NOTE: This catalog represents the most accurate information available at the time of publication. The university reserves the right to correct or otherwise change any such information without notice at its sole discretion. The information contained in this publication is not intended to, and does not, confer any contractual rights on any individual. With respect to course offerings, the departments have attempted to anticipate which courses will be offered, and by whom and when such courses will be taught. However, course offerings may be affected by changes in faculty, student demand, and funding. Although efforts have been made to indicate these uncertainties, course offerings are subject to change without notice.

William Marsh Rice University
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Mailing Address: P.O. Box 1892, Houston, Texas 77251–1892
Telephone: Campus Operator 713-348-0000
Homepage Address: http://www.rice.edu
2005–2006 General Announcements online: http://www.rice.edu/catalog/

Please address all correspondence to the appropriate office or department followed by the university mailing address given above.

Admission, Catalogs, Applications  Office of Admission
109 Lovett Hall; 713-348-7423

Business Matters  Office of the Cashier
110 Allen Center; 713-348-4946

Career Services, Part-time  Career Services Center
Employment off Campus  Rice Memorial Center; 713-348-4055

Credits, Transcripts  Office of the Registrar
116 Allen Center; 713-348-4999

Financial Aid, Scholarships,  Student Financial Services
Part-time Employment on Campus  116 Allen Center; 713-348-4958

Graduate Study  Chair of the appropriate
department (see pages 59–63)

Undergraduate and  Office of the Dean of Undergraduates
Undergraduate Curricula  101 Lovett Hall; 713-348-4996

Rice University is committed to equal opportunity in education and employment. It is the policy of Rice University to attract qualified individuals of diverse backgrounds to its faculty, staff, and student body. Accordingly, Rice University does not discriminate against any individual on the basis of race, color, religion, sex, sexual orientation, national or ethnic origin, age, disability, or veteran status in its admissions, its educational programs, or employment of faculty or staff. In employment, the university seeks to recruit, hire, and advance women, members of minority groups, individuals with disabilities, Vietnam-era veterans, and special disabled veterans.
**Academic Calendar 2005–2006**

**Fall 2005**

Monday, August 1 ........................................ Deadline: Tuition due for entering freshmen

Wednesday, August 10 ............................. Deadline: Tuition due for returning undergraduate students

Sunday, August 14 (through Friday, August 19) Orientation week for new students

Monday, August 15 .................................... Deadline: Tuition due for graduate students

Friday, August 19 ..................................... Credit balance checks available to students

Monday, August 22 .................................. First day of classes

Friday, September 2 ................................... Deadline: Last day to add courses without a fee

Deadline: Last day to add a course without obtaining instructors permission

Deadline: Last day to withdraw with a 100% refund of tuition and fees

Deadline: Last day to drop to part-time with a 100% refund of tuition

Monday, September 5 ................................ Labor Day (holiday–no classes)

Friday, September 9 ................................. Deadline: Last day to withdraw with a 70% refund of tuition

Friday, September 16 ............................... Deadline: Last day to complete late registration or add courses

Deadline: Last day to drop courses without a fee

Deadline: Last day to designate a course as “Audit” or vice versa

Deadline: Last day anticipated aid for fall shows as a credit on student accounts

Deadline: Last day to withdraw with a 60% refund of tuition

Friday, September 23 ............................... Deadline: Last day to convert a “Pass/Fail” to an earned letter grade for courses taken in spring 2005

Deadline: Last day for instructors to submit final grades to clear “Incompletes” for courses taken in spring 2005

Deadline: Last day to withdraw with a 50% refund of tuition

Friday, September 30 ............................... Deadline: Last day to withdraw with a 40% refund of tuition

Friday, October 7 ..................................... Deadline: Mid-semester grades for first-year undergraduate students due

Deadline: College course plans due to Dean of Undergraduates

Deadline: Last day to withdraw with a 30% refund of tuition

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Monday, October 10
(through Tuesday, October 11) ....................... **Midterm Recess**

Wednesday, October 12 ............................... All classes normally held on Monday meet; all Wednes-
day classes canceled (to equalize holidays by days of
the week during the semester)

Friday, October 14 ................................. Deadline: Last day to withdraw with a **20% refund of
tuition**

Friday, October 21 ................................. Deadline: Last day to withdraw with a **10% refund of
tuition**

Friday, October 28 ................................. Deadline: Last day to drop courses for all graduate
students and “returning” undergraduate students with a
$10.00 fee
  Deadline: Last day to designate a course as “Pass/Fail”

Monday, October 31 .............................. Deadline: Last day to file an application for a May 2006
conferral of degree with the Office of the Registrar
  Deadline: Last day to file an application for
January 2006 conferral of degree with the Office of
the Registrar

Tuesday, November 1 ............................. Deadline: Last day to file the following in the Office of
Graduate Studies for January 2006 degree conferral:
  • Thesis master’s candidacy petitions
  • Certification of non-thesis master’s
  • Form for automatic master’s
  • PhD candidacy petitions

Monday, November 14
(through Friday, November 18) ................... Spring 2006 registration for currently enrolled under-
graduate, graduate and fifth-year students
  Registration for SELF-scheduled final exams for under-
graduate courses

Tuesday, November 15 ............................. Deadline: Last day to complete financial aid applica-
tion for fall 2005

Friday, November 18 at 5:00 p.m. ............... Deadline: Last day to register for spring 2006 without
$60 “failure to register” fee
  Deadline: Last day to register for SELF-scheduled final
exams for undergraduate courses

Thursday, November 24
(through Friday, November 25) ................. **Thanksgiving Recess (holiday—no classes)**

Thursday, December 1 ............................. Deadline: Last day to complete loan applications for
fall 2005

Friday, December 2 ............................... **Last day of classes**
  Deadline: (for fall 2005 matriculants only) Last day
to drop courses—students must go to the Office of the
Registrar **by 5:00 p.m.**
  Deadline: For a January 2006 conferral of degree,
students must submit theses to the Office of Graduate
Studies **by 12:00 noon**
  Deadline: All Faculty Evaluations are due to the Office
of the Registrar **by 5:00 p.m.**
Saturday, December 3
(through Wednesday, December 14) .......... SELF-scheduled exams for undergraduate courses

Wednesday, December 7
(through Wednesday, December 14) .......... Scheduled FINAL exams for undergraduate courses

Wednesday, December 14 at 5:00 P.M. .......... **Deadline:** All take home final examinations are due

Wednesday, December 21 at 12:00 NOON ...... **Deadline:** All final grades are due to the Office of the Registrar

**Spring 2006**

**Thursday, January 5** .................................. **Deadline:** Tuition due for all students

**Thursday, January 10** ............................... Credit balance checks available to students

**Wednesday, January 11** ............................ **First day of classes**

**Monday, January 16** ................................. **Martin Luther King, Jr. Day (holiday—no classes)**

**Wednesday, January 18** ............................ All classes normally held on Monday meet; all Wednes-
day classes canceled (to equalize holidays by days of the week during the semester)

**Friday, January 20 at 5:00 P.M. ...................... **Deadline:** Last day to resolve grades of “Other” from

**Friday, January 27** ................................. **Deadline:** Last day to add courses without a fee

**Deadline:** Last day to add a course without obtaining instructor's permission

**Deadline:** Last day to withdraw with a **100% refund of tuition and fees**

**Deadline:** Last day to drop to part-time status with **100% refund of tuition**

**Wednesday, February 1** ............................ **Deadline:** Last day to file the following in the Office of Graduate Studies for a May 2006 conferral of degree:

- Thesis master’s candidacy petitions
- Certification for non-thesis master’s
- Form for automatic master’s
- PhD candidacy petitions

**Friday, February 3** ................................. **Deadline:** Last day to withdraw with a **70% refund of tuition**

**Friday, February 10** ................................. **Deadline:** Last day to complete late registration or add course(s)

**Deadline:** Last day to drop courses without a fee

**Deadline:** Last day to designate a course as “Audit” or vice versa

**Deadline:** Last day to withdraw with a **60% refund of tuition**

**Deadline:** Last day anticipated aid for spring shows as credit on student accounts

**Wednesday, February 15** ......................... Financial aid application materials available to returning students to apply for need-based aid for 2006–2007

**Friday, February 17** ................................. **Deadline:** Last day for students to convert a “Pass/Fail” to an earned letter grade for courses taken in fall 2005
Deadline: Last day for instructors to submit final grades to clear “Incompletes” for courses taken in fall 2005

Deadline: Last day to withdraw with a **50% refund of tuition**

Friday, February 24

Deadline: Last day to withdraw with a **40% refund of tuition**

Friday, March 3

Deadline: Mid-semester grades for first-year undergraduate students are due

Deadline: College course plans are due to the Dean of Undergraduates

Deadline: Last day to withdraw with a **30% refund of tuition**

Friday, March 10

Deadline: Last day to withdraw with a **20% refund of tuition**

Monday, March 13
(through Friday, March 17) **Spring Break (no classes)**

Friday, March 17

Deadline: Last day to withdraw with a **10% refund of tuition**

Friday, March 24

Deadline: Sophomores must file a Declaration of Major form with the Office of the Registrar

Friday, March 31

Deadline: Last day to drop course(s) for all graduate students and “returning” undergraduate students with a $10.00 fee

Deadline: Last day to designate a course as “Pass/Fail”

Deadline: Last day to complete financial aid applications for spring 2006

Summer School financial aid application available

Thursday, April 7
(through Friday, April 8) **Spring Recess (no classes)**

Friday, April 14

Deadline: Last day to complete loan applications for spring 2006

**Priority Deadline:** For returning and graduate students to submit financial aid applications for 2006–2007

Monday, April 17
(through Friday, April 21) Register for self-scheduled final exams for undergraduate courses

Fall 2006 registration begins for currently enrolled undergraduate, graduate and fifth-year students

Friday, April 21 at 5:00 p.m.

Deadline: Last day to register for Fall 2006 without a $60 “failure to register” fee

Deadline: Last day to register for SELF-scheduled final exams for undergraduate courses

Thursday, April 27

**Last day of classes** except for lab courses and seminars that meet once a week
Deadline: (for spring 2006 undergraduate matriculants only) Last day to drop courses
Deadline: For a May 2006 conferral of degree, students must submit theses to the Office of Graduate Studies by 12:00 noon
Deadline: All Faculty Evaluations are due to the Office of the Registrar by 5:00 p.m.

Friday, April 28............................................. Last day of class for lab courses and seminars that meet only on Friday.

Saturday, April 29
(through Thursday, May 4 at 12:00 noon) .... All degree candidates: All SELF-scheduled, scheduled final, and take-home exams must be completed

Saturday, April 29
(through Wednesday, May 10) ............... All non-graduating students: SELF-scheduled exams for undergraduate courses
Monday, May 1 ........................................... Deadline: For financial aid application for early summer session

Wednesday, May 3
(through Wednesday, May 10) ............... All non-graduating students: Scheduled FINAL exams for undergraduate courses

Saturday, May 6 at 9:00 A.M. ..................... Deadline: Grades for all degree candidates are due in the Office of the Registrar
Saturday, May 13 ........................................ Ninety-Third Commencement
Monday, May 15 ........................................ Deadline: For financial aid application for general summer session

Wednesday, May 17 at 9:00 A.M. ............... Deadline: All grades for non-graduating students are due in the Office of the Registrar
Friday, June 9 ............................................. Deadline: Last day to resolve grades of “Other” from spring 2006

**Summer 2006**
**Early Session (May 16–June 2)**

Friday, March 31 ........................................... Summer term financial aid applications available
Wednesday, April 19 ................................... Deadline: For early application discount (by 2:30 p.m.)
Monday, May 1 ........................................... Deadline: To submit financial aid applications
Friday, May 5 ............................................. Deadline: For application to Early Session courses (by 2:30 p.m.)

Tuesday, May 9 ........................................... Admission status emailed
Online registration for Rice students begins

Monday, May 15 ........................................... Registration: 9:00 A.M. – 1:00 P.M. for visiting students

Deadline: For final tuition payment

Tuesday, May 16 ........................................... First day of classes—Early Session
Thursday, May 18 ....................................... Deadline: For adding courses (by 3:00 p.m.)
Deadline: For late registration (by 3:00 p.m.)
Monday, May 22 ........................................... **Deadline:** For visiting and Class III students to submit official transcripts (must be received by this date)

**Deadline:** For dropping courses without academic penalty (by 3:00 P.M.)

**Deadline:** For designating “Pass/Fail” option (by 3:00 P.M.)

**Deadline:** For submitting refund requests (must be received by this date). Please see section on Withdrawal Penalty and Tuition Refund.

Monday, May 29 ......................................... **University holiday**

Friday, June 2 ........................................... **Last day of classes—Early Session**

Tuesday, June 6 ......................................... **Deadline:** For completion of all Early Session course work, including final examinations. Exam schedule determined by instructor.

Friday, June 9 ........................................... **Deadline:** For submitting grades to the School of Continuing Studies Summer School Office (by 3:00 P.M.)

**Summer 2006**

**General Session (June 5–July 28)**

Friday, March 31 ....................................... Summer term financial aid applications available

Wednesday, April 19 ................................. **Deadline:** For early application discount (by 2:30 P.M.)

Tuesday, May 9 ......................................... Online registration for Rice students begins

Monday, May 15 ....................................... **Deadline:** For financial aid application for General Summer Session

Friday, May 19 ......................................... **Deadline:** For application to General Session courses (by 2:30 P.M.)

Thursday, May 25 ..................................... Admission status emailed

Monday, May 29 ....................................... **University holiday**

Friday, June 2 ........................................... **Registration,** 9:00 A.M. – 1:00 P.M. for visiting students

**Deadline:** For final tuition payment

Monday, June 5 ........................................... **First day of classes—General Session**

One week after first class ......................... **Deadline:** For dropping courses without academic penalty (no refunds after June 19th) (by 3:00 P.M.)

**Deadline:** For designating “Pass/Fail” option (by 3:00 P.M.)

Monday, June 12 ...................................... **Deadline:** For adding courses (by 3:00 P.M.)

**Deadline:** For late registration (by 3:00 P.M.)

Monday, June 19 ...................................... **Deadline:** For visiting and Class III students to submit official transcripts (must be received by this date)

**Deadline:** For submitting refund requests (must be received by this date.) Please see section on Withdrawal Penalty and Tuition Refund.

Monday, July 3 & Tuesday July 4 .............. **University holidays**
Friday, July 28............................. Last day of classes–General Session

Tuesday, August 1.............................. Deadline: For completion of all General Session course work, including final examinations

Friday, August 4.............................. Deadline: For submitting grades to School of Continuing Studies Summer School Office (by 3:00 P.M.)

Friday, August 11............................. Final grades for Early and General Summer terms mailed to visiting students from the Office of the Registrar
MESSAGE FROM THE PRESIDENT

What makes Rice extraordinary? In less than 100 years, it has achieved a position among America’s great research universities. Even in that category, it is distinctive: Rice is a small great university. That is, while smaller than most, Rice is able to compete with the best in the nation, indeed, in the world. Our comparative advantages lie in our relatively small size, our emphasis on undergraduate education, our identification of important but focused areas of strength, the relative ease by which we can foster interdisciplinary study, and our possibilities for teaching and research excellence across the range of human knowledge and endeavor. All this resides in an extraordinarily beautiful, coherent, and tree-lined campus located in the heart of the cultural district of the nation’s fourth-largest city and just three miles from its downtown.

*General Announcements* guides you through Rice University’s diverse academic offerings, taught by an enormously talented faculty. It further serves as a guide for the rules and responsibilities that govern both undergraduate and graduate student life in our community.

Rice, said founding president Edgar Odell Lovett, would “set no upper limit on its educational endeavor.” We remain intent on that ambition.

David W. Leebron
President
William Marsh Rice University
THE UNIVERSITY AND THE CAMPUS
The University and Campus

Rice is a private, independent university dedicated to the “advancement of letters, science, and art.” Occupying a distinctive, tree-shaded, nearly 300-acre campus only a few miles from downtown Houston, Rice attracts a diverse group of highly talented students with a range of academic studies that includes humanities, social sciences, natural sciences, engineering, architecture, music, and business management (graduate study only). The school offers students the advantage of forging close relationships with members of the faculty and the option of tailoring graduate and undergraduate studies to specific interests. Students each year are drawn to this coed, nonsectarian university by the creative approaches it historically has taken to higher education.

One of the unique features of Rice is its residential colleges. Before matriculating, each of the university’s 2,933 undergraduates becomes a member of one of nine residential colleges, each of which has its own dining hall, public rooms, and dorm on campus. Because each student is randomly assigned to one of the colleges and maintains membership in the same college throughout the undergraduate years, the colleges are enriched by the diversity of their students’ backgrounds, academic interests and experiences, talents, and goals. A faculty master is assigned to each college and lives in an adjacent house and helps cultivate a variety of cultural and intellectual interests among the students, as well as supporting an effective system of self-government. Other faculty or members of the community serve as associates to individual colleges. The experience of college residence is indispensable to conveying the rich flavor of academic life at Rice, allowing students to combine their usual studies with an array of social events, intramural sports, student plays, lecture series, innovative college-designed courses, and active roles in student government.

Graduate students come to Rice for the chance to work closely with eminent professors and researchers who are seeking to extend the horizons of current knowledge. Although most of Rice’s 1,922 graduate students live off campus, taking advantage of the city’s readily available and affordable housing, space also is available in the university-owned Graduate Apartments. Graduate students have a voice in the university community through the Graduate Student Association, which organizes and funds regular social events.

Rice offers students the pleasures and challenges of academic life within the peaceful enclosure of a campus widely acclaimed for its beauty. Campus buildings, including an extensive computer center and the 2.3 million-volume Fondren Library, form graceful groupings under spreading live oaks. Recent additions include the architecturally stunning Anne and Charles Duncan Hall, a state-of-the-art building for computational engineering; James A. Baker III Hall, which houses the Institute for Public Policy and the School of Social Sciences; and E. Dell Butcher Hall, home to the Center for Nanoscale Science and Technology. Additionally, Rice boasts the largest open-air stadium in the city.

Rice students also enjoy all the commercial and cultural advantages of a major metropolitan center. The school maintains extensive technological links to the area’s many colleges and universities, the acclaimed Texas Medical Center, and other resources. And both students and faculty enjoy Houston’s panoply of cultural offerings, from opera to blues clubs and from a renowned collection of post-impressionist art to alternative art spaces. Rice and Houston together provide an ideal learning and living environment.
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**Student Responsibility**

The university expects all Rice students to exercise personal responsibility over their actions. Their behavior should reflect a respect for the law and for their contractual obligations, a consideration for the rights of others, and shared standards of considerate and ethical behavior.

Students are responsible for knowing and following all information, policies, and procedures listed in this *General Announcements*. Questions should be directed to the appropriate office or administrator.

Rice encourages self-discipline, recognizing that effective student government, including judicial processes, and the integrity of the honor system depend on the willingness of all students to meet community standards of conduct.

The university, however, reserves the right to insist on the withdrawal of any student whose conduct it judges to be clearly detrimental to the best interests of either the student or the university. The appropriate authorities take such action only after careful consideration.

No individual or group may use the name of the university or one of its colleges without prior approval of the university or the college.

**The Honor System**

The honor system, one of the oldest and proudest traditions at Rice, is administered by the Honor Council, whose student members are elected each year by the student body. Adopted by a student vote in 1916, the honor system has remained essentially the same since that time but for changes in the procedures and membership of the Honor Council.

Students take all written examinations and complete any specifically designated assignments under the honor system. By committing themselves to the honor system, all students accept responsibility for assuring the integrity of the examinations and assignments conducted under it. The Honor Council is responsible for investigating reported violations and for conducting a hearing when the facts warrant. The assistant dean of Student Judicial Programs, who reviews the results of the investigations and hearing, considers the council’s recommendations when issuing penalties.

The Honor Council conducts an ongoing program to acquaint new students and faculty with the honor system. The Honor Code and other related information and resources are located at the homepage of the Honor Council: http://www.ruf.rice.edu/~honor/.

**The Code of Student Conduct**

With regard to nonacademic disciplinary matters, the assistant dean of Student Judicial Programs and the University Court—a court of student peers—enforce the Code of Student Conduct that governs the administration of student order and discipline. The Code of Student Conduct applies to all undergraduate students, transfer students, graduate students, and professional students registered at Rice University, as well as to visiting students, Class III students, second degree students, and auditors from the time they arrive on campus for orientation until they have completed their studies or degrees and physically left campus. Organizations also are subject to this Code. All enrolled students also are subject to Rice University policies, rules, and regulations. The assistant dean of Student Judicial Programs oversees the judicial system under the auspices of the Office of the Dean of Undergraduates, who has general authority over the student disciplinary system. The Code of Student Conduct
and other related information and resources are located at the home page of the University Court: http://www.ruf.rice.edu/~ucourt/table.html.

**Faculty Grading Guidelines**

The Committee on Examinations and Standing has drawn up the following guidelines on grading. Additional information is available on pages 28–33.

- The evaluation of the student’s performance in a course and a decision on the appropriate grade is the responsibility of the designated instructor or instructors in the course.

- No student should be given an extension of time or opportunities to improve a grade that are not available to all members of the class, except for verified illness or justified absence from campus. Students who have three scheduled final examinations in two consecutive calendar days may, however, take one of the examinations at another time. Except for scheduled exams, no course assignments may be due between the last day of classes and the last day of the final examination period.

- Students in independent study courses are not to be allowed an extension beyond the time when grades are due. Faculty are to submit grades at the end of the semester for such students based on work completed during the semester. The instructor directing the independent study assumes responsibility with the student for ensuring that the work undertaken is appropriate to the span of a semester and for determining the degree credit to be received.

- The basis for grading and the expectations on all written assignments or tests should be clearly explained to the class in advance, preferably in writing at the beginning of the semester. The instructor should explain clearly which assignments or homework are covered by the honor system and which are not. To prevent allegations of plagiarism on written assignments, students should be warned that all direct and indirect quotations from other sources should be properly acknowledged. The instructor should explain the extent to which the student’s paper is expected to be independent of the references and clearly distinguishable from them.

- Instructors should be willing to give any student an explanation of his or her grade as consistent with the grading for the rest of the class. For this reason, the committee urges the faculty to preserve all examinations and written material not returned to students, as well as grade records, for at least the following semester so that students may, if they wish, review with their instructor the basis for the grade received.

- Instructors may not change a semester grade after the grade sheet has been submitted to the registrar, except when there is a clerical error in calculating the grade. This is a long-standing university rule of which the faculty are reminded by the registrar at the end of each semester. It is designed in part to protect the faculty from student pressure for grade changes. All other grade changes, including retroactive change to withdrawal or incomplete, must be approved by the Committee on Examinations and Standing on the basis of a written petition from the student and on information from the instructor.

- There is no university requirement that a final examination be given in a course. It is university policy that final examinations that cover more than the material since the last examination, that are the only exam in the course, or that are comprehensive of the entire course may be given only during the final examination period. Such examinations may not, for example, be labeled “tests” and administered during the last week of classes. Final
examinations are normally of 3-hour duration. Faculty who, under exceptional circumstances, wish to give longer examinations may do so only if the exam is scheduled as take-home. Under no circumstances may final exams exceed five hours. The “due date” for all take-home final exams is the end of the examination period.

- First-year students receive mid-semester grades around the eighth week of the fall and spring semesters so that they can, if advisable, enroll in tutoring or drop a class for which they may not be prepared. Faculty who teach first-year students in any of their classes will be asked to submit grades of standing for these students during the seventh week of the semester and should schedule the grading of tests, quizzes, or homework assignments accordingly. These grades are not recorded on the student’s transcript nor calculated in the grade point average, but they are important indicators for students and their faculty advisers.

- Departments using teaching associates, adjunct professors, or visiting faculty of any kind should make sure these teachers are familiar with Rice grading procedures. A regular faculty member who is well-versed in the grading guidelines should be assigned to assist such instructors.

The chair of the Committee on Examinations and Standing or the Office of the Dean of Undergraduates will be glad to advise any faculty member faced with exceptional circumstances that may justify special consideration. Students may petition the committee concerning the application of these guidelines. Suspected or possible violations of the honor system should be submitted to the Honor Council.

### Student Health and Counseling Services

#### Student Health Fee

By paying an annual student health service fee, all students gain access to both the Student Health Service and the Rice Counseling Center. Detailed information on the care and services each provide is available from both centers.

#### Student Health Service

The student Health Service, an outpatient primary care clinic, is located in the Rich Health and Wellness Center in the former Brown College commons. Two primary care physicians and two nurses staff the clinic.

Clinic hours are from 8:30 A.M. to 5:00 P.M., Monday through Friday, during fall and spring semesters. For after-hours and weekend medical care, students may choose among a number of local hospitals. Students must pay for all medical care outside the clinic’s purview, including blood tests, x-rays, and outside physician consultations. Should such medical care be necessary, students are urged to review their insurance coverage and pick the best available option.

In serious emergencies, students should call the Student Health Service (713-348-4966 during work hours) or the Rice University Police Department (713-348-6000).

The clinic is open full time from the first day of Orientation Week until the day before commencement. It is closed during the Christmas break and Thanksgiving. The clinic is also open for reduced hours during the summer months.

The Student Health Service provides the following:

- Primary care for illness and injury with referrals to specialists when needed
- Maintenance of health records for all students
- Immunizations
• Contraceptive counseling and routine Pap smears
• Allergy shots (students must provide serum after a specialist allergy workup)
• Physical examinations (e.g., for employment, transfer to another school, or scholarship expeditions)

Confidentiality—The Student Health Service physician–patient relationship is a confidential one, and medical records will not be released except as required by law, or when the patient poses a significant risk to herself or himself or another person.

Health Insurance—All Rice students must have health insurance of their choice, and must enter details of their health insurance online at http://studenthealthinsurance.rice.edu by August 15. Failure to do so will result in automatic billing for insurance. Students may purchase insurance through the university, as described online. Dependent coverage is also available. For questions about the Rice student health insurance plan, students should contact the Rice Counseling Center at rucc@rice.edu. Rice’s group coverage for 2005–2006 is effective at 12:01 A.M. on August 15, 2005, and will terminate at 12:01 A.M. on August 15, 2006.

Disability Support Services
Located in the Ley Student Center, Disability Support Services coordinates campus services for individuals with documented disabilities. For academic accommodations, adaptive equipment, or disability-related housing needs, the Disability Support Services Office is the campus resource for all students with disabilities. Information is maintained on scholarships, internships, and other programs specific to students with disabilities. For more information, see the Disability Support Services website at http://www.dss.rice.edu. Students can schedule an appointment with the director of Disability Support Services by calling 713-348-5841.

Rice Counseling Center
Rice Counseling Center, in 301A Lovett Hall, addresses students’ psychological needs with various programs and services. The center is open year-round except for scheduled holidays and occasional all-day staff retreats. Office hours for counseling and consultations are 8:30 A.M. to noon and 1:00 P.M. to 5:00 P.M., Monday through Friday. Students can make appointments by calling 713-348-4867 or by visiting the center. There are no costs for Counseling Center services.

Typically, most students who use the counseling services bring with them very common concerns: roommate problems, breakup of a relationship, academic and/or interpersonal anxiety, family problems, difficulties adjusting to Rice, or confusion about personal goals, values, and identity. Counselors are equipped to handle a variety of issues, including substance abuse, eating disorders, sexual assault/abuse/date violence, depression, and the coming-out process. Rice Counseling Center offers both individual and group counseling as well as educational workshops and programs.

When students need prolonged or specialized counseling or treatment, counselors refer them to an outside provider. The students, or their health insurance, must pick up those costs. All students who have paid the Health Service Fee are eligible for initial assessment sessions, consultations, crisis intervention, and educational programming. Individual or group counseling may also be available, if appropriate.

The Rice Counseling Center provides the following services:
• Initial assessment
• Short-term individual and couples counseling
• Group therapy and support groups
• Medication consultations with the center’s consulting psychiatrist for students in counseling at the center
• Other consultations (e.g., how to make a referral or how to respond to a friend in distress)
• Educational programming (e.g., various presentations on mental health issues)
• Crisis intervention on a walk-in emergency basis during regular office hours; students may call 713-348-4867 for assistance with emergencies after hours or on weekends

The Wellness Center
The Wellness Center is located in the Rich Health and Wellness Center. The center works with Student Health Services and the Rice Counseling Center to encourage and reinforce behaviors in students that promote a higher quality of health and well-being. Key target areas include prevention of substance abuse and misuse, unplanned pregnancies and sexually transmitted diseases, sexual assault and harassment, promotion of good nutrition and a healthy body image, disease prevention, management of time and stress to decrease depression, and improvement in the overall wellness of students. The Wellness Center offers educational material and programs, web-based information, audio-visual and print materials, many free health supplies, and free, confidential consultations and referrals for students. Nutritional counseling, massage therapy, and acupuncture also are available in the center. There are fees for some services. Call 713-348-5194 for an appointment.

College Assistance Peer Program (CAPP)—Students who have been carefully selected and trained in listening skills and mental-health education serve in this peer education program as supportive listeners and referral sources for other students. They also assist the center with its educational programming.

Students with Disabilities—Because students who have physical limitations may find it difficult to reach the Rice Counseling Center’s third-floor location in Lovett Hall, staff will arrange to see those students in a more accessible location on campus. Students should call the center to make these arrangements.

Confidentiality—Counseling services are confidential; information about a student is not released without that student’s written permission. By state law, confidentiality does not extend to circumstances where (1) there is risk of imminent harm to the student or others; (2) the counselor has reason to believe that a child or an elderly or handicapped person is, or is in danger of, being abused or neglected; (3) a court order is issued to release information; (4) the student is involved in a criminal lawsuit; or (5) the counselor suspects that the student has been the victim of sexual exploitation by a former health provider during the course of treatment with that provider.
**INTRODUCTION**

The undergraduate experience at Rice is one of intense personal interactions. The close sense of community created by individual placement in residential colleges is extended to warm intellectual and personal relationships with members of the Rice faculty. “Behind the hedges,” the beautifully designed, spacious campus is small enough to encourage a sense of belonging even as students engage with the lively cultural currents of one of the country’s largest cities.

The academic philosophy at Rice is to offer students beginning their college studies both a grounding in the broad fields of general knowledge and the chance to concentrate on very specific academic and research interests. By completing the required distribution courses, all students gain an understanding of the literature, arts, and philosophy essential to any civilization, a broad historical introduction to thought about human society, and a basic familiarity with the scientific principles underlying physics, chemistry, and mathematics. Building on this firm foundation, students then concentrate on studies in their major areas of interest.

Rice University is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (SACS), the recognized regional accrediting body in the eleven U.S. Southern states.

Rice grants the two undergraduate degrees, the Bachelor of Arts (BA) and the Bachelor of Science (BS), in a range of majors. The majority of undergraduates earn the BA degree. The BS degree is offered in some science fields and in various fields of engineering accredited by the Accreditation Board for Engineering and Technology (ABET). Undergraduates may major in any of the numerous fields provided by the various schools of architecture, humanities, music, social sciences, science, and engineering. To accommodate the full range of individual student interests, specific interdepartmental majors are also available, as are selectively approved area majors. In certain departments, students also have the option of overlapping the upper-level course work of their undergraduate degree with those basic requirements necessary to earn a higher degree in the field, considerably reducing the time required to complete their graduate studies. The Shepherd School of Music offers a joint degree in music (BMus/MMus) that may be completed with a fifth year of study.

Through Rice’s Education Certification Program, students interested in teaching in secondary schools may complete a program of teacher training, leading to certification in the state of Texas, together with the BA degree. Students interested in satisfying the requirements for admission to medical, dental, or law school should consult with the Office of Academic Advising for completing these programs in conjunction with the various majors.

**GRADUATION REQUIREMENTS**

**Degree Requirements for All Bachelor’s Degrees**

Students are responsible for making certain that their plan of study meets all degree and major requirements. To graduate from Rice University, all students must:

- Be registered at Rice full time for at least four full fall and/or spring semesters
- Complete the requirements of at least one major degree program
- Complete at least 120 semester hours (some degree programs require more than 120 hours)
- Complete at least 60 semester hours at Rice University
• Complete at least 48 hours of all degree work in upper-level courses (at the 300 level or higher)
• Complete more than half of the upper-level courses in degree work at Rice
• Complete more than half of the upper-level courses in their major work at Rice (certain departments may specify a higher proportion)
• Complete all Rice courses satisfying degree requirements with a cumulative grade point average of at least 1.67 or higher
• Complete all Rice courses that satisfy major requirements (as designated by the department) with a cumulative grade point average of at least 2.00 or higher
• Satisfy the English composition requirement (see below)
• Satisfy the Lifetime Physical Activity Program (LPAP) requirement (see below)
• Complete courses to satisfy the Distribution Requirements (see below)
• Otherwise be a student in good academic and disciplinary standing and not under investigation

To satisfy the English composition requirement, students must pass an English composition examination given during Orientation Week. Those receiving grades of “not satisfactory” on the exam must complete ENGL 103, Introduction to Argumentation and Academic Writing, a one-semester course carrying degree credit.

To satisfy the LPAP requirement, students must complete 2 different noncredit courses in LPAP. Students with disabilities may make special arrangements to satisfy this requirement.

In order to earn a second degree, students must fulfill the requirements outlined on page 25.

Distribution Requirements

Each student is required to complete at least 12 semester hours of designated distribution courses in each of Groups I, II, and III. The 12 hours in each group must include courses in at least two departments in that group. (Divisional or interdisciplinary designations, e.g., HUMA or NSCI, count as departments for this purpose.) Interdivisional courses approved for distribution credit may count toward the 12 semester hours in any relevant group; however, students may not count any one such course toward the 12 required hours in more than one group, and may count no more than one such course toward the 12 required hours in any one group.

Students must complete the distribution requirements in each group by taking courses that are designated as a distribution course at the time of course registration, as published in that semester’s Course Offerings. Courses taken outside of Rice and transferred in can be used to satisfy distribution requirements, assuming they are on the list of approved and designated distribution courses at the time they were taken. Completed courses taken prior to matriculation are subject to the list of designated distribution courses at the time of matriculation.

The distribution system presupposes that every Rice student should receive a broad education along with training in an academic specialty. This goal is achieved by courses that are broad based, accessible to nonmajors, and representative of the knowledge, intellectual skills, and habits of thought that are most characteristic of a discipline or of inquiry across disciplines.

Group I—These courses have one or more of the following goals. They develop students’ critical and aesthetic understanding of texts and the arts; they lead students to the analytical examination of ideas and values; they introduce students to
the variety of approaches and methods with which different disciplines approach intellectual problems; and they engage students with works of culture that have intellectual importance by virtue of the ideas they express, their historical influence, their mode of expression, or their critical engagement with established cultural assumptions and traditions.

**Group II**—Three types of courses fulfill this requirement. The first are introductory courses which address the problems, methodologies, and substance of different disciplines in the social sciences. The second are departmental courses that draw upon at least two or more disciplines in the social sciences or that cover topics of central importance to a social science discipline. The third are interdisciplinary courses team-taught by faculty from two or more disciplines.

**Group III**—These courses provide explicit exposure to the scientific method or to theorem development, develop analytical thinking skills and emphasize quantitative analysis, and expose students to subject matter in the various disciplines of science and engineering.

**BACHELOR OF ARTS**

The specific requirements of individual majors leading to the Bachelor of Arts degree vary widely. No department may specify more than 80 semester hours (required courses, prerequisites, and related laboratories included) for the Bachelor of Arts.

In addition to meeting the degree requirements for all bachelor’s degrees, to qualify for the Bachelor of Arts, students in all fields except architecture must complete at least 60 hours in course work outside the major, and students in architecture must complete at least 36 hours in course work outside the major.

**BACHELOR OF SCIENCE IN THE SCHOOL OF NATURAL SCIENCES**

The Bachelor of Science degree is offered in astrophysics, biochemistry and cell biology, chemistry, chemical physics, earth science, ecology and evolutionary biology, and physics. The specific degree requirements vary from field to field and differ from those of the Bachelor of Arts in that there are greater technical requirements. No department may specify more than 80 semester hours (required courses, prerequisites, and related laboratories included) for the Bachelor of Science. To earn a BS degree in one of these fields, students must complete at least 60 hours in course work outside the major.

**BACHELOR OF SCIENCE DEGREES IN ENGINEERING:**

**Bachelor of Science in Chemical Engineering (BSChE), Civil Engineering (BSCE), Computer Science (BSCS), Electrical Engineering (BSEE), Materials Science (BSMS), Mechanical Engineering (BSME), and Bioengineering (BSB)**

The Bachelor of Science degree in a given engineering field is distinct from the Bachelor of Arts degree in that it must meet greater technical requirements. In establishing a departmental major for the degree of bachelor of science in civil engineering, electrical engineering, materials science, and mechanical engineering, the department may specify no more than 92 semester hours (required courses, prerequisites, and related laboratories included). In establishing the departmental major for the BS in chemical engineering, the department may specify no more than 100 semester hours (required courses, prerequisites, and related laboratories included). The bioengineering department specifies 94 semester hours for the BS degree (required courses, prerequisites, and related laboratories included). To earn a BS degree, students must meet the following minimum semester hour requirements in course work:
• All majors except chemical engineering and computer science—a total of at least 134 hours
• Chemical engineering majors—a total of at least 132 hours, depending on area, up to 137 hours
• Computer science majors—a total of at least 128 hours

Other Bachelor’s Degrees
The professional Bachelor of Architecture (BArch) degree requires a fifth year of study and a one-year preceptorship. The Bachelor of Fine Arts (BFA) degree requires a fifth year of concentrated study and advanced courses in addition to the core course requirements. The Bachelor of Music (BMus) degree requires advanced courses in aural skills in addition to the core music curriculum.

Undergraduate Majors
To receive a bachelor’s degree, a student must complete the requirements for at least one major. Rice offers majors in many fields. Within some majors, students have the choice of a particular area of concentration. Students also may choose to fulfill the requirements for more than one major; such majors do not necessarily need to be in related fields. More detailed information on the departmental majors described below may be found in the Undergraduate Degree chart (pages 18–20), in the section “Departments and Interdisciplinary Programs” or by contacting the department. The process for declaring majors appears in the section Declaring Departmental Majors on page 23.

School of Architecture—Students admitted to the university as architecture majors must first complete 4 years of the BA program (architecture major) before applying to the BArch program in their senior year. If admitted, they are assigned a preceptorship with an architectural firm for a one-year period, after which they return to Rice to complete the BArch degree program.

George R. Brown School of Engineering—Rice offers majors in bioengineering, chemical engineering, civil engineering, computational and applied mathematics, computer science, electrical and computer engineering, environmental engineering sciences, mechanical engineering, materials science and engineering, and statistics. These programs lead to either the BA or the BS degree and may qualify students for further graduate study.

School of Humanities—Students may declare majors in art history, classics, English, French studies, German and Slavic studies (includes Russian), Hispanic studies, history, kinesiology, linguistics, philosophy, religious studies, and visual arts. Interdisciplinary majors are available in ancient Mediterranean civilizations, Asian studies, medieval studies, and the study of women and gender, while an interdepartmental major in policy studies combines courses from the School of Humanities and the School of Social Sciences.

Shepherd School of Music—Music students may opt for either a BA or a Bachelor of Music (BMus) degree in performance, composition, music history, and music theory. Students who pass a special qualifying examination may elect an honors program that leads to the simultaneous awarding of the BMus and Master of Music (MMus) degrees after five years of study.

Wiess School of Natural Sciences—All natural sciences departments, including biochemistry and cell biology, chemistry, earth science, ecology and evolutionary biology, mathematics, and physics and astronomy offer programs leading to the BA degree. BS degrees are offered in some departments. Majors include astronomy, biochemistry, biology, biophysics, chemical physics, chemistry, earth science, mathematics, and physics. Students may also elect double majors combining one
of the programs in natural sciences with another science, a humanities discipline, or an engineering field.

**School of Social Sciences**—Rice offers majors in anthropology, economics, mathematical economic analysis, political science, psychology, and sociology. Both the interdepartmental policy studies major and the cognitive sciences majors include science, engineering, and humanities courses, while the managerial studies major incorporates course work in the Schools of Engineering and Management.

### UNDERGRADUATE DEGREE CHART

<table>
<thead>
<tr>
<th>School Department</th>
<th>Undergraduate Degrees Offered</th>
<th>Additional Options or Areas of Concentration (within majors)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>School Of Architecture</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>BA, BArch</td>
<td>BA majors in architecture and in architectural studies</td>
</tr>
<tr>
<td><strong>George R. Brown School of Engineering</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bioengineering</td>
<td>BSB</td>
<td>Areas of concentration in cellular and molecular engineering, biomedical instrumentation and imaging, and biomaterials and biomechanics</td>
</tr>
<tr>
<td>Chemical and Biomolecular Engineering</td>
<td>BA, BSChE</td>
<td>Focus areas in bioengineering, environmental science and engineering, materials science and engineering, and computational engineering</td>
</tr>
<tr>
<td>Civil and Environmental Engineering</td>
<td>BA, BSCE</td>
<td>BA degree in civil engineering and environmental sciences BSCE with focus areas in environmental engineering sciences, hydrology and water resources, structural engineering and mechanics, and urban infrastructure and management</td>
</tr>
<tr>
<td>Computational and Applied Mathematics</td>
<td>BA</td>
<td>Numerical analysis, operations research, optimization, differential equations, and scientific computation</td>
</tr>
<tr>
<td>Computer Science</td>
<td>BA, BSCS</td>
<td>Areas of concentration in architecture, artificial intelligence, computational science, foundations, human-computer interaction, and software systems</td>
</tr>
<tr>
<td>Electrical and Computer Engineering</td>
<td>BA, BSEE</td>
<td>Areas of concentration in bioengineering computer engineering; systems: control, communications, and signal processing; electronic circuits and devices; and quantum electronics and photonics</td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>BA, BSME, BSMS</td>
<td>Mechanical engineering: areas of concentration and Materials Science in biomechanics, computational mechanics, fluid mechanics and thermal science, solid mechanics and materials, and system dynamics and control</td>
</tr>
</tbody>
</table>
### INFORMATION FOR UNDERGRADUATE STUDENTS

#### Statistics
- **BA**
  - Theoretical and applied training orientations; engineering, scientific, and business applications of probability and statistics; joint work in related departments

#### SCHOOL OF HUMANITIES

<table>
<thead>
<tr>
<th>Field</th>
<th>Degree</th>
<th>Major Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art History</td>
<td>BA</td>
<td>History of art</td>
</tr>
<tr>
<td>Classical Studies</td>
<td>BA</td>
<td>Classics, Greek, Latin</td>
</tr>
<tr>
<td>Education</td>
<td>No BA</td>
<td>Leads to secondary teaching certificate in conjunction with BA in major field.</td>
</tr>
<tr>
<td>English</td>
<td>BA</td>
<td></td>
</tr>
<tr>
<td>French Studies</td>
<td>BA</td>
<td></td>
</tr>
<tr>
<td>German and Slavic Studies</td>
<td>BA</td>
<td>German and German cultural studies and Slavic studies (for existing majors)</td>
</tr>
<tr>
<td>Hispanic Studies</td>
<td>BA</td>
<td>Spanish and Latin American literature and Spanish Linguistics</td>
</tr>
<tr>
<td>History</td>
<td>BA</td>
<td>Areas of concentration in exercise science, sports medicine, and sports management</td>
</tr>
<tr>
<td>Kinesiology</td>
<td>BA</td>
<td>Areas of concentration in language, cognitive science, second language acquisition, and language, culture, and society</td>
</tr>
<tr>
<td>Linguistics</td>
<td>BA</td>
<td></td>
</tr>
<tr>
<td>Philosophy</td>
<td>BA</td>
<td>Areas of concentration in religious traditions and/or methodology</td>
</tr>
<tr>
<td>Religious Studies</td>
<td>BA</td>
<td></td>
</tr>
<tr>
<td>Visual Arts</td>
<td>BA, BFA</td>
<td>Studio art and special fifth-year courses for BFA candidates</td>
</tr>
</tbody>
</table>

#### JESSE H. JONES GRADUATE SCHOOL OF MANAGEMENT

<table>
<thead>
<tr>
<th>Field</th>
<th>Degree</th>
<th>Major Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>No undergraduate degree</td>
<td>BA</td>
<td>Four accounting courses open to all under-graduate students</td>
</tr>
</tbody>
</table>

#### SHEPHERD SCHOOL OF MUSIC

<table>
<thead>
<tr>
<th>Field</th>
<th>Degree</th>
<th>Major Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA, BMus</td>
<td>BA</td>
<td>BA in music; BMus in composition, music history, music theory, and performance; joint BMus/MMus with fifth year of study</td>
</tr>
</tbody>
</table>

#### WIESS SCHOOL OF NATURAL SCIENCE

<table>
<thead>
<tr>
<th>Field</th>
<th>Degree</th>
<th>Major Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biochemistry and Cell Biology</td>
<td>BA, BS</td>
<td>Part of an integrated biosciences curriculum</td>
</tr>
<tr>
<td>Chemistry</td>
<td>BA, BS</td>
<td>Chemical physics major offered jointly with the Department of Physics and Astronomy and resulting in a BS degree</td>
</tr>
<tr>
<td>Earth Science</td>
<td>BA, BS</td>
<td>Major tracks in geology, geophysics, geochemistry, and environmental earth science.</td>
</tr>
<tr>
<td>Degree Program</td>
<td>Level</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>-------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Ecology and Evolutionary Biology</td>
<td>BA, BS</td>
<td>Part of an integrated biosciences curriculum</td>
</tr>
<tr>
<td>Mathematics</td>
<td>BA</td>
<td>300-level courses oriented toward problem solving and applications and 400-level and above oriented toward theory and proofs; preparation for graduate studies or high school teaching or other areas; ample opportunity for double-majoring, especially with CAAM, COMP, ELEC, PHYS, or STAT; abundance of courses in analysis, topology, geometry, algebra, etc.</td>
</tr>
<tr>
<td>Physics and Astronomy</td>
<td>BA, BS</td>
<td>Majors in physics with specific options in applied physics, biophysics, computational physics, astrophysics, and astronomy; interdepartmental major in chemical physics</td>
</tr>
</tbody>
</table>

### School of Social Sciences

<table>
<thead>
<tr>
<th>Degree Program</th>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropology</td>
<td>BA</td>
<td>Areas of concentration in archaeology and social/cultural anthropology</td>
</tr>
<tr>
<td>Economics</td>
<td>BA</td>
<td>Majors in economics and in mathematical economic analysis, concentration in business economics</td>
</tr>
<tr>
<td>Political Science</td>
<td>BA</td>
<td>Areas of concentration in American, comparative, and international relations</td>
</tr>
<tr>
<td>Psychology</td>
<td>BA</td>
<td></td>
</tr>
<tr>
<td>Sociology</td>
<td>BA</td>
<td></td>
</tr>
</tbody>
</table>

### Interdepartmental Majors

<table>
<thead>
<tr>
<th>Degree Program</th>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area Majors</td>
<td>BA</td>
<td>Requires approval of two or more departments, the Office of Academic Advising, and the Committee on Undergraduate Curriculum (see page 24)</td>
</tr>
<tr>
<td>Ancient Mediterranean Civilizations</td>
<td>BA</td>
<td>Anthropology, classical studies, Greek, Latin, history, history of art, linguistics, philosophy, and religious studies</td>
</tr>
<tr>
<td>Asian Studies</td>
<td>BA</td>
<td>Anthropology, art, history of art, Hindi, history, humanities, linguistics, Chinese, Japanese, Korean, Sanskrit, political science, and religious studies</td>
</tr>
<tr>
<td>Cognitive Sciences</td>
<td>BA</td>
<td>Computer science, linguistics, neuroscience, philosophy, and psychology</td>
</tr>
<tr>
<td>Education Certification</td>
<td></td>
<td>Leads to secondary teaching certificate in conjunction with BA in major field</td>
</tr>
<tr>
<td>Managerial Studies</td>
<td>BA</td>
<td>Accounting, economics, political science, and statistics</td>
</tr>
<tr>
<td>Medieval Studies</td>
<td>BA</td>
<td>History of art, classics, English, French, German, history, humanities, linguistics, Spanish, music, philosophy, political science, and religious studies</td>
</tr>
<tr>
<td>Policy Studies</td>
<td>BA</td>
<td>Environmental policy, government policy and management, healthcare policy and management, international affairs, law and justice, business policy and management, and urban and social change</td>
</tr>
<tr>
<td>Study of Women and Gender</td>
<td>BA</td>
<td>Anthropology, classics, English, French studies, German, Spanish, history, humanities, economics, political science, linguistics, music, psychology, philosophy, religious studies, and sociology</td>
</tr>
</tbody>
</table>

The above information is based on the provided text and does not include any additional context or formatting.
**Teacher Certification**

Students in the teacher certification program earn Texas state teacher certification at the secondary level. Subjects include art, English, French, German, health science, history, Latin, life science, mathematics, physical education, physical science, Russian, science, social studies, and Spanish. For more information on teacher certification programs at the undergraduate and graduate levels, see Education Certification in the Departments and the Interdisciplinary Programs and Courses of Instruction sections.

**Study Abroad, Exchange, and Work Abroad Programs**

Rice University provides students the opportunity to embark on a cultural learning experience by offering a variety of destinations and program options worldwide. Students can choose to study abroad with one of more than 500 affiliated programs. Some affiliates specialize in intensive language instruction, some in field research opportunities, and others in facilitating direct enrollment at universities around the world. Over a dozen direct exchange programs with internationally renowned universities allow Rice students to act as ambassadors abroad while providing the opportunity for a student from the host institution to study at Rice. Work programs allow students to travel to another country and work during or after their time at Rice. Experiences range from casual jobs to professional internships.

Each year more than 200 undergraduates from across the disciplines study abroad and then apply the transfer credit toward their degrees. The study abroad advisors, in cooperation with the faculty advisors in each department, assist students in identifying the best programs for their individual interests and academic needs. To assure proper enrollment, transfer of credits and financial aid, students planning to study abroad must make their arrangements through the Department of International Programs. This includes arranging prior approval for transfer credit through the relevant academic department(s) and the registrar.

Detailed information on affiliated programs, including application forms, is available from the Department of International Programs (first floor, Ley Student Center) or online at abroad.rice.edu.

**Academic Regulations**

All undergraduate students are subject to the academic regulations of the university. Students are responsible for making certain they meet all departmental and university requirements and academic deadlines. The Committee on Examinations and Standing administers the rules described below. Under unusual or mitigating circumstances, students may submit a written petition requesting special consideration to the committee. Students should address all correspondence to the committee in care of the Office of the Dean of Undergraduates.

**Registration**

Currently enrolled students register in April for the fall semester and in November for the spring semester. Student registration is prioritized based on the hours earned and in progress. Entering students complete their registration during Orientation Week before classes begin in August. Undergraduate students are required to obtain a Registration/Add/Drop PIN in order to register for classes. To receive this PIN students must meet with their divisional or major advisor to discuss their courses for the upcoming semester. The first Registration/Add/Drop PIN for each semester is valid from the registration period through the end of the second week of classes. The second Registration/Add/Drop for each semester is valid from the beginning of the third week of classes through the drop deadline. Registration/Add/Drop PIN validity dates can be found in the Academic Calendar.
To be properly registered, new students must complete, sign, and return a matriculation card. New students may not register or attend classes until they return a properly completed health data form and meet immunization and TB screening requirements. Immunizations required for admission are diphtheria/tetanus, measles, rubella, and mumps, with immunizations against hepatitis B and chicken pox recommended. The Mantoux tuberculin skin test is also required. A late fee of $30 is charged for failure to submit a fully completed health data form by the required date. Each year, the Office of the Registrar publishes the specific deadlines for the semesters of that year.

Unless students elect a special payment plan, they must pay all tuition and fees for the fall semester by the end of the second week in August and for the spring semester by the end of the first week in January. Any student not registered as of the last day to add classes or any student who is in arrears or becomes in arrears after the last day to add classes will be withdrawn from the university by default. Withdrawn students may not be allowed to receive credit for the withdrawn semester.

Appeals to this policy must be addressed to the dean of undergraduates. If readmitted, students must petition the Committee on Examinations and Standing to late add classes and must pay a late registration fee of $110. Additionally, students who are readmitted after being withdrawn for nonpayment will be assessed a $300 readmission fee.

**Drop/Add**—During the first two weeks of the semester, students may add or drop courses without penalty. After the second week of the semester, the following conditions apply for adds and drops:

**Undergraduate students in their first semester at Rice:**

- Must obtain instructor’s permission and have a valid Registration/Add/Drop PIN to add a course in the third or fourth week of classes (a $10 fee will be assessed)
- May not add courses after the fourth week of classes, except with the approval of the Committee on Examinations and Standing (a $50 fee will be assessed)
- May drop courses up to the last day of classes with a valid Registration/Add/Drop PIN (a $10 fee will be assessed for courses dropped between week four and week 14*)

**All other students:**

- Must obtain instructor’s permission and have a valid Registration, Add/Drop PIN to add a course in the third or fourth week of classes (a $10 fee will be assessed)
- May not add courses after the fourth week of classes, except with the approval of the Committee on Examinations and Standing (a $50 fee will be assessed)
- May drop courses after the fourth week up to the end of the tenth week of classes with a valid Registration/Add/Drop PIN required (a $10 fee will be assessed for courses dropped between week four and week ten*)
- May not drop courses after the end of the tenth week of classes, except with the approval of the Committee on Examinations and Standing (a $50 fee will be assessed)

For courses with start and end dates not coinciding with the normal Rice semester calendar, otherwise known as partial term courses, the registrar will consult with the instructor and set:
• The add deadline approximately one-third of the way into the course
• The drop deadline approximately two-thirds of the way into the course
• The add/drop deadline for these partial-term courses will be posted on the Registrar's web site.

Students may not drop courses where the Honor Council has ruled a loss of credit.

*Note: Weeks are defined as academic instruction; thus, midterm recess is not included in this calculation.

Course Load—Students at Rice normally enroll for 15 to 17 semester hours each semester. For most students, this allows them to complete the requirements for graduation in 8 semesters. Students must secure permission in writing from the Office of the Dean of Undergraduates before registering for courses, if they want to:
  • Register for or add to more than 20 credits
  • Register for or drop below 12 credits
  • Register concurrently at another university

No student may receive credit for more than 20 credits in a semester, including courses taken elsewhere, without this prior written approval.

Students should also be aware that the registrar’s office must report a student’s part-time status to various groups, such as loan agencies, scholarship foundations, insurance companies, etc. It is in the student’s best interest to determine if he or she will be affected in any way by part-time status.

Repeated Courses
Students may repeat courses previously taken, but the record of the first attempt (and grade) remains on the transcript, and both grades are included in term and cumulative grade point average calculations. In most cases, if students repeat courses previously passed, credit is awarded only once. For example, a student took HIST 117 and received a grade of B. The student repeated HIST 117 and received a grade of A. Both grades—the A and B—appear on the transcript and are included in his/her GPA; however, he/she only receives three credits toward his/her degree. On the transcript, a repeated course is indicated by one of the following values:

I - Included in GPA and earned hours
A - Included in GPA, but excluded from earned hours

Some Rice University courses may be repeated for credit. They are specifically noted in the Schedule of Courses each semester. If a course may be repeated for credit, each grade appears on the permanent record and is included in the grade point average.

Students may not repeat courses for which they have received either advanced placement or transfer credit. Credit will not be counted twice for students who repeat these types of courses.

Students may not receive credit for cross-listed, equivalent, or graduate/undergraduate equivalency courses taken at the same time. If the course is not repeatable, students may not receive credit for cross-listed, equivalent, or graduate/undergraduate equivalency courses taken in different semesters.

Declaring Departmental Majors
Students declare their major using a Declaration of Major form. The department chair or designee must sign the form acknowledging the declaration. The department will counsel the student about the requirements that must be met to complete the
major and the likelihood the student will be able to meet them. If the department believes a student is not well prepared for success in its major, it may express its reservations on the form. No department or program may, however, refuse to admit an undergraduate as a major, with the exception of the School of Architecture and the Shepherd School of Music or in the case of limitations of resources. In such cases, departments must publish criteria they will use to limit the number of majors together with their major requirements.

Students must declare a major during the spring of their sophomore year. They will not be permitted to register for the fall semester of the junior year without having declared a major. The major declaration deadline is listed in the Academic Calendar for each year.

Students are free to declare a major at any time before this deadline and are always free to change their major by completing the appropriate form. However, such a change may entail one or more additional semesters at the university. Area majors are an exception to this rule and must be declared by the fourth semester before graduation (see Area Majors below).

Once a student declares a major, the title of the major is noted on the student’s transcript, and a faculty adviser in the major department is assigned. Students and their advisers should regularly review progress towards their degrees. Introductory courses taken before formal designation of a major may be counted in fulfilling the major requirements.

For information on the specific requirements for any major, students should consult the departmental listings and seek the advice of the faculty member who is the designated major advisor. It is the responsibility of the student to meet regularly with their advisors to review progress toward their degrees.

Area Majors

Should the traditional departmental majors or programs not meet their exact needs, students may develop an area major closer to their particular interests and career goals. Area majors differ from double majors in that the latter must conform to the requirements of both departments while the former is a single major: It may combine courses from two or more departments, but it maintains its own specific major requirements. Area majors are limited by the available academic resources and must be distinct from other majors offered at Rice. Students who elect to declare an area major may not use it to form a double major, and they must still meet all the other university graduation requirements.

Students are usually the ones to initiate an area major, working it out in conjunction with the Office of Academic Advising and with faculty advisors from each of the departments involved. After designing a comprehensive and substantial course of study and deciding on an appropriate title, all parties sign off on the plan. The chairs of the involved departments and the Committee on the Undergraduate Curriculum determines final approval. At that point, the Office of Academic Advising officially certifies the approved plan to the registrar and goes on to oversee the major on behalf of the faculty advisers. Any change in the proposed requirements requires the approval of both the faculty advisers and the Committee on the Undergraduate Curriculum.

Students may not propose an area major if they are within three semesters of graduation unless the Committee on Examinations and Standing rules that exceptional circumstances warrant this action. Under no circumstances may students declare an area major in their final semester before graduation.
Second Four-Year Bachelor’s Degree

Currently enrolled undergraduates, Rice graduates with a bachelor’s degree, and graduates from other universities with a bachelor’s degree have the option of earning a second four-year bachelor’s degree at Rice in a different discipline. This degree must be a different bachelor’s degree from the one already held; for example, the holder of a BA degree may pursue course work leading to the BS or BMus degree. Rice students should note that they can apply courses they completed at Rice as Class III students to the second degree only with the approval of the major department for that degree. (Class III students are students who already have college degrees and are taking courses for credit outside of a Rice degree program.)

Students Already Enrolled at Rice—To earn a second four-year bachelor’s degree, also known as a dual degree, currently enrolled undergraduates who have not yet completed their first bachelor’s degree must:

• Be accepted for the second major by the major department
• Fulfill all requirements for the second degree
• Complete at least 30 additional semester hours at Rice beyond the hours required for their first degree (these hours are applied to the second degree)

Students seeking admission to this program should complete an application for a second degree with the office of the registrar. The application should include a written statement identifying both proposed majors and specifying an approved course program for each. It should also contain an outline from the chair or undergraduate adviser of each department involved, indicating that the proposed course program satisfies all major degree requirements.

Students with a Bachelor’s Degree from Rice—Rice graduates who wish to earn a different four-year bachelor’s degree must:

• Be accepted for the major by the major department
• Fulfill all requirements for the second degree
• Complete at least 30 additional semester hours at Rice beyond their first bachelor’s degree (these hours are applied to the second degree)
• Attend Rice full time for at least two semesters during the fall and/or spring terms beyond their first bachelor’s degree

The entire undergraduate record for these students continues cumulatively. Those seeking admission to this program should complete an application for a second degree with the office of the registrar. The application should include a written statement specifying the proposed major and course program for the second degree, a supporting letter from the chair of the major department, and an explanation of the student’s reasons for seeking a second degree.

Students with a Bachelor’s Degree from Another School—Other graduates who wish to earn a four-year bachelor’s degree in a different major from Rice must:

• Fulfill all requirements for the second degree
• Complete at least 60 semester hours at Rice (these hours are applied to their Rice degree)
• Attend Rice full time for at least four fall and/or spring semesters

Interested students should apply for admission through the Office of Admission. See page 43 for details on application requirements for Second Degree Students.

Financial Aid and Housing—Students seeking information about financial aid available to participants in the second degree program should contact the Office
of Student Financial Services. Students admitted to the second degree program may request assignment to a college, but they will have lower priority for on-campus housing than students enrolled for a first four-year bachelor’s program. This means that housing will probably not be available.

**Honors Programs**

To enroll in the two-semester **Rice Undergraduate Scholars Program**, students register for HONS 470–471 *Proposal Development and Research*. This program is for juniors and seniors in all disciplines who are considering graduate study and an academic career after graduation. Students enroll in the program plan and execute independent research under the supervision of a sponsoring faculty member (they may apply for funding to cover expenses related to their projects). They meet once a week to discuss each other’s work and to hear a range of presentations on life in academia. Students may apply in the spring of each year. For more information, contact the program’s faculty co-director.

Individual departments may offer undergraduates the option of honors program enrollment. These programs enable students to receive advanced training or to deepen their understanding of a given discipline through an intensive program of independent supervised research. Customary procedure is for students to submit a proposed project to their department’s Undergraduate Committee, which helps them rework it, as needed, into a substantial but feasible proposal. Once accepted, students are assigned a faculty adviser to guide their research. The project concludes in an honors thesis, which the adviser and two readers evaluate, and an oral examination. Departments also use honors programs to formally recognize students who have shown outstanding work through their individual projects. Acceptance into a departmental honors program is at the discretion of the faculty. For specific requirements and procedures, students should contact the individual departments.

**Transfer Credit**

Courses taken at another college or university that are appropriate to the Rice curriculum may be approved for transfer credit toward a Rice undergraduate degree. This includes credit for summer school courses not taken at Rice, though no more than 14 semester hours of transfer credit taken in summer schools other than Rice may be applied to any Rice degree. Students must have taken the course at a U.S. academic institution accredited by a regional accrediting agency or with a study abroad program approved by the Department of International Programs and must have earned a grade of C- or the equivalent or better. Students may not transfer courses taken pass/fail or on a similar basis at other institutions. Courses that meet these requirements will be transferred to Rice by the Office of the Registrar as general credit with the designation TRAN. The Office of the Registrar will distinguish between credits that are upper-level and credits that are not upper level. TRAN credit will count toward the general hours needed for graduation under university requirements and for upper-level credit needed if it is designated by the Office of the Registrar as upper-level credit.

The Office of the Registrar, in conjunction with the academic departments, determines whether courses are appropriate for transfer to Rice as Rice equivalent courses. Individual departments may place additional restrictions on particular courses and/or institutions. Similarly, various majors and degree programs may limit the amount of transfer credit that students may apply to them. If courses transferred to Rice as TRAN credit are subsequently granted Rice equivalent course credit by
the Office of the Registrar and academic department, the TRAN credit is reduced by the number of credit hours of the Rice equivalent course. The Rice equivalent course is then listed on the student's transcript and satisfies the university and major requirements the Rice course satisfies. Courses may be evaluated for transfer directly as Rice equivalent courses, if appropriate, if the student completes the forms required by the Office of the Registrar. Students also may have to obtain departmental approval.

Because of these restrictions, students are strongly advised to seek prior approval from the registrar for courses for which students plan to receive Rice equivalent credit. The Office of the Registrar may require that students secure approval from the major department to receive Rice equivalent credit. Without prior approval, students cannot be certain that credit taken at another institution will be transferred as a Rice equivalent course and therefore count for major distribution or specific university requirements.

If approved, the equivalent Rice course or the general TRAN credit, as the case may be, is entered on the student's record after the Office of the Registrar receives an official transcript from the other college or university. For credits obtained while studying abroad, the Office of the Registrar also must receive the necessary approval paperwork from Rice International Programs before transfer credit may be granted. Students may appeal to Rice International Programs to have credit granted from nonapproved study abroad programs. Such appeals generally should be justified by the curricular needs of the student. In addition, credit from non-U.S. degree-granting universities not part of a study abroad program must be approved by Rice International Programs. Credit is generally determined on a pro rata basis. No grade is entered, and transferred courses have no effect on a student's Rice grade point average.

Students with much transfer credit should be aware of the general graduation requirements (listed on pages 33) that they must complete at least 60 semester hours at Rice, complete more than half of their upper-level degree work and more than half of their upper-level major work at Rice (students also should check their specific departmental major requirements).

**Excused Absences**

Students are expected to be in attendance at all of the classes for which they are registered during the entire course of the academic semester for which they are enrolled. The university understands, however, that students participating in university-sponsored extracurricular activities may, on rare occasions, need to miss a class session during the semester. As a matter of course, students should inform their instructors in advance of absences resulting from participation in university-sponsored activities, and faculty normally will give a reasonable opportunity to make up work missed on such occasions.

During the last week of classes, from Monday through Saturday, university-sponsored events at which student attendance is required may be rescheduled in or outside of Houston as long as no more than one day of classes and one night would be spent out of Houston from the previous Sunday night through Friday afternoon. Events scheduled on Saturday may involve travel on Friday evening and on Sunday. However, no event may be scheduled on Sunday and thereafter until the conclusion of the final examination period. Exceptions may be authorized only by the Committee on Examinations and Standing.

Absences for activities other than university-sponsored events may be negotiated on an informal basis between the student and the faculty member. Alternatively,
absences may be formally excused on a case-by-case basis if a petition explaining
the nature of the event, accompanied by suitable documentation, is submitted to the
Committee on Examinations and Standing at least two weeks before the event.

Final Examinations

Most courses include final examinations, but the decision to give a final exam as a
required part of the course rests with the instructor and the department. All tests
and examinations are conducted under the honor system (see page 8).

Examinations are considered final examinations when they:

- Cover more than the material learned since the last test, or
- Are the only exam in the course, or
- Require comprehensive knowledge of the entire course

Such exams may be given only during the final examination period.

No student should be given an extension of time or opportunities to improve a
grade that are not available to all members of the class, except for verified illness
or justified absence from campus. However, students who have three scheduled
final examinations in two consecutive calendar days may take one of the examina-
tions at another time.

Final examinations are normally three hours long. When instructors, for exceptional
reasons, wish to give a longer examination, they schedule it as a take-home exam;
even then, they may not exceed five hours. The “due date” for all take-home final
exams is the end of the final examination period; in fact, except for scheduled
exams, no course assignments may be due between the last day of classes and the
last day of the final examination period.

Grades (See also Faculty Grading Guidelines on pages 9–10.)

The Pass/Fail Option—Undergraduates may register for courses on a pass/fail
basis. Students:

- May not take more than 1 course as pass/fail per semester for each full year
  of residence (students studying in off-campus programs through Rice are
  considered to be in residence for the purpose of this rule)
- May not take more than 4 courses total as pass/fail (even if they are in a five-
  year degree program)
- May not take more than a total of 14 semester hours total as pass/fail
- May register for only 1 course as pass/fail in a semester
- May not take as pass/fail those courses specifically required for the major or
courses falling within the major department or major area. If students take
such courses pass/fail, the registrar will replace the P with the grade earned
during the final degree audit.
- Must file the proper form for a course to be taken pass/fail no later than the
posted deadline, usually the end of the 10th week of the semester

Students may convert a pass/fail course to a graded course by filing the proper
form with the registrar. The deadline is by the end of the fifth week of the
following semester.

Students should be aware that while a grade of P does not affect their grade point
average, a grade of F is counted as a failure and is included into their GPA. Students
who take a course during the Rice summer session as pass/fail should also be aware
that this counts toward their allowable total of 4 courses.
Grade Symbols—Instructors are required to report a grade for all students (except auditors) whose names appear on the class list. They grade their students using the following conventional symbols: A+, A, A-, B+, B, B-, C+, C, C-, D+, D, D-, F. Students successfully completing a course pass/fail receive a P, and failure to complete the course successfully is indicated by an F. A P does not affect the grade point average. Completion of the English composition requirement is denoted by a grade of E.

Satisfactory/unsatisfactory courses are those that do not use traditional grading procedures. Such courses or labs are designated by the instructor. Students successfully completing a course satisfactory/fail receive an S; failure to complete the course successfully is indicated by an F. While an S does not affect the grade point average, an F does.

Grade Designations—Under certain circumstances, special designations accompany the student’s grade. These designations do not affect the grade point average. The special designations include the following:

INC (“Incomplete”)—Instructors report this designation to the registrar when a student fails to complete a course because of verified illness or other circumstances beyond the student’s control that occur during the semester. Students must complete the work, and instructors must submit a revised grade, by the end of the fifth week of the next semester; otherwise, the Office of the Registrar records the grade originally submitted. Students with an “incomplete” must be certain that tests, papers, and other materials affecting their grade or essential to completing a course requirement are delivered by hand to the appropriate professor or office with ample time for the instructor to grade the documents and submit the final grade to the Office of the Registrar by the deadline. Loss or lateness because of mail service is not an acceptable excuse for failing to meet academic deadlines. A student who receives two or more “incompletes” in a semester may not enroll in the next semester for more than 14 semester hours. Students should also be aware that they may be placed on probation or suspension when the “incomplete” is changed to a grade, either by an instructor or by default.

OT (“Other”)—Instructors report this designation to the Office of the Registrar when a student fails to appear for the final examination after completing all the other work for the course. Students must resolve the matter, and instructors must submit a revised grade, by the end of the first week of the spring semester or by the end of the fourth week after Commencement, whichever is applicable. If the Office of the Registrar does not receive a revised grade, the original grade submitted is recorded. A designation of “Other” is also used if an accusation has been made to the Honor Council. Students should be aware that they may be placed on probation or suspension when the “Other” is changed to a grade, either by an instructor or by default.

W (“Official Withdrawal from University”)—Students who officially withdraw from the university during the last five weeks of the semester will receive a final grade of “W” for each course in which they were enrolled at the time of withdrawal. In addition, the professors of those students who withdraw during that time will submit a grade based on the student’s academic achievement at the time of withdrawal to the Office of the Registrar.

Students who officially withdraw from the university before the last five weeks of the semester will not receive the grade of “W” for any courses in which they were enrolled for that semester. These courses will not be included on the official transcript.
**W (“Late Drop with Approval”)**—A student who receives approval from the Committee on Examinations and Standing to drop a course after the designated drop deadline will receive a grade of “W” for that course. When requests for late drops are denied by the Committee, the registrar records the submitted grade.

If a student drops a class before the designated drop deadline for the semester, the course will not be included on his/her official transcript. Students in their first semester at Rice may drop a class up until the last day of classes, and the course will not be included on the student’s official transcript.

**NG (“No Grade”)**—This designation indicates that the instructor failed to report grades for the enrolled students in their class(es). Instructors are responsible for resolving this situation as quickly as possible.

**NC (“No Credit”)**—This designation signals that no credit was granted for the course. It is only used for people auditing the course.

**Grade Points**—To compute grade point average, letter grades are assigned numeric values as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Grade Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>4.33</td>
</tr>
<tr>
<td>A</td>
<td>4.00</td>
</tr>
<tr>
<td>A-</td>
<td>3.67</td>
</tr>
<tr>
<td>B+</td>
<td>3.33</td>
</tr>
<tr>
<td>B</td>
<td>3.00</td>
</tr>
<tr>
<td>B-</td>
<td>2.67</td>
</tr>
<tr>
<td>C+</td>
<td>2.33</td>
</tr>
<tr>
<td>C</td>
<td>2.00</td>
</tr>
<tr>
<td>C-</td>
<td>1.67</td>
</tr>
<tr>
<td>D+</td>
<td>1.33</td>
</tr>
<tr>
<td>D</td>
<td>1.00</td>
</tr>
<tr>
<td>D-</td>
<td>0.67</td>
</tr>
<tr>
<td>F</td>
<td>0.00</td>
</tr>
</tbody>
</table>

**Grade Point Average Calculation**—For each course, the credit hours attempted and the points for the grade earned are multiplied. The points for each course are added together, and the sum is divided by the total credit hours attempted. Grade point averages are noted each semester on the student’s official transcripts.

**President’s Honor Roll**—This honor roll, published each semester, recognizes outstanding students. To be eligible, students must have earned grades in a total of 12 or more semester hours without receiving a grade of F (Pass/Fail courses may not be counted.) Approximately the top 30 percent of undergraduates receive recognition each semester. While undergraduates enrolled in a four-year bachelor’s degree program are always eligible for the President’s Honor Roll, students enrolled in five-year bachelor’s or master’s programs are eligible only during their first 8 semesters.

**Academic Discipline and Other Disciplinary Matters**

**Academic Probation**—Students are placed on academic probation at the end of any semester if:

- Their grade point average for that semester is less than 1.67, or
- Their cumulative grade point average is less than 1.67 (this requirement is waived if the grade point average for that semester is at least 2.00)

The period of probation extends to the end of the next semester in which the student is enrolled. Students on probation (academic or other disciplinary matters) may not be candidates for, or hold, any elected or appointed office, nor are they allowed to enroll in more than 17 semester hours.
Academic Suspension—Students are suspended from the university at the end of any semester if:

- They earn grades that will place them on academic probation a third time, or
- They have a grade point average for the semester that is less than 1.00 (exceptions are made for students completing their first semester at Rice)

Students readmitted after a period of academic suspension will be suspended again, in any succeeding semester, if:

- Their cumulative grade point average is less than 1.67, or
- Their semester grade point average is less than 2.00

The first suspension period is normally one semester; the second suspension period is at least two semesters. Students are not readmitted after a third suspension.

Students who are going to be suspended for academic performance are notified by the registrar after all final grades have been received and posted to their record. Suspension is lifted the first day of class of the semester when the student returns to the university. When students serve the nominal term of suspension but do not intend to return to Rice, suspension is lifted after permission from the Committee on Examinations and Standing is granted.

For students facing a first or second academic suspension who verify with the registrar and their department that they will complete their degree requirements in one semester if allowed to return, may have their suspension reduced to probation. Students may invoke this ruling only once for a given academic degree plan.

Students who graduate at the end of a semester under academic circumstances that would normally place them on probation or suspension will not have the terms “academic probation” or “suspension” placed on their transcript for that semester.

Disciplinary Probation and Suspension—The assistant dean of student judicial programs may place students on probation or suspension for an honor system violation or for other disciplinary or code of conduct reasons. Students who are on disciplinary suspension, under investigation for disciplinary violations, or who have disciplinary proceedings pending against them (including for an honor system or code of conduct violation) may not receive their degree even if they have met all academic requirements for graduation. Students who are suspended must leave the university within 48 hours of being informed of the dean’s decision, though in cases of unusual hardship, the college master and assistant dean of student judicial programs may extend the deadline up to one week. Any tuition refund will be prorated from the official date of suspension, which is determined by the registrar. While on disciplinary suspension or probation, students may not run for, or hold, any elective or appointed office in any official Rice organization, nor may they serve as Orientation Week advisers once they return to the university following a suspension. Participation in student activities on and off campus and use of Rice facilities, including the student center, the colleges, the playing fields, the gym, and the computer labs, are limited to enrolled students.

Readmission after Suspension—Students seeking readmission after academic suspension should address a letter of petition to the Committee on Examinations and Standing, in care of the Office of the Dean of Undergraduates, which must be received by July 1 for readmission in the fall semester and December 1 for readmission in the spring semester. The petition must include two supporting letters from persons for whom the student has worked during the suspension period as a student or an employee. The petition must also include an academic program approved by the Office of Academic Advising. If the problems causing the previous difficulty appear to be resolved, the student generally is readmitted. Students returning from
academic suspension must maintain regular contact with the Office of Academic Advising throughout the semester. In some instances, the committee may postpone approval of readmission or rule that suspension is permanent.

Students seeking readmission after leaving the university because of disciplinary actions (including honor system or code of conduct actions) or other non-academic action should submit a petition in writing for review by the Assistant Dean of Student Judicial Programs.

**Rice Summer School**—Although it may do so at its discretion, the Office of the Registrar does not normally place on probation or suspension students who perform poorly in the Rice Summer School. Students should be aware, however, that Rice Summer School grades are included in their grade point averages.

**Withdrawals and Leaves**

**Voluntary Withdrawal and Readmission**—Students may withdraw voluntarily from the university at any time during the semester up until the last day of classes. Students wishing to withdraw should inform their college master in person and give written notification to the Office of the Dean of Undergraduates, who notifies other offices of the university as necessary. Students who fail to give notice of withdrawal should expect to receive failing grades.

If they are in good academic standing at the time of their withdrawal, students may be considered for readmission after they submit a written application to the Office of the Dean of Undergraduates. That application must include an academic program approved by the Office of Academic Advising. If students withdraw within five weeks of the last day of classes, they must submit the written application to the dean of undergraduates who, at his discretion, will submit it to the Committee on Examinations and Standing. The petition should include two supporting letters and must also include an academic plan approved by the Office of Academic Advising. If students withdraw within five weeks of the last day of classes, the Committee on Examinations and Standing takes into account their grades (which reflects their performance up to the day of withdrawal) when ruling on their readmission. Students whose grades would have led to suspension had they not withdrawn are treated, for purposes of readmission, as if they had been suspended. If students voluntarily withdraw for major medical or psychological/psychiatric reasons, however, they must meet the readmission conditions for a medical or involuntary withdrawal.

**Involuntary Withdrawal**—The university may insist on a student’s involuntary withdrawal if, in the judgment of the dean of undergraduates, the student:

- Poses a threat to the lives or safety of him/herself or other members of the Rice community
- Has a medical or a psychological condition which is likely to be exacerbated by the academic and/or living environment and the student’s ability to address it effectively
- Has a medical condition or demonstrates behavior that seriously interferes with the education of other members of the Rice community

Students should submit written petitions for readmission after medical or involuntary withdrawal to the Office of the Dean of Undergraduates. This petition must include documentation of treatment provided and students must have an interview with the director of the Rice Counseling Center or Student Health Services or their designees. The petition must also include an academic plan approved by the Office of Academic Advising.
Students who withdraw for psychological reasons within the last five weeks of the fall semester will not be able to petition for readmission for the spring semester immediately following the semester from which they withdrew. They can appeal no later than June 1 to be considered for readmission for the upcoming fall semester.

Unauthorized Withdrawal—Students who leave the university without first obtaining permission to withdraw are considered to have resigned. Although students who resign are not normally considered for readmission, they may submit a petition to the Committee on Examinations and Standing, in care of the Office of the Dean of Undergraduates, for readmission.

Leave of Absence—Students may request a leave of absence from the university by applying in writing to the Office of the Dean of Undergraduates at any time before the first day of classes in the semester for which they are requesting leave. A leave of absence taken after the first day of classes is considered a voluntary withdrawal.

To gain readmission following an approved leave of absence of not more than four semesters, students must notify the Office of the Dean of Undergraduates at least one month before the beginning of the semester that they intend to end their leave. The student must also include an academic plan approved by the Office of Academic Advising. After a leave of more than four semesters, they should apply in writing to the Committee on Examinations and Standing.

Approval of a leave of absence is always contingent on the student's satisfactory completion of course work in the semester preceding the leave. Students performing poorly may have their approved leave converted to suspension.

Military Leave of Absence—Students who require a leave of absence because of being called to active military duty should contact the Office of the Dean of Undergraduates.

Applicable Academic Graduation Requirements

Students enrolled in four- (or five-) year bachelor's programs may decide whether to follow the graduation requirements in effect when they first registered at Rice or those in effect when they graduate. If they graduate more than seven (or eight) years after their initial registration, students must graduate under the regulations in effect at the time of their last readmission or those in effect when they graduate. Also, departments may review courses completed in a major more than seven (or eight) years before the student's anticipated graduation. If the department concludes that a course no longer satisfies the requirements of the major, it is not credited toward the major program, although it remains on the student's record.

Departmental major requirements may vary from year to year during the period between a student's matriculation and graduation. The department may, at its discretion, make any of these variations available to a student for completion of the major requirements. If a new degree program or major is created during the student's time at Rice, the new program will be available to a student as if the program appeared in the General Announcements at the time of matriculation.

Name Changes

To comply with a number of government agencies' reporting requirements, the university must record the name of each student who is a U.S. citizen as the student's name appears on his or her Social Security card. Students who need to change their names on Rice University records and who are U.S. citizens must notify the Office of the Registrar and present a Social Security card, marriage license, divorce decree, or
court order and picture identification when submitting the form. After the change is implemented, the name on the Rice University transcript will read as printed on the supporting document(s).

**Change in Registration**

The academic calendar lists deadlines for dropping or adding a class or section. This schedule is binding for all students. Adding or dropping a course, including transferring from one section to another or changing credit status in a course must be accomplished through completion of the appropriate forms and submission to the Office of the Registrar. Changing a course to/from audit must be done within the first four weeks of the semester. Students can request exceptions to these deadlines by petitioning the Committee on Examinations and Standing.

**Transcript Policies**

Transcripts are issued only at the request of the student. Transcript requests should be made at least three working days before the desired date of issue. A $5 fee per transcript must be received before a transcript is issued.

Transcripts that have been presented for admission or evaluation of credit become a part of the student’s permanent record and are not reissued. Transcripts from other institutions, if needed, must be sent to Rice University directly from the original issuing institution.

**Student Records**

Rice University assures the confidentiality of student educational records in accordance with state and federal laws, including the Family Educational Rights and Privacy Act. Student academic records are maintained primarily in the Office of the Registrar and in the academic department of the student’s major, as well as various other offices around campus. All students have the right to review their records to determine their content and accuracy, to consent to disclosures of personally identifiable information as defined by law, and to file complaints with the Department of Education.

**Release of Student Information from Educational Records**

The disclosure or publication of student information is governed by policies of Rice University and the Family Educational Rights and Privacy Act.

A student’s consent is required for the disclosure or publication of any informational which is a) personally identifiable and b) a part of the educational record. However, certain exceptions to this general rule, both in types of information which can be disclosed and in access to that information, are allowed by the regulations of the Family Educational Rights and Privacy Act. Rice may allow access to personally identifiable information without a student’s prior consent to its faculty or staff who legitimately require this information to perform their instructional, supervisory, advisory, or administrative duties.

In accordance with the law, a student’s prior consent is not required for disclosure of portions of the educational record defined by the institution as directory information. The following directory information may be released by the university:

1. Name, local and permanent address, telephone and mobile number(s), campus email address(es), and instant messenger address(es)
2. Date, place of birth, and gender
3. Classification and major and minor fields of study
4. Participation in officially recognized activities and sports
5. Weight and height of members of athletic teams
6. Dates of attendance, degrees and awards received
7. The most recent previous educational agency or institution attended by the student
8. Photographic image

The information above, designated by the university as directory information, may be released or published by the university without a student’s prior written consent unless exception is made in writing by the student or the parents of a dependent student. Students who prefer to avoid access to or release of directory information must notify the registrar in writing before the end of the second week of fall classes, and the university will withhold access to, or release of, directory information until further written instruction is received.

Students have a right to challenge the accuracy of their educational records and may file written requests to amend these records. The Office of the Registrar should be contacted for further information regarding the procedure to follow for questions or problems. Students have a right to file a complaint with the U.S. Department of Education concerning alleged failures by Rice University to comply with the requirements of FERPA. For more information regarding FERPA, please visit the U.S. Department of Education’s website.

For complete information regarding Rice’s policy on student education records, please contact:

Rice University Registrar
Rice University
Office of the Registrar – MS 57
6100 Main Street
Houston, TX 77005-1892
Email: reg@rice.edu

Veterans Information

At Rice University, the Office of Veterans Affairs is managed through the Office of the Registrar. This office assists all veterans and their dependents who wish to receive VA educational benefits. The office also provides personal counseling, fee deferments, tutorial assistance, and work-study jobs.

Veterans who are planning to attend the university should contact the Office of Veterans Affairs at least two months before the date of entry. Such time is required to expedite the processing of paperwork for educational allowances from the Veterans Administration.

For certification of benefits, the student must be enrolled according to the following schedule:

<table>
<thead>
<tr>
<th>Attendance</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Time</td>
<td>12 Credits</td>
</tr>
<tr>
<td>1/2 Time</td>
<td>6 Credits</td>
</tr>
<tr>
<td>3/4 Time</td>
<td>9 Credits</td>
</tr>
<tr>
<td>Less than 1/2 Time</td>
<td>5 Credits</td>
</tr>
</tbody>
</table>

For rate of monthly payment of educational allowances for veterans and dependents, please contact Office of Veterans Affairs.

For additional informational regarding other Veterans Educational Programs contact the Office of the Registrar at 713-348-4999 or registrar@rice.edu.

Application for Graduation

All students must complete and submit in a timely manner an Application for Graduation Form available in the Office of the Registrar. This form is required for
INFORMATION FOR UNDERGRADUATE STUDENTS

all students who plan to complete their degree requirements at the end of the fall or spring semester.

SUMMER SCHOOL FOR COLLEGE STUDENTS

Rice Summer School for College Students, administered by the School of Continuing Studies, offers courses for credit to Rice students, visiting undergraduates, graduate students, and Class III students (see pages 74–75). Two summer sessions are offered: in May and June–July. See Academic Calendar, pages vii–xii. Taking 6 to 8 semester hours in one session is considered a full load. Interested students should complete the application form found on the summer school website at http://scs.rice.edu/summercredit. Admission is automatic for any Rice undergraduate or graduate student in good standing. Visiting students in good standing should send official transcripts, including spring semester grades and a completed Dean of Students Recommendation form (mailed directly from their universities and colleges to the School of Continuing Studies), as well as the completed application. Acceptance in the Rice Summer School carries no implications for regular admission to Rice.

All applicants, including Rice students, should submit their applications to the Rice Summer School Office with the application fee and a tuition deposit. The remaining tuition is due in full at registration before the beginning of classes. Auditors of summer school courses, who are considered visiting students, must pay full tuition and fees. Limited financial aid in the form of private educational loans is available for Rice students only.

It is essential that students apply by the deadlines listed on the summer school website. Courses that do not generate enrollments sufficient to cover their costs may be canceled. Students may apply after the deadline (but before the start of classes) by paying a late fee.

For more information, including tuition and registration information, students should contact the Rice Summer School Office at 713-348-4803, via e-mail at scsummer@rice.edu, or online at http://scs.rice.edu/summercredit/.

ADMISSION OF NEW STUDENTS

Dating back to the founding of Rice University, our first president, Edgar Odell Lovett, mandated that we aspire to be a world-class university of the highest standing. Dr. Lovett challenged us “to assign no upper limit to our educational endeavor.” He envisioned students and faculty as a community of scholars, their minds exercised by spirited discourse (John Boles, A University So Conceived: A Brief History of Rice, pp 22–23, rev. ed. 1997). Therefore, as an integral part of the University’s mission, we seek a broadly diverse student body where educational diversity increases the intellectual vitality of education, scholarship, service, and communal life at Rice. We seek students, both undergraduate and graduate students, of keen intellect and diverse backgrounds who not only show potential for success at Rice, but who will contribute to the educational environment of those around them. Rice determines which group of applicants, considered individually and collectively, will take fullest advantage of what we have to offer, contribute most to the educational process at Rice, and be most successful in their chosen fields and in society in general. Our evaluation process employs many different means to identify these qualities in applicants. History shows that no single gauge can adequately predict a student’s preparedness for a successful career at Rice. For example, we are cautious in the use of standardized test scores to assess student preparedness and potential. An applicant is considered in competition with all other applicants. In making a deci-
sion to admit or award financial aid, we are careful not to ascribe too much value
to any single metric, such as rank in class, grade-point average, the SAT/ACT or
Graduate Record Exam.

We use a broader perspective that includes such qualitative factors as the overall
strength and competitive ranking of a student’s prior institution, the rigor of his or
her particular course of study, letters of recommendation, essays, responses to ap-
lication questions, and (where required) auditions and portfolios. Taken together
with a student’s academic record and test scores, these additional factors provide
a sound basis to begin assessing the applicant’s potential on all levels.

Beyond indicators of academic competence, we look for other qualities among
applicants such as creativity, motivations, artistic talent, and leadership potential.
We believe that students who possess these attributes in combination with strong
academic potential will contribute to, and benefit from, a more vibrant, diverse
educational atmosphere. Through their contributions and interactions with
others, students will enrich the educational experience of all faculty and students.
These qualities are not revealed in numerical measurements, but are manifest in
the breadth of interests and the balance of activities in their lives.

Rice University strives to create on its campus a rich learning environment in which
all students will meet individuals whose interests, talents, life-experience, beliefs, and
world-views differ significantly from their own. We believe that an educated person
is one who is at home in many different environments, at ease among people from
many different cultures, and willing to test his or her views against those of others.
Moreover, we recognize that in this or any university, learning about the world we
live in is not by any means limited to the structured interaction between faculty
and students in the classroom, but also occurs through informal dialogue between
students outside the classroom.

To encourage our students’ fullest possible exposure to the widest possible set
of experiences, Rice seeks through its admissions policies to bring bright and
promising students to the University from a range of socioeconomic, cultural,
geographic and other backgrounds. We consider an applicant’s race or ethnicity
as a factor in the admission process and believe that racial and ethnic diversity is
an important element of overall educational diversity. Though race or ethnicity is
never the defining factor in an application or admissions decision, we do seek to
enroll students from underrepresented groups in sufficient and meaningful num-
bers as to prevent their isolation and allow their diverse voices to be heard. We
also seek students whose parents did not attend college, as well as students from
families with a well-established history of college-level education. Rice places a
premium on recruitment of students, regardless of their races or ethnicities, who
have distinguished themselves through initiatives that build bridges between differ-
ent cultural, racial and ethnic groups. In so doing, we endeavor to craft a residential
community that fosters creative, inter-cultural interactions among students, a place
where prejudices of all sorts are confronted squarely and dispelled.

In assessing how well an applicant can contribute to enlivening the learning en-
vironment at Rice, we also try to determine the relative challenges that he or she
may have faced. For economically disadvantaged students, this may mean achieving
a high level of scholastic distinction while holding down a job in high school. For
a first generation student, it might mean achieving high standards for academic
success within an environment relatively indifferent to intellectual attainment.
Or it might mean overcoming a disability to excel in sports, music, or forensics.
For students who do not have particular disadvantages, we also look at whether
they chose a more challenging road than the normal path through high school.
This might mean an especially strenuous course of study, a prolonged, in-depth engagement in a school project, or a particularly creative and wide-ranging set of extracurricular activities.

Rice does not view offers of admission as entitlements based on grades and test scores. Our admission process combines an examination of academic ability with a flexible assessment of an applicant's talents, experiences and potential, including potential diversity contributions; it precludes any quick formula for admitting a given applicant or for giving preference to one particular set of qualifications without reference to the class as a whole. Rice is a highly selective institution, and receives many more applications from viable candidates than it has available spaces. An inevitable consequence of Rice’s approach is that some highly accomplished students will not be admitted. However, by selecting a wide range of matriculants of all types, the admissions process seeks to enrich the learning environment at Rice, and thus improve the quality of a Rice education for all students.

Due to the nature of the Rice education, Rice enrolls undergraduate degree candidates on a full-time basis only. First-year applicants, architecture applicants, and international students may apply for the fall semester only. Other applicants may apply to enter either the fall or spring semester.

Applicants are selected on a competitive basis in six academic divisions: architecture, engineering, humanities, music, natural sciences, and social sciences. Candidates should give careful consideration to the category under which they wish to be considered. However, once enrolled, most students are able to move freely among most divisions after consultation with their advisers. Music students must pursue the music program for at least the first year before changing divisions. The Schools of Music and Architecture maintain limited enrollments; all majors are subject to faculty approval.

Those offered admission are expected to complete the remainder of their high school courses with the same superior performance that led to their admission.

**First-Year Applicants**

There are four areas of focus generally used in evaluation of first-year candidates for admission: scholastic record as reflected by the courses chosen and the quality of academic performance, recommendations from high school, the application presentation of personal information and essays, and standardized testing (the new SAT or the ACT with the writing test and two SAT Subject Tests).

**The High School Record**—Students must complete at least 16 college preparatory units as follows:

- English 4
- Laboratory science (e.g., biology, chemistry, physics) 2
- Social studies 2
- A foreign language 2
- Mathematics 3
- Additional credits in any of the categories above 3

The natural science and engineering divisions require trigonometry (pre-calculus) or other advanced mathematics courses and both chemistry and physics. Students may substitute a second year of chemistry or biology for physics.

Students admitted with academic deficiencies will be asked to complete the required work by taking high school or college-level courses during the summer before enrollment at Rice.

**Note:** Because of the admission competition to enter Rice, successful applicants generally have taken 20 or more college preparatory courses, many at the college level. Therefore, only those students who have more than 20 college preparatory courses may have the registrar consider for Rice credit their college courses taken in high school.
Transfer of Coursework Taken During High School—College-level courses taken during high school years may be considered for credit at Rice University on receipt of the following documentation:

1. An official transcript of all college courses sent directly from the college(s) attended. No college-level courses that appear only on the high school transcript will yield credits at Rice.

2. From each college attended, official verification that all courses were taken on the college campus, were taken together with students at that college, were taught by regular members of the college faculty, and were a part of the normal curriculum of the college. This type of documentation is normally obtained from the registrar’s office of each college.

3. Official notification by letter from the high school principal or guidance counselor that the credit earned was not used to meet high school diploma requirements.

Recommendations—Candidates must submit evaluations from their guidance counselor and one teacher. The necessary forms are included in the application.

The Application—The application provides the committee with important information on the student’s background and gives the applicant an opportunity to provide statements on his or her interests, experiences, and goals. Both the Rice application and the Common Application are accepted. The application fee is $50. Students for whom this fee creates a hardship may apply for a waiver. Freshman applicants should provide proof of a fee waiver for the SAT I or ACT test or eligibility for the school lunch program. In any case, a letter from the student’s high school counselor is required. Financial stress created by application fees to other institutions is not considered a valid reason to grant a fee waiver.

Standardized Testing—The new SAT or the ACT with the writing test and two SAT Subject Tests are required for admission. All applicants must submit two SAT Subject Tests in fields related to the candidate’s proposed division of study. These exams are administered by the College Board and the American College Testing Program. Bulletins and test registration forms are available from high school counseling offices. The applicant is responsible for arranging to take the tests, and official score reports must be submitted before the student can be considered for admission. The College Board code for Rice is 6609. The ACT code is 4152.

Personal Interview—Although a personal interview is not a requirement, we recommend an interview for first-year applicants as an excellent opportunity to discuss the applicant’s interests, needs, and questions. On-campus interviews are conducted by the admission staff and a select group of Rice senior students. Also, off-campus interviews are conducted throughout the United States by Rice alumni. Please consult the university websites or the application packet, or call the admission office for details.

Music Audition—Candidates to the Shepherd School of Music must arrange for an audition with a member of the music faculty.

Architecture Portfolio and Interview—Architecture applicants must submit a portfolio. An interview with a faculty member from the School of Architecture is strongly recommended.

Decision Plans

Early Decision Plan—Early Decision is designed for students who have selected Rice as their first choice. Students may initiate applications to other colleges but may make a binding Early Decision application to Rice only.
Early Decision applicants must complete the required standardized testing on or by the November testing dates in the senior year. All other materials should be postmarked by November 1. Admission notices will be mailed by December 15. The committee will admit, defer, or deny Early Decision applicants. Deferred applicants are considered with the Regular Decision pool, and seventh-semester grades and additional standardized test scores will then be considered.

It is important to note that if admitted under Early Decision a candidate must withdraw all other college applications, may not submit any additional applications after accepting the offer, and must accept Rice’s offer of admission by submitting a $100 nonrefundable deposit by January 2. An additional $50 housing deposit is required of those desiring on-campus accommodations.

Those accepted under Early Decision may receive an estimate of need-based financial aid by registering for the College Scholarship Service (CSS) PROFILE by November 1, and sending the PROFILE packet to CSS by November 15. Register for the CSS PROFILE by visiting their website at www.collegeboard.com. Students will complete the PROFILE online. The PROFILE number for Rice is 6609. Note that official financial aid offers may be made only after the Office of Student Financial Services has received the following documents:

- CSS PROFILE, priority date February 15
- Free Application for Federal Student Aid (FAFSA), priority date February 15
- Student and parent 2005 income tax and W-2 forms, priority date March 1

Interim Decision Plan—First-year applicants who complete their standardized testing on or before the December testing dates and who postmark all other materials by December 1 may be considered under the Interim Decision Plan. Decisions are mailed by February 10. The committee will admit, defer, or deny Interim Decision applicants. Deferred applicants are considered with the Regular Decision pool, and seventh-semester grades and additional standardized test scores will then be considered.

Interim Decision applicants who are offered admission must pay a $100 registration deposit by May 1 to reserve a place in the incoming class. After May 1, deposits are not refundable. Those who desire a room on campus must pay an additional $50 deposit.

Regular Decision Plan—Students who apply Regular Decision must postmark their materials by January 10 to receive notification by April 1. Candidates who miss the deadline must do so in full knowledge that they are in a less competitive position. Regular Decision applicants must complete their standardized tests by January.

Regular Decision applicants who are offered admission should submit a $100 registration deposit by May 1 to reserve their places in the incoming class. After May 1, deposits are not refundable. Those who desire a room on campus must pay an additional $50 deposit.

Accelerated Students

Rice University will accept applications from students who are completing high school in less than four years. It is important to note that these students will compete with other candidates who will be completing four years of high school. Therefore, it is the candidate’s responsibility to demonstrate that he or she has exhausted all college preparatory course work at his or her school. Further, because of the residential focus and commitment to student self-governance at Rice, candidates must also demonstrate the maturity and personal development that would allow them
to participate fully and responsibly in campus life. Because of the unique circumstances surrounding the accelerated student, it is strongly recommended that these candidates have an on-campus interview before the application deadline.

**Home-Schooled Applicants**

The Committee on Admission and Financial Aid recognizes that each home-schooled applicant is in a unique educational program. To ensure that our evaluation process is fully informed, each home-schooled applicant is encouraged to provide clear, detailed documentation of his or her curriculum of study, assessment tools, and learning experiences. Rice requires two academic letters of recommendation from all applicants, and at least one of these letters must come from someone who is not related to the applicant.

**Bachelor of Fine Arts**

Students with a bachelor's degree in art from Rice or an equivalent degree from another university may apply to enter the BFA program, which consists of a fifth year of intensive study in the creative arts. In exceptional cases, students with a BA in a major other than art may be admitted. BFA students are considered on a space-available basis. The following items should be received by November 1 for spring term enrollment or May 1 for fall term enrollment.

Required application materials include:

- A $50 application fee
- Official transcripts of all undergraduate and graduate work
- Official final high school transcript
- Two letters of recommendation from professors at the most recent college attended
- Dean of students recommendation from the most recent college attended
- SAT, SAT I, or ACT scores
- The complete application for bachelor of fine arts degree candidates
- Portfolio of artwork

**Bachelor of Fine Arts Portfolio**—Applicants to the Bachelor of Fine Arts program must submit a portfolio to the Department of Visual Arts for faculty review before admission is finalized.

The portfolio of artwork must include 15 slides of original paintings, drawings, sculpture, and prints, and/or film/video. Submission is limited to a binder or folder no larger than 9” x 12” x .5” and photographic transparencies (slides) must be placed in a standard-view sleeve, 20-slide capacity. Slides of artwork should be properly labeled (at the top of the individual slide) with name, title, medium, dimensions, and date(s), and submitted in clear plastic. Do not submit anything you wish returned.

All BFA students attending Rice are full-time students; most classes are held Monday through Friday. Financial aid and campus housing are not available for BFA students.

**Transfer Students**

Students with superior records from two-year or four-year colleges or universities may apply as transfer candidates. Applicants for transfer admission must file the following with the Office of Admission:

- The written application
- Official transcripts of all high school and college work completed to date as well as courses in progress
- Two faculty recommendations
- A recommendation from the dean of students
• SAT, SAT I, or ACT scores
• A $50 application fee

Applications with the appropriate documents must be postmarked by March 15 for fall term admission and October 15 for spring term admission. Notification of the admission decision is mailed by May 15 and December 15, respectively. The criteria used in evaluating transfer applications are similar to those applied to applicants for the first-year class, except that special emphasis is given to performance at the college level. Because of the highly competitive nature of transfer admission, it is recommended that applicants have a minimum 3.20 (4.00 scale) grade point average on all college work. The SAT, SAT I or ACT must be taken by March 15 for fall application and October 15 for spring application. The SAT Subject Tests are not required.

Students for whom the $50 application fee creates a hardship may apply for a waiver. Transfer applicants must send a copy of the Student Aid Report that they receive after completing the Free Application for Federal Student Aid (FAFSA) along with a request for a fee waiver to the Office of Admission. Financial stress created by application fees to other institutions is not considered a valid reason to grant a fee waiver.

Transfer students must be registered in residence at Rice for at least four full semesters during the fall or spring terms and must complete no fewer than 60 semester hours before earning a Rice degree.

**Advanced Placement/International Baccalaureate/Placement Tests**

Students who score a 4 or 5 on the applicable Advanced Placement College Board examinations taken before matriculation at Rice are given university credit for corresponding Rice courses.

Students who complete the International Baccalaureate diploma and receive a score of 6 or 7 on a higher-level IB exam will also receive course credit for the appropriate course.

**Other Students**

*Please note that financial assistance is not available for visiting, Class III, second degree, dual enrollment, or auditing students.*

**Visiting Students**—Students who wish to spend a semester or a year at Rice taking courses for credit to be applied toward their undergraduate degree at another school may apply for admission as visiting students through the Office of Admission. The student’s application should be accompanied by the $50 application fee, an official high school transcript, an official transcript of college work to date, an SAT, SAT I, or ACT score, and recommendations from the dean of students and a faculty member who has taught the student within the past academic year. Visiting student applications should be postmarked by March 15 for the fall semester and October 15 for the spring semester.

Visiting students are assigned membership to one of the residential colleges during their stay and are charged the same fees as other undergraduates. In a few classes where enrollment is limited because of space or other considerations, candidates for Rice degrees have priority over visiting students for registration.

**Visiting students may apply to transfer to Rice only after having left Rice for at least one semester.**

**Class III Students**—Students with Class III standing at Rice have an undergraduate or graduate degree from an accredited college or university and are taking courses at Rice for credit but not in a specific degree program. Students interested in this program should contact the Office of Graduate Studies.

**Second-Degree Students**—An individual who has a bachelor’s degree from an-
other institution and desires another degree in a different area of focus may apply as a second-degree student on a space-available basis. Students may only pursue a second degree that is different from their first degree. The application, a $50 application fee, official transcripts of all undergraduate and graduate work, a final high school transcript, two faculty letters of recommendation and a recommendation from the dean of students from the most recent college attended, and standardized test scores (the SAT, SAT I, or ACT) are required to complete an application file. The deadline for fall semester admission is March 15 and the deadline for spring is October 15.

Second degree applicants with a prior bachelor’s degree from Rice should apply to the registrar. The application should include a written statement specifying the proposed major and course program for the second degree, a supporting letter from the chair of the major department, and an explanation of the student’s reasons for seeking a second degree.

**Dual Enrollment Students**—Accelerated high school juniors and seniors who have taken all the courses in a given discipline available to them in high school may request admission to Rice for the purpose of taking one or more university-level courses as dual enrollment students. The written application, application fee of $50, high school transcript, a teacher and a counselor recommendation from the applicant’s high school, and an SAT, SAT I, or ACT score should be sent to the Office of Admission by June 1 for the fall semester or by December 1 for the spring semester. Home-schooled students must demonstrate that they have exhausted all other community resources before applying for dual enrollment at Rice. All dual enrollment students are limited to two courses per semester at Rice.

Tuition for new students is $972 per semester hour plus a $115 registration fee, the total not to exceed $11,655. Tuition for returning dual enrollment students would be the rate (plus inflation) at which they first took dual enrollment courses at Rice. These charges are for the 2005–2006 school year and are subject to change in subsequent years. Financial assistance is not available for this program.

**Auditors**—Any interested person, including currently enrolled students, may audit one or more courses at Rice by securing permission of the instructor and by registering as an auditor with the registrar. The university grants no academic credit for such work. The audited course will appear on the student’s transcript with the designation AUD. Currently enrolled students may audit courses without charge. Rice alumni are charged a fee of $285 per course per semester. All others are charged $570 per course per semester for the privilege of auditing. Request to audit a class or to change from audit to credit or vice versa must be done by the end of the fourth week of the semester.

### TUITION, FEES, AND EXPENSES

Charges for tuition, fees, and room and board are billed to students each semester. Students may pay the charges in full by the due date or in installments over the course of the semester. The fall semester due date is August 1 for freshmen and mid-August for all others, and the spring semester due date is the first week of January. The following costs apply to undergraduates in the 2005–2006 school year:

<table>
<thead>
<tr>
<th>Tuition</th>
<th>Annual</th>
<th>Semester</th>
<th>Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entering first-year and transfer students</td>
<td>$23,310</td>
<td>$11,655</td>
<td>$972</td>
</tr>
<tr>
<td>Students matriculating in 2004–2005</td>
<td>21,830</td>
<td>10,915</td>
<td>910</td>
</tr>
<tr>
<td>Students matriculating in 2003–2004&lt;sup&gt;1&lt;/sup&gt;</td>
<td>20,310</td>
<td>10,155</td>
<td>847</td>
</tr>
<tr>
<td>Students matriculating in 2002–2003&lt;sup&gt;1&lt;/sup&gt;</td>
<td>19,360</td>
<td>9,680</td>
<td>807</td>
</tr>
<tr>
<td>Students matriculating in 2001–2002&lt;sup&gt;1&lt;/sup&gt;</td>
<td>18,610</td>
<td>9,305</td>
<td>776</td>
</tr>
<tr>
<td>Students matriculating in 2000–2001&lt;sup&gt;2&lt;/sup&gt;</td>
<td>18,510</td>
<td>9,255</td>
<td>772</td>
</tr>
</tbody>
</table>

<sup>1</sup> Tuition indexed for five years from year of matriculation
INFORMATION FOR UNDERGRADUATE STUDENTS

2 Tuition indexed for six years from year of matriculation
3 By special permission only

Required Fees

<table>
<thead>
<tr>
<th></th>
<th>Fall</th>
<th>Spring</th>
<th>Annual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student activities⁴</td>
<td>$43.15</td>
<td>$43.15</td>
<td></td>
</tr>
<tr>
<td>Health services</td>
<td>175.00</td>
<td></td>
<td>175.00</td>
</tr>
<tr>
<td><strong>Total fees</strong></td>
<td><strong>$218.15</strong></td>
<td><strong>$218.15</strong></td>
<td><strong>$436.30</strong></td>
</tr>
</tbody>
</table>

⁴ Fifth-year students in professional degree programs and students working toward a second bachelor's degree pay a reduced student activities fee of $6.85 per semester, which covers the Student Association, Student Organizations Activity, University Court, and Honor Council portions of the activity fee.

Orientation Week Fees

<table>
<thead>
<tr>
<th>Orientation Week Fees</th>
<th>Freshmen</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oweek Room and Board</td>
<td>$230.00</td>
<td>$2,850.00</td>
<td></td>
</tr>
<tr>
<td>Oweek Activity Fee</td>
<td>$190.00</td>
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</tbody>
</table>

Room and Board

<table>
<thead>
<tr>
<th>Room and Board</th>
<th>Annual</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room</td>
<td>$5,700.00</td>
<td>$2,850.00</td>
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<tr>
<td>Board</td>
<td>3,280.00</td>
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</tr>
<tr>
<td>Telecommunication</td>
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<td>71.00</td>
</tr>
<tr>
<td>Off Campus Board</td>
<td>1,380.00</td>
<td>690.00</td>
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</tbody>
</table>

Any undergraduate who withdraws or takes an approved leave of absence and then gains readmission to the university pays the tuition applicable at their matriculation, plus annual Consumer Price Index increases for a period not to exceed six years. Starting with fall 2001 matriculants, the index period is not to exceed five years. After five/six years, students pay the tuition applicable to the entering class. Indexing does not apply to classes entering after spring 2003.

Refund of Tuition and Fees

Students who withdraw during the first two weeks of the semester are not charged tuition or fees for that semester. Students who withdraw during the third week must pay 30 percent of the semester's tuition, receiving a 70 percent refund. The amount of the refund drops by 10 percent at the beginning of each successive week that passes before withdrawal until the ninth week, after which no refund is made. Federal regulations require a refund calculation for all students receiving Title IV funds. The length of time during which a refund must be calculated is up to 60 percent of the payment period (semester). If a student withdraws on or before the 60 percent point in time, a portion of the Title IV funds awarded to a student (Pell Grant, Federal SEOG, Federal Perkins Loan, Federal Subsidized and Unsubsidized loans, and Federal PLUS Loans, and the Texas LEAP Grant) must be returned, according to the provisions of the Higher Education Act as amended. The calculation of the return of these funds may result in the student owing a balance to the university and/or the Department of Education.

For students withdrawing after the second week of classes in a semester, fees or special charges (see page 46) are not refunded. Similarly, students withdrawing or taking leaves of absence in the spring semester do not receive a partial refund of fees paid for the full year. Students withdrawing at any time forfeit the $100 enrollment deposit they paid as incoming students.

Students who receive approval to enroll with a course load of fewer than 12 hours and do so within the first two weeks of the semester will be charged at the per hour rate plus a part-time registration fee. There are no refunds for part-time enrollment after the first two weeks of the semester.
Students unable to resolve with the cashier’s office any request for special consideration in connection with waivers, refunds, or adjusted payments on tuition, fees, and other charges should forward their appeals to the Dean of Undergraduates. Exceptions are granted by the dean of undergraduates only under extraordinary circumstances.

**Living Expenses**

Residence fees cover dining hall costs and residence maintenance. They are established each year as needs dictate. For 2005–2006, the annual room and board charge for residence in a residential college is $8,980. This charge includes the room and all the meals eaten during the year.

**Housing**—About 77 percent of Rice undergraduates live in the on-campus residential colleges. Information about the residential colleges and room application forms accompany the notice of admission sent to each new undergraduate. Room reservations cannot be made before notification of admission. Further information on housing in the residential colleges is available from the Office of Dean of Undergraduates, and information on off-campus housing is available from the Office of Academic Advising.

When they receive their residential college room assignments for the academic year to follow, students must sign a housing agreement. To reserve their space, current students must sign a housing agreement by the date established in their respective colleges but no later than April 15. New students must make a $50 deposit before May 1. These nonrefundable deposits are applied to the following semester’s room and board charges.

**Board**—Meals are served cafeteria-style and are all-you-care-to-eat. The colleges provide three meals per day Monday through Friday, breakfast and lunch on Saturday, and lunch and dinner on Sunday. Meals are not served during the Thanksgiving holiday, at the mid-year break, over the fall and spring mid-term recesses, and during spring holidays. More information is available from the Residential Dining web site (http://food.rice.edu/index.html).

**Payments and Refunds**—Students may pay their residence fee in installments. The exact amounts and due dates appear in the Residential Housing Agreement. Students moving out of the college for any reason receive a refund (or a credit) of the reduced balance of room and board charges but must still pay a termination processing fee. Possible exceptions such as academic suspension, Rice-sponsored study abroad, and family emergencies are treated on a case-by-case basis.

**Special Charges**

The following charges are separate from the regular fees. For charges because of late registration or course changes made after the deadlines, see Registration (pages 21–24).

<table>
<thead>
<tr>
<th>Charge</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preceptorship per semester</td>
<td>$210</td>
</tr>
<tr>
<td>Internship per semester</td>
<td>$210</td>
</tr>
<tr>
<td>Study abroad fee—Fall 2005</td>
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<tr>
<td>Study abroad fee—Spring 2006</td>
<td>$250</td>
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<tr>
<td>Study abroad fee—Summer 2006</td>
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<td>Late payment penalty</td>
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<tr>
<td>Undergraduate application fee</td>
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<tr>
<td>Part-time registration fee</td>
<td>$115</td>
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<td>Orientation Week room and board (coordinators)</td>
<td>$170</td>
</tr>
<tr>
<td>Late registration fee</td>
<td>$110</td>
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</tbody>
</table>
INFORMATION FOR UNDERGRADUATE STUDENTS

Failure to register fee .................................................. 60
Deferred payment plan late fee ......................................... 35
College withdrawal: suspension .......................................... 100
College withdrawal: breaking of lease ............................... 700
Diploma fee: sheepskin .................................................. 105
Diploma fee: parchment .................................................. 35
Diploma fee: facsimile .................................................... 15
Diploma mailing fee: domestic .......................................... 25
Diploma mailing fee: air mail ............................................ 30
Transcript fee ............................................................. 5
Replacement ID ........................................................... 10
Readmission fee after withdrawal for nonpayment .............. 300

HEALTH INSURANCE
All Rice students must have health insurance. Students may purchase insurance for the 2005–2006 school year through the university program developed for Rice students at a yearly premium of $1,936. Coverage is effective from 12:01 A.M., August 15, 2005, until 12:01 A.M., August 15, 2006. Dependent coverage is also available. A description of the policy, application form, and waiver form can be found on the Web at http://studenthealthinsurance.rice.edu. Students should submit either the application or waiver by August 15 each year.

EDUCATION CERTIFICATION PROGRAM FEES
Students enrolling in the student teaching apprenticeship or internship plans must pay a $210 registration fee for each semester. An additional $25 fee (paid to the School of Continuing Studies) is due for each summer school session

DELINQUENT ACCOUNTS
Students in arrears on their financial obligation to Rice as of the last day to add courses for any semester may be withdrawn. The university will not issue certificates of attendance, diplomas, or transcripts at any time for a student whose account is in arrears.

Students who have not made satisfactory arrangements with the cashier for payment of current charges or who have moved on campus without a proper room contract may be withdrawn from the university.

TRANSCRIPTS
Transcripts are issued on written request to the Office of the Registrar. The registrar does not issue transcripts without the consent of the individual. The charge of $5 for each copy is payable in advance. Those requesting transcripts by mail should include payment with the request.

FINANCIAL AID
The financial aid programs at Rice provide assistance to meet demonstrated need for university attendance for all admitted students. Through grants, endowments, low-interest loans, campus work opportunities, or a combination of these programs, Rice makes every effort to provide students and families assistance to meet their educational expenses. The financial aid program receives funding from many sources. Rice uses contributions from alumni and friends to establish and maintain scholarships and loan funds. Federal and state grant, work, and loan programs also provide funds. Awards are based primarily on financial need and a computed Expected Family Contribution (EFC), although there are also attractive loan opportunities for students and families who demonstrate no need.
The university determines need for first-time students by having them complete the College Scholarship Service (CSS) PROFILE. Students register for CSS PROFILE by visiting their website at www.collegeboard.com. Students will complete the PROFILE online. The PROFILE number for Rice is 6609. First-time students also complete the Free Application for Federal Student Aid (FAFSA) and submit copies of student and parent income tax and W-2 forms. The FAFSA school code for Rice is 003604.

The university determines need for continuing students by having them complete the FAFSA and the PROFILE; continuing students also submit student and parent income tax and W-2 forms.

“Need” is the amount required to meet the difference between each student’s basic educational expenses and his or her family’s resources. Parents are expected to contribute according to their financial means, taking into account income, assets, home equity, number of dependents, and other relevant factors. Students are expected to contribute as well from their own assets and earnings, including appropriate borrowing against future earnings.

The brochure *Financing Your Education* explains the assistance programs in detail. Copies are available from the Office of Admission.

**NEED-BASED APPLICATION PROCESS**

Rice University is a need-blind school. Applicants are admitted to the university regardless of their family’s ability to pay for college. Rice will meet 100% of demonstrated financial need as determined by university calculations.

Rice considers applicants for all appropriate assistance administered by the university, including grants, scholarships, loans, and work. Students receive notification of an offer after their financial aid files are complete. Student Financial Services provides financial assistance only for coursework sponsored through Rice University.

To apply for financial assistance, first time students (including Early Decision students) must submit the following:

- CSS PROFILE, priority date February 15
- Free Application for Federal Student Aid (FAFSA), priority date February 15
- Student and parent income tax and W-2 forms, priority date March 1

**Continuing students must submit the following:**

- FAFSA, priority date April 15
- CSS Profile, priority date April 15
- Student and parent income tax and W-2 forms, priority date April 15

**DECISION**

Financial aid offers are made annually. Award amounts are specified in the Financial Aid Offer Letter. Because financial circumstances change from year to year, Rice conducts an annual review of need and offers aid accordingly. For this reason, continuing students must complete CSS Profile and file the FAFSA every year that they seek assistance.

The university, from time to time, may adjust its methods of computing financial need or its policies regarding the types of financial assistance that it offers so as to meet the financial needs of the largest possible number of students. Therefore, the amount and type of financial aid may change from year to year, even when the student’s financial situation appears to remain relatively stable.

**TYPES OF FINANCIAL AID AND ASSISTANCE**

**Need-Based Scholarships/Grants**—Various need-based scholarships and grants
are awarded to assist students with demonstrated need.

**Merit Scholarships**—Merit Scholarships are offered through the Office of Admissions to incoming students. Merit scholarships may only be used for coursework sponsored by Rice University. Should a student with a merit award graduate early, unexpended merit funds will not be granted to the student.

**Student Loan Funds**—To assist students and parents with educational financing, the Office of Student Financial Services participates in the following programs:

- **Stafford Student Loans**—These are low-interest loans made to students attending school on at least a half-time basis. Subsidized Stafford loans require need-based financial aid eligibility, but unsubsidized Stafford loans are available to all students.
- **Parent Loans for Undergraduate Students (PLUS loan)**—The PLUS loan is a low-interest loan to parents or legal guardians of dependent undergraduate students. Eligibility is not based on demonstrated financial need.
- **Federal Perkins Loan Program**—These are low-interest loans made to students attending school on at least a half-time basis and who demonstrate high need.
- **Private Education Loans**—These nonfederal loans are available to students attending school on at least a half-time basis. Eligibility is not based on financial need. These are credit-based loans and may require a co-signer.

A few endowments for student loans have been established at Rice primarily as memorial tributes. These funds exist separately from the normal financial aid program. Rice uses them to make small emergency loans to students experiencing unexpected financial problems or showing additional need beyond regular eligibility.

All requests for these loans must be submitted to the Office of Student Financial Services.

**Student Employment Programs**—Opportunities for employment are available to students, either on or off campus, during the academic year. Students are eligible to work under the Federal Work-Study Program or the Rice University Work Program. Students interested in employment should access the Student Financial Services webpage at [http://www.ruf.rice.edu/~fina/employment.htm](http://www.ruf.rice.edu/~fina/employment.htm).

**Deferred Payment Plan**—Rice offers a deferred payment plan to enable families to finance students’ educational costs. This plan divides each semester’s charge over four installments. Applications and details are available to eligible students each semester at the time of billing. Students arrange for deferred payment through the Cashier’s Office.

**Summer Aid**—Students who have not exceeded 10 semesters at Rice are eligible to apply for summer aid. The only aid available during the summer session are private educational loans.

**Vocational Rehabilitation**

The Texas Rehabilitation Commission (TRC) provides assistance in paying tuition and nonrefundable fees for students who have certain disabling conditions. Once a TRC counselor approves their vocational objectives, students affected by orthopedic deformities, emotional disorders, diabetes, epilepsy, heart problems, and other disabling conditions are eligible for assistance. The TRC offers a range of services to help handicapped students become employable. Interested students should apply to the Texas Rehabilitation Commission.

Students with visual handicaps should contact the Texas State Commission for the Blind.
INFORMATION FOR UNDERGRADUATE STUDENTS

Financial Aid Eligibility

Undergraduate students are eligible to apply for need-based Rice sponsored and federal/state/private aid during the first 8 semesters at Rice; for transfer students the number of semesters is prorated based on the number of hours transferred. If a student is enrolled beyond eight semesters, the student may apply for federal/state/private aid for an additional two semesters. (Architecture students may apply for Rice sponsored aid for two semesters following their preceptorship to complete the Architecture degree.) If a student attends part-time during a semester or withdraws during a term, the semester is counted towards the number of semesters aid is available.

Loan Counseling

Students who are recipients of federal student loans will be required to complete online loan entrance counseling before funds will be credited to student accounts. Students also will be required to complete online exit counseling at the completion of a program of study at Rice. Failure to complete online loan exit counseling will result in a transcript hold.

Satisfactory Academic Progress

The Higher Education Act of 1965, as amended by Congress, mandates that institutions of higher education require minimum standards of “satisfactory academic progress” for students to be eligible to receive financial aid.

To remain in good standing, an undergraduate student must meet the following qualitative and quantitative standards:

Qualitative—A student must earn a minimum term GPA of 1.67 for each term enrolled at Rice University.

Quantitative—By the end of each academic year, a student must have earned a minimum of 24 credits. If a student were enrolled for only one term, the student must have earned a minimum of 12 credits.

If a student fails to meet either standard, the next term the student is enrolled the student will be granted aid on a probationary status. During a term in which a student is on financial aid probation, the student must complete a minimum of 12 credits and must earn a term GPA of 1.67 to be considered in good standing and to be eligible to receive aid for the next term enrolled. If a student on financial aid probation does not complete these requirements, then the student’s financial aid eligibility is terminated.

Appeal—A student whose aid eligibility has been terminated after one semester of financial aid probation may submit an appeal in writing to Student Financial Services for a second term of financial aid probation. If during that second probation term the student fails to complete 12 credits and earn a term GPA of 1.67, the student’s aid eligibility is terminated, and the student may not appeal for another probationary aid term. In order to regain aid eligibility, the student must complete 12 credits in one term with a 1.67 term GPA (or 2.0 GPA at a school without weighted grades) using resources other than aid offered through Rice University to pay affiliated charges.

Financial Aid After Suspension—Students who have been suspended by the University for academic reasons need to be aware that if they are readmitted by the Committee on Examinations and Standing they may not be eligible for financial aid based on their prior academic performance. Students who are petitioning for readmission are advised to contact Student Financial Services to determine their aid eligibility.
INFORMATION FOR UNDERGRADUATE STUDENTS

RETURN OF TITLE IV FUNDS

Students who receive federal funds as part of their aid packages and do not complete the academic term may be subject to returning a portion of those funds. Contact Student Financial Services for information about “Return of Title IV Funds” policies and procedures.

HONOR SOCIETIES

Honor societies at Rice include the following:

- **Phi Lambda Upsilon**—national honorary chemical society promoting high scholarship and original investigation in all branches of pure and applied chemistry (Rice chapter: 1926)
- **Phi Beta Kappa**—founded in 1776 at the College of William and Mary to recognize intellectual achievement and the love of learning among students in the liberal arts and sciences (Rice chapter: March 1, 1929)
- **Pi Delta Phi**—organized to interest French students in competing for high standing in scholarship (Theta chapter at Rice: May 1930)
- **Society of Sigma Xi**—for the promotion of research in science (Beta of Texas chapter at Rice: March 23, 1938)
- **Tau Beta Pi Association**—organized to interest engineering students in competing for high standing in scholarship (Gamma of Texas chapter at Rice: December 18, 1940)
- **Delta Phi Alpha**—to promote an interest in the German language and literature (Gamma Xi chapter at Rice: April 1949)
- **Sigma Delta Pi**—to promote an interest in the Spanish language and literature (Rice chapter: May 14, 1953)
- **Tau Sigma Delta**—national honor society in architecture and applied arts (Rice chapter at Rice: May 7, 1961)
- **Eta Kappa Nu**—founded in 1904 at the University of Illinois for electrical engineering students, to stimulate and reward scholarship as well as assist and encourage its members to grow professionally throughout their lives (Rice chapter: January 1981)
- **Omicron Delta Epsilon**—to promote study in economics (Rice chapter: 1981)
- **Psi Chi**—founded in 1929 at Yale University to encourage, stimulate, and maintain excellence in scholarship and to advance the science of psychology (Rice chapter: April 23, 1990)
- **Chi Epsilon**—the Civil Engineering Honor Society. It serves to recognize students of high scholarship, character, practicality, and sociability. Students are inducted into the society once or twice annually, and are selected from the pool of upper division level civil engineering students. (Rice chapter: 1995)

UNDERGRADUATE STUDENT LIFE

RESIDENTIAL COLLEGES

All undergraduate students at Rice, whether they live on campus or not, are members of one of nine residential colleges. All colleges are coeducational.

Each college has faculty masters who live in a house next to the college. Reporting to the vice president for student affairs, the masters have overall responsibility for
all aspects of student life in the college, especially for encouraging broad cultural and intellectual interests and for promoting self-discipline and effective self-government within the college. Upon agreement, the students and masters invite other members of the Rice faculty to become resident and nonresident associates of the college. Faculty associates act as advisers to the students and participate in the various activities of the college. Colleges also have nonfaculty university associates and community associates drawn from various professions in the Houston area.

Each college exists as a self-governing group of students. The elected officers and representatives are responsible to the masters and to the college membership for:

- Directing the college’s cultural, social, and athletic activities
- Expenditure of college funds
- Maintaining order in the college

While uniformity among the colleges has never been sought and each college has developed its own particular interests and character, all seek to foster fellowship among their members and a mature sense of honor, responsibility, and sound judgment.

**College Assignment**—Each undergraduate, upon acceptance by the university, is designated a member of one of the colleges. Two students entering Rice for the first time may request assignment to the same college, but they may not designate which college. New students may also request membership in the same college as a close relative. Except for these cases, students have no individual choice of college.

**Room and Board**—College buildings include a dining hall and public rooms, which are available to both resident and nonresident members, and living quarters for approximately 215 students from all classes and all academic disciplines.

At present, Rice has room in its on-campus residential colleges for about 75 percent of its undergraduate students. Although most of the students who want to live in the colleges can be accommodated, demand usually exceeds the available number of rooms. The university makes every effort to provide housing in the colleges for all incoming first-year students who wish to live on campus, but space cannot be guaranteed. Continuing students draw for rooms according to the priority system established in each college. No student is required to live on campus; however, those members of the colleges who live off campus are encouraged to eat in their colleges and to participate in college activities.

The College Food Service provides à la carte meals, with the exception of prepaid dinners. Its other services include:

- Assistance with special diets prescribed by a physician
- Sack lunches for students who must miss a meal due to a job conflict
- Sick trays for students when requested by the Student Health Service
- Alternate menu entrées, whenever possible, to accommodate students’ religious practices

For more information on room and board, see page 45.

**College Courses.** One of the colleges’ important activities is their sponsorship of courses and workshops open to all students. By expanding course offerings outside the traditional departments, college courses promote the academic involvement of the colleges while introducing students to interdisciplinary topics of particular interest.

Students propose college courses during the semester before they are offered. Once approved by the masters and faculty associates of the college and by the dean of
undergraduates and the provost, these college courses are offered for academic credit on the same basis as departmental courses. The registrar provides a list of college courses each semester during preliminary registration.

**Student Government**

All undergraduates are members of the Rice Student Association, which is governed through the Student Senate. The senate includes the president, two vice presidents, the secretary, the treasurer, the nine college presidents, and nine college senators. Alleged violations of university or college rules are handled in accordance with the Code of Student Conduct. In most cases, original jurisdiction belongs to student courts. Students may appeal verdicts to the college masters or the assistant dean for student judicial programs, as appropriate with a final appeal to the vice president for student affairs. The student-staffed Honor Council conducts hearings and trials for alleged offenses against the honor system (see page 8). Rice retains ultimate authority in all matters of discipline and over all actions that affect its educational function or the safety and well-being of members of the university community.

**Award Presentations**—The Rice Student Association presents two coveted awards annually, one to a student and one to a faculty or staff member. The Rice Service Award, a memorial to Hugh Scott Cameron, first dean of students at Rice, is awarded to currently enrolled or former members of the association who have rendered distinguished service to the student body. The Mentor Recognition Award recognizes extraordinary service to the student body by a current member of the faculty or staff. A committee of faculty and students appointed by the association makes the selections.

**Office of Student Activities**

The Office of Student Activities, located in the Rice Memorial Center cloisters, oversees the activities of various campuswide student organizations. It also handles student requests for facilities and party permits, and it coordinates leadership development programs, including the annual leadership retreat and symposium.

Principal student organizations include the following:

- Rice Student Association, the student governing body
- Rice Program Council, which sponsors various events of current interest to the student body as well as social functions
- KTRU, the student-run radio station, operating 24 hours, seven days a week, on 91.7 FM
- Student publications (e.g., *Rice Thresher*, the student newspaper; *Campanile*, the yearbook; *The Rice Undergraduate: The Annual Academic Review*, a collection of peer-reviewed student papers; and *University Blue*, a literary and visual arts publication)

A large number of student organizations address special student interests, such as the Black Student Association, the Hispanic Association for Cultural Education at Rice, the Chinese Student Association, Rice Young Democrats, and Rice Republicans. There also are numerous clubs for such sports as sailing, rugby, lacrosse, volleyball, and soccer. Other special-interest groups include a premed society, forensic society, juggling club, and vegetarian club.

Many organizations are associated with special academic and professional disciplines, such as foreign language clubs, honor societies, and student affiliates of the American Chemical Society, the American Society of Civil Engineers, and the American Society of Mechanical Engineers.
The Rice Players, an extracurricular theater group of Rice students, faculty, and staff, present at least four productions each year and welcome participation by anyone interested in any aspect of theater production or management.

Rice students also maintain affiliations with a number of religious organizations. These include, but are not limited to, the Baptist Student Union, Canterbury Association, Catholic Student Association, Christian Science Organization, Hillel Society, Lutheran Student Association, Intervarsity Christian Fellowship, and the Wesley Foundation. Many of these clubs are assisted by local clergy who form the Joint Campus Ministry.

The Office of Student Organizations on the second floor of the Ley Student Center houses mailboxes for all student organizations. There is a student organization work space in the basement of the Rice Memorial Center that has office space, storage, and computers for student organization use.

**Community Involvement Center/Rice Student Volunteer Program**

Housed in the cloisters of the Rice Memorial Center, the Community Involvement Center works to develop a culture of service within the university by functioning as an advocate for community service, social responsibility, and an increased awareness of social and community issues. The center acts as a clearinghouse for resources and referrals involving local, national, and international community agencies and service opportunities. By making educational programs and information available, the center fosters a lifelong commitment to service among students, faculty, and staff. It also organizes alternative semester break service trips, volunteer fairs, beach cleanups, and other activities. The 10 student service organizations supported by the Community Involvement Center include Rice Habitat for Humanity, youth mentoring and tutoring programs, tutoring in English as a second language, Best Buddies, and the Rice Student Volunteer Program.

By heightening student awareness of community needs and generally raising social consciousness, the Rice Student Volunteer Program (RSVP) has organized volunteer projects for Rice students, faculty, and staff since 1985. The largest event of each semester is Outreach Day, a Saturday when approximately 500 students volunteer with more than 30 nonprofit agencies throughout the Houston area, learning how to take thoughtful action to build a stronger, more just community. With an office in the cloisters of the Rice Memorial Center, RSVP invites each student’s involvement as an officer, a college representative, a committee member, a project organizer, or an interested participant in any RSVP event.

**Intercollegiate Speech and Debate**

Consistently ranked in the top 10 nationally, the George R. Brown Forensic Society sponsors competition in the categories of Individual Events, Lincoln–Douglas, and Parliamentary Debate. The society provides students with the chance to hone their public speaking skills and to qualify for competition both at the American Forensic Association National Individual Events Tournament and at the National Parliamentary Debate Championships. Recognizing the importance of developing strong communication skills, the society has an open admissions policy, inviting students with little or no previous experience as well as those with extensive high school backgrounds to become members of one of the most successful teams at Rice. For more information on speech and debate, please go to http://www.ruf.rice.edu/~forensic/eventinfo/.
Information for Graduate Students
INTRODUCTION

Since Rice opened in 1912, the university has recognized the importance of graduate study and research as a principal means of advancing knowledge. The first Doctor of Philosophy degree was awarded in 1918 in mathematics. Since that time, the graduate area has expanded to encompass the schools of architecture, engineering, humanities, management, music, natural sciences, and social sciences, as well as interdepartmental areas. The graduate program has steadily increased over time; Rice now enrolls approximately 1,900 graduate students and offers advanced degrees in 29 fields of study.

Graduate programs lead to either research or professional degrees. Research programs generally require the completion of a publishable thesis that represents an original and significant contribution to the particular field of study. Research degrees include the Doctor of Philosophy (PhD), Doctor of Architecture (DArch), Master of Arts (MA), and Master of Science (MS).

Professional programs provide advanced course work in several disciplines but do not generally include independent research. These programs lead to degrees in most of the major schools including many engineering disciplines. (See the Graduate Degree Chart and the Interdepartmental and Cooperative Programs Chart on pages 59–63 for a complete listing of degrees offered.)

All degrees conferred by the university are awarded solely in recognition of educational attainments and not as warranty of future employment or admission to other programs of higher education.

For additional information on graduate programs and requirements, please go to http://rgs.rice.edu.

ADMISSION TO GRADUATE STUDY

Graduate study is open to a limited number of extremely well-qualified students with a substantial background in their proposed field of study (this usually, though not always, means an undergraduate major in the field). Each department determines whether applicants have enough preparation to enter a given program, emphasizing the quality of their preparation rather than the particular academic program they completed or the credits they earned.

Admittance to a Rice University graduate-degree program, with the exception of those in the School of Music, requires a baccalaureate degree or its equivalent as determined by the Office of Graduate Studies. For the Shepard School of Music, the equivalent to the baccalaureate degree will be determined by their graduate committee.

Applicants for admission to graduate study should either contact the appropriate department for application forms and relevant information about the program or visit the department’s website for on-line application information. The Graduate Studies website, http://rgs.rice.edu, also has links to the graduate departments’ websites. The Graduate Degree and Department Information Chart (pages 59–62) lists department chairs with department phone/fax numbers and e-mail addresses. Applicants should send all application materials, including transcripts and test scores, to the admitting department.

Application Process—An application for graduate study should include the completed application form, the application fee, transcript(s), recommendations, and writing samples, if required. Some departments require scores on the aptitude
portion of the Graduate Record Examination (GRE) or the Graduate Management Admission Test (GMAT) and an appropriate advanced test; these should be sent directly to the admitting department. See individual departmental listings for specific requirement information.

To make sure scores are available when admission decisions are normally made, applicants should take the GRE by the December before the fall for which they are applying. The application deadline for the fall semester is February 1. Some departments, however, may specify an earlier deadline, and departments may occasionally consider late applications.

Admission depends on students’ previous academic records, available test scores, and letters of reference from scholars under whom they have studied. Writing samples, portfolios, or statements of reference may also be required. In general, applicants should have at least a 3.00 (B) grade point average in undergraduate work. Applicants whose native language is not English must take the TOEFL test and should score at least 600 on the paper-based TOEFL or at least 250 on the computer-based TOEFL. For those students who choose to take the IELTS in lieu of TOEFL, the minimum score is 7. The TOEFL and IELTS may be waived for an international student who has received a degree from a university in which English is the official language of communication.

**GRADUATE DEGREES**

**Research Degrees**

Research degrees are offered in six of the seven schools at Rice (the School of Management offers professional degrees only), with some degrees combining studies in more than one school. For general information on advanced degree work at Rice, see Requirements for Graduate Study (pages 64–68). Specific requirements for advanced research degrees in each field of study appear in the appropriate departmental pages (pages 78–266). Students seeking additional material should contact the appropriate department (see Graduate Degree and Department Information Chart on pages 59–63).

**PhD Programs**—The PhD degree is awarded for original studies in the departments listed in the Graduate Degree and Interdepartmental and Cooperative Programs Charts (page 63); in architecture, the equivalent degree is the DArch. Candidates receive a PhD degree after successfully completing at least 90 semester hours of advanced study and concluding an original investigation that is formalized in an approved thesis. As final evidence of preparation for this degree, the candidate must pass a public oral examination. (See also Candidacy, Oral Examinations, and the Thesis Regulations on page 65.) The residency requirement for the doctorate is four semesters of full-time study at the university.

**Master’s Programs**—The MA degree is available in the departments listed in the Graduate Degree and Interdepartmental and Cooperative Programs Charts (page 63), including certain scientific fields of study. The MS degree is offered in the engineering and science fields also listed in the chart. Candidates may undertake the MArch, MArch in Urban Design, and MMus degrees as research degrees by adopting the thesis option. Candidates receive a master’s degree after completing at least 30 semester hours of study (including thesis hours), 24 hours of which must be
taken at Rice. Master's programs require original work reported in a thesis and a public oral examination. Most students take three or four semesters to complete a master's degree (some programs may require more time). Students receiving a master's degree must be enrolled in a graduate program at Rice University for at least one semester of full-time study.

Students may also pursue a nonthesis degree in certain departments. This degree would be based on alternative departmental requirements and would include, but not be limited to, the following:

- 30 semester hours of study
- 24 semester hours must be at Rice University
- Minimum residency is one semester of full-time graduate study
- At least 15 hours of course work must be at or above the 500 level
- All courses must be in the relevant field

In certain departments, students may receive a master's degree (called an Automatic Master's) when they achieve candidacy for the doctoral degree. Students seeking a master's degree in this manner must submit a petition for the degree, signed by their department chair, to the Office of Graduate Studies by February 1 of the year in which the degree is to be awarded. (See also Candidacy, Oral Examinations, and the Thesis on page 65.)

**Professional Degrees**

Rice University offers advanced degree programs to prepare students for positions in a number of professional fields. The professional degrees offered appear in the Graduate Degree and Interdepartmental and Cooperative Programs Charts (pages 59–63). In some departments, the professional degree also prepares the student for a doctoral-level program. All professional degrees are master's degrees with one exception: candidates earn the DMA after concluding a program of advanced music study.

Requirements for professional degrees include the successful completion of 30 semester hours or more of upper-level courses (at the 300 level or higher) with at least 24 hours taken at Rice. Minimum residency for all master's degrees is one semester of full-time study. Specific information and requirements for individual degrees appear in the Graduate Degree Chart (pages 59–63). Program information and application materials are also available from the departments (see Graduate Degree and Department Information Chart on pages 59–63). For general information on advanced degree work at Rice, see Requirements for Graduate Study (pages 64–67).

Admission into a professional program is granted separately from admission into a research or thesis program. Students who wish to change from a thesis program to a professional degree program must petition their department in writing. Upon recommendation of the department and approval by the dean's office, the request is sent to the Office of Graduate Studies for consideration and final approval. If approved, students who received tuition waivers while enrolled in the thesis program will be expected to repay the tuition before their professional degrees are awarded. Professional degree programs terminate when the degree is awarded. Students who wish to continue graduate study after completing a professional program must reapply for admission into a research program.
<table>
<thead>
<tr>
<th>SCHOOL OF ARCHITECTURE</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lars Lerup (Dean)</td>
<td>MArch, MArch in Urban Design, DArch</td>
<td>Architecture design, urbanism, theory, and practice</td>
<td></td>
</tr>
<tr>
<td>John J. Casbarian (Associate Dean)</td>
<td>713-348-4044 fax 713-348-5277 <a href="mailto:arch@rice.edu">arch@rice.edu</a> 713-348-5152 <a href="http://www.arch.rice.edu/flash/">www.arch.rice.edu/flash/</a></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GEORGE R. BROWN SCHOOL OF ENGINEERING</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioengineering</td>
<td>MBE, MS, PhD</td>
<td>Biochemical engineering, biological systems modeling, biomaterials, biomedical lasers, cellular and molecular engineering, controlled release technologies, metabolic engineering, phytoremediation, spectroscopy, systems engineering and instrumentation, thrombosis, tissue engineering, and transport processes.</td>
<td></td>
</tr>
<tr>
<td>David Hellums</td>
<td>713-348-5869 fax 713-348-5877 <a href="mailto:bioeng@rice.edu">bioeng@rice.edu</a> dacnet.rice.edu/~bioe/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemical and Biomolecular Engineering</td>
<td>MChE, MS, PhD</td>
<td>Thermodynamics and phase equilibria, chemical kinetics and catalysis, optimization and process control, rheology and fluid mechanics, polymer science, biomedical engineering, enhanced oil recovery and cleanup of groundwater aquifers, and biochemical reactor engineering.</td>
<td></td>
</tr>
<tr>
<td>Kyriacos Zygiourakis</td>
<td>713-348-4902 fax 713-348-5478 <a href="mailto:ceng@rice.edu">ceng@rice.edu</a> <a href="http://www.ruf.rice.edu/~che/">www.ruf.rice.edu/~che/</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Civil and Environmental Engineering</td>
<td>MCE, MEE, MES MS, PhD</td>
<td>Civil engineering: structural dynamics and control, structures and mechanics, reinforced and prestressed concrete, geotechnical engineering, computer-aided engineering, probability and random vibrations, reliability of systems, and solid mechanics. Environmental science: environmental biology, chemistry, toxicology, geology, and planning; surface and groundwater hydrology; water and wastewater treatment; and urban and regional air quality. Environmental engineering: hydrology and water resources engineering; water and wastewater treatment, design, and operation; and numerical modeling</td>
<td></td>
</tr>
<tr>
<td>Herb Ward</td>
<td>713-348-5268 <a href="mailto:civi@rice.edu">civi@rice.edu</a> <a href="http://www.ruf.rice.edu/~ceedept/">www.ruf.rice.edu/~ceedept/</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computational and Applied Mathematics</td>
<td>MCAM, MCSE, MA, PhD</td>
<td>Numerical analysis, operations research, and differential equations; additional program in computational science and engineering (see Interdepartmental and Cooperative Programs)</td>
<td></td>
</tr>
<tr>
<td>Bill Symes</td>
<td>713-348-4805 fax 713-348-5318 <a href="mailto:caam@rice.edu">caam@rice.edu</a> <a href="http://www.caam.rice.edu/">www.caam.rice.edu/</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer Science</td>
<td>MCS, MS, PhD</td>
<td>Algorithms and complexity, artificial intelligence and robotics, bioinformatics, compilers, distributed and parallel computation, graphics and visualization, operating systems, and programming languages</td>
<td></td>
</tr>
<tr>
<td>Keith Cooper</td>
<td>713-348-5930 <a href="mailto:comp@rice.edu">comp@rice.edu</a> <a href="http://www.cs.rice.edu/">www.cs.rice.edu/</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical and Computer Engineering</td>
<td>MEE, MS, PhD</td>
<td>Bioengineering, communication and signal processing, computer architecture and networking, electro-optics, and device physics</td>
<td></td>
</tr>
<tr>
<td>Behnaam Aazhang</td>
<td>713-348-4020 fax 713-348-5686 <a href="mailto:elec@rice.edu">elec@rice.edu</a> <a href="http://www.ece.rice.edu">www.ece.rice.edu</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mechanical Engineering and Materials Science</strong></td>
<td>MME, MMS, MS, PhD</td>
<td>Mechanical engineering: mechanics, computational mechanics, stochastic mechanics, fluid dynamics, heat transfer, dynamics and control, robotics, biomedical systems, and aerospace sciences. Materials science: nanotechnology, metals physics, statistical mechanics, metallic solid thermodynamics, materials chemistry, aspects of composites, coatings and thin films, and interface science</td>
<td></td>
</tr>
<tr>
<td>---</td>
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<td></td>
</tr>
<tr>
<td>Enrique V. Barrera</td>
<td>713-348-4906 <a href="mailto:mems@rice.edu">mems@rice.edu</a> <a href="http://www.mems.rice.edu/">www.mems.rice.edu/</a></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Statistics</strong></th>
<th>MStat, MA, PhD</th>
<th>Applied probability, Bayesian methods, bioinformatics, biomathematics, biostatistics, data analysis, data mining, density estimation, epidemiology, environmental statistics, financial statistics, image processing, model building, nonparametric function estimation, quality control, risk management, spatial temporal statistics, statistical computing, statistical genetics, statistical visualization, stochastic processes, and time series analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Katherine B. Enser</td>
<td>713-348-6032 fax: 713-348-5476 <a href="mailto:stat@rice.edu">stat@rice.edu</a> <a href="http://www.stat.rice.edu/">www.stat.rice.edu/</a></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>SCHOOL OF HUMANITIES</strong></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Education:</strong></td>
<td>713-348-4826 <a href="http://www.dacnet.rice.edu/Depts/Education/">www.dacnet.rice.edu/Depts/Education/</a></td>
<td>Secondary education (See Education Certification below)</td>
</tr>
<tr>
<td><strong>English</strong></td>
<td>MA, PhD</td>
<td>British and American literature and literary theory</td>
</tr>
<tr>
<td>Susan Wood</td>
<td>713-348-4840 fax: 713-348-5991 <a href="mailto:engl@rice.edu">engl@rice.edu</a> english.rice.edu</td>
<td></td>
</tr>
<tr>
<td><strong>French Studies</strong></td>
<td>MA, PhD</td>
<td>French literature, language, and culture</td>
</tr>
<tr>
<td>Michel Achard</td>
<td>713-348-4851 fax: 713-348-5951 <a href="mailto:fren@rice.edu">fren@rice.edu</a> <a href="http://www.ruf.rice.edu/~fren/">www.ruf.rice.edu/~fren/</a></td>
<td></td>
</tr>
<tr>
<td><strong>Hispanic Studies</strong></td>
<td>MA</td>
<td>Spanish and Latin American Literature and Spanish Linguistics</td>
</tr>
<tr>
<td>Maarten Van Delden</td>
<td>713-348-5451 fax: 713-348-4865 <a href="mailto:span@rice.edu">span@rice.edu</a> hispanicstudies.rice.edu</td>
<td></td>
</tr>
<tr>
<td><strong>History</strong></td>
<td>MA, PhD</td>
<td>U.S., European, and other history</td>
</tr>
<tr>
<td>Peter Carl Caldwell</td>
<td>713-348-4948 fax: 713-348-5207 <a href="mailto:hist@rice.edu">hist@rice.edu</a> history.rice.edu/</td>
<td></td>
</tr>
<tr>
<td><strong>Linguistics</strong></td>
<td>MA, PhD</td>
<td>Anthropological, applied, cognitive, field, functional or discourse, and English, German, or Romance linguistics; second language acquisition; language typology and universals, sociolinguistic, phonetics, phonology, and speech technology</td>
</tr>
<tr>
<td>Masayoshi Shibatani</td>
<td>713-348-6010 fax: 713-348-4718 <a href="mailto:ling@ruf.rice.edu">ling@ruf.rice.edu</a> linguistics.rice.edu/</td>
<td></td>
</tr>
<tr>
<td><strong>Philosophy</strong></td>
<td>MA, PhD</td>
<td>Specialization in medical ethics</td>
</tr>
<tr>
<td>Steven Crowell</td>
<td>713-348-4994 <a href="mailto:philos@rice.edu">philos@rice.edu</a> philosophy.rice.edu</td>
<td></td>
</tr>
<tr>
<td>Department</td>
<td>Title</td>
<td>Degree(s)</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>---------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>Religious Studies</td>
<td>MA, PhD</td>
<td></td>
</tr>
<tr>
<td>Jeffrey Kripal</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>713-348-5201 fax: 713-348-5486 <a href="mailto:reli@rice.edu">reli@rice.edu</a> reli.rice.edu/</td>
<td></td>
</tr>
</tbody>
</table>

**JESSE H. JONES GRADUATE SCHOOL OF MANAGEMENT**

<table>
<thead>
<tr>
<th>Professor</th>
<th>Degree(s)</th>
<th>Research/Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>William H. Glick (Dean)</td>
<td>MBA, MBA/Master of Engineering MBA/MD (with Baylor College of Medicine) MBA for Executives</td>
<td>MBA is a general management degree; however, students may have informal concentrations in the following areas: accounting, entrepreneurship, finance, general management, international business, information technology, marketing, operations management, organizational behavior and human resource management, healthcare management, and strategic management and planning; joint nonthesis degree option with all engineering disciplines</td>
</tr>
<tr>
<td>George Kanatas (Associate Dean)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wilfred C. Uecker (Associate Dean)</td>
<td></td>
<td></td>
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</table>

**SHEPHERD SCHOOL OF MUSIC**

<table>
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<tr>
<th>Professor</th>
<th>Degree(s)</th>
<th>Research/Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robert Yekovich (Dean)</td>
<td>BMus/MMus, MMus, DMA</td>
<td>Composition, choral and instrumental conducting, historical musicology, performance, and music theory</td>
</tr>
<tr>
<td></td>
<td>713-348-4854 fax: 713-348-5317 <a href="mailto:musi@rice.edu">musi@rice.edu</a> <a href="http://www.ruf.rice.edu/~musi">www.ruf.rice.edu/~musi</a></td>
<td>Composition and selected areas of performance</td>
</tr>
</tbody>
</table>

**WIESS SCHOOL OF NATURAL SCIENCES**

<table>
<thead>
<tr>
<th>Department</th>
<th>Title</th>
<th>Degree(s)</th>
<th>Research/Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biochemistry and Cell Biology</td>
<td>George Bennett</td>
<td>MA, PhD</td>
<td>Biochemistry, biophysics, developmental biology, cell biology, genetics, molecular biology, neurobiology, structure and function of nucleic acids and proteins, regulatory processes, biochemistry of lipids, enzymology, NMR and crystallography, cellular regulation, oxygen and electron transport, molecular genetics of plants, animals, fungi, bacteria, and bacteriophage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>713-348-4015 fax: 713-348-5154 <a href="mailto:bioc@rice.edu">bioc@rice.edu</a> <a href="http://www.biochem.rice.edu">www.biochem.rice.edu</a></td>
<td></td>
</tr>
<tr>
<td>Chemistry</td>
<td>Kenton H. Whitmire</td>
<td>MA, PhD</td>
<td>Organic chemistry, inorganic chemistry, physical chemistry, nanotechnology, biological chemistry, theoretical and computational chemistry, materials chemistry, bio-organic chemistry, and bio-inorganic chemistry</td>
</tr>
<tr>
<td></td>
<td></td>
<td>713-348-5650 fax: 713-348-5155 <a href="mailto:chem@rice.edu">chem@rice.edu</a> <a href="http://www.chem.rice.edu">www.chem.rice.edu</a></td>
<td></td>
</tr>
<tr>
<td>Earth Science</td>
<td>Alan Levander</td>
<td>MA, PhD</td>
<td>Marine geology and geophysics; sedimentology, stratigraphy, paleoceanography, paleo-climatology, evolution of continental margins and carbonate platforms; tectonics, neotectonics, tectonophysics, geodynamics, mantle processes, planetology, and space geodesy; remote sensing, potential fields, reflection and lithospheric seismology, global seismology, wave propagation and inverse theory; kinetics of fluid-solid interactions, low T aqueous geochemistry, petrology, and high T geochemistry, hydrogeology, sediment deformation, carbon cycling, and terrestrial-biosphere interactions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>713-348-4880 fax: 713-348-5214 <a href="mailto:geol@rice.edu">geol@rice.edu</a> earthscience.rice.edu/</td>
<td></td>
</tr>
</tbody>
</table>
Ecology and Evolutionary Biology | MA, PhD | Ecology, plant and insect communities, populations, diversity, mutualisms, invasive species, evolution, quantitative genetics, mate choice, speciation, molecular evolution, adaptive evolution, behavioral ecology, sociobiology, genomics, microbial evolution
---|---|---
Joan Strassmann | 713-348-4919 fax: 713-348-5232 eeb@rice.edu eeb.rice.edu |

Mathematics | MA, PhD | Differential and algebraic geometry, ergodic theory, partial differential equations, probability and combinatorics, real analysis, complex variables, and geometric and algebraic topology
---|---|---
Michael Wolf | 713-348-4829 fax: 713-348-5231 math@rice.edu math.rice.edu |

Physics and Astronomy | MST, MS, PhD | Atomic and molecular physics, biophysics, particle physics, condensed matter physics, surface physics, space physics, astronomy, astrophysics, and theoretical physics
---|---|---
E Barry Dunning | 713-348-4938 fax: 713-348-4150 physics@rice.edu www.physics.rice.edu/ |

### School of Social Sciences

<table>
<thead>
<tr>
<th>Field</th>
<th>Name</th>
<th>Degree</th>
<th>Research Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropology</td>
<td>James D. Faubion</td>
<td>MA, PhD</td>
<td>Archaeology, anthropological linguistics, social/cultural anthropology, theory, history, and global change</td>
</tr>
<tr>
<td></td>
<td></td>
<td>713-348-4847 fax: 713-348-5455 <a href="mailto:anth@rice.edu">anth@rice.edu</a> <a href="http://www.ruf.rice.edu/~anth/">www.ruf.rice.edu/~anth/</a></td>
<td></td>
</tr>
<tr>
<td>Economics</td>
<td>Peter Hartley</td>
<td>MA, PhD</td>
<td>Econometrics, economic theory, industrial organization and regulation, international trade and finance, labor, macroeconomics/monetary theory, and public finance and development</td>
</tr>
<tr>
<td></td>
<td></td>
<td>713-348-4875 <a href="mailto:econ@rice.edu">econ@rice.edu</a> <a href="http://www.ruf.rice.edu/~econ/">www.ruf.rice.edu/~econ/</a></td>
<td></td>
</tr>
<tr>
<td>Political Science</td>
<td>Rick K. Wilson</td>
<td>MA, PhD</td>
<td>American government, comparative government, and international relations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>713-348-4842 <a href="mailto:poli@rice.edu">poli@rice.edu</a> <a href="http://www.ruf.rice.edu/~poli/">www.ruf.rice.edu/~poli/</a></td>
<td></td>
</tr>
<tr>
<td>Psychology</td>
<td>Randi Martin</td>
<td>MA, PhD</td>
<td>Cognitive-experimental psychology and industrial-organizational/social psychology, with tracks in engineering psychology, human–computer interaction, and neuropsychology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>713-348-4856 fax: 713-348-5221 <a href="mailto:pyc@rice.edu">pyc@rice.edu</a> <a href="http://www.ruf.rice.edu/~psyc/">www.ruf.rice.edu/~psyc/</a></td>
<td></td>
</tr>
</tbody>
</table>

### Education Certification

<table>
<thead>
<tr>
<th>Name</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meredith Skura</td>
<td>713-348-4826 Fax: 713-348-5459 <a href="mailto:educ@rice.edu">educ@rice.edu</a> education.rice.edu/</td>
<td></td>
</tr>
</tbody>
</table>

### Interdepartmental and Cooperative Programs

Opportunities for graduate study are available in a number of interdisciplinary areas. The advanced degree programs listed in the Interdepartmental and Cooperative Programs Chart (below) are administered by the participating Rice departments. They represent fields of study in rapidly developing areas of science and engineering or those areas subject to multiple investigations and interests. Rice has also established ties with other Houston universities and the Texas Medical Center to enable graduate students to receive training in computational biology research, to earn separate degrees simultaneously, or to focus their doctoral study on the specialized field of medical ethics.
# Interdepartmental and Cooperative Programs Chart

## Interdepartmental Programs

<table>
<thead>
<tr>
<th>Program</th>
<th>Degrees Offered</th>
<th>Departments/Areas of Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Physics</td>
<td>Master's, PhD</td>
<td>Departments of physics and astronomy, chemistry, electrical and computer engineering, mechanical engineering and materials sciences, bioengineering, computational and applied mathematics, chemical and biomolecular engineering, and civil and environmental engineering; sciences that underlie important new and emerging technologies. Contact: Rice Quantum Institute, 713-348-6556 or <a href="mailto:quantum@rice.edu">quantum@rice.edu</a>.</td>
</tr>
<tr>
<td>Computational Science and Engineering</td>
<td>Master's, PhD</td>
<td>Modern computational techniques and use of powerful, new computers in research, development, and design involving the following departments: computational and applied mathematics, biochemistry and cell biology, earth sciences, computer science, chemical and biomolecular engineering, electrical and computer engineering, civil and environmental engineering, and statistics. Contact: 713-348-4657 or <a href="mailto:caam@caam.rice.edu">caam@caam.rice.edu</a>.</td>
</tr>
<tr>
<td>Education Certification</td>
<td>MAT</td>
<td>Secondary teaching certification in conjunction with BA in major field.</td>
</tr>
<tr>
<td>Environmental Analysis and Decision Making</td>
<td>MS</td>
<td>Departments of computational and applied mathematics, statistics, civil and environmental engineering, chemistry, earth science, ecology and evolutionary biology, mechanical engineering and materials science, chemical and biomolecular engineering, sociology, electrical and computer engineering, management, and natural sciences. Contact Professional Master's Program: 713-348-3188 or <a href="mailto:profms@rice.edu">profms@rice.edu</a>.</td>
</tr>
<tr>
<td>Materials Science and Engineering</td>
<td>Master's, PhD</td>
<td>Departments of chemistry, electrical and computer engineering, mechanical engineering and materials sciences, chemical and biomolecular engineering, and physics. Contact: 713-348-4906 or <a href="mailto:mems@rice.edu">mems@rice.edu</a>.</td>
</tr>
<tr>
<td>Nanoscale Physics</td>
<td>MS</td>
<td>Departments of physics and astronomy, electrical and computer engineering, chemistry, management, and natural sciences. Contact Professional Master's Program: 713-348-3188 or <a href="mailto:profms@rice.edu">profms@rice.edu</a>.</td>
</tr>
<tr>
<td>Study of Women and Gender</td>
<td>Graduate Certificate</td>
<td>Departments in anthropology, English, French, history, linguistics, philosophy, and religious studies</td>
</tr>
<tr>
<td>Subsurface Geoscience</td>
<td>MS</td>
<td>Departments in earth science, chemistry, statistics, management, sociology, and natural sciences. Contact Professional Master’s Program: 713-348-3188 or <a href="mailto:profms@rice.edu">profms@rice.edu</a>.</td>
</tr>
</tbody>
</table>

## Cooperative Programs

<table>
<thead>
<tr>
<th>Program</th>
<th>Degrees Offered</th>
<th>Departments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joint Programs in Biomedical Ethics</td>
<td>MA, PhD</td>
<td>Religious studies degree with the University of Texas Health Science Center at Houston. Contact: 713-348-5201 or <a href="mailto:reli@rice.edu">reli@rice.edu</a>. Philosophy degree with the Baylor College of Medicine and the Institute of Religion. Contact: 713-348-4994 or <a href="mailto:phil@rice.edu">phil@rice.edu</a>.</td>
</tr>
<tr>
<td>Joint Program in Computational Biology</td>
<td>Training opportunities for PhD students</td>
<td>Research in a lab setting, seminars and work-shops, and access to advanced resources of W.M. Keck Center for Computational Biology (fellowships available); with Baylor College of Medicine and the University of Houston. Contact: 713-348-4752 or <a href="mailto:bioc@rice.edu">bioc@rice.edu</a>.</td>
</tr>
<tr>
<td>Joint Programs with Medical Colleges</td>
<td>MD/PhD, MD/MA, MD/MS</td>
<td>Combined MD and advanced research degree for research careers in medicine; with Baylor College of Medicine. Contact: 713-348-5869 or <a href="mailto:bioeng@rice.edu">bioeng@rice.edu</a>.</td>
</tr>
</tbody>
</table>
ACADEMIC REGULATIONS

Requirements for Graduate Study

Graduate students must meet the following minimums, deadlines, and course or grade requirements to graduate in good standing from the university. Some departments may have stricter policies and/or requirements.

Residency—Master’s students must complete at least one semester enrolled in full-time study in a graduate program at Rice University. PhD students must be enrolled at least four semesters in full-time study at Rice University.

Full-time study—Semester course load for full-time students is 9 hours, or more as required by specific departments. Graduate programs at Rice generally require full-time study.

Part-time study—Admission of part-time students requires departmental permission, and students must register for at least 3 hours in a semester. All time-to-degree requirements apply to part-time students.

Time to degree—PhD students are required to complete their program, including thesis defense, within ten years of initial enrollment in the degree program. All masters students are required to complete their program, including thesis defense, within five years of initial enrollment. In both cases, students have a limit of six additional months from the date of defense to submit their theses to the Office of Graduate Studies. These time boundaries include any period in which the student was not enrolled or enrolled part-time, for whatever reason.

Time to candidacy—PhD students must be approved for candidacy before the beginning of the ninth semester of their residency at Rice. Masters students must be approved for candidacy before the beginning of the fifth semester of their residency at Rice.

Time to defense—PhD students must defend their theses before the end of the 16th semester of their residency at Rice. Masters students must defend their theses before the end of the eighth semester of their residency at Rice.

Time to thesis submission—After candidates successfully pass the oral examination in defense of the thesis, they must submit two signed copies of the thesis to the Office of Graduate Studies no later than six months from the date of the examination.

Credit for previous degrees—For students who enter a doctoral program with a master’s degree, completed at Rice or elsewhere, departments should determine the amount of previous work, if any, that will be counted from the master’s degree at issue toward the doctoral degree. Any such credit of one semester or more toward doctoral requirements will result in an equal reduction of the time allowed for (1) the achievement of candidacy, (2) the defense of the PhD thesis, and (3) the total time to the doctoral degree. The maximum credit allowed for students with master’s degrees from Rice will be six semesters, and the maximum credit allowed for students with master’s degrees from outside Rice will be two semesters.

Minimum hours—Students must register for at least 3 hours in a semester.

Course registration—Students may register for courses of study and drop or add courses only with the approval of their adviser or the department chair.

Deadlines—Students must observe all deadlines listed in the Academic Calendar (pages viii–xiv).

Grades—To graduate, students must achieve at least a B- (2.67) grade point average in courses counted toward the graduate degree. Some programs and
departments have more stringent standards. To compute grade point averages, the credits attempted in semester hours for each course and the points for the grade earned (from A+ = 4.33 to F = 0.00) are multiplied, then the products (one for each course) are added together and the sum is divided by the total credits attempted. See also Probationary Status (page 67).

**Pass/Fail**—All students, except Class III students, may take course(s) Pass/Fail outside their department. They must file a course as Pass/Fail no later than the end of the 10th week of classes; however, they may later convert a Pass/Fail to a graded course by filing the appropriate paperwork with the registrar. Students should be aware that while a grade of P does not affect their Grade Point Average, a grade of F does.

**Satisfactory/Unsatisfactory**—Some departments may assign a grade of S or U. Students should be aware that while a grade of S or U does not affect their Grade Point Average, no credit will be awarded if a grade of U is received. Courses with a grade of S will count towards total credits earned.

**Departmental duties**—In most research degree programs, students must undertake a limited amount of teaching or perform other services as part of their training. Assigned duties should not entail more than 10 hours per week, averaged over the semester, or extend over more than eight semesters.

**Employment**—Students receiving a stipend may accept employment only with the approval of their home academic department. Students working for more than 20 hours per week are not normally eligible for full-time status.

**Continuous enrollment**—Students must maintain continuous program involvement and enrollment unless granted an official leave of absence. See Leaves or Withdrawals (page 66) for more information.

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**Candidacy, Oral Examinations, and the Thesis**

**Approval of Candidacy**—Candidacy marks a midpoint in the course of graduate education. Achieving candidacy for the PhD implies that a graduate student has: (a) completed required course work, (b) passed required exams to demonstrate his/her comprehensive grasp of the subject area, (c) demonstrated the ability for clear oral and written communication, and (d) shown the ability to carry on scholarly work in his/her subject area. Requirements for achieving candidacy for the thesis Masters degree are determined at the departmental level. Students enrolled in research degree programs submit their petitions for candidacy for a master’s or doctoral degree through the department chair to the vice provost for research and graduate studies. In the petition sent to the vice provost, the department chair identifies the student’s thesis director, recommends a thesis committee, certifies that the applicant has fulfilled the departmental requirements, and provides a course transcript as evidence that work completed within the department is of high quality.

Students must file their applications for approval of PhD and MA/MS candidacy in the Office of Graduate Studies on or before November 1 for mid-year conferral and on or before February 1 for May commencement. Students may take the final oral examination in defense of their thesis only after the vice provost for research and graduate studies approves their candidacy. PhD students must be approved for candidacy before the beginning of the ninth semester of their residency at Rice. Master’s students must be approved for candidacy before the beginning of the fifth semester of their residency at Rice.

**Thesis Committee**—The thesis committee administers the oral examination for the student’s thesis defense and has final approval/disapproval authority and responsibility for the written thesis.
A thesis committee is composed of at least three members. Two, including the committee chair, must be members of the student’s department faculty; in doctoral thesis committees, one member must be from another department within the university. At least three members of the committee must meet one of the following requirements:

- Tenured or tenure-track members of the Rice faculty
- Research faculty holding the rank of faculty fellow, senior faculty fellow, or distinguished faculty fellow
- Faculty who have been certified as thesis committee members by the vice provost for research and graduate studies

The committee chair need not be the thesis director. The chair, however, must be either a tenured or tenure-track member of the major department or a research faculty member of the major department. Additional members of the committee, who may or may not meet the above criteria, may be selected with the approval of the department chair. These would be in addition to the three required members.

Candidates are responsible for keeping the members of their committee informed about the nature and progress of their research. They also must establish a schedule for thesis completion and review. The members of the committee, in turn, should review the thesis in a timely manner, approving a preliminary form of the thesis before scheduling the oral examination.

**Oral Examination in Defense of Thesis**—The public oral defense of a thesis is intended to be an examination of a completed body of work and should be scheduled only when the dissertation is essentially completed. The defense should be scheduled by the student after consultation with the thesis adviser, who agrees that the thesis is completed and ready to be defended. All members of the thesis committee must be present for the oral defense. A candidate must be enrolled in the semester in which his or her oral examination is held. For the purpose of the oral defense only, enrollment in a semester is considered valid through the Friday of the first week of class of the following semester.

At least one copy of the thesis must be available in the departmental office not less than two calendar weeks prior to the date of the oral defense. Oral examinations for the doctoral degree must be announced in *Rice News* at least one week in advance. Oral examination announcements can be submitted to *Rice News* by entering the information into the Graduate Students’ Thesis Defense Announcement form. (Specific instructions should be requested by sending e-mail to graduate@rice.edu when the student has set the date for the defense. The words “Rice News defense announcement” need to appear in the subject line of the e-mail.) An automatically generated e-mail will be sent to *Rice News* once the defense form has been submitted.

Students should note that material printed in *Rice News* must be submitted at least two weeks before publication; the *Rice News* calendar editor can provide specific submission dates. PhD candidates therefore should begin scheduling their oral defenses at least three weeks in advance.

Oral examinations for the master’s degree require only that public notice of the oral defense be posted on the department bulletin board one week in advance and a copy sent to the Office of Graduate Studies.

The length of the oral examination and the subject matter on which the candidate is questioned are left to the judgment of the committee. After candidates successfully pass the oral examination in defense of the thesis, they must submit two signed copies of the thesis to the Office of Graduate Studies no later than six months from the date of the examination. If the thesis is not ready for final signature by the end
of the six-month period, the “pass” will be revoked and an additional oral defense will need to be scheduled. Extensions of this six-month period for completion without reexamination will be granted only in rare circumstances. Applications for an extension must be made by the candidate with the unanimous support of the thesis committee and approved by the Office of Graduate Studies. Students passing the oral examination on or before the end of the first week of classes of any semester do not have to register for that or any subsequent semester even though they may be continuing to make minor revisions to the final copy of their thesis.

Should a candidate fail, the committee chair may schedule a second examination. Students who fail a second time must withdraw from the university.

Students must send a copy of their approval of candidacy form, signed by the thesis committee signifying successful defense of the thesis, to the Office of Graduate Studies within one week after the oral examination. The original approval of candidacy form must be turned in when the thesis is submitted.

PhD students must defend their theses before the end of the 16th semester of their residency at Rice. Master’s students must defend their theses before the end of the eighth semester of their residency at Rice.

**Thesis Regulations and Procedures**—The thesis is the principal record of a student’s work for an advanced degree. It is permanently preserved in the library. Instructions for thesis submission and guidelines for thesis formatting are provided by the Office of Graduate Studies at the time of approval of candidacy. Additional copies of these instructions are available from the graduate studies office and can also be accessed on the Rice website at: http://rgs.rice.edu/grad/policies/thesis.

Students must have the original signatures of their thesis committee on two title pages of their dissertation. Students submitting a dissertation for the PhD, DArch, or DMA must fill out a Survey of Earned Doctorates form. All students submitting theses, whether for master’s or doctoral degrees, must complete a University Microfilm contract. Students must pay their fees for microfilming and binding their theses to the cashier before submitting the two copies to the Office of Graduate Studies for approval. The thesis may be submitted to the Office of Graduate Studies at any time; however students must meet the deadline for the thesis submission listed in the Academic Calendar (pages viii–xiv).

**Leaves or Withdrawals**

**Leave of Absence**—A leave of absence is granted only by the Office of Graduate Studies upon the recommendation of the department chair and only to graduate students in good standing with the university. Students must obtain approval for a leave before the academic semester in question. These requests, approved by the department, must be received in the Office of Research and Graduate Studies prior to the first day of classes.

Leaves are not granted after students register for courses or after the registration period passes. Normally, students may take a leave of absence for no more than two consecutive semesters. Students must pay a reinstatement fee of $100 on their return from an official leave.

**Short Term Medical and Parental Leave**—If a graduate student cannot fulfill the duties of his or her appointment due to a medical emergency or the adoption or birth of a child, enrollment and stipend support may be continued for up to six weeks or until the appointment expires (which ever occurs first). Complete guidelines for obtaining a short term or parental leave are available at: http://rgs.rice.edu/Grad/Policies/med-mat-leave.cfm
INFORMATION FOR GRADUATE STUDENTS

Withdrawal and Readmission—Students who wish to withdraw from Rice during the semester, for any reason, are to notify the chair of their academic department in writing (see Refund of Tuition and Fees, pages 44–45). Failure to register for any period without a leave of absence granted by the Office of Graduate Studies constitutes a de facto withdrawal.

The university may insist on a student’s involuntary withdrawal if, in the judgement of the vice provost for research and graduate studies, the student;

- Poses a threat to the lives or safety of him/herself or other members of the Rice community
- Has a medical or psychological problem that cannot be properly treated in the university setting
- Has a medical condition or demonstrates behavior that seriously interferes with the education of other members of the Rice community

Students who later wish to resume study, whether after voluntary or involuntary withdrawal, must reapply to the university. Readmission requires the recommendation of the department chair and the approval of the vice provost for research and graduate studies. Accepted students must pay a readmission fee of $300.

Students who withdraw for medical reasons must meet certain conditions when applying for readmission. They must submit a written petition for readmission to the Office of Graduate Studies at least one month before the start of the semester in which they wish to resume their work at Rice. They must also provide evidence from a health professional that they have resolved the problems leading to their withdrawal. Some cases may require an interview with the director of the Rice Counseling Center, with the director of Student Health Services or their designees.

Nonenrollment—Students may not do degree work at Rice or work involving Rice faculty or facilities during any period of nonenrollment, except during the period following successful oral defense prior to submission of the final thesis.

Drop/Add

During the first two weeks of classes, all students may change their registration without a penalty fee by adding or dropping courses with the appropriate adviser’s approval. Students must obtain the instructor’s permission and the adviser’s approval to add a course after the second week of classes. Students may not add courses after the fourth week of classes without the permission of the Office of Graduate Studies.

Students may not drop courses after the end of the 10th week of classes, except by approval of the Office of Graduate Studies (a $50 fee is assessed for courses dropped after the 10th week by non-first-semester students). The student’s request to drop a course must be approved by the student’s advisor and then forwarded to the vice provost for consideration.

Students who add or drop courses after the second week but before the deadlines noted above are charged for each drop/add form submitted according to the fee schedule (see page 23).

Academic Discipline

Probationary Status—Students whose cumulative grade point average or the average for the most recently completed semester falls below 2.33 are placed on probationary status; some departments may have more stringent standards. Although
the department in most cases sends the student a letter of warning, probationary status applies whether or not a letter has been issued. A second semester of probationary status leads to automatic dismissal by the Office of Graduate Studies unless the student’s department presents a plea for exception that is approved by the vice provost for research and graduate studies. Departments are free to dismiss a student in the first semester of probationary status if they issue a warning before taking action.

**Dismissal**—Reasons for student dismissal include unsatisfactory progress as determined by the student’s department or behavior judged by Rice to be disruptive or otherwise contrary to the best interests of either the university or the student.

**Appeal**

Students may petition the Office of Graduate Studies regarding the application of any academic regulation. Petitions should go through department chairs and divisional deans, who will be asked to comment on their merits. In some cases, the vice provost will seek the advice of the Graduate Council. For appeals regarding nonacademic matters, see the following section on problem resolution.

**Other Disciplinary Sanctions**

Additionally, the assistant dean of Student Judicial Programs may place students on probation or suspension for violating the Honor Code or Code of Student Conduct or for other disciplinary reasons. Students on disciplinary suspension (including for an Honor System violation) may not receive their degree even if they have met all academic requirements for graduation. They must leave the university within 48 hours of being informed of the dean’s decision, though in cases of unusual hardship, the assistant dean of Student Judicial Programs may extend the deadline to one week. Any tuition refund will be prorated from the official date of suspension, which is determined by the registrar. While on disciplinary suspension, students may not run for, or hold, any elective or appointed office in any official Rice organization. Participation in student activities on and off campus and use of Rice facilities are limited to enrolled students. Students seeking admission after leaving the university because of a sanction imposed by the assistant dean should submit a petition in writing for review by the assistant dean.

**Procedures for Resolution of Problems**

Problems or conflicts may arise during a student’s graduate education. Students should take responsibility for informing the appropriate faculty of any such problem. All parties involved should work together amicably with the goal of resolving the problem informally if at all possible. When attempts to resolve a problem informally do not meet with success, the following grievance procedure should be adopted.

1. The student should submit the grievance in writing to the departmental chair, who will then attempt to resolve the problem.
2. If the student remains unsatisfied, the problem should be presented to a departmental committee for resolution. This committee should be a standing committee and not the student’s own review or dissertation committee. Both the student and the chair should submit a written record of their views to this committee.
3. If the student remains unsatisfied, the problem should be referred to a standing subcommittee designed at Graduate Council and composed of three faculty
members (representing diverse disciplines within the university), one graduate student and the associate dean for graduate studies. A written report of proceedings at stage two should be presented to the chair of graduate council, for forwarding to the subcommittee, together with all other written materials generated during the investigation. The decision of this subcommittee will be considered final.

**TUITION, FEES, AND EXPENSES**

The tuition and fees for graduate students in this section are for the 2005–2006 academic year only and are subject to change in subsequent years. Current tuition and fees for all graduate students, full time and part time:

<table>
<thead>
<tr>
<th></th>
<th>Annual</th>
<th>Semester</th>
<th>Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tuition</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All schools except Jones School</td>
<td>$22,700</td>
<td>$11,350</td>
<td>$1,262</td>
</tr>
<tr>
<td>Jones School MBA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Start 2005</td>
<td>30,900</td>
<td>15,450</td>
<td>1,717</td>
</tr>
<tr>
<td>Start 2004</td>
<td>30,000</td>
<td>15,000</td>
<td>1,667</td>
</tr>
<tr>
<td>Jones School EMBA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Start 2004 (2-year rate)</td>
<td>77,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Start 2005 (2-year rate)</td>
<td>78,300</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fees</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health service</td>
<td>350</td>
<td>175</td>
<td></td>
</tr>
<tr>
<td>Graduate Student Association</td>
<td>20</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Honor Council</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Student Organizations Fund</td>
<td>8</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Information technology</td>
<td>120</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>Jones School activities (Jones School only)</td>
<td>70</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>Jones School materials (Jones School only)</td>
<td>1,350</td>
<td>675</td>
<td></td>
</tr>
</tbody>
</table>

**Away Status**—Students pursuing their studies outside of the Houston area (students on “away” status) must be registered and pay tuition but are not required to pay the fees listed above, with the exception of the information technology fee.

**Reduced Tuition**—After six semesters of full-time study in one degree program (excluding the summer semesters), continuing students enter a reduced-tuition category of $1,262 per year ($631 per semester). Students who are admitted with a relevant master’s degree, i.e., a master’s degree that counts toward a doctoral program at Rice, may become eligible for reduced tuition earlier than those entering a doctoral program without a relevant master’s degree. Semesters credited toward reduced tuition will generally be limited to one degree program. In extraordinary circumstances, the Office of Graduate Studies may consider petitions for exceptions.

**Health Insurance**—All students, full time or part time—including those on away status—must carry health insurance (see page 11).

**Other Fees**—Unless students elect a special payment plan, they must pay all tuition and fees for the fall semester by the middle of August, and for the spring semester by the end of the first week of January. Past these deadlines, a late payment penalty of $140 will be assessed.

Other fees applicable under special circumstances:

- Preceptorship (per semester) ........................................... $210
- Internship (per semester) ............................................. $210
- Study abroad fee—Fall 2005 ........................................... $140
<table>
<thead>
<tr>
<th>Fee Type</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study abroad fee—Spring 2006</td>
<td>$250</td>
</tr>
<tr>
<td>Study abroad fee—Summer 2006</td>
<td>$250</td>
</tr>
<tr>
<td>Graduate application fee</td>
<td>$35</td>
</tr>
<tr>
<td>Jones School application fee: MBA</td>
<td>$100</td>
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<tr>
<td>Jones School application fee: EMBA</td>
<td>$100</td>
</tr>
<tr>
<td>Part-time registration fee</td>
<td>$115</td>
</tr>
<tr>
<td>Late registration fee</td>
<td>$110</td>
</tr>
<tr>
<td>Failure to preregister fee</td>
<td>$60</td>
</tr>
</tbody>
</table>

**Late course change fee**

- **Adds:**
  - Week 1–2: Free
  - Week 3–4: $10
  - Week 5 and after: $50

- **Drops:**
  - Weeks 1–4: Free
  - Weeks 5–10: $10
  - Week 11 and after: $50

<table>
<thead>
<tr>
<th>Fee Type</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deferred Payment Plan late fee</td>
<td>$35</td>
</tr>
<tr>
<td>Diploma fee: sheepskin</td>
<td>$105</td>
</tr>
<tr>
<td>Diploma fee: parchment</td>
<td>$35</td>
</tr>
<tr>
<td>Diploma fee: facsimile</td>
<td>$15</td>
</tr>
<tr>
<td>Diploma mailing fee: domestic</td>
<td>$25</td>
</tr>
<tr>
<td>Diploma mailing fee: air mail</td>
<td>$30</td>
</tr>
<tr>
<td>Transcript fee</td>
<td>$5</td>
</tr>
<tr>
<td>Class III registration fee</td>
<td>$115</td>
</tr>
<tr>
<td>Class III late application fee</td>
<td>$80</td>
</tr>
<tr>
<td>Class III late registration fee</td>
<td>$110</td>
</tr>
<tr>
<td>Intramural fee</td>
<td>$15</td>
</tr>
<tr>
<td>Readmission fee: graduate students only</td>
<td>$300</td>
</tr>
<tr>
<td>Reinstatement fee: graduate students only</td>
<td>$100</td>
</tr>
<tr>
<td>Replacement ID</td>
<td>$10</td>
</tr>
</tbody>
</table>

For more information, see Refund of Tuition and Fees (pages 44–45).

### FINANCIAL AID

#### Fellowships, Scholarships, and Assistantships

A range of fellowships, scholarships, and assistantships are available at Rice. Most graduate students in degree programs requiring a thesis are supported by fellowships or research assistantships.

**Rice Graduate Fellowships**—Doctoral students with high academic records and strong qualifications receive support through Rice fellowships. In most cases, these fellowships provide a stipend plus tuition for the nine-month academic period. Departments may nominate particularly outstanding entering students for a Rice Presidential Fellowship.

**Rice Graduate Tuition Scholarships**—Students whose previous records show marked promise but for whom no graduate fellowships are available may receive full or partial graduate tuition scholarships, which do not include a stipend.

**Research and Teaching Assistantships**—Usually funded from grants and contracts, research assistantships are available in many departments. Qualified students (usually second-year or later) receive these awards to provide assistance on faculty research projects, work that usually contributes to the student’s own thesis. In
some departments, a limited number of teaching assistantships may be available to advanced students.

Fellowship, scholarship, and assistantship recipients are selected by the individual departments, subject to the approval of the Office of Graduate Studies. Students should send their applications for such awards directly to the department involved.

To receive Rice fellowships, graduate tuition scholarships, or assistantship aid, students must be engaged in full-time graduate study; part-time students and students who are not enrolled are not eligible for such aid.

Students receiving stipends from fellowships or assistantships may not accept any regular paid employment on or off campus without the explicit permission of the department. Full-time students, whether receiving stipend support or not, may not accept paid employment in excess of 20 hours per week.

**Loans and Work-Study Financial Aid**

In addition to fellowships, scholarships, and assistantships, the Office of Student Financial Services offers assistance in the form of loans. Interested students must file a Free Application for Federal Student Aid (FAFSA) and a Rice Graduate Financial Aid Application or a Rice Jones School Application and submit copies of income tax returns and W-2’s. The priority deadline to apply is April 15. (Loan assistance through Rice is not available to Master of Liberal Studies students.)

To be eligible to apply for loans and federal work-study employment, graduate students must maintain satisfactory academic progress as defined by their departments. Should a graduate student fail to make satisfactory academic progress, the student’s aid eligibility will be terminated. Graduate students who enroll for less than 5 hours in a term will not be eligible for financial aid.

**Stafford Student Loans**—These are low-interest loans made to students attending the university at least half-time. Subsidized Stafford loans require need-based financial aid eligibility, but unsubsidized Stafford loans are available to all students. Stafford loan eligibility is subject to annual and lifetime borrowing limits.

**Loan Counseling**—Students who are recipients of federal student loans will be required to complete online loan entrance counseling before funds will be credited to student accounts. Students also will be required to complete online exit counseling at the completion of a program of study at Rice. Failure to complete online exit counseling will result in a transcript hold.

**Private Loan Programs**—Private loans are available to graduate and MBA students. These loans are not based on need but do require credit approval from the lender and cannot exceed the student’s cost of education, as determined by Rice, minus other resources.

**Special Loan Programs**—A Gulf Oil Corporation Foundation Loan Fund and the Benjamin S. Lindsey and Veola Noble Lindsey Memorial Loan Fund are available to help students working toward a degree meet their educational expenses, but funds are limited. Interested students may contact the Office of Student Financial Services.

**The Mary Lyn and Niles Moseley Loan Fund and the Professor John A. S. Adams, Sr., Memorial Graduate Student Loan Fund**—These funds provide financial assistance, in the form of loans, to graduate students at Rice University. Students wishing to apply for such a loan should obtain an application from the Graduate Studies Office. Guidelines for the program are:

- Individual loans are made for an amount not to exceed $1,500.
• Loans are made for a period of up to one year and, upon request, may be renewable annually.
• The interest rate applicable to these loans is determined by the university.
• Graduate students must be enrolled on a full-time basis to be eligible to apply for a loan and must maintain full enrollment during the full term of the loan.
• Upon completion, applications are submitted to the vice provost for research and graduate studies for approval.
• Loans are available during the full course of the academic year.
• Loans must be repaid before graduation.

Emergency Loan Fund—Established through gifts from the Graduate Wives Club of 1972–73, the Graduate Student Association, and various faculty members, this fund makes available emergency loans to help graduate students at Rice with short-term needs. Loans are limited to $250 and must be repaid within three months. In lieu of interest, a charge of $5 per loan is assessed to maintain the fund.

Summer Aid—Graduate students are eligible to apply for private educational loans if they are registered during the summer term.

Other Fellowships, Honors, and Prizes—Provisions are made for a variety of fellowships, scholarships, and prizes available to graduates of this and other universities. Memorial fellowships that have been founded and endowed by gift or bequest on the part of friends of Rice University provide stipends enabling the holders to devote their time to study and research in their chosen fields. There are also several industrial fellowships maintained by companies interested in the development of technical fields and the training of competent scientists, engineers, and business executives.

Persons desiring consideration for appointment as fellows should consult with the department in which they wish to do research. However, not all fellowships are available every year.

Return of Title IV Funds—Students who receive federal funds as part of their aid packages and do not complete the academic term may be subject to returning a portion of those funds. Contact student Financial Services for information about policies and procedures regarding the return of Title IV funds.

Graduate Student Life

Graduate Student Association

All full-time students in the graduate program are members of the Graduate Student Association, which is the sole organization representing graduate students as a body. The governing body of this organization is the Graduate Student Association Council, consisting of a representative from each department offering graduate study and a president, vice president, secretary, and treasurer elected by the council. Graduate students also participate in university affairs through their representatives on many standing and ad hoc university committees, such as the Graduate Council, the Research Council, and various department committees.

One of the functions of the Graduate Student Association is to encourage social interaction among graduate students from different departments. To that end, the association organizes a variety of social activities open to all members of the graduate student body.
Housing for Graduate Students

The Rice Graduate Apartments are housed in a garden-style complex located on a 2.7-acre site just north of campus. The project features attractive landscaping and good lighting in all common areas, designed to enhance both the security and the aesthetics of pedestrian, bike, auto paths, parking, and recreational areas. Electronically controlled gates for both pedestrian and vehicular paths are provided. Handicap accessibility also is an important feature. A shuttle bus travels back and forth between the apartments and campus.

There are 112 units, including one-bedroom, two-bedroom, four-bedroom, and efficiency apartments. The complex is designed with a centrally located space for social activities, a laundry room on each floor, a study room equipped with computers, enclosed areas with locks for bike racks, and two courtyards. Every apartment has a living area, a fully equipped kitchen, cable TV connection, and a network drop for a personal computer. Housing is assigned on a space-available basis. Call 713-348-GRAD (4723) for further information.

The Morningside Square Apartments are two-story 1950s-vintage units located in a quiet neighborhood adjacent to Rice Village. They are within a short walking distance to campus, restaurants, and shopping areas. The complex is attractively landscaped and offers gated and covered parking.

There are 53 units, including one-bedroom, two-bedroom, and three-bedroom apartments. The common hallways, bedrooms, and living rooms feature oak hardwood flooring. Kitchens are equipped with a refrigerator and gas range. All units have ceiling fans, a gas furnace, and window air conditioners. Basic cable TV is provided, and a coin-operated laundry is available on site. Apartments are assigned on a space-available basis. Call 713-524-1275 for further information.

The Information Desk, the Office of Student Activities, and the Graduate Student Association keep records of available rooms and apartments listed with the university by area landlords. The daily newspaper and a weekly Greensheet are other sources of rental housing information. Incoming graduate students should arrive in Houston several days early to allow themselves time to find suitable housing.

Health Insurance Requirements for Graduate Students

Paying the student health service fee gives graduate students access to both the Student Health Service and Rice Counseling Center (see pages 11–12). New graduate students may not register for or attend classes until they have completed and returned the health data form to Rice and have met the immunization and TB screening requirements.

All graduate students must have health insurance purchased through Rice or provided by an outside source. Students may purchase insurance through the university. Rice's group coverage for the 2005–2006 academic year is effective from 12:01 A.M., August 15, 2005, until 12:01 A.M. August 15, 2006. Dependent coverage is also available. A description of the policy and the application form can be found on the Web at http://studenthealthinsurance.rice.edu. A waiver form, if outside insurance is provided, also can be found at this site. Students should submit either the application or waiver by August 15 each year.

Class III Students in Nondegree Programs

Students with a 3.00 (B) or better grade average and an undergraduate or graduate degree from an accredited college or university may apply for admission as Class III students. These students may take courses for credit without being admitted to a specific degree program. Registration requires the permission of the instructor and
approval by the vice provost for research and graduate studies. Class III students must register for at least 3 hours and cannot take courses on a pass/fail or satisfactory/unsatisfactory basis. Class III students must receive at least a B for all classes taken or they will not be allowed to remain in the Class III program.

Students may not use courses taken under this arrangement to fulfill the requirements for a Rice degree unless and until they have been accepted into a degree program by an academic department (as well as, in the case of graduate students, by the vice provost for research and graduate studies) and received department approval; students are responsible for obtaining the proper approvals. Students may request that the department allow up to 3 courses taken as Class III to count toward their graduate degree.

Applications for Class III

Applications and course request forms are available from the Office of Graduate Studies. Official transcripts from all colleges and universities the student has attended should be mailed directly by the institutions to the Office of Graduate Studies. Students who were previously Class III students must complete a new application (without transcripts) for each such semester. All application materials are due by the workday closest to August 1 for fall semester courses and December 1 for spring semester courses. Late applications are not considered after classes have begun. Individuals applying as Class III students for the summer term should apply to the Summer School for College Students (see page 36).

Tuition and Fees for Class III

The tuition for 2005–2006 is $1,262 per semester hour, plus a $115 registration fee each semester. All fees are payable during registration. Students failing to submit their applications by the deadline must pay a late application fee of $80, and students registering after the second week of class must pay a $110 late registration fee and may also have to pay a late payment fee. For some courses, students may be charged for computer time. If a class fills with degree students, instructors may drop Class III students up to the end of the third week of class. In that case, the tuition (less $30 of the registration fee) will be refunded. Please see page 36 for information pertaining to summer school.
INFORMATION FOR GRADUATE STUDENTS

Departments and Interdisciplinary Programs
The Air Force ROTC program develops responsible, competent men and women prepared to assume leadership positions as commissioned officers in the active duty United States Air Force. Upon completion of the curriculum, students will have an understanding of the core values and the professional discipline of a military career. For more information on the Air Force Science program, contact the Air Force Science Department at the University of Houston by calling 713-743-4932.

**Course Credit**

ROTC classes may be taken for elective credit toward any degree plan at the University of Houston as well as Rice University. Freshman and sophomore level classes are open to all students. No military obligation is incurred as a result of enrollment in these courses. Junior and senior level courses are more restrictive and do require a military obligation. ROTC scholarship students also incur a military obligation.

**Four-Year Program**

The General Military Course (GMC) is the first half of the Four-Year Program and is taken during the freshman and sophomore years. This program allows the student to try out Air Force ROTC without obligation (unless the student is on an Air Force ROTC scholarship).

During the first two years, the student will learn about the Air Force and the historical development of aerospace power.

During the summer preceding the junior year, the student will compete for the opportunity to attend a four-week Field Training Unit. Successful completion of field training is mandatory for entrance into the Professional Officer Course (POC), the junior and senior years of the Four-Year Program.

As a junior, the student will study the leadership and management techniques needed to become an effective Air Force officer.

During the senior year, students study the national security policy process and regional issues while preparing for entrance to active duty.

Enrollment in the POC is open to graduate students if they have four semesters of school remaining. Each semester of the POC consists of three classroom hours of instruction as well as Leadership Laboratory each week.

**Two-Year Program**

The two-year program bypasses the General Military Course (GMC) portion of the Four-Year Program and leads directly into the Professional Officer Course (POC).

This route is the best option for junior college transfer students, current college sophomores, college juniors and active duty personnel who have two years of school remaining. The student can be completing an undergraduate degree, a graduate degree, or a combination of the two. Requirements for POC include:
1. Attending an extended Field Training Unit the summer prior to entering the two year program or the summer between the junior and senior year
2. Achieving an acceptable score on the Air Force Officer Qualifying Test (AFOQT)
3. Passing a complete medical physical
4. Passing the Air Force Physical Fitness Test (PFT)

Students entering the POC must enter into a contract to pursue and accept a regular commission in the active Air Force.

**Leadership Laboratory**

As an Air Force ROTC cadet, each student will be required to attend an additional class known as Leadership Laboratory.

Although it is not part of the academic class requirement, it is an essential part of officer training. Leadership Laboratory is a motivational, cadet-centered program where the student gains valuable leadership and managerial experience while learning about the Air Force way of life. On occasion, the student will have the opportunity to hear guest speakers discuss a variety of interesting topics.

**AFROTC Scholarship Opportunities**

Air Force ROTC offers four different scholarship opportunities for students at the University of Houston and Rice University:

**In-College Scholarship Program (ICSP)**—is a highly competitive scholarship program aimed primarily at college freshmen and sophomores in any major (students with a bachelor's degree can compete to earn a master's degree). The ICSP awards cover tuition capped at either $15,000 per year plus $510 per year for books or $9,000 per year plus $510 per year for books.

**The Express Scholarship Program**—is operated on a fully qualified basis: those who meet the qualifications are awarded the scholarship. Though the list of eligible college majors differs from year to year, the express scholarship pays up to $15,000 tuition per year and $510 for books. The processing of the scholarship award is completed at the local detachment.

**General Military Course Incentive (POCI)**—is a fully qualified scholarship program open to college students in the spring semester of their sophomore year. This program is open to students in any major. The GMCI provides up to $1,500 in tuition and fees for eligible students. The GMCI does not pay for books.

**Professional Officer Course Incentive (POCI)**—is a fully qualified scholarship program open to college students in their junior or senior year (or to those with a bachelor's degree who will pursue a master's degree). POCI is open to any major. The POCI provides up to $3,000 in tuition and fees each year and $450 per year for books. POCI may be paid for up to two years.

**Stipend**

All AFROTC scholarship recipients and POC cadets receive a nontaxable monthly stipend. The annual stipend amount ranges from around $2,000 per year to 4,000 per year depending on the recipient's enrollment year.

For additional information on AFROTC scholarship opportunities, please visit the AFROTC website at www.afrotc.com or call 1-800-4AFROTC.

**Field Training (FT)**

Cadets completing the General Military Course attend four weeks of field training (FT) during the summer at a selected Air Force base. Those who have not completed the GMC attend an extended FT Unit. This rigorous program of leader-
ship training, physical conditioning and academics assesses the cadet's potential to be an Air Force officer.

Cadets also receive survival and firearms training, career information, and an opportunity for a military aircraft orientation flight. Cadets receive travel pay and daily pay for FT.

**Professional Development Training (PDT)**

Cadets are eligible to compete to attend PDT during summer months.

PDT consists of several programs, including:

- Army Airborne
- United States Air Force Academy (USAFA) Survival Training
- USAFA Soaring
- USAFA Freefall Parachute Training
- Cadet Training Assistant
- The British Exchange program

Cadets receive travel pay and daily pay for the majority of these programs.

For more information contact Colonel David Mintz at 713-743-4932, or visit the University of Houston Air Force website at www.uh.edu/afrotc.

See AFSC in the Courses of Instruction section (these are University of Houston listings).
ANCIENT MEDITERRANEAN CIVILIZATIONS

THE SCHOOL OF HUMANITIES

DIRECTOR AND ADVISOR
Donald Ray Morrison

PROFESSORS
James D. Faubion
Michael Maas
Roderick J. McIntosh
Susan Keech McIntosh
Donald Ray Morrison
Harvey E. Yunis

ASSOCIATE PROFESSORS
Matthias Henze
Hilary S. Mackie
Carol E. Quillen
Paula Sanders

ASSISTANT PROFESSORS
David Cook
Eva Haverkamp
Scott McGill
Caroline Quenemoen

LECTURER
Kristine Gilmartin Wallace

VISITING ASSISTANT PROFESSOR
Eric Adler

Degree Offered: BA

This interdisciplinary major in the cultures of ancient Greece and Rome, Judaism, early Christianity, and early Islam, as well as their antecedents, explores these traditions both for their intrinsic interest and for the contributions each has made to contemporary Western society. Our combined focus on ancient cultural history in its broadest sense and on perspectives offered by cultural criticism enables students to examine the beginnings of the civilization in which they now participate.

Courses for this major address common questions about the transmission and transformation of cultures in the ancient Mediterranean world. Students examine sources, such as texts, artifacts, and institutions that illuminate the process. They study how shifting cultural centers and frontiers in this world are delineated, and they explore the general integration and disintegration of specific ancient cultures. This major also offers opportunities for archaeological fieldwork and study abroad.

Rice is a sponsor of the American School of Classical Studies at Athens, the American School of Oriental Research, and the Intercollegiate Center for Classical Studies in Rome. Students majoring in Ancient Mediterranean Civilizations are encouraged to study in these programs as well as in the College Year in Athens program.

Degree Requirements for BA in Ancient Mediterranean Civilizations

Students must take one course from three of the five following categories: 1) Graeco-Roman Civilization, 2) Islamic Civilization, 3) Jewish Civilization, 4) Christian Civilization, and 5) Archaeological Methods & Theory. In addition, students must take one course that addresses the creation, transmission, and reception of traditions in the Mediterranean world. Courses that meet this requirement are designated as “Themes Across Time.”

Students must also fulfill a comparative requirement by taking either one course that, in and of itself, treats two different cultural traditions (designated “Comparative”) or two separate courses on similar themes but from different cultures (e.g. Women in Greece & Rome, Women in the Islamic World). Although not required, courses in ancient languages are recommended. A minimum of five courses must be taken at the 300 level or above.
For general university requirements, see the Graduation Requirements in this publication. Majors in Ancient Mediterranean Civilizations must complete at least thirty (30) semester hours (10 courses). Students must take a core course (HIST 200, CLAS 107, or CLAS 108) near the beginning of their studies, and may select from the following courses to fulfill their requirements for the major.

Please note that not all courses listed below will be offered during the academic year. For a current list of AMC courses that will be offered in fall 2005 and spring 2006, please visit the AMC web site at http://amc.rice.edu.

**Core Courses**

- CLAS 107 Greek Civilization and Its Legacy
- CLAS 108 Roman Civilization and Its Legacy
- HIST 200 Origins of Western Civilizations: Ancient Empires
- HUMA 109 Greek Civilization and Its Legacy

**Graeco-Roman Civilization**

- ANTH 321 Text as Property, Property as Text: Across the Ages
- ANTH 325 Sex, Self, and Society in Ancient Greece
- ANTH 363 Early Civilizations
- CLAS 101 Socrates: The Man and His Philosophy
- CLAS 107 Greek Civilization and Its Legacy
- CLAS 108 Roman Civilization and Its Legacy
- CLAS 209 Greek and Roman Drama
- CLAS 220 The Novel in Classical Antiquity
- CLAS 225 Women in Greece and Rome
- CLAS 235 Classical Mythology: Interpretation, Origins, and Influence
- CLAS 311 Text as Property, Property as Text: Across the Ages
- CLAS 312 Greek Art and Architecture
- CLAS 315 Roman Art and Architecture
- CLAS 316 Democracy and Political Theory in Ancient Greece
- CLAS 318 The Invention of Paganism in the Roman Empire
- CLAS 320 The Age of Augustus
- CLAS 336 The Origin of the Languages of Europe
- CLAS 337 Epic and Novel
- ENGL 335 Epic and Novel
- FSEM 101 Socrates: The Man and His Philosophy
- FSEM 151 The Hero and His Companion from Gilgamesh to Sam Spade
- GREE 101 Introduction to Ancient Greek I
- GREE 102 Elementary Greek II
- GREE 201 Intermediate Greek I: Prose
- GREE 202 Intermediate Greek II: Prose
- GREE 301 Advanced Greek
- HART 204 Art as Civilization
- HART 218 Special Topics: Ancient Greek Sites
- HART 219 Independent Study: Ancient Art
- HART 228 Special Topics: Christian, Byzantine, and Islamic Art
- HART 229 Independent Study: Christian, Byzantine, and Islamic Art
- HART 312 Greek Art and Architecture
- HART 315 Roman Art and Architecture
- HART 320 The Age of Augustus
- HART 417 Buried Cities: The Art and Architecture of Akrotiri, Pompeii, and Herculaneum
- HART 428 Special Topics: Early Christian, Byzantine, and Islamic Art
- HART 429 Independent Study: Early Christian, Byzantine, and Islamic Art
- HIST 113 God, Time, and History
- HIST 151 The Hero and His Companion from Gilgamesh to Spiderman
- HIST 200 Origins of Western Civilizations: Ancient Empire
- HIST 202 Introduction to Medieval Civilization: The Early Middle Ages
- HIST 223 Empires and Communities in the Middle Ages
- HIST 257 Jews and Christians in Medieval Europe
- HIST 262 Rome: City and Empire
- HIST 304 Imperialism and Its Critics in the Roman World
- HIST 306 The Roman Republic
- HIST 307 Imperial Rome from Caesar to Diocletian
- HIST 308 The World of Late Antiquity
HIST 316 The Invention of Paganism in the Roman Empire
HIST 323 Empires and Communities in the Middle Ages
HIST 357 Jews and Christians in Medieval Europe
HIST 358 European Intellectual History from Augustine to Descartes
HIST 382 Classical Islamic Cultures
HIST 437 Christians and Jews in the Medieval Islamic World
HIST 438 Women and Gender in the Medieval Islamic Societies
HIST 460 Advanced Seminar in Ancient History
HUMA 109 Greek Civilization and Its Legacy
HUMA 113 God, Time, and History
LATI 101 Elementary Latin I
LATI 102 Elementary Latin II
LATI 201 Intermediate Latin I: Prose
LATI 202 Intermediate Latin II
LATI 301 Advanced Latin: Literature of Exile in the Roman Tradition
LATI 302 Advanced Latin: Roman Epic
LATI 303 Advanced Latin: Plautus and Terence
LATI 311 Latin Pastoral Poetry
LATI 312 Advanced Latin: Ovid
LATI 313 Cicero and Catullus: Literature and Society in the Roman Republic
MDST 101 Elementary Latin I
MDST 102 Elementary Latin II
MDST 202 Introduction to Medieval Civilization: The Early Middle Ages
MDST 211 Intermediate Latin I: Prose
MDST 212 Intermediate Latin II
MDST 223 Empires and Communities in the Middle Ages
MDST 257 Jews and Christians in Medieval Europe
MDST 308 The World of Late Antiquity
MDST 357 Jews and Christians in Medieval Europe
MDST 358 European Intellectual History from Augustine to Descartes
MDST 382 Classical Islamic Cultures
MDST 385 Christians and Jews in the Medieval Islamic World
MDST 438 Women and Gender in the Medieval Islamic Societies
MDST 460 Advanced Seminar in Ancient History
RELI 123 God, Time, and History
RELI 316 The Invention of Paganism in the Roman Empire
WGST 225 Women in Greece and Rome
WGST 332 Sex, Self, and Society in Ancient Greece
WGST 455 Women and Gender in the Medieval Islamic Societies

Islamic Civilization
ASIA 221 The Life of the Prophet Muhammad
ASIA 441 Popular Religion in the Middle East
HIST 382 Classical Islamic Cultures
HIST 437 Christians and Jews in the Medieval Islamic World
HIST 438 Women and Gender in the Medieval Islamic Societies
MDST 382 Classical Islamic Cultures
MDST 385 Christians and Jews in the Medieval Islamic World
MDST 438 Women and Gender in the Medieval Islamic Societies
RELI 141 Introduction to Islam
RELI 221 The Life of the Prophet Muhammad
RELI 223 Qur’an and Commentary
RELI 350 Sacred Scriptures in Monotheistic Faiths
RELI 354 Asian Apocalyptic Movements
RELI 441 Popular Religion in the Middle East
WGST 455 Women and Gender in the Medieval Islamic Societies

Jewish Civilization
HIST 113 God, Time, and History
HUMA 113 God, Time, and History
RELI 122 The Bible and Its Interpreters
RELI 123 God, Time, and History
RELI 125 Introduction to Biblical Hebrew I
RELI 126 Introduction to Biblical Hebrew II
DEPARTMENTS / Ancient Mediterranean Civilizations

RELI 127 Intermediate Biblical Hebrew I
RELI 128 Intermediate Biblical Hebrew II
RELI 209 Introduction to Judaism
RELI 210 Ethics in Judaism
RELI 350 Sacred Scriptures in Monotheistic Faiths
RELI 383 The Dead Sea Scrolls

Christian Civilization
RELI 122 The Bible and Its Interpreters
RELI 125 Introduction to Biblical Hebrew I
RELI 126 Introduction to Biblical Hebrew II
RELI 127 Intermediate Biblical Hebrew I
RELI 128 Intermediate Biblical Hebrew II
RELI 223 Qur'an and Commentary
RELI 243 The Book of Genesis
RELI 282 Introduction to Christianity
RELI 350 Sacred Scriptures in Monotheistic Faiths
RELI 381 The Messiah
RELI 383 The Dead Sea Scrolls
RELI 410 Apocalypse Then and Now

Archaeological Methods and Theory
ANTH 203 Human Antiquity: An Introduction to Physical Anthropology and Prehistory
ANTH 205 Introduction to Archaeology
ANTH 345 The Politics of the Past: Archaeology in Social Context
ANTH 362 Archaeological Field Techniques
ANTH 363 Early Civilizations
ANTH 425 Advanced Topics in Archaeology
ANTH 460 Advanced Archaeological Theory

Themes Across Time
ANTH 321 Text as Property, Property as Text: Across the Ages
ANTH 363 Early Civilizations
CLAS 311 Text as Property, Property as Text: Across the Ages
FSEM 151 The Hero and His Companion from Gilgamesh to Sam Spade
HART 101 Introduction to the History of Western Art: Prehistoric to Gothic
HIST 113 God, Time, and History
HIST 151 The Hero and His Companion from Gilgamesh to Spiderman
HIST 200 Origins of Western Civilizations: Ancient Empires
HIST 308 The World of Late Antiquity
HIST 358 European Intellectual History from Augustine to Descartes
HUMA 113 God, Time, and History
MDST 308 The World of Late Antiquity
MDST 358 European Intellectual History from Augustine to Descartes
PHIL 201 History of Philosophy I
PHIL 301 Ancient and Medieval Philosophy
PHIL 307 Social and Political Philosophy
PHIL 327 History of Social and Political Philosophy
RELI 123 God, Time, and History

Comparative
CLAS 209 Greek and Roman Drama
CLAS 225 Women in Greece and Rome
CLAS 336 The Origin of the Languages of Europe
CLAS 337 Epic and Novel
ENGL 335 Epic and Novel
HIST 357 Jews and Christians in Medieval Europe
HIST 437 Christians and Jews in the Medieval Islamic World
HIST 438 Women and Gender in the Medieval Islamic Societies
MDST 357 Jews and Christians in Medieval Europe
MDST 385 Christians and Jews in the Medieval Islamic World
MDST 438 Women and Gender in the Medieval Islamic Societies
PHIL 501 Seminar in Ancient and Medieval Philosophy
WGST 225 Women in Greece and Rome
WGST 455 Women and Gender in the Medieval Islamic Societies
ANTHROPOLOGY

THE SCHOOL OF SOCIAL SCIENCES

Chair
James D. Faubion

Professors
George E. Marcus
Roderick J. McIntosh
Susan Keech McIntosh
Julie M. Taylor
Stephen A. Tyler

Associate Professor
Eugenia Georges

Assistant Professors
Christopher Kelty
Hannah Landecker
Amy Ninetto

Adjunct Professor
Patricia Seed

Adjunct Assistant Professor
Deepa Reddy

Degrees Offered: BA, MA, PhD

The major in anthropology has 2 areas of concentration: cultural anthropology and archaeology. The focus in cultural anthropology is on contemporary theoretical issues. By reading primary sources, students gain an exposure to the styles of argument and reasoning of a broad range of theorists. They can then engage in the ongoing discussion and definition of central problems within the field. Fieldwork and ethnography are important in the doctoral research.

In archaeology, the focus is on research skills in the library, the field, and the laboratory. Most students also develop at least one analytical skill, such as remote sensing, archaeological statistics, osteology, or geomorphology, drawing on the university’s extensive laboratory and computer facilities.

Students may organize a major in one or both fields or combine a major in anthropology with one in another discipline.

Degree Requirements for BA in Anthropology

For general university requirements, see Graduation Requirements (pages 14–15). Students majoring in anthropology must:

- Complete a total of 30 semester hours of departmental courses (10 courses), at least 18 of which should be at the 300 level or above
- Have a plan of study approved by the undergraduate adviser

With department approval, students may substitute for departmental courses at most 6 hours of courses from outside the major that are related to their plan of study. The department recommends that students intending to pursue graduate study acquire a reading knowledge of 1 or 2 European languages.

Honors Program—Majors considering a career in anthropology should apply to the honors program, as should those who wish to include advanced training and an intensive, individual research project in their undergraduate education. Anthropology faculty determine acceptance into the program. More information is available from the department office; see also Honors Programs (page 26).

Archaeological Field School on Gorée Island, Senegal

The Department of Anthropology offers a 6-week field school in June and July on the island of Gorée, located off the coast of Senegal just a short ferry ride away from the capital of Dakar. The field school excavations are part of ongoing investigations into the growth and development of Gorée as a supply port for the Atlantic trade, occupied and serviced by a polycultural population of slaves, Europeans, mainland
Africans, and mixed-race female landowners, known as signares. Two courses, ANTH 364 and 370, are offered for a total of 6 hours credit. The courses are offered without specific prerequisites, but there is a general requirement that students have some prior coursework in archaeology or African history. Program fees apply.

**Degree Requirements for MA and PhD in Anthropology**

Because each field of specialization offers different opportunities for training and different research orientations, the department seeks applicants with a defined interest in either cultural anthropology or archaeology; an undergraduate background in anthropology is desirable but not required. Entering students devise a detailed first-year plan of study and provisional plans for succeeding years in consultation with an adviser. The plan should emphasize broad training in the selected field before the eventual definition of a project for dissertation research. For general university requirements, see Graduate Degrees (pages 57-58).

**MA Program**—Graduate students may earn the MA after obtaining approval of their candidacy for the PhD. For the MA as a terminal degree, students must complete:

- 30 semester hours of approved course work
- 1 of the 3 special papers required for the PhD
- A thesis

**PhD Program**—For the PhD degree, students must accomplish the following:

- Complete 3 substantial papers, each emphasizing an analytical, research, and writing skill appropriate to their field of specialization (should be completed during the first two years of study)
- Demonstrate reading competency in 1 foreign language
- Prepare a satisfactory proposal for dissertation research, based in substantial part on field research
- Complete and defend the dissertation

**Special Options**—The department will arrange seminars and tutorials on any topic relevant to a student’s training; these seminars may be conducted in supervisory consultation with scholars in other disciplines as well as with adjunct faculty. Students interested in the specialized field of medical anthropology may take advantage of the extensive resources of the Texas Medical Center through ties established with the University of Texas School of Public Health and Graduate School of Biomedical Sciences; students may earn degree credit for formal courses taken at both schools.

**Financial Support**—All first-year students receive the same level of support: a combination of graduate fellowships and tuition scholarships. These awards are renewed for a further two years of study.

See ANTH in the Courses of Instruction section.
APPLIED PHYSICS GRADUATE PROGRAM

THE RICE QUANTUM INSTITUTE

DIRECTOR OF APPLIED PHYSICS GRADUATE PROGRAM
D. Natelson

Participating Faculty
This program is open to faculty from physics and astronomy, chemistry, mechanical engineering and materials science, electrical and computer engineering, bioengineering, computational and applied mathematics, civil and environmental engineering, and chemical engineering.

Degrees offered: MS, PhD
A joint effort of both the natural sciences and the engineering divisions at Rice, overseen by the Rice Quantum Institute (RQI), the Applied Physics Program (APP) is administered by a committee composed of members from the participating departments mentioned above. The objective is to provide an interdisciplinary graduate education in the basic science that underlies important technology. The faculty believes that the experience obtained by performing research at the intellectually stimulating interface of physical science and engineering is particularly effective in producing graduates who succeed in careers based on new and emerging technologies.

Due to the interdisciplinary nature of the program, students can access virtually any of the research facilities in either the natural sciences or engineering schools of Rice University. The Applied Physics Committee (APC) urges prospective students to contact individual departments or RQI for detailed descriptions of research facilities and ongoing research projects. Within RQI alone, there are more than 100 separate projects, and there are numerous other research opportunities.

Degree requirements
The Applied Physics Program offers master’s and PhD degrees. For each degree, the student must fulfill the University requirements set forth in the catalog under which he/she entered. The semester hour requirements may be fulfilled both by classroom hours and research hours. A total of nine one-semester graduate level courses is required for the Master’s Degree in Applied Physics, ordinarily a requirement for advancement to candidacy in the PhD program. Four of these are core courses required of all students, and five are elective courses chosen according to individual research goals. The Applied Physics Committee may waive some course requirements for students who demonstrate a thorough knowledge of material in one or more core/elective course(s). The student will normally be expected to complete the course requirements in three semesters and maintain a minimum grade point average of 3.0 in core courses as well as a 3.0 average in all courses taken.

By the end of the third year in the program, all APP students should have completed the university requirements for a master’s degree, fulfilled the course requirements of the APP and defended a master’s thesis in a public oral examination by a committee approved by the APC. The examination covers the work reported in the thesis as well as the entire field in which the student intends to work toward a PhD. The examining committee votes separately on awarding the masters degree and on admission to candidacy for the PhD. Fulfillment of all university degree
requirements and successful defense of a PhD thesis in a public examination by an APC approved committee is necessary for the PhD.

**Core courses**

*Quantum Mechanics I* (PHYS 521 or CHEM 530)

*Quantum Mechanics II or Statistical Physics*

(PHYS 522 or PHYS 526 or CHEM 531 or CHEM 520)

*Classical Electrodynamics* (PHYS 532)

*Introduction to Solid State Physics I* (PHYS 563/ELEC 563)

It is assumed that the student has an adequate background in classical mechanics, electrostatics, and statistical and thermal physics. This background is determined from interviews or exams given to entering students by the APC or the host department.

**Elective courses (5 required)**

BIOE 584 *Lasers in Medicine and Bioengineering*

BIOE 589/BIOS 589 *Computational Molecular Biophysics*

BIOE 610/PHYS 600 *Methods of Molecular Simulation/Advanced Topics in Physics*

CENG 630 *Chemical Engineering of Nanostructured Materials*

CHEM 495 *Transition Metal Chemistry*

CHEM 515 *Chemical Kinetics & Dynamics*

CHEM 520 *Classical and Statistical Thermodynamics*

CHEM 530 *Quantum Mechanics I/Quantum Chemistry*

CHEM 531 *Quantum Mechanics II/Quantum Chemistry*

CHEM 533 *Nanostructure & Nanotechnology*

CHEM 547 *Supramolecular Chemistry*

CHEM 611 *High Temperature and High Pressure Chemistry*

CHEM 630 *Molecular Spectroscopy*

ELEC 462 *Semiconductor Devices*

ELEC 463 *Lasers and Photonics*

ELEC 465 *Physical Electronics Practicum*

ELEC 560 *Linear/Nonlinear Fiber Optics*

ELEC 561 *Topics in Semiconductor Manufacturing*

ELEC 562 *Submicrometer & Nanometer Device Technology*

ELEC 564/PHYS 564 *Introduction to Solid State Physics II*

ELEC 565 *Topics in Quantum Semiconductor Nanostructures*

ELEC 567 *Applied Quantum Mechanics*

ELEC 568 *Laser Spectroscopy*

ELEC 569 *Ultrafast Optics*

ELEC 591 *Optics*

ELEC 592 *Topics in Quantum Optics (Nonlinear Optics)*

ELEC 603 *Topics in Micro- and Nano-Photonics*

ELEC 691 *Seminar Topics in Nanotechnology*

MECH 679 *Applied Monte Carlo Analysis*

MECH 682 *Convective Heat Transfer*

MECH 683 *Radiative Heat Transfer I*

MECH 684 *Radiative Heat Transfer II*

MSCI 402 *Mechanical Properties of Materials*

MSCI 523 *Properties, Synthesis, and Design of Composite Materials*

MSCI 535 *Crystallography and Diffraction*

MSCI 597 *Polymer Synthesis, Soft Materials and Nanocomposites*

MSCI 610 *Crystal Thermodynamics*

MSCI 614 *Principles of Nanoscale Mechanics*

MSCI 615 *Thin Film Failure Analysis, Measurement & Reliability*

MSCI 623 *Analytical Spectroscopies*

MSCI 634 *Thermodynamics of Alloys*

MSCI 635 *Transformation of Alloys*

MSCI 645/ELEC 645 *Thin Films*

MSCI 666 *Conduction Phenomena in Solids*

PHYS 480 *Introduction to Plasma Physics*

PHYS 512 *Ionospheric Physics*

PHYS 515 *Classical Dynamics*

PHYS 516 *Mathematical Methods*

PHYS 521 *Quantum Mechanics I*

PHYS 522 *Quantum Mechanics II*

PHYS 526 *Statistical Physics*

PHYS 533/534 *Nanostructures and Nanotechnology I/II*

PHYS 537/538 *Methods of Experimental Physics I/II*
No courses may be used for both core and elective courses. Due to overlap of curricula, only one from each of the pairs PHYS 521/CHEM 530, PHYS 522/CHEM 531, and PHYS 526/CHEM 520 may be used for the nine required courses.
The principal goal of the School of Architecture is to contribute to a more humane environment. The school focuses on teaching and research, the development of a broad liberal education for undergraduates in the allied sciences and arts of architecture, and professional graduate and postgraduate education in architecture and urban design. Intimate student-faculty interaction, academic freedom, and unrestricted institutional cooperation within and outside the university are distinctive qualities of the architecture degree programs at Rice.

"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 U.S. professional degree programs in architecture, recognizes two types of degree: 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 established educational standards.

Masters degree programs may consist of a pre-professional undergraduate degree and a professional degree, which, when earned sequentially, comprise an accredited professional education. However, the professional degree is not, by itself, recognized as an accredited degree."—National Architectural Accrediting Board

The undergraduate programs maintain a balance between academic studies and professional practice. Lectures and other public programs, visiting faculty, scholarly presentations, and the Preceptorship Program, which provides a one-year
internship in outstanding architectural offices throughout the U.S., Europe, and Japan, all complement the school’s core of distinguished teachers and practitioners.

The graduate programs have three areas of emphasis: architectural design, with particular attention paid to history, theory, and practice; urban design, where the concern is the emerging form of the American city; and research in computer visualization, which uses the resources of the state-of-the-art Rice Advanced Visualization Lab.

**Degree Requirements for BA in Architecture or Architectural Studies**

For general university requirements, see Graduation Requirements (pages 14–15). The conditions specified here for each major also satisfy the university distribution requirements.

**BA in Architecture**—The curriculum for architecture majors is divided into a foundation sequence taken in the freshman and sophomore years and a preprofessional sequence taken in the junior and senior years. The foundation sequence consists of four semesters of design studios and other related courses in architecture. The first-semester studio develops basic design skills through directed explorations and problem-solving exercises in form, texture, color, material, and structures. In the subsequent 3 studios, through a carefully sequenced series of exercises, students are introduced to a broad range of architectural design issues, processes, and methods. Students are required to take 4 courses in the history and theory of art and architecture during the freshman and sophomore years in addition to two semesters of architectural technology. They must also complete university distribution requirements. It is recommended that students take an introductory drawing course during their first two years of study to develop visual skills.

Students who satisfactorily complete the foundation sequence may, upon approval of their major, enter the junior and senior year preprofessional sequence. The fall studios for the third and fourth years are organized around the workshop model and emphasize complex building/computer applications and urban design issues, respectively. The spring studios are vertically integrated, allowing students to select offerings emphasizing specialized design topics such as technology, landscape, historical precedent, and urban design. During the third and fourth years, students are required to take 2 additional technology courses and to fulfill all remaining school or university distribution requirements. Students wishing to pursue the professional degree in architecture may apply for admission to the Bachelor of Architecture (BArch.) degree program during the second semester of the fourth year.

**BA in Architectural Studies**—Students who have been admitted as architecture majors and who have successfully completed the two-year foundation program may choose the architectural studies curriculum. The first four semesters of the curriculum are identical to the foundation sequence of the architecture major except for the omission of 1 technology course. Subsequent requirements are the completion of 1 additional studio and 4 elective courses in architecture. The program provides basic preparation for later professional study while allowing students to pursue other academic interests in depth.
Typical Curriculum for BA in Architecture

**First Semester**
- ARCH 101 Principles of Architecture I
- HART 101 Introduction to History of Art
- PHYS 101 Mechanics (with lab)
- LPAP 101 Lifetime Physical Activities

Approved architecture-restricted distribution course in humanities

**Second Semester**
- ARCH 102 Principles of Architecture I
- ARCH 132 Freshman Seminar
- HART 102 Introduction to History of Art
- LPAP 102 Lifetime Physical Activities
- MATH 101 Single Variable Calculus

Approved architecture-restricted distribution course in humanities

**Third Semester**
- ARCH 201 Principles of Architecture II
- ARCH 207 Introduction to the Design of Structures
- ARCH 345 Architecture and the City I
- Studio Art Elective*
- Elective*

**Fourth Semester**
- ARCH 202 Principles of Architecture II
- ARCH 214 Design of Structures II
- ARCH 346 Architecture and the City II

Approved architecture-restricted distribution course in social sciences
- Elective*

**Fifth Semester**
- ARCH 301 Principles of Architecture III
- ARCH 315 Building Climatology
- Architectural Theory Elective
- Elective*
- Elective*

**Sixth Semester**
- ARCH 302 Principles of Architecture III
- ARCH 316 Design of Structures III
- Elective*
- Elective*
- Elective*

**Seventh Semester**
- ARCH 401 Principles of Architecture IV
- Elective*
- Elective*
- Elective*

**Eighth Semester**
- ARCH 402 Principles of Architecture IV
- Elective*
- Elective*
- Elective*

*All courses must be selected to satisfy both architecture major requirements and university distribution requirements.

Degree Requirements for a Bachelor of Architecture (BArch)

The Bachelor of Architecture program is only open to students who have completed the undergraduate preprofessional architecture program at Rice. Upon admission, students are assigned a preceptorship, which takes place immediately after receipt of the Bachelor of Arts in Architecture degree. The preceptorship program balances academic learning with professional experience. Qualified students who have been admitted to the BArch degree program are assigned to work for a year in the United States or abroad with leading architectural offices designated by the school as preceptors. The BArch degree requires the successful completion of the BA in architecture, completion of the two-semester preceptorship, and completion of 2 graduate studios and 5 approved lecture or seminar courses.
Master of Architecture

The Master of Architecture (MArch) program prepares graduates for a full range of professional activities in the field of architecture. It is offered to individuals who possess a bachelor’s degree. Students follow a course of study in all four areas of the curriculum: design; history, theory, and criticism; structures, practice, and environments; and computing, logic, and representation. These areas of study are sustained by groups of courses from which students may choose offerings according to the requirements of their particular program. Strong emphasis is given to developing design skills, logic, and imagination through an intensive series of design studio courses. Students are also required to prepare an independent thesis before graduating. A potential exists for dual degrees.

The Master of Architecture program is accredited by the National Architectural Accrediting Board (NAAB). It leads to the degree of Master of Architecture, which qualifies graduates to take the state professional licensing examination after completing the required internship in an architectural office.

Programs of Study—Three program options are available at the Master of Architecture level. Options 1, 2, and 3 differ according to the bachelor’s degree received before entering the graduate program.

Option 1

Seven-Semester Program—Option 1 is offered to individuals who hold a four-year undergraduate degree with a major in a field other than architecture. Preference for admission is given to those who have completed a balanced education in the arts, sciences, and humanities. A minimum of two semesters of
college-level courses in the history of art and/or architecture are recommended; so is a minimum of one semester of college-level courses in mathematics or physics. Previous preparation in the visual arts is also desirable as are courses in philosophy, literature, and economics.

To graduate, students must complete a four-semester core curriculum (76 credit hours), which is followed by a three-semester advanced curriculum (57 credit hours). Course work in both core and advanced curricula consists of 7 studios (including thesis) and 20 distribution courses (133 credit hours).

**Core Curriculum**

**First Semester**
- ARCH 501 Core Design Studio I
- ARCH 507 Introduction to Design of Structures II
- ARCH 635 Architecture Computer Graphics Overview
- ARCH 685 Architecture and Society I

**Second Semester**
- ARCH 502 Core Design Studio II
- ARCH 514 Design of Structures II
- ARCH 532 Introduction to Digital Visualization and Communication
- ARCH 686 Architecture and Society II

**Third Semester**
- ARCH 503 Core Design Studio III
- ARCH 516 Environmental Control Systems
- ARCH 683 20th-Century History of Ideas in Architecture
- Dist. Elective (Comp., Log., and Repr.)

**Fourth Semester**
- ARCH 504 Architectural Problems
- ARCH 515 Design of Structures III
- ARCH 623 Professionalism and Manag. in Architecture
- Dist. Elective (Hist., Theory, and Crit.)

**Advanced Curriculum**

**Fifth Semester**
- ARCH 601 Architectural Problems
- Dist. Elective (Hist., Theory, and Crit.)
- Dist. Elective (Comp., Log., and Repr.)
- Elective

**Sixth Semester**
- ARCH 602 Architectural Problems
- ARCH 702 Pre-Thesis Preparation
- Dist. Elective (Struct., Pract., and Env.): Sustainability
- Elective

**Seventh Semester**
- ARCH 703 Thesis Studio or equivalent
- Elective
- Elective

**Option 2**

**Five-Semester Program**—Option 2 is offered to individuals who hold a four-year undergraduate degree with a major in architecture. Preference for admission is given to those who have successfully completed between four and six semesters of undergraduate design studio as well as undergraduate courses that are analogous to those given in the first year of Option 1. A minimum of two semesters of college-level courses in the history of art and/or architecture are recommended; so is a minimum of one semester of college-level courses in mathematics and physics.

Students in this program enter into the second year of the core curriculum (two semesters, 38 credit hours), followed by the advanced curriculum (three semesters, 57 credit hours). Course work in both core and advanced curricula consists of 5 studios (including thesis) and 14 distribution courses (95 credit hours).
First Semester
ARCH 503 Core Design Studio III
ARCH 516 Environmental Control Systems
ARCH 683 20th-Century History of Ideas in Architecture
Dist. Elective (Comp., Log., and Repr.)

Second Semester
ARCH 504 Architectural Problems
ARCH 515 Design of Structures III
ARCH 623 Professionalism and Manag. in Architecture
Dist. Elective (Hist., Theory, and Crit.)

Advanced Curriculum

Third Semester
ARCH 601 Architectural Problems
Dist. Elective (Hist., Theory, and Crit.)
Dist. Elective (Comp., Log., and Repr.)
Elective

Option 3: Three-Semester Program—Option 3 is offered to individuals who hold a professional degree in architecture (BArch.), or its equivalent from a foreign university. Preference for admission is given to those who have significant practical experience in architecture and who have demonstrated high achievement in design.

To graduate, students must complete a three-semester advanced curriculum of elective courses. Course work consists of 3 studios (including thesis) and 8 distribution courses (57 credit hours).

First Semester
ARCH 601 Architectural Problems
Dist. Elective (Hist., Theory, and Crit.)
Dist. Elective (Comp., Log., and Repr.)
Elective
or
ARCH 610 History, Theory, . . . /RSAP
ARCH 620 Architectural Problems/RSAP

Second Semester
ARCH 602 Architectural Problems
ARCH 702 Pre-Thesis Preparation

Fourth Semester
ARCH 602 Architectural Problems
ARCH 702 Pre-Thesis Preparation
Dist. Elective (Struct., Pract., and Env.):
Sustainability
Elective

Fifth Semester
ARCH 703 Thesis Studio*
Elective
Elective
*or an approved alternative

Thesis Requirement—All MArch candidates are required to develop a thesis in partial fulfillment of graduate degree requirements. Students are asked to demonstrate their ability to independently undertake research and analysis as well as develop a hypothesis and a thorough demonstration of the thesis. This must take the form of either a research thesis (written thesis) or a thesis with a design demonstration (design thesis). Both thesis formats must address architectural consequences that may be derived from within or outside conventional boundaries of the architectural discipline.
Thesis preparation begins in the next-to-last semester with a 3-hour independent study course leading to the submission of a thesis proposal and the selection of a thesis director plus two faculty members as readers. While the thesis is independent work carried out by the student under the direction of a chosen adviser, it is organized as a studio in the fall term of the academic year. The thesis studio provides a support setting for both formal and informal review processes throughout the thesis semester. In early January, thesis projects are reviewed by a panel of guest critics and publicly presented in the Farish Gallery.

**Master of Architecture in Urban Design**

The Master of Architecture in Urban Design (MAUD) program prepares graduates for a full range of professional activities in the field of urban design. It is offered to individuals who already hold a professional degree qualifying them for registration as architects or landscape architects. The MAUD program makes extensive use of Houston as a setting for case studies and design problems. During the first year, strong emphasis is given to developing design skills, logic, and imagination through an intensive series of urban design studio courses. Three additional courses in urban history, planning, and design are required each semester. Students are also required to prepare an independent thesis during their third semester.

**Doctor of Architecture**

Admission to the Doctor of Architecture program requires either a bachelor’s or master’s degree in architecture and a detailed statement of research concerns and anticipated array of investigation. A student entering with a master’s degree normally takes three semesters of course work before the qualifying examination. A student with a bachelor’s degree normally requires two to five semesters of course work before the qualifying examination. Preparation for doctoral candidacy may include a foreign language or computer skills. Specific course requirements are established individually when a student is admitted to the program.

After successful completion of all required course work, students may apply to take the qualifying examination after submitting a prospectus outlining their research programs for the doctoral dissertation. The dissertation must represent an original contribution to knowledge in the field of architecture. Completion and successful defense of the dissertation will take a minimum of one year. University requirements for thesis (dissertation) preparation and defense must be carefully followed. The time limit for successful defense of the dissertation is established by university policy. Students should not expect to complete the Doctor of Architecture program in less than four years of full-time study.

See ARCH in the Courses of Instruction section.
ART HISTORY

THE SCHOOL OF HUMANITIES

CHAIR
Joseph Manca

ASSISTANT PROFESSORS
Robert Leo Costello
Shirine T Hamadeh
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Professors
Joseph Manca
Hamid Naficy

LECTURER
Sarah Costello

Associate Professors
Marcia Brennan
Linda E. Neagley

ADJUNCT LECTURER
Charles Dove

Visiting Assistant Professor
James Clifton

DEGREES OFFERED: BA

The Department of Art History offers a wide range of courses in European, American, Asian, and Middle Eastern/Islamic art history with additional strengths in architectural history and film and media studies. The major in art history is structured to expose students to the chronological, geographical, and methodological breadth of the field of scholarship.

DEGREE REQUIREMENTS FOR BA IN ART HISTORY

For general university requirements, see Graduation Requirements (pages 14–15).

Students with a single major in Art History must complete 36 hours (12 courses) and double majors must complete 30 hours (10 courses) in art history. A total of six of the courses for double and single majors must be at the 300 level or above. Of these six courses, two courses must be in each of the following periods: Pre Modern, Early Modern, and Modern. Three of these six courses must also be in American/European, distributed over the three periods; one course in Asian from any period; and one course in the Middle East/Islamic from any period. Of the 12/10 courses for single and double majors, at least two courses must be seminars.

It is strongly recommended that majors in Art History acquire a proficiency in at least one foreign language.

In addition, Art History majors are encouraged to take advantage of the opportunities provided by museum internships, study abroad programs, and travel fellowships.

TRANSFER CREDIT

With approval from the departmental undergraduate adviser, a maximum of four courses may be taken outside of the department and applied to the major as transfer credits or study abroad course credits. No Advanced Placement credits may be used to satisfy major requirements.

See also Transfer Credit in the Information for Undergraduate Students section (page 26–27).

HONORS PROGRAM IN ART HISTORY

Art History majors may apply in the spring semester of their junior year for acceptance into the Honors Program. Interested students, with an excellent academic record, must submit a thesis proposal and recommendation from their thesis adviser to a committee of art historians for review. If accepted, six credit hours
(included in the 36/30 hours for single and double majors) of directed research and writing would be taken the senior year to complete an honors thesis (HART 402/HART 403). Financial assistance is available for honor students to conduct research between their junior and senior years. In addition to a written thesis, honors students must make a presentation to the faculty and students of the department. Once the adviser and readers have evaluated the completed thesis, the art history faculty determine whether to award honors. Students who do not make satisfactory progress in the first term will not be allowed to continue. Students who miss the final thesis deadline (mid-spring semester of the senior year) will receive a grade and credit but no honors.

**Exhibitions, Lectures, and Arts Programs at Rice and in Houston**

Exhibitions and related activities organized by the Rice University Art Gallery (Kimberly Davenport, director) enrich the teaching program of the Department of Art History as well as the larger university and Houston community. The Department of Visual Arts mounts several art and photography exhibitions each year and sponsors Rice Cinema, a public alternative film program. Rice cinema is intimately connected with the curriculum both in film and media studies (HART) and in film and photography production (ARTV), and includes frequent guest lecturers, panel discussions, and media events.

The department enjoys an ongoing close relationship with local museums and galleries. The department offers opportunities for students to work and study with local museums, galleries, and alternative art spaces by way of internship courses (HART 400, HART 401, HART 500, HART 501), summer internship working opportunities, fellowships, or collaborative events. The collections and special exhibitions of local museums are often the subject of course lectures.

Lectures, symposia, and talks are sponsored the department. These events are designed to bring local, national, and international scholars, critics, and artists to campus to speak on a broad range of topics and current interests.

The Department of Art History houses the Visual Resources Center, which currently holds a broad and extensive collection of approximately 300,000 slides and digital images related to the arts for teaching and research, serving both the department and the university at large.

See HART and ARTV in the Courses of Instruction section.
Asian Studies is an interdisciplinary major that explores the complex interaction between political, social, religious, and other important spheres of human life in Asia. Emphasis is placed not only on the diversity and achievements of Asian civilizations but also on the ways an understanding of Asia may shed new light on Western cultural traditions. The major is built around courses in the humanities and social science divisions and a team-taught interdisciplinary core course, Introduction to Asian Civilizations. Some residential college courses may qualify for Asian studies credit.

Requirements: The undergraduate Asian Studies major will consist of 30 hours or more of course work. All majors must take the core course, ASIA 211, and 9 additional courses drawn from at least three of the departments offering courses in Asian studies. (See specific guidelines below.)

Degree Requirements for BA in Asian Studies

For general university requirements, see Graduation Requirements (pages 14–15). Students majoring in Asian studies must complete 30 semester hours or more of major course work, including:

- ASIA 211 Introduction to Asian Civilizations
- 9 additional courses drawn from at least three of the departments or programs that offer courses with predominantly Asian content. In the case of cross-listed courses, any one of the departments or programs appearing in the cross-listing can be used to satisfy this particular requirement. See courses listed below.
- 6 courses at the 300 level or above
- 2 years of a single Asian language (this may include an Asian language other than those offered by Rice), though students may count no more than four
seminsters of Asian languages toward the major. Students who have placed into the third year (300-level) or higher of an Asian language at Rice will have satisfied our proficiency requirement for the Asian Studies major. Such students may continue with the same Asian language or another and receive up to four semesters of credit toward the major for this additional language coursework.

Any changes in the requirements for the major must be approved by the director of Asian Studies.

One or more independent reading courses (ASIA 401 for the fall and ASIA 402 for the spring, or ASIA 403) taught by Asian Studies faculty in these departments may be counted toward the major. Students may also use certain residential college courses to fulfill their major requirements, subject to the approval of the director of Asian Studies.

The following courses, not all of which are taught every year, may be used to satisfy the major requirements. Note that a number of these courses are cross-listed.

**Anthropology**

ANTH 220 *Contemporary China* (also offered as HIST 220)

ANTH 310 *Contemporary China* (enriched version of ANTH 220; also offered as HIST 310)

ANTH 353 *Cultures of India*

**Art and Art History**

HART 170 *The Arts of China*

HART 371 *The Brush and the Stroke in Traditional Chinese Painting* (also offered as ASIA 371)

HART 470 *Visual Culture in Revolutionary and Post-revolutionary China* (ca. 1949-present) (also offered as ASIA 470)

HART 472 *Japanese Animation* (also offered as ASIA 472 and HIST 472)

**Asian Studies**

ASIA 139 *Introduction to Indian Religions* (also offered as RELI 139)

ASIA 140 *Introduction to Chinese Religions* (also offered as RELI 140)

ASIA 179 *The Arts of China*

ASIA 211 *Introduction to Asian Civilizations* (also listed as HIST 206)

ASIA 221 *The Life of the Prophet Muhammad* (also offered as RELI 221)

ASIA 231 *The Enlightenment of the Body* (also offered as RELI 231)

ASIA 240 *Gender and Politicized Religion* (also offered as WGST 240)

ASIA 250 *Meditation, Mysticism, and Magic* (also offered as RELI 250)

ASIA 280 *The Asian American Experience*

ASIA 299 *Women in Chinese Literature* (also offered as CHIN 299 and WGST 299)

ASIA 323 *The Knowing Body* (also offered as WGST 323 and RELI 323)

ASIA 330 *Introduction to Traditional Chinese Poetry* (also offered as CHIN 330)

ASIA 332 *Chinese Films and Modern Chinese Literature* (also offered as CHIN 332)

ASIA 334 *Traditional Chinese Tales* (also offered as CHIN 334)

ASIA 335 *Introduction to Classical Chinese Literature* (also offered as CHIN 335)

ASIA 340 *Gender and Politicized Religion* (also offered as WGST 340)

ASIA 344 *Korean Literature* (also offered as HUMA 344 and KORE 344)

ASIA 345 *Origin and Development of Korean and Related Languages in East Asia* (also offered as HUMA 345 and KORE 345)

ASIA 346 *Korean Culture and History* (also offered as KORE 346)

ASIA 354 *Asian Apocalyptic Movements* (also offered as RELI 354)

ASIA 355 *Religion and Social Change in South Asia* (also offered as RELI 355)

ASIA 360 *China and the Chinese Diaspora*

ASIA 361 *The Oriental Renaissance* (also offered as RELI 361)

ASIA 363 *Marriage of Heaven and Hell* (also offered as RELI 363)
ASIA 365 Mysticism and Meditation in China (also offered as RELI 365)
ASIA 369 Film, Literature, and the Japanese Past (also offered as HIST 369)
ASIA 372 Survey of Asian American Literature (also offered as ENGL 372)
ASIA 380 The Asian American Experience
ASIA 387 Asian Religious and Medical Traditions
ASIA 399 Women in Chinese Literature (also offered as WGST 399)
ASIA 401/402 Independent Reading
ASIA 422 Original Beauty of Chinese Literature
ASIA 432 Islam in South Asia (also offered as HIST 432 and WGST 432)
ASIA 441 Popular Religion in the Middle East (also offered as RELI 441/525)
ASIA 470 Visual Culture in Revolutionary and Post-revolutionary China (ca. 1949-present) (also offered as HART 470)
ASIA 472 Japanese Animation (also offered as HART 472, HIST 472)
ASIA 473 Topics in Asian American Literature (also offered as ENGL 473)
ASIA 489 Migrations and Diasporas

Chinese

CHIN 101/102 Introductory Chinese I and II
CHIN 201/202 Elementary Chinese I and II
CHIN 203/204 Accelerated Chinese I and II
CHIN 211/212 Accelerated Elementary Chinese I and II
CHIN 215 Classical Chinese
CHIN 301/302 Intermediate Chinese I and II
CHIN 311/312 Accelerated Intermediate Chinese I and II
CHIN 313 Advanced Intermediate Chinese: Media Chinese
CHIN 314 Contemporary China
CHIN 316 Texts from Popular Culture
CHIN 318 Medical Chinese
CHIN 321 Structure of Chinese: Syntax and Semantics (also offered as LING 321)
CHIN 322 Taiwanese Language and Literature
CHIN 330 Introduction to Traditional Chinese Poetry (also offered as ASIA 330)
CHIN 332 Chinese Film and Modern Chinese Literature (also offered as ASIA 332)
CHIN 334 Traditional Chinese Tales (also offered as ASIA 334)
CHIN 335 Introduction to Classical Chinese Literature (also offered as ASIA 334)
CHIN 346 History of the Chinese Language (also offered as LING 346)
CHIN 399 Chinese Teaching Practicum
CHIN 411/412 Advanced Chinese Language and Culture I and II
CHIN 422 Original Beauty of Chinese Literature (also offered as ASIA 422)

English

ENGL 372 Survey of Asian American Literature (also offered as ASIA 372)
ENGL 473 Topics in Asian American Literature (also offered as ASIA 473)

Hindi

HIND 101/102 Elementary Hindi I and II
HIND 201/202 Intermediate Hindi I and II
HIND 335 South Asian Literature
HIND 336 South Asian Literature, Poetry, and Popular Culture
HIND 398/399 Hindi Teaching Practicum

History

HIST 206 Introduction to Asian Civilizations
HIST 219 Fortune-Tellers and Philosophers
HIST 220 Contemporary China (also offered as ANTH 220)
HIST 221 Japan in the World Until 1800
HIST 222 Japan in the World Since 1800
HIST 250 Traditional Chinese Culture
HIST 270 South Africa and Indonesia
HIST 310 Contemporary China (enriched version of HIST 220; also offered as ANTH 310)
HIST 319 Fortune-Tellers and Philosophers
HIST 321 Japan in the World Until 1800
HIST 322 Japan in the World Since 1800
HIST 341 Pre-modern China
HIST 342 Modern China
HIST 352 The Comparative Modernization of China and Japan
HIST 369 Film, Literature and the Japanese Past (also offered as ASIA 369)
HIST 405 Issues in Comparative History
HIST 421 *Japan in the World Until 1800* (enriched version of HIST 221)
HIST 422 *Japan in the World Since 1800* (enriched version of HIST 222)
HIST 432 *Islam in South Asia* (also offered as ASIA 432 and WGST 432)
HIST 448 *Creating Modern Japan: The Meiji Restoration*
HIST 449 *Nation, Empire, and War: Japan in the 1930s*
HIST 450 *Traditional Chinese Culture* (enriched version of HIST 250)
HIST 472 *Japanese Animation* (also offered as ASIA 472 and HART 472)
HIST 485 *Comparing Histories: Modernization, War, and Society in Germany and Japan*

**Japanese**
JAPA 101/102 *Introduction to Japanese I and II*
JAPA 201/202 *Intermediate Japanese I and II*
JAPA 301/302 *Advanced Japanese Reading and Composition I and II*
JAPA 370 *Structure of Japanese* (also offered as LING 370)
JAPA 398/399 *Japanese Teaching Practicum*
JAPA 498/499 *Independent Study*

**Korean**
KORE 101/102 *Introduction to Korean Language and Culture I and II*
KORE 201/202 *Intermediate Korean Language and Culture I and II*
KORE 301/302 *Advanced Korean I and II*
KORE 344 *Korean Literature and Culture* (also offered as ASIA 344 and HUMA 344)
KORE 345 *Origin and Development of Korean and Related Languages in East Asia* (also offered as LING 345 and ASIA 345)
KORE 346 *Korean Culture and History* (also offered as ASIA 346)
KORE 398/399 *Korean Teaching Practicum*

**Linguistics**
LING 321 *Structure of Chinese Syntax and Semantics* (also offered as CHIN 321)
LING 345 *Linguistic Structure of Korean* (also offered as KORE 345)
LING 346 *History of the Chinese Language* (also offered as CHIN 346)
LING 351/352 *Introduction to Sanskrit I and II* (also offered as SANS 301 and 302)
LING 370 *Structure of Japanese* (also offered as JAPA 370)
LING 451/452 *Advanced Sanskrit I and II* (also offered as SANS 401 and 402)

**Political Science**
POLI 351 *Politics of Southeast Asia*
POLI 460 *Seminar in Comparative Government*

**Religious Studies**
RELI 132 *Classical and Colloquial Tibetan* (also offered as TIBT 132)
RELI 139 *Introduction to Indian Religions* (also offered as ASIA 139)
RELI 140 *Introduction to Chinese Religions* (also offered as ASIA 140)
RELI 221 *The Life of the Prophet Muhammad* (also offered as ASIA 221)
RELI 231 *The Enlightenment of the Body* (also offered as ASIA 231)
RELI 235 *Intro to Taoism*
RELI 250 *Meditation, Mysticism, and Magic* (also offered as ASIA 250)
RELI 322 *Introduction to Buddhism*
RELI 323 *The Knowing Body* (also offered as ASIA 323)
RELI 325 *Buddhism and the Female*
RELI 331/332 *Advanced Tibetan Language and Culture I and II* (also offered as TIBT 331/332)
RELI 354 *Asian Apocalyptic Movements* (also offered as ASIA 354)
RELI 355 *Religion and Social Change in South Asia* (also offered as ASIA 355)
RELI 356 *Major Issues in Contemporary Islam*
RELI 361 *The Oriental Renaissance* (also offered as ASIA 361)
RELI 363 *The Marriage of Heaven and Hell* (also offered as ASIA 363)
RELI 365 *Mysticism and Meditation in China* (also offered as ASIA 365)
RELI 441/525 Popular Religion in the Middle East (also offered as ASIA 441)
RELI 470 Buddhist Wisdom Texts
RELI 471 Buddhist Meditation Theory: Women and Men
RELI 480/580 Sexuality, Sanctity, and Psychoanalysis (also offered as WGST 470)

Sanskrit
SANS 301/302 Elementary Sanskrit I and II (also offered as LING 351 and 352)
SANS 401/402 Advanced Sanskrit I and II (also offered as LING 451 and 452)

Sociology
SOCI 323 The Knowing Body: Buddhism, Gender, and the Social World (also offered as ASIA 323 and WGST 323)

Tibetan
TIBT 132/133 Tibetan Language and Culture I and II (also offered as RELI 132/133)
TIBT 331/332 Advanced Tibetan Language and Culture I and II (also offered as RELI 331/332)

University and Residential College Courses
BAKE 121/JONE 135 Beginning Vietnamese Language and Culture
JONE 279 Intermediate Vietnamese Language and Culture

JONE 311 Indian Society and Politics
UNIV 118 The Classic of Changes (I Ching) in Asian and World Culture

Vietnamese
JONE 135/BAKE 121 Beginning Vietnamese Language and Culture
JONE 279 Intermediate Vietnamese Language and Culture

Women and Gender Study
WGST 240 Gender and Politicized Religion (also offered as ASIA 240)
WGST 299 Women in Chinese Literature (also offered as ASIA 299 and CHIN 299)
WGST 323 The Knowing Body: Buddhism, Gender, and the Social World (also offered as ASIA 323 and SOCI 323)
WGST 340 Gender and Politicized Religion (also offered as ASIA 240)
WGST 399 Women in Chinese Literature (also offered as ASIA 399 and CHIN 399)
WGST 432 Islam in South Asia (also offered as ASIA 432 and HIST 432)
WGST 470 Sexuality, Sanctity, and Psychoanalysis (also offered as RELI 480/580)

See ASIA in the Courses of Instruction section.
DEPARTMENTS / Bioengineering

BIOENGINEERING

GEORGE R. BROWN SCHOOL OF ENGINEERING

CHAIR
Rebecca Richards-Kortum

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DEGREES OFFERED: BSB, MBE, MS, PhD

Graduate programs in bioengineering offer concentrations in areas that include cellular and molecular engineering; bioinstrumentation, imaging, and optics; biomaterials and biomechanics; and computational bioengineering. Undergraduate programs in bioengineering offer concentrations in areas that include cellular and molecular engineering; bioinstrumentation, imaging, and optics; and biomaterials and biomechanics. Research areas include biomechanical engineering, biological systems modeling, bioinformatics, biomaterials, biomedical lasers, cellular and molecular engineering, controlled release technologies, metabolic engineering, spectroscopy, statistical mechanics, systems engineering and instrumentation, thrombosis, tissue engineering, and transport processes.

Undergraduate Program—The bioengineering undergraduate program will prepare students for careers in rapidly developing areas of biomedical engineer-
ing and bioprocessing. Our unified and comprehensive program leading to the BS degree in bioengineering will:

- Provide students with a fundamental understanding of mathematics and the natural, life, and medical sciences
- Teach students bioengineering principles and their applications in life and medical sciences
- Develop their critical problem-solving skills in bioengineering.
- Develop their ability to communicate effectively and participate in interdisciplinary teams
- Expose students to a broad education that prepares them for diverse careers

Undergraduates in bioengineering will then have the training to pursue further education in graduate school or medical school and will have strong preparation for a career in the biotechnology industry.

The BS degree is organized around a core of required courses and a selection of elective courses from three areas of specialization. The specialization electives provide a flexibility that can be used to create a focus in cellular and molecular engineering, bioinstrumentation, imaging, and optics; or biomaterials and biomechanics. Because of the number of options, students should consult early with departmental advisors to plan a program that meets their needs.

**Degree Requirements for BS in Bioengineering**

For general university requirements, see Graduation Requirements (pages 14-15). The curriculum for a BS degree in bioengineering requires 94 credit hours, which count toward the total of 134 hours required to graduate.

**Preparation**—As freshmen, students considering a major in bioengineering should take MATH 101 and 102, CHEM 121 and 122, PHYS 101 or PHYS 125, PHYS 102 or PHYS 126, and CAAM 210. Sophomore students should take MATH 211 and 212, CHEM 211, BIOS 201, ELEC 243 and MECH 211. BIOE 252 should be taken in the first semester of the sophomore year. BIOE 330, BIOE 320, and BIOE 322 should be taken the second semester of the sophomore year.

Students majoring in bioengineering must complete the following courses.

**Core Courses**

**Bioengineering**
- BIOE 252 Bioengineering Fundamentals
- BIOE 320 Systems Physiology Laboratory Module
- BIOE 322 Systems Physiology
- BIOE 330 Bioreaction Engineering
- BIOE 332 Thermodynamics
- BIOE 342 Tissue Culture Laboratory
- BIOE 370 Biomaterials
- BIOE 372 Biomechanics
- BIOE 383 Biomedical Instrumentation
- BIOE 384 Biomedical Instrumentation Laboratory Module
- BIOE 391 Numerical Methods

**Biosciences**
- BIOS 201 Introductory Biology
- BIOS 341 Cell Biology
Computational and Applied Mathematics
CAAM 210 Introduction to Engineering Computation

Chemistry
CHEM 121 General Chemistry
CHEM 122 General Chemistry
CHEM 211 Organic Chemistry

Math
MATH 101 Single Variable Calculus I
MATH 102 Single Variable Calculus II
MATH 211 ODEs and Linear Algebra
MATH 212 Multivariable Calculus

Electrical Engineering
ELEC 243 Introduction to Electronics

Mechanical Engineering
MECH 211 Engineering Mechanics

Physics
PHYS 101, PHYS 111, or PHYS 125 Mechanics
PHYS 102, PHYS 112, or PHYS 126 Electricity and Magnetism

*Students must take the advanced laboratory module in their specialization area: BIOE 442 or BIOE 443 for cellular and molecular engineering, BIOE 442 or 444 for biomaterials and biomechanics, and BIOE 445 for bioinstrumentation, imaging and optics. Students must take one other advanced laboratory module for a total of two of the four listed modules (BIOE 442, 443, 444, and 445).

Specialization Areas
Three specialization area elective courses, at least two of which must be at the senior level, will be required in one of the three areas:
- Cellular and molecular engineering
- Bioinstrumentation, imaging, and optics
- Biomaterials and biomechanics

The elective courses in these concentration areas will be announced in future course listings. All three specialization courses must be engineering courses.

Graduate Program—The bioengineering graduate program at Rice educates its students so that they can directly interact with physicians and cell and molecular biologists, while still excelling in the quantitative capabilities so important for engineering applications.

Degree Requirements for MBE and MS and PhD in Bioengineering
For general university requirements, see Graduate Degrees (pages 57–58).

MBE Program—The master of bioengineering degree is intended for those having a BA or BS degree in an engineering or science discipline.

To obtain an MBE from the bioengineering department, you must complete the following course work:

1. Curriculum must be approved by the Academic Affairs Committee of the bioengineering department. (This will be done on a case-by-case basis).
2. Total of 30 credit hours is required (courses must be above and beyond the requirement for the undergraduate degree) as follows:
• At least 15 credit hours of the 36 must be taken as BIOE courses, including Biosystems Transport and Reaction Processes (BIOE 520) and Fundamentals of Systems Physiology (BIOE 572)
• Introduction to Partial Differential Equations (MATH 381) (3 hours)
• One additional engineering course (3 hours)
• Three additional courses approved by the Academic Affairs Committee (9 hours)

In summary, the credit hours required are:

15 credit hours of BIOE courses
3 credit hours of MATH 381
3 credit hours of one additional engineering course
9 credit hours of additional courses approved by the Academic Affairs Committee
30 Total credit hours

**MS Program**—Candidates for the MS degree must:

• Complete at least 18 semester hours of foundation, supporting, and advanced courses with high standing
• Fulfill a teaching requirement
• Submit an original research thesis
• Defend the thesis in a public oral examination

**PhD Program**—Candidates for the PhD degree must:

• Complete at least 36 approved semester hours of foundation, supporting, and advanced courses, with high standing. With departmental approval, the course requirements may be reduced to not less than 22 hours for students already holding an MS degree.
• Fulfill a teaching requirement. After their first semester in residence, students may be asked to spend the equivalent of 6 to 10 hours per week for a total of three semesters on teaching assignments.
• Submit a thesis proposal. PhD students must submit and successfully defend their thesis proposals by the end of their fourth semester in residence.
• Complete a three- to six-month industrial internship. This requirement may be waived for those with adequate previous industrial experience.
• Submit a thesis that provides evidence of their ability to carry out original research in a specialized area of bioengineering.
• Defend the thesis in a public oral examination.

Graduate students take required courses and electives in the following areas:

• Cellular and molecular engineering
• Bioinstrumentation, imaging, and optics
• Biomaterials and biomechanics
• Computational bioengineering

See BIOE in the Courses of Instruction section.
BIOSCIENCES

BIOCHEMISTRY AND CELL BIOLOGY

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** Degrees Offered: BA, BS, MA, PhD **

** Undergraduate Programs**—The Departments of Biochemistry and Cell Biology and Ecology and Evolutionary Biology offer a broad range of courses in the biosciences: animal behavior, animal biology, biochemistry, biophysics, cell biology, developmental biology, ecology, endocrinology, evolutionary biology, genetics, immunology, microbiology, molecular biology, neurobiology, plant biology, and advanced courses in these and related areas. Students may elect a BA in Biochemistry and Cell Biology, BA in Biological Sciences, BS in Biochemistry and Cell Biology, or BS in Ecology and Evolutionary Biology; and may select courses from the range of topics listed above.

Core courses required of all biosciences majors:

<table>
<thead>
<tr>
<th>Mathematics</th>
<th>One Group B BIOS course</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 101/102 Single Variable Calculus I and II</td>
<td>2 of the following advanced laboratory courses:</td>
</tr>
<tr>
<td>Chemistry</td>
<td>BIOS 311 Lab in Protein Purification</td>
</tr>
<tr>
<td>CHEM 121/122 General Chemistry with Laboratory</td>
<td>BIOS 312 Lab Module in Molecular Biology I</td>
</tr>
<tr>
<td>CHEM 211/212 Organic Chemistry</td>
<td>BIOS 313 Lab Module in Molecular Biology II</td>
</tr>
<tr>
<td>CHEM 215 Organic Chemistry Lab</td>
<td>BIOS 314 Lab in Cell and Developmental Biology</td>
</tr>
<tr>
<td>Physics</td>
<td>BIOS 315 Lab in Physiology</td>
</tr>
<tr>
<td>PHYS 125/126 General Physics I and II</td>
<td>BIOS 316 Lab in Ecology</td>
</tr>
<tr>
<td>Biosciences</td>
<td>BIOS 317 Lab in Behavior</td>
</tr>
<tr>
<td>BIOS 201/202 Introductory Biology</td>
<td>BIOS 318 Lab in Microbiology</td>
</tr>
<tr>
<td>BIOS 301 Biochemistry</td>
<td>BIOS 319 Tropical Field Biology</td>
</tr>
<tr>
<td>BIOS 211 Introductory Lab in Biological Sciences (2 credit hours)</td>
<td>BIOS 320 Lab in Tissue Culture</td>
</tr>
<tr>
<td>BIOS 213 Introductory Lab in Ecology and Evolutionary Biology</td>
<td>BIOE 342 Lab in Tissue Culture</td>
</tr>
</tbody>
</table>

Math 111 and 112 may be substituted for Math 101; Chem 151, 152 may be substituted for Chem 121, 122; Phys 101 and 102 or Phys 111 and 112 and their labs may be substituted for Phys 125, 126. See listings in the Courses of Instruction for Group A and B designations. No course may be counted more than once toward any of the major requirements.

One of the advanced laboratory course requirements can be satisfied by taking any of the following: (i) Bios 310 if taken for at least two credits; or (ii) Hons 470/471, if the research supervisor is from one of the Biosciences departments, or if the research is biological in nature and pre-approved by the student’s advisor; or (iii) Bios 412.

** BA in Biochemistry and Cell Biology **

In addition to the core courses required of all biosciences majors, BA majors within this option must also take:

- MATH 211 or MATH 213
- BIOS 311
• BIOS 341
• Two of the following courses: BIOS 302, BIOS 344, BIOS 352
• Two additional Group A biosciences courses, only one of which may be BIOS 401 or 402

Chem 311 and 312 may be substituted for BIOS 352. Neur 511 and 512 may be substituted for one Group A course. Students may receive credit toward the major for a maximum of 3 credits of BIOS 390.

**BA in Biological Sciences**

In addition to the core courses that are required of all biosciences majors, BA majors within this option must take:

• MATH 211 or MATH 213 or STAT 305
• One of the following advanced lab courses: BIOS 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 530, 532, 533, 535, or BIOE 342
• One of the following Group A courses: BIOS 302, 341, 344, 352
• One additional Group A course
• Two Group B courses
• One additional Group A or Group B course

Only one of the courses used to satisfy these group A and group B requirements may be BIOS 401, 402, 403, or 404. NEUR 511 and 512 may be substituted for one Group A course. Students may receive credit toward the major for a maximum of 3 credits of BIOS 390 and 3 credits of BIOS 391. Students desiring to specialize in ecology and evolutionary biology can choose a Group B course for the Group A or B course and their advanced lab can be BIOS 316, 317, or 319.

**BS in Biochemistry and Cell Biology**

In addition to the core courses required of all biosciences majors, BS majors must also take:

• MATH 211 or MATH 213
• BIOS 311
• BIOS 302
• BIOS 341
• BIOS 344
• BIOS 352
• Three additional Group A bioscience courses

BIOS 401 and 402 are recommended Group A courses in the BS degree program. NEUR 511 and 512 may be substituted for one Group A course. Students may receive credit toward the major for a maximum of 3 credits of BIOS 390.

**BS in Ecology and Evolutionary Biology**

In addition to the core courses required of all biosciences majors, BS majors must also take:

• MATH 211 or MATH 213 or Stat 305
• One of the following advanced laboratory courses: BIOS 316, 317, 319
• One Group A biosciences course
• BIOS 403 and BIOS 404
• Two additional Group B biosciences courses
• One additional biosciences course from Group A or B
NEUR 511 and 512 may be substituted for one Group A course. Students may receive credit toward the major for a maximum of 3 credits of BIOS 390 and 3 credits of BIOS 391.

**Advising**—Students should contact the appropriate departmental office to be assigned to an advisor. Those pursuing a BS or BA in Biochemistry and Cell Biology should contact that department office. Those pursuing a BS in Ecology and Evolutionary Biology should contact that department office. Those electing a BA in Biological Sciences may choose the department that most closely corresponds to their interests, and that choice may be changed at any time. Students interested in environmental careers should consult with the Ecology and Evolutionary Biology Department for a list of recommended courses. See also Environmental Studies listings and Environmental Science Double Major.

It is recommended that the 100-level mathematics and chemistry courses be taken in the freshman year; that the 100-level physics courses and the 200-level biosciences courses be taken in either the freshman or sophomore year; and that CHEM 211, 212, 215 be taken in the sophomore year. Those with a limited background in chemistry should complete CHEM 121, 122 before taking BIOS 201, 202. Others are urged to take BIOS 201, 202 as freshmen, to permit earlier access to advanced level BIOS courses. PHYS 125 and 126 are the preferred physics courses for biosciences majors. However, PHYS 101 and 102 or PHYS 111 and 112 and their labs may be taken instead by those wishing to preserve the option of majoring in a subject for which PHYS 101 and 102 are required.

An undergraduate major in biosciences must have 48 semester hours in courses numbered 300 or higher to obtain a BA or BS degree. Students must also complete no fewer than 60 semester hours outside the departmental requirements. These must include the courses needed to satisfy the university distribution requirements.

**Accelerated Rice BA–BS/PhD Program in Biochemistry and Cell Biology**

Qualified undergraduate students at Rice can apply to enroll in the biochemistry and cell biology graduate program in their senior year. The course requirements for graduate studies are therefore completed at the same time as the upper-level undergraduate degree requirements; laboratory research performed as part of the undergraduate thesis project can serve as the initial phases of the PhD thesis work. As a result, the graduate careers of these students will be accelerated by at least one full year, and, in principle, such students should be able to obtain their PhD degrees approximately three years after obtaining their BA or BS degree.

Criteria for selection include academic performance (GPA ≥ 3.3), GRE scores, motivation, previous research experience, and personal qualities. Selection is made by the department admissions committee.

**Mechanics of the Program**

The program requires the completion of two and one-half years (or their equivalent) of undergraduate studies at Rice before a student can be considered for enrollment in the accelerated PhD program. To continue in the program, the following requirements must be fulfilled: (1) The student must take the GRE before receiving the BA or BS degree and receive scores greater than 80 percent in the Analytical and Quantitative Tests; (2) students must also maintain at least a B average in all courses in their senior year; and (3) the usual graduate requirements will apply for continuation in the program.
Degree Requirements for MA and PhD in Biochemistry and Cell Biology

Admission—Applicants for graduate study in the Department of Biochemistry and Cell Biology must have:

- BA degree in biochemistry, biology, chemistry, chemical engineering, physics, or some equivalent
- Strong ability and motivation, as indicated by academic record, Graduate Record Examination (GRE) scores, and recommendations

Although the department offers an MA degree in biochemistry and cell biology, only on rare occasions are students who do not intend to pursue the PhD degree admitted to the graduate program. The department provides a program guide entitled “Graduate Requirements for Biochemistry and Cell Biology” which is updated annually. For general university requirements, see Graduate Degrees (in the General Announcements).

Both PhD and MA Programs—Most of the formal course studies will be completed in the first year of residence to allow the students to commence thesis research at the end of their second semester at Rice. During the first year, all graduate students will be advised by the Graduate Advisory Committee (current composition: Stern, Bartel, Braam, Gustin, Olson). This committee will determine the formal course program to be taken during the first year in residence. Students are required to have training in biochemistry, cell biology, genetics, and physical chemistry or biophysics. If students are missing formal training in these subjects, they are required to take the equivalent background courses during their first year. The corresponding courses at Rice include the following:

- BIOS 301 Biochemistry
- BIOS 302 Biochemistry
- BIOS 311, 312 and 313 Laboratories for the Biosciences
- BIOS 341 Cell Biology
- BIOS 344 Molecular Biology and Genetics
- BIOS 352 Physical Chemistry for the Biosciences

All PhD students are required to take the following graduate-level courses:

- BIOS 575 Introduction to Research
- BIOS 581, 582 Graduate Research Seminars
- BIOS 583 Molecular Interactions
- BIOS 587 Research Design, Proposal Writing, and Professional Development
- BIOS 594 The Ethics of Bioscience and Bioengineering
- BIOS 599 Graduate Teaching
- BIOS 800 Graduate Research (rotations in first year)

Students must also take 2 units from the following set of advanced courses:

- BIOS 525 Plant Molecular Biology (1 unit)
- BIOS 530, 532, 533, 535 Graduate Laboratory Modules in Molecular Biophysics (1/2 unit each)
- BIOS 545 Advanced Molecular Biology and Genetics (1 unit)
- BIOS 551 Molecular Biophysics
- BIOS 588 Advanced Cell and Developmental Biology (1 unit)

Students should complete BIOS 583 and BIOS 587 in their first year, and they will be responsible for the content of those course programs in their admission to candidacy examinations (see below). Students also gain teaching experience by serving as discussion leaders and graders in undergraduate sections during their second year. Safety and ethics presentations are provided for first-year students.

Evaluation of Progress in Graduate Study—The Graduate Advisory Committee evaluates each student’s undergraduate record and identifies any deficiencies to be corrected (usually in the first year). Thesis advisors may require additional course work of a more specialized nature. Students must complete all additional courses before taking the admission to candidacy examination.
At the end of each semester, the department chair, in consultation with the committee and faculty, reviews student performance in the formal course work; after students complete two semesters at Rice, the faculty conducts a review. Students must maintain at least a B average and demonstrate outstanding motivation and potential for research.

Evaluation after the first year includes:

- Ongoing review of research progress by the thesis research advisor
- A research progress review examination given each year by the student’s Research Progress Review Committee
- Presentation of research progress at least once a year after the second year until submission of a complete doctoral thesis
- Completion of an oral admission to candidacy examination before the end of the student’s fourth semester
- Defense of the PhD thesis research and text in a final public seminar presentation and oral examination attended by the student’s Thesis Committee

MA Program—All the above requirements and evaluation procedures apply to MA candidates with the following exceptions. The research progress review examination held during the MA student’s second full year, which is identical in format to that for PhD students, replaces the admission to candidacy examination; no other preliminary examination is held before the final oral defense of the master’s thesis. MA candidates must complete a thesis and make a public oral defense of their research work to their Thesis Committee and other interested parties.

Degree Requirements for MA and PhD in Ecology and Evolutionary Biology

Admission—Applicants for graduate study in the Department of Ecology and Evolutionary Biology must have:

- BA degree or equivalent
- Scores from the Graduate Record Examination (GRE), including the advanced examination in biology
- A strong background in biology
- Completed course work in physics, mathematics (including calculus), and chemistry (including organic chemistry)

These requirements do not preclude admission of qualified applicants who have majored in areas other than biology. Deficiencies should be made up during the first year of residence; some may be waived at the discretion of the student’s faculty advisor and the department chair.

Entering students will meet with a faculty advisor to form a course of study for the first year. All first-year students will demonstrate basic proficiency in ecology and evolutionary biology either by completing one ecology course from the following choices: BIOS 322, BIOS 324, BIOS 325, BIOS 329, or BIOS 336 and one evolutionary biology course from the following choices: BIOS 321 or BIOS 334 or by performing satisfactorily on a written examination that tests basic knowledge in both ecology and evolutionary biology.

All graduate students are required to complete the following graduate-level courses: BIOS 561 Topics in Evolution, BIOS 562 Topics in Behavioral Biology, BIOS 563 Topics in Ecology, BIOS 568 Topics in Biological Diversity, BIOS 585/586 Graduate Seminar in Ecology and Evolutionary Biology. Students may substitute BIOS 432 Advanced Evolutionary Biology for BIOS 561 or BIOS 562. Students are required to complete
two semesters of BIOS 591 Graduate Teaching. Students typically complete a PhD in no fewer than 3 and no more than 5 years.

**MS Program**—In addition to the general university requirements and those listed above, the Master of Science in Ecology and Evolutionary Biology requires 10 hours of research credit.

**MA Program**—In addition to the general university requirements and those listed above, the Master of Arts in Ecology and Evolutionary Biology requires the completion and public defense of a thesis embodying the results of an original investigation.

**PhD Program**—In addition to the general university requirements and those listed above, applicants for the PhD degree in Ecology and Evolutionary Biology must:

- Maintain a grade average of B or better in courses taken in the department and satisfactory grades in courses taken outside the department
- Pass the admission to candidacy examination given by the Graduate Advisory Committee (this examination may be oral and/or written)
- Complete an original investigation and a doctoral thesis worthy of publication in a scientific journal
- Present a departmental seminar on the research
- Publicly defend the doctoral thesis
The Center for the Study of Languages (CSL) was founded in 1997 to promote and enhance the study of languages at Rice University and is responsible for teaching 13 languages through the third year of instruction. The role of the center is to establish innovative approaches to language acquisition, expand opportunities for language learning across the curriculum, and increase Rice students' participation in study and work abroad. The Language Resource Center (LRC), the technology division of the CSL, provides resources such as specialized computer software and enhanced videos to support and supplement all aspects of the teaching and learning of languages.

Degrees Offered: None

The CSL does not offer degree programs itself, but students are able to pursue language degrees from language departments. Some of those degrees include: BA in Asian Studies (Asian Studies), BA in Classical Studies (Classical Studies), BA, MA, and PhD in French Studies (French Studies), BA in German Studies, BA in Slavic Studies (German and Slavic Studies), and BA, MA in Spanish (Hispanic Studies). See each department for degree requirements.

Placement Testing

Foreign language classes are popular among Rice University students who wish to enhance their knowledge of world languages and cultures. Students who have some background in the language they intend to study are required to take a placement test to ensure that they are placed in the appropriate course. Placement Tests can be given online prior to matriculation or during O-Week. Additional information regarding language placement tests can be found on the Language Resource Center web page at www.ruf.rice.edu/~lrc.
**Transfer Credits**

The CSL will determine equivalency for foreign language classes taken at other colleges or universities and approve them for transfer credit. University transfer credit guidelines (see page 27) as well as requirements of the degree-granting department still apply. Students who study abroad should have their transfer credits approved before they commit to a study-abroad program. When requesting Rice equivalent credit for foreign language acquisition courses students must submit no less that the following to the CSL for approval: 1) the appropriate transfer request form from the Registrar's Office, 2) a program description for courses taken abroad or catalog description for courses taken in the US, and 3) a syllabus for the course they wish to take or have taken. Students should be aware that the approval process takes about one week and should plan accordingly.

**Scholarships**

Two scholarships are offered yearly through the CSL. The Donne Di Domani donates money to be awarded to outstanding Rice University students. This scholarship, to be used for tuition and books, is awarded to students committed to study of the Italian language and is based on need and merit. The Ministry of Education, Republic of China in Taiwan also offers a scholarship to study Mandarin Chinese in Taiwan for one year. Students interested in applying for either of these scholarships should contact the CSL at the beginning of the spring semester.

See ARAB, CHIN, FREN, GERM, HIND, HEBR, ITAL, JAPA, KORE, PLSH, PORT, RUSS, and SPAN in the Courses of Instruction section.
Degrees Offered: BA, BSChE, MChE, MS, PhD

This major gives undergraduates a sound scientific and technical grounding for further development in a variety of professional environments. Courses in mathematics, chemistry, physics, and computational engineering provide the background for the chemical engineering core, which introduces students to chemical process fundamentals, fluid mechanics, heat and mass transfer, thermodynamics, kinetics, reactor design, process control, and process design. Course electives may be used to create a focus area in one of the following four disciplines: bioengineering, environmental engineering, materials science/engineering, and computational engineering. Upon completing either the flexible BA requirements or the more scientific and professional BSChE requirements, students may apply for a fifth year of study leading to the nonthesis Master of Chemical Engineering (MChE) degree. A joint MBA/MChE degree is also available in conjunction with the Jesse H. Jones Graduate School of Management.

Students admitted for graduate studies leading to the MS or PhD degrees must complete a rigorous program combining advanced course work and original research that must be formalized in an approved thesis. Graduate research is possible in a number of areas, including thermodynamics, interfacial phenomena, complex fluids, polymer science and rheology, process control and optimization, reaction engineering and catalysis, reservoir engineering, biotechnology, and biomedical engineering.

Degree Requirements for BS in Chemical Engineering

For general university requirements, see Graduation Requirements (pages 14–15). The BS degree is accredited by the Accreditation Board for Engineering and
Technology (ABET). Through careful selection of other engineering and science courses, a student can develop a focus (or concentration) area in any of the following 4 engineering disciplines: environmental science/engineering, bioengineering, materials science/engineering, and computational engineering. These elective programs can be completed within the framework of a BS in chemical engineering. Students majoring in chemical engineering must complete 96 hours in the courses specified below for a minimum of 132 hours at graduation.

The undergraduate curriculum is designed so that outstanding students interested in careers in research and teaching may enter graduate school after earning either bachelor’s degree.

Engineering Breadth and Focus Area Options
To complete their technical education, Rice students seeking a BS degree in chemical engineering take course electives in at least two other engineering disciplines to satisfy a “breadth” requirement.

Or, they can use their electives to create a focus (or concentration) area in one of the following four disciplines:
- biotechnology/bioengineering
- computational engineering
- environmental engineering
- materials science and engineering

Consult our department web page for a detailed list of courses that can be used to satisfy the engineering breadth or focus area requirements.

Degree Requirements for BA in Chemical Engineering

Chemistry
CHEM 121/122 General Chemistry
or CHEM 151/152 Honors Chemistry
CHEM 211/212 Organic Chemistry
CHEM 217 Organic Chemistry Lab
CHEM 311/312 Physical Chemistry
Any 2 of CHEM 212, CHEM 311, or CHEM 312

Chemical Engineering
CHBE 301 Chemical Engineering Fundamentals
CHBE 303 Computer Programming in Chemical Engineers
CHBE 305 Computational Methods for Chemical Engineers
CHBE 343 Chemical Engineering Lab I
CHBE 390 Kinetics and Reactor Design
CHBE 401/402 Transport Phenomena I and II
CHBE 404 Product and Process Design
CHBE 411/412 Thermodynamics I and II
CHBE 443 Chemical Engineering Lab II
CHBE 470 Process Dynamics and Control

Mathematics
MATH 101/102 Single Variable Calculus I and II
MATH 211 Ordinary Differential Equations and Linear Algebra
MATH 212 Multivariable Calculus or equivalent honors courses
CAAM 336 Differential Equations in Science and Engineering or MATH 381 Introduction to Partial Differential Equations

Physics
PHYS 101 or 111 Mechanics
PHYS 102 or 112 Electricity and Magnetism

Mechanical Engineering
MECH 211 Engineering Mechanics

Students pursuing the BA degree in chemical engineering must meet all of the requirements for the BSChE degree with the following exceptions: CHBE 404 and 470 are not required. They do not have to satisfy the requirements for either the
engineering breadth or the focus area. Free electives may be substituted for these requirements to reach at least 132 semester hours for graduation.

**Prerequisites for Chemical Engineering Courses**—Before undergraduates may register for courses in chemical engineering at the 300 level and above, they must satisfy the following prerequisites.

**For CHBE 301**
- Math 101/102
- CHEM 121/122 or CHEM 151/152
- Corequisite: CHBE 303

**For CHBE 390**
- CHBE 301, 303, and 305
- MATH 211/212

**For CHBE 401**
- CHBE 411
- MATH 211/212
- PHYS 101/102
- Co/Prerequisite: CHBE 305

**For CHBE 402**
- CHBE 401
- Co/Prerequisites: CAAM 336 or MATH 381

With the written consent of the instructor, students may register for a course without completing the required prerequisite(s). Waivers, however, are not transferable.

**Degree Requirements for MChE, MS, and PhD in Chemical Engineering**

For general university requirements, see Graduate Degrees (pages 57–58).

**MChE Program**—For the MChE degree, students must complete at least 30 hours of courses beyond those counted for their undergraduate degree. At least 6 of the courses taken must be upper-level courses in chemical engineering and 1 must be an approved mathematics course. The chemical engineering courses selected should include process design (two semesters) and process control, unless courses in these subjects were taken during the student’s undergraduate studies.

**MS Program**—Candidates for the MS degree must:
- Complete at least 18 approved semester hours with high standing
- Submit an original research thesis
- Defend the thesis in a public oral examination

**PhD Program**—Candidates for the PhD degree must:
- Demonstrate competence in the areas of applied mathematics, thermodynamics, transport processes, and chemical kinetics and reactor design by passing qualifying examinations, usually during the first year of study
- Complete at least 36 approved semester hours with high standing (with department approval, the course requirements may be reduced to 24 hours for students already holding an MS degree)
- Submit a thesis that provides evidence of their ability to carry out original research in a specialized area of chemical engineering
- Defend the thesis in a public oral examination

**See CHBE in the Courses of Instruction section.**
Recognizing the wide range of studies encompassed by chemistry, the department encourages undergraduates to explore offerings in other departments such as mathematics, computational and applied mathematics, biochemistry, and physics as well as upper-level courses in chemistry. An interdepartmental major is offered in chemical physics. Taking advantage of the department’s extensive facilities, each BS degree candidate carries out a program of individual research under the supervision of a faculty member.

Graduate studies emphasize individual research, together with a fundamental understanding of chemistry beyond the students’ specific interests. Faculty research interests include the synthesis and biosynthesis of organic natural products; the synthesis of small cycloalkanes, molecular recognition, and biological catalysis; bioinorganic and organometallic chemistry; main group element and transition metal chemistry; the chemistry of group 13 elements; high-pressure and high-temperature chemistry; fluorine chemistry; chemical vapor deposition; the design of nanophase solids; molecular photochemistry and photophysics; infrared kinetic spectroscopy, laser and NMR spectroscopy; studies of electron transfer in crossed beams; theoretical and computational chemistry; and the study of fullerene molecules, carbon nanotubes, and their derivatives; polymer synthesis and characterization; molecular electronics; and molecular machines.
Degree Requirements for BA in Chemistry

For general university requirements, see Graduation Requirements (pages 14–15). Students choosing to receive a BA in chemistry must have a total of at least 120 semester hours at graduation, including the following courses required of all majors.

Core Courses

Chemistry
CHEM 121/122 General Chemistry with laboratory or CHEM 151/152 Honors Chemistry with laboratory
CHEM 211/212 Organic Chemistry
CHEM 215 Organic Chemistry Lab
CHEM 311/312 Physical Chemistry
CHEM 351 Introductory Module in Experimental Chemistry I
CHEM 352 Introductory Module in Experimental Chemistry II
CHEM 353 Introductory Module in Analytical Methods
CHEM 360 Inorganic Chemistry

Mathematics*
MATH 101/102 Single Variable Calculus I and II or MATH 121/122
MATH 211 Ordinary Differential Equations and Linear Algebra
MATH 212 Multivariable Calculus or MATH 221/222 Honors Calculus III and IV

Physics
PHYS 101 or 111 Mechanics
PHYS 102 or 112 Electricity and Magnetism

Other
NSCI 230 Computation in the Natural Sciences or CAAM 210 Introduction to Engineering Computation (or equivalent)

* The Department of Mathematics may, after consultation with a student concerning his/her previous math preparation, recommend that a student be placed into a higher level math course than for which the student has official credit. The Department of Chemistry will accept this waiver of the math classes upon a written confirmation of the waiver from the Department of Mathematics and upon the student’s successful completion of the higher level math course.

Advanced Courses

Additional Lecture Courses
At least 1 course from the following:
CHEM 401 Advanced Organic Chemistry
CHEM 430 Quantum Chemistry
CHEM 495 Transition Metal Chemistry

Additional Laboratory Courses
At least 3 advanced laboratory module credit hours from the following list:
CHEM 373 Advanced Module in Fullerene Chemistry
CHEM 374 Advanced Module in Synthetic Chemistry
CHEM 375 Advanced Module in Nanotechnology
CHEM 376 Advanced Module in Materials Chemistry
CHEM 377 Advanced Module in Catalysis
CHEM 381 Advanced Module in Physical Chemistry, A
CHEM 382 Advanced Module in Physical Chemistry, B
CHEM 383 Advanced Module in Instrumental Analysis, A
CHEM 385 Advanced Module in Polymer Chemistry
CHEM 391 Advanced Module in Catalysis
CHEM 395 Advanced Module in Green Chemistry
CHEM 435 Methods of Computational Quantum Chemistry

To ensure that students receive suitable breadth in their laboratory experience, advanced module selections must be approved by the student’s major committee.
Other advanced laboratory courses from chemically related disciplines (biochemistry, materials science, environmental engineering, etc.) may be substituted for these advanced modules, with approval of the committee. Chemistry majors may also substitute 2 advanced organic laboratory module credit hours for CHEM 215, with approval of the committee. Three hours of CHEM 491 (taken for one entire semester) may be substituted for 1 advanced laboratory module if no other CHEM 491 credit is taken in the same semester.

Students in the chemistry BA major must satisfy the university distribution requirements and complete no fewer than 64 semester hours in addition to the departmental requirements for the chemistry major, giving a minimum total of 120 hours for graduation.

**Degree Requirements for BS in Chemistry**

The core chemistry, math, physics, and NSCI 230 requirements for the BS degree are the same as those for the BA degree. PHYS 201 *Waves and Optics* and PHYS 202 *Modern Physics* are recommended but not required.

In addition to the core requirements, the BS degree requires the following course and laboratory work:

- 2 courses total from the **Additional Lecture Courses** list
- 3 advanced modules from the **Additional Laboratory Courses** list. As with the BA degree, 2 advanced laboratory modules may be substituted for CHEM 215 with departmental approval.
- At least 3 semester hours in undergraduate research (CHEM 491) in no less than 2-hour segments. With departmental approval, students may satisfy this requirement with HONS 470/471, which requires participation in CHEM 491 meetings. Students may also satisfy 3 of the 6 required hours in upper-level courses with additional research.
- 6 hours credit in upper-level courses (300 level or higher) in chemistry, mathematics, computational and applied mathematics, physics, biochemistry, or other subjects with adviser approval.

Students in the chemistry BS major must satisfy the distribution requirements (see pages 15–16) and complete no fewer than 60 semester hours in addition to the departmental requirements for the chemistry major, giving a minimum total of 128 hours for graduation.

**American Chemical Society Certification**—The Rice Department of Chemistry is on the approved list of the Committee on Professional Training of the American Chemical Society and so can certify that graduates have met the appropriate standards. The BA degree is not certifiable. For certification, students must complete:

- All degree requirements for the BS degree listed above
- CHEM 495 *Transition Metal Chemistry* as one of the additional lecture courses
- A department-approved course in biochemistry
- 9 hours total in upper-level courses from chemistry, physics, mathematics, computational and applied mathematics, biochemistry, or other courses in science or engineering with the approval of the department. The required course in biochemistry listed above counts toward this total.

A foreign language, preferably German, is recommended.

**Chemical Physics Major**—The chemical physics major leading to a BS degree is offered in conjunction with the Department of Physics and Astronomy. Students take upper-level courses in both chemistry and physics, focusing on the applications of physics to chemical systems. Students majoring in chemical physics must complete the following courses:
Admission Requirements for Accelerated BS/PhD Program in Chemistry

The high level of training provided in the Rice BS program enables certain specially qualified undergraduates to enter an accelerated program that allows them to complete a PhD degree within two or three years after receiving their BS degree. Students electing this option must begin their research during the summer following their junior year and continue the research by taking CHEM 491 during their senior year.

** Students wishing to be considered for the accelerated BS/PhD program should apply to the Department by January 15 of the second semester of their sophomore or junior years at Rice. The student should submit with the application a letter describing why they would like to enroll in this program and outline briefly their intended plan of study, stating their area of interest and with whom they would like to undertake graduate research. After an interview, the Department’s graduate admissions committee will consider the application and inform the candidate of their decision by no later than April 15 of that semester. Students admitted to the program will be assigned a committee to work out details of required courses for the accelerated program.

Degree Requirements for MA and PhD in Chemistry

For general university requirements, see Graduate Degrees (pages 57–58). Students who have completed course work equivalent to that required for a BA or BS in chemistry may apply for admission to the PhD program. For more information, see Admission to Graduate Study (pages 56–57).

MA Program—Students are NOT normally admitted to study for an MA degree. However, this degree is sometimes awarded to students who do not wish to complete the entire PhD program. Candidates for the MA degree must:

- Complete 6 one-semester courses
- Produce a thesis that presents the results of a program of research approved by the department
- Pass a final oral examination

Core Courses

**Chemistry**
- CHEM 121/122 General Chemistry with Laboratory or CHEM 151/152 Honors Chemistry with Laboratory
- CHEM 211 Organic Chemistry
- CHEM 311/312 Physical Chemistry

**Physics**
- PHYS 101 or 111 Mechanics
- PHYS 102 or 112 Electricity and Magnetism
- PHYS 201 Waves and Optics
- PHYS 202 Modern Physics
- PHYS 231 Elementary Physics Lab II
- PHYS 301 Intermediate Mechanics
- PHYS 302 Intermediate Electrodynamics

**Mathematics**
- MATH 101/102 Single Variable Calculus I and II
- or MATH 121/122

MATH 211 Ordinary Differential Equations and Linear Algebra

MATH 212 Multivariable Calculus or MATH 221/222 Honors Calculus III and IV

Additional Courses

1 course from CHEM 212 or CHEM 360
2 courses from PHYS 311, PHYS 312, CHEM 430, or CHEM 415
6 hours from CHEM 215, CHEM 351, CHEM 352, CHEM 373–391, CHEM 435, PHYS 331, or PHYS 332. Up to 2 hours of independent research (CHEM 491 or PHYS 491/492 may be counted toward this requirement.)
2 courses from NSCI 230, CAAM 210, or mathematics or computational and applied mathematics at the 300 level or above
Students who are admitted to PhD candidacy may apply for an automatic master's degree.

**Requirements for the PhD in Chemistry at Rice University**

The PhD in Chemistry is awarded for original research in Chemistry. Candidates receive a PhD after successfully completing at least 90 semester hours of advanced study in Chemistry and related fields and culminating in a thesis that describes an original and significant investigation in Chemistry. The thesis must be satisfactorily defended in a public oral examination. The student must pass the thesis defense before the end of the 16th semester of residency.

**Research**

During the first semester of residence students will select a research advisor from among the members of the faculty; the department chair must approve this choice. In some cases, students may choose research advisors outside of the department; however, such arrangements must be approved by the chemistry faculty. The research advisor will guide the student in the choice of an appropriate research topic and in the detailed training required to complete that project. Students must enroll in CHEM 800 (Graduate Research) and must participate in one of the graduate seminar classes offered by the department (currently CHEM 600) each semester that the student is in residence.

**Course Work**

The student must complete 6 three-semester-hour graduate-level lecture courses at Rice University. In order to satisfy this requirement, each of these courses must satisfy the following criteria:

- They must be approved by the department’s graduate advising committee.
- If a Chemistry course, it must be at the 400 level or higher. Certain 300 level courses in other departments may be acceptable with prior approval by the department’s graduate advising committee. Courses must be in technical subjects in Science or Engineering. Courses in teaching, presentation or management will not be counted towards the 6-class requirement.
- Each course must be passed with a grade of B or higher. It is possible to repeat or replace a course, upon approval of the department’s graduate advising committee. A maximum of two courses can be repeated/replaced.

Students transferring from other graduate institutions or students with a master degree can apply to have a maximum of 2 courses waived. A course waiver request must be accompanied by proof that a course pertinent to the student’s field of research has been successfully completed at a different institution. Waiver requests must be submitted for approval to the department’s graduate advising committee.

**Teaching**

Each student is required to participate in CHEM 700 (Teaching Practicum), for four semesters with no grade less than B-.

**Qualifying Examination**

An examination committee, consisting of three faculty members excluding the research advisor, will be assigned to each student, typically in the second semester. The student must defend an original research proposal before this committee, involving both a written and oral presentation of the original research proposal. The written proposal must conform to the format and guidelines established by the
Chemistry Department, which are available in the Department office. The written proposal must be submitted to the committee at least one week before the date of the oral examination. The examination (including any follow up work deemed necessary by the committee) must be passed by the last day of class at the end of the student’s fourth semester in residency.

**Advancement To Candidacy For The PhD**

The course and examination requirements listed above must be completed within two years of admittance to the graduate program. After completing these requirements, a student must petition to be advanced to candidacy for the PhD degree. Upon advancement to candidacy a student chooses a thesis committee of at least three faculty members with the guidance and approval of the research advisor and department Chair. The thesis committee must include one faculty member holding his/her primary appointment outside of the Chemistry Department.

**Satisfactory Performance**

Students are expected to perform satisfactorily in research as judged by their research director and their thesis committee. Students may also be requested to fulfill certain service functions for the Department. The student must be enrolled full time in a research group each semester that the student is in residence (except the first semester). Every year the student must submit an annual three-page research progress report to the thesis committee by August 1st.

The thesis committee will assess the progress being made in research and may invite the student to present a discussion of their work. If progress is unsatisfactory, the committee may recommend a semester of probation, which may result in dismissal from the program if progress remains unsatisfactory in the subsequent semester. The student, advisor, or committee may request a meeting between student and committee at other times to evaluate progress or to determine a course of action.

In order to remain in good standing, a student must receive grades above B- in CHEM 800, CHEM 700, and the various seminar courses. In the completed lecture courses, a student must maintain an average GPA of 3.00 (B) or higher. Failure to maintain satisfactory progress in research and/or grades will result in probation and possible dismissal.

**Appeal**

Students may petition the Chemistry Department Graduate Advising Committee for variances on these academic regulations.
Civil and Environmental Engineering

The George R. Brown School of Engineering

Chair
Herb Ward

Professors
Pedro Alvarez
Philip B. Bedient
Ahmad A. Durrani
Arthur A. Few, Jr.
Mason B. Tomson
Pol D. Spanos
Anestis S. Veletsos
Calvin H. Ward
Mark R. Wiesner

Professors Emeriti
Ronald P. Nordgren
John E. Merwin

Associate Professors
Matthew P. Fraser
Satish Nagarajaiah

Adjunct Professors
James B. Blackburn
Jean-Yves Bottero
Joseph Hughes
Pat H. Moore
Carroll Oubre
Baxter Vieux

Adjunct Assistant Professor
Charles J. Newell

Lecturers
Joseph Cibor
John Grounds
Moyeen Haque
John E. Merwin
John M. Sedlak
Ed Segner, III
Tauqir Sheikh

Degrees Offered: BA, MCE, MEE, MES, MS, PhD

Civil and environmental engineering (CEVE) is a broad and diverse field of study that offers students an education with several degree options. The most flexible degree options are at the bachelor’s level, where students can major in civil engineering (BS or BA) or complete a double major with any other Rice University major. Three nonthesis graduate degrees (MCE, MEE, and MES) are available to students who desire additional education and specialization in civil engineering, environmental engineering, or environmental sciences. Joint MBA/Master of Engineering degrees are also available in conjunction with the Jesse H. Jones Graduate School of Management.

Students admitted for graduate study leading to MS or PhD degrees must complete a rigorous course of study that combines advanced course work with scholarly research culminating in the public defense of a written thesis. Graduate research is carried out in a range of areas reflecting the interests of the department’s faculty. Examples include environmental engineering, geotechnical engineering, structural engineering and mechanics, hydrology, water resources and water quality management, air pollution and its control, and hazardous waste treatment.

BS Degree in Civil Engineering

The Department of Civil and Environmental Engineering (CEVE) offers an innovative and challenging BS engineering curriculum, which is designed to provide significant flexibility to the student. Specific details and typical course layouts by semester can be found at the departmental website: http://ceve.rice.edu.

The main features of the ABET accredited BS in Civil Engineering are as follows:

• Six core courses (21 hours) primarily aimed at introduction to civil and environmental engineering, followed by 8 courses (24 hours) that represent the four thrust areas within CEVE
• The total required CEVE courses are kept to a minimum level of 45 hours to provide maximum flexibility to the student
• The thrust areas include (1) Environmental engineering (air and water quality, transport theory and modeling), (2) Hydrology and water resources (watershed and aquifer management, flood prediction, data analysis, GIS), (3) Structural engineering and mechanics (structural analysis, mechanics, design, matrix methods), (4) Urban infrastructure and management (transportation systems, geotechnical engineering, engineering economics, management)
• A choice of free electives (24 hours) to allow maximum flexibility for students to choose from a approved list of courses
• General science (39 hours) courses involve mathematics, physics, and chemistry
• Distribution (24 hours) courses as per university requirements

Total of at least 132 hours are required for graduation with a BS (see detailed list below).

Additional features of the BS curriculum include
• Freshman/sophomore year courses that introduce fundamentals of CEVE primarily targeted at students with diverse science, engineering, and humanities backgrounds (CEVE 101, 201, 203, 204, 211, and 311, 312)
• Special topics course available in the final year to help attract the best students to perform undergraduate research in the department
• Engineers Without Borders (EWB) is an important component of the program. This exciting new endeavor allows undergraduates to have an experience in a developing country where they are able to actually design and build a project to help society. Students have been attracted to the program in large numbers.

Course Requirements
General Science Requirements (* or an equivalent approved course)
MATH 101 Single Variable Calculus I (3)
MATH 102 Single Variable Calculus II (3)
CHEM 121 General Chemistry with Lab (4)
CHEM 122 General Chemistry with Lab (4)
PHYS 101 Mechanics with Lab (3)
PHYS 102 Electricity and Magnetism with Lab (4)
MATH 211 Ordinary Differential Equations (3)
MATH 212 Multivariable Calculus (3)
CAAM 210 Intro to Engineering Comp (3)
STAT 310* Probability and Statistics (3)
CAAM 335* Matrix Analysis (3)
CHEM 211 or PHY 201 or BIOS 201 (3)

CEVE Core Requirements (21 credits)
CEVE 101 (F) Fundamentals of CEVE (3)
CEVE 203 (F) Environmental Eng. Processes (3)
CEVE 204 (F) Environmental Eng. Lab (1)
CEVE 211 (F) Engineering Mechanics (3)
CEVE 311 (S) Mechanics of Solids and Structures (3)
CEVE 312 (S) Strength of Materials Lab (1)
CEVE 371 (F) Fluid Mechanics (3)
CEVE 480 (S) Senior Design Project (4)

Area I Environmental Engineering (select 6 approved hours)
CEVE 401 (F) Environmental Chemistry (3)
CEVE 402 (F) Environmental Chemistry Lab (1)
CEVE 406 (S) Environmental Law (3)
CEVE 411 (S) Air Resources Management (3)
CEVE 434 (F) Chemical Transport and Fate (3)
Or any approved environmental course in CEVE/CENG

Area II Hydrology and Water Resources (select 6 approved hours)
CEVE 412 (S) Hydrology and Watersheds Analysis (3)
CEVE 512 (S) Hydrologic Design Lab (3)
CEVE 443 (F) Atmospheric Science (3)
ESCI 450 (S) Remote Sensing (3)
ESCI 451 (F) Analysis of Environmental Data (3)
ESCI 454 (F) Geographical Info Systems (3)
Or any approved computational course in CEVE/CAAM/ESCI

Area III Structural Engineering and Mechanics (select 6 approved hours)
CEVE 304 (S) Structural Analysis (3)
CEVE 405 (S) Steel Design (3)
CEVE 407 (F) Reinforced Concrete Design (3)
CEVE 408 (F) Structures Lab (1)
CEVE 427 (F) Matrix Methods in Structural Mechanics (3)

Area IV Urban Infrastructure and Management (select 6 approved hours)
CEVE 201 (F) Urban and Environmental Systems (4)
CEVE 322 (F) Engineering Economics (3)
CEVE 452 (S) Urban Transportation Systems (3)
MGMT 750 (F) Management for Science and Engineering (3)
MGMT 751 (S) Management for Science and Engineering (3)
CEVE 470 (F) Infrastructure Geotechnical Engineering (4)
Or any approved Urban Infrastructure and Management course in CEVE/MGMT/ECON

List of Approved CEVE 500 Level Courses:
CEVE 511, 516, 518, 520, 521, 522, 527, 530, 531, 532, 533, 534, 536, 540, 550, 570, 576, 590
ABET Program Objectives
(see website at http://ceve.rice.edu/ for additional information)
1. Develop/demonstrate strong problem solving and communication skills
2. Achieve leadership position in technical or managerial area
3. Demonstrate initiative and innovative thinking in project work
4. Maintain a keen awareness of ethical, social, environmental, and global concerns
5. Remain engaged in continuing learning, including advanced degrees
6. Prepare for a Professional Engineering License

BA degree in Environmental Engineering Sciences
The BA degree in Environmental Engineering Sciences is designed to provide access to topics of common interest to students across the disciplines at Rice University. It is tailored to the specific needs of each student by discussion with and approval by the CEVE departmental advisor. An advisor will be assigned by the CEVE department chair, normally during the first year of study. Five core courses, plus seven courses in a focused specialty area (see below for example curricula) of study are required; total CEVE requirements approximately 39 hrs. In addition, each student is responsible for satisfying the university distribution requirements (24 hours) and additional electives for a total of at least 120 hours for graduation with a BA in Environmental Engineering Sciences. Although not required, students are encouraged to double major in their focus specialty area.

The coherent and complete core curriculum is designed to give Rice Undergraduate students a consistent technological literacy through the lens of Civil and Environmental Engineering and to prepare students for graduate school in engineering, various sciences (depending upon focus), economics, business MBA, political science, law, or medicine. Select students will be invited to finish an accelerated MS/PhD degree in the CEVE Department at Rice (meet with your advisor or department chair for details). Those students who want to obtain an ABET accredited engineering degree must follow a BS degree program in one of the engineering disciplines, including CEVE.

A student must demonstrate proficiency in the basic concepts of mathematics, computation, chemistry, and physics. Generally, this will require that these subjects were studied previously, e.g., AP exams, or concurrent enrollment with CEVE 101 or 201.

Seven (7) courses from approved electives, including four (4) courses from one specific focus area; four of these seven courses must be 300, or above, and two of these upper-division courses must be from the CEVE curriculum.

Five Core courses required for all BA Environmental Engineering Science majors:

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEVE 101 Fundamentals of CEVE</td>
<td>3</td>
</tr>
<tr>
<td>CEVE 201 Urban and Environmental Systems</td>
<td>4</td>
</tr>
<tr>
<td>CEVE 203(204) Environmental Eng. Processes</td>
<td>4*</td>
</tr>
<tr>
<td>CEVE 401 Intro Environmental Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>CEVE 412 Hydrology and Watershed Analysis</td>
<td>3</td>
</tr>
</tbody>
</table>

Typical “focus specialty areas” might include:

1. Environmental Engineering: CEVE 406, 411, 434; ESCI 451 + 3 approved electives
2. Chemical Engineering: CENG 301, 390, 401, 402; CEVE 411, 434, 443
3. Chemistry: CHEM 211, 212; CEVE 406, 511 + 3 approved electives
4. Economics: ECON 211, 212, 370, 450, 461; CEVE 406, 411
5. Management: ECON 211, 212, 461; ACCO 305; POLI 336; CEVE 406, 411

* Courses with laboratories.
Engineers Without Borders (EWB) is an important component of the CEVE program. This exciting new endeavor allows undergraduates to have an experience in a developing country where they are able to actually design and build a project to help society. Students have been attracted to the program in large numbers.

**BA degree in Civil Engineering**

The BA degree in Civil Engineering is designed to provide access to topics of common interest to students across the disciplines at Rice University. It is tailored to the specific needs of each student by discussion with and approval by the CEVE departmental advisor. An advisor will be assigned by the CEVE department chair, normally during the first year of study. For the BA degree in Civil Engineering the students must have a total of at least 120 hrs. A student must demonstrate proficiency in the basic concepts of mathematics, computation, chemistry, and physics. Generally, this will require that subjects studied previously, e.g., AP exams. The BA degree in Civil Engineering requires 21 hours of general math and science courses, 25 hours of core civil engineering courses, and 74 hours of electives (distribution courses 24 hrs and remaining open or free electives 50 hrs). Although not required, students are encouraged to double major in their focus specialty area.

The coherent and complete core curriculum is designed to give Rice Undergraduate students a consistent technological literacy through the lens of Civil and Environmental Engineering and to prepare students for graduate school in engineering. Those students who want to obtain an ABET accredited engineering degree must follow a BS degree in Civil Engineering program.

<table>
<thead>
<tr>
<th>Required general math and science courses</th>
<th>Total:</th>
<th>13 hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 101 Single Variable Calculus I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MATH 102 Single Variable Calculus II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MATH 211 Ordinary Differential Equations</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHYS 101* Mechanics with Lab</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHYS 102* Electricity and Magnetism with Lab</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>One of [COMP 110, CAAM 210, CAAM 335]</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>One of [BIOS 122, CHEM 121/122, ELEC 242, MECH200, MSCI 301]</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>* or equivalent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[MATH 212 or 221 recommended]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Required core civil engineering courses</th>
<th>Total:</th>
<th>21 hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEVE 101 Fundamentals of CEVE</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CEVE 211 Engineering Mechanics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CEVE 311 Mechanics of Solids and Structures</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CEVE 312 Strength of Materials</td>
<td>1*</td>
<td></td>
</tr>
<tr>
<td>CEVE 371 Fluid Mechanics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>* Laboratory</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Any four civil engineering courses from the following:

<table>
<thead>
<tr>
<th>Total:</th>
<th>12 hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEVE 202 Environmental Eng. Processes</td>
<td>3</td>
</tr>
<tr>
<td>CEVE 304 Structural Analysis</td>
<td>3</td>
</tr>
<tr>
<td>CEVE 322 Engineering Economics</td>
<td></td>
</tr>
<tr>
<td>for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>CEVE 405 Steel Design</td>
<td>3</td>
</tr>
<tr>
<td>CEVE 407 Reinforced Concrete Design</td>
<td>3</td>
</tr>
<tr>
<td>CEVE 412 Hydrology and Watersheds</td>
<td>3</td>
</tr>
<tr>
<td>CEVE 427 Matrix Methods in Structural Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>CEVE 452 Urban Transportation Systems</td>
<td>3</td>
</tr>
<tr>
<td>CEVE 470 Infrastructure</td>
<td>3</td>
</tr>
<tr>
<td>Geotechnical Engineering</td>
<td>4</td>
</tr>
</tbody>
</table>

**Degree Requirements for MCE, MEE, MES, MS, and PhD**

**Admission**—Applicants pursuing graduate education in environmental engineering or hydrology should have preparation in mathematics, science, and engineering or related courses. A BS degree, or degree in Natural Science is preferred. Applicants pursuing graduate education in structural engineering, structural mechanics, and geotechnical engineering should have a BSCE with a significant emphasis on struc-
tural engineering, but students with other undergraduate degrees may apply if they have adequate preparation in mathematics, mechanics, and structural analysis and design. Applicants for graduate degrees should have a BS or BA in related areas of science and engineering. Successful applicants typically have at least a 3.00 (B) grade point average in undergraduate work and high Graduate Record Examination (GRE) scores. For general university requirements, see Graduate Degrees and Admission to Graduate Study (pages 56–58).

**MS Program**—The Master of Science degree is offered in both civil engineering and environmental engineering. For general university requirements, see Graduate Degrees (pages 57–58). To earn a MS degree, students must:

- Complete at least 24 semester hours of approved courses. For students studying Environmental Engineering this must include one course each in environmental chemistry, water treatment, hydrology, and air quality. For students studying civil, structural engineering, and mechanics this must include one course each in structural engineering, mechanics, advanced mathematics, and dynamic systems (comparable course work completed previously may be substituted for the core courses).
- Select a thesis committee according to department requirements and conduct original research in consultation with the committee.
- Present and defend in oral examination an approved research thesis.

Students take the oral exam only after the committee determines the thesis to be in a written format acceptable for public defense. Normally, students take two academic years and the intervening summer to complete the degree.

Students intending to extend their studies into the PhD degree program should note that the department does not grant an automatic MS degree to candidates who have not written a satisfactory master’s thesis.

**MCE Program**—The Master of Civil Engineering (MCE) is a professional non-thesis degree requiring 30 hours of study. Students with a BS in Civil Engineering are eligible to apply. (see Graduate Degrees pages 57–58). To earn an MCE degree, students must complete 30 semester hours of approved courses.

**MBA/MCE Program**—For general university requirements, see Graduate Degrees (pages 57–58). See also Management and Accounting (pages 192–202). To earn a MBA/MCE degree, students must:

- Complete 24 semester hours of civil engineering courses
- Complete 52 semester hours of business administration courses

**MEE Program**—The Master of Environmental Engineering (MEE) is a professional non-thesis degree requiring 30 hours of study. Students who have a BS degree in any field of engineering may apply (see Graduate Degrees pages 57–58).

**MES Program**—The Master of Environmental Science (MES) is a professional non-thesis degree requiring 30 hours of study. To enter the MES program, applicants must have a BA or BS degree in any of the natural or physical sciences (see Graduate Degrees pages 57–58).

**PhD Program**—To earn a PhD degree, candidates must successfully accomplish the following (spending at least four semesters in full-time study at Rice):

- Complete 90 semester hours of approved course work past BS (60 semester hours past MS) with high standing.
- Pass a preliminary written examination in civil and environmental engineering.
- Pass a qualifying examination on course work, proposed research, and related topics.
• Complete a dissertation indicating an ability to do original and scholarly research.
• Pass a formal public oral examination on the thesis and related topics.

PhD candidates in civil and environmental engineering take the preliminary exam, administered by department faculty, after two semesters of course work. Candidates who pass this exam then form a doctoral committee according to department requirements. The qualifying examination administered by the doctoral committee after candidates develop a research proposal evaluates their preparation for the proposed research and identifies any areas requiring additional course work or study.
The classical studies major offers instruction in the Greek and Latin languages, in Greek and Roman literature (studied in the original and in translation), in the classical civilizations surveyed as a whole, and in particular themes, genres, and periods of classical culture and its influence through subsequent ages.

We recognize that students come to the study of ancient Greece and Rome with a whole spectrum of different kinds of interest. Some will want to concentrate on learning the ancient languages and reading the classical texts in the original Greek or Latin. Others will desire a broader introduction to the cultures of Greece and Rome and their legacy. Still others will be looking for some combination of these two approaches. With this in mind, the classical studies major provides maximum flexibility without sacrifice of focus. We cater to students who wish to prepare for graduate school in classical studies and also to students who are interested in Greek and Roman culture for other reasons and who wish to take a less specialized approach. Students will be able to explore ancient Greece and Rome from a variety of different angles and with whatever emphasis best suits their individual needs and goals.

To satisfy the requirements for the classical studies major, students must complete 30 semester hours of courses listed under “Greek,” “Latin,” and “Classics.” Courses listed under “Greek” and “Latin” concentrate on the acquisition of language skills and on the reading and interpretation of texts in the original languages. Courses listed under “Classics” explore, in translation, the literature, history, philosophy, art, and other aspects of Greek and Roman civilization and also the effect that Greece and Rome have had on literature and other traditions in the West. These courses in translation regularly include freshman seminars.

Classical Studies majors will also, if they wish, have the opportunity to engage in research. In the final semester of study, a student majoring in Classical Studies may enroll in CLAS 493, in which the student writes a senior thesis on a topic of the student’s choice in close consultation with a particular faculty member.

Further information on the classical studies major is available from faculty members. Faculty also help students arrange travel to Greece or Italy, whether to work on a dig or to study at the Intercollegiate Center for Classical Studies in Rome.

Degree Requirements for BA in Classical Studies

For general university requirements, see Graduation Requirements (pages 14–15).

Students majoring in classical studies must complete at least 30 semester hours (10 courses) listed under “Greek,” “Latin,” or “Classics.” The precise combination of
Greek, Latin, and Classics courses is to be determined by the student in consultation with the undergraduate coordinator, to ensure an individual course of study that is tailored to the student’s own interests and goals.

Some courses offered by the departments of History and Philosophy also satisfy requirements for the classical studies major. For advice on which courses do this, consult any member of the classical studies faculty.

See CLAS, GREE, and LATI in the Courses of Instruction section.
Researchers in this interdisciplinary field seek to understand such mental phenomena as perception, thought, memory, the acquisition and use of language, learning, concept formation, and consciousness. Some investigators focus on relations between brain structures and behavior, some work with computer simulation, and others work at more abstract theoretical levels.

**Degree Requirements for BA in Cognitive Sciences**

For general university requirements, see Graduation Requirements (pages 14–15). Students majoring in cognitive sciences must complete 5 core courses and 7 additional courses (see below). Among the 7 additional courses, at least 3 and no more than 4 must be in a single area of concentration—linguistics, philosophy, psychology, or neuroscience.

**Introductory Courses**

Because the major is interdisciplinary, no single course introduces the full range of the subject. However, students who are interested in majoring in cognitive sciences should take one or more of the following courses during their first and second years: LING200, PHIL103, PSYC101, or PSYC203.

**Honors Program**

Students with a 3.5 GPA in cognitive sciences and 3.3 overall GPA may apply for the cognitive sciences honors program. Students in the honors program are expected to conduct an independent research project of either one or two semesters under the guidance of a member of the cognitive sciences faculty. Students who wish to enter this program should consult with prospective advisors during their junior year and submit a proposal by the end of the semester proceeding the initiation of the project. Typically, this means submitting a proposal by the end of the junior year and beginning the project during the fall of the senior year. Proposal will be reviewed by both the supervisor and the program director. Students who under-
take a two-semester project will be allowed to continue into the second semester only if their advisor judges that sufficient progress has been made during the first semester. At the end of a project, honors students are expected to submit a final paper to both their advisor and the program director and make an oral presentation. For more details, contact the program director.

**Independent Research**

Majors may undertake supervised independent research by enrolling in CSCI390 or the honors program, and may apply up to 9 credits of independent research towards the major. Students who wish to take CSCI390 must complete a CSCI390 contract and have it approved by their supervisor and the program director prior to the end of the first week of classes. All students taking CSCI390 must also write a substantive research paper, which is to be submitted to both their advisor and the program director at the end of the semester. (Copies of the contract form and instructions are available on the ‘forms’ section of the cognitive sciences website.)

**Core Courses**

The core courses are divided into five groups. Majors just take one course from each group.

**Computer Science**

Though all of these courses may be used to satisfy the computer science core requirements, no more than one may be taken for credit within the major

CAAM 210 *Introduction to Engineering Computation*

COMP 200 *Elements of Computer Science*

COMP 201 *Principles of Object-Oriented Programming*

COMP 210 *Introduction to Principles of Scientific Computation*

**Psychology**

PSYC 203 *Introduction to Cognitive Psychology*

**Linguistics**

LING 200 *Introduction to the Scientific Study of Language*

LING 306 *Language and the Mind*

LING 315 *Semantics*

**Philosophy**

PHIL 103 *Philosophical Aspects of Cognitive Science*

PHIL 305 *Mathematical Logic*

PHIL 312 *Philosophy of Mind*

**Advanced Psychology**

PSYC 308 *Memory*

PSYC 309 *Psychology of Language*

PSYC 351 *Psychology of Perception*

PSYC 360 *Thinking*

PSYC 362 *Biopsychology*

PSYC 430 *Computational Modeling of Cognitive Processes*

PSYC 432 *Brain and Behavior*

**Computer Science**

COMP 212 *Intermediate Programming*

COMP 440 *Artificial Intelligence*

COMP 450 *Algorithmic Robotics*

**Linguistics**

LING 200 *Introduction to the Scientific Study of Language*

LING 300 *Linguistic Analysis*

LING 301 *Phonetics*

LING 304 *Introduction to Syntax*

LING 306 *Language and the Mind*

LING 311 *Phonology*

**Additional Courses**

At least 3 and no more than 4 must be in one of the following areas of concentration: linguistics, philosophy, psychology, or neuroscience. Note: you may not use the same courses to fulfill both a core course requirement and an additional course requirement; in other words, no double counting.

**Cognitive Sciences**

CGSCI 390 *Supervised Research in Cognitive Science*

CSCI 481 *Honors Project*

CSCI 482 *Honors Project*
LING 315 Semantics
LING 317 Language and Computers
LING 402 Syntax and Semantics
LING 403 Foundations of Modern Linguistics
LING 404 Research Methodologies and Linguistic Theories
LING 411 Neurolinguistics
LING 412 Language and Intelligence
LING 490 Discourse Analysis

**Neuroscience**
Many of the neuroscience courses are taught by Baylor College of Medicine faculty.
For more information, see http://www.ruf.rice.edu/~neurosci/neurocoursesmain.html
BIOS 421 Neurobiology
CAAM 415 Theoretical Neuroscience
ELEC 481 Fundamentals of Systems Physiology and Biophysics
LING 411 Neurolinguistics
PSYC 362 Biopsychology
PSYC 432 Brain and Behavior (formally cross-listed as CSCI 420)
NEUR 500 Functional Neuroanatomy and Systems Neuroscience
NEUR 501 Cognitive Neuroscience I
NEUR 502 Cognitive Neuroscience II
NEUR 503 Molecular Neuroscience I and II
NEUR 504 Cellular Neurophysiology I and II
NEUR 505 Optical Imaging in Neuroscience
NEUR 506 Learning and Memory
NEUR 511 Integrative Neuroscience Core Course (first semester)
NEUR 512 Integrative Neuroscience Core Course (first semester)
NEUR 515 Neural Development

**Psychology**
PSYC 308 Memory
PSYC 309 Psychology of Language
PSYC 340 Research Methods
PSYC 351 Psychology of Perception
PSYC 352 Formal Foundations of Cognitive Science
PSYC 360 Thinking
PSYC 362 Biopsychology
PSYC 370 Introduction to Human Factors
PSYC 409 Methods in Human-Computer Interaction
PSYC 411 History of Psychology
PSYC 430 Computational Modeling of Cognitive Processes
PSYC 432 Brain and Behavior (formally cross-listed as CSCI 420)
PSYC 441 Human-Computer Interaction
PSYC 465 Olfactory Perception

**Other**
ANTH 406 Cognitive Studies in Anthropology and Linguistics
ELEC 201 An Introduction to Engineering Design
ELEC 498 Introduction to Robotics
STAT 300 Model Building
Degrees Offered: BA, MCAM, MCSE, MA, PhD

Courses within this major can provide foundations applicable to the many fields of engineering, physical sciences, life sciences, behavioral and social sciences, and computer science. Undergraduate majors have considerable freedom to plan a course of study consistent with their particular interests.

The professional degree (MCAM), for persons interested in practicing within this field, emphasizes general applied mathematics, operations research and optimization, and numerical analysis, while the MA and PhD programs concentrate on research. Faculty research interests fall in the four general areas of numerical analysis and computation, physical mathematics, operations research and optimization, and mathematical modeling in physical, biological, or behavioral sciences.

A further advanced degree program in computational science and engineering (CSE) addresses the current need for sophisticated computation in both engineering and the sciences. Such computation requires an understanding
parallel and vector capabilities and a range of subjects including visualization, networking, and programming environments. An awareness of a variety of new algorithms and analytic techniques is also essential to maximizing the power of the new computational tools.

A joint MBA/Master of Engineering degree is also available in conjunction with the Jesse H. Jones Graduate School of Management.

**Degree Requirements for BA in Computational and Applied Mathematics**

For general university requirements, see Graduation Requirements (pages 14–15). Students majoring in computational and applied mathematics are required to complete the 51 semester hours spelled out in the following program of study.

**Introductory Courses:** Typically completed during the first two years

- MATH 101 *Single Variable Calculus I*
- MATH 102 *Single Variable Calculus II*
- MATH 212 *Multivariable Calculus*
- COMP 110 *Computation in Science and Engineering*

*Students with prior experience with calculus and/or computational science may petition the department for a waiver.*

Entering students should enroll in the most advanced course commensurate with their background; advice is available from the CAAM department during Orientation Week.

**Intermediate Courses:** Typically completed by the end of the third year

- CAAM 336 *Differential Equations in Science and Engineering*
- CAAM 210 *Introduction to Engineering Computation*
- CAAM 335 *Matrix Analysis*
- CAAM 378 *Introduction to Operations Research and Optimization*
- CAAM 378 *Introduction to Operations Research and Optimization*
- CAAM 401 *Analysis I*
- CAAM 402 *Analysis II*
- (or STAT 310 *Probability and Statistics*
- or STAT 331 *Applied Probability*)

**Advanced Courses:** Typically completed during the fourth year

- CAAM 453 *Numerical Analysis I*
- CAAM 454 *Numerical Analysis II*

**Electives:** 5 Courses at 300 level or above; 2 of which must be at the 400 level or above. (Chosen in consultation with the CAAM undergraduate advisor.)

**Highly Recommended Electives:**

- CAAM 415 *Theoretical Neuroscience*
- CAAM 420 *Computational Science I*
- CAAM 436 *Partial Differential Equations of Mathematical Physics*
- CAAM 460 *Optimization Theory*
- MATH 423 *Partial Differential Equations*
- MATH 425 *Real Analysis*
- MATH 427 *Complex Analysis*
- STAT 431 *Overview of Mathematical Statistics*

**Degree Requirements for MCAM, MA, and PhD in Computational and Applied Mathematics**

**Admission**—Admission to graduate study in computational and applied mathematics is open to qualified students holding bachelor’s or master’s degrees (or their equivalent) in engineering, mathematics, or the physical, biological, mathematical, or behavioral sciences. Department faculty evaluate the previous academic record.
and credentials of each applicant individually. For general information, see Graduate Degrees (pages 57–58) and Admission to Graduate Study (pages 56–57).

Applicants should be aware that it normally takes two years to obtain a master’s degree and an additional two to four years for the doctoral degree.

**MCAM Program**—This professional degree program emphasizes the applied aspects of mathematics. The MCAM degree requires satisfactory completion of at least 30 semester hours of course work approved by the department.

**MA Program**—For an MA in computational and applied mathematics, students must:

- Complete at least 30 semester hours at the graduate level, including 5 courses in computational and applied mathematics, in addition to thesis work
- Produce an original thesis acceptable to the department
- Perform satisfactorily on a final public oral examination on the thesis

For students working toward the PhD, successful performance on the master’s thesis may fulfill the PhD thesis proposal requirements upon approval by the thesis committee.

**PhD Program**—For a PhD in computational and applied mathematics, students must:

- Complete a course of study approved by the department, including at least 2 courses outside the major area
- Perform satisfactorily on preliminary and qualifying examinations and reviews
- Produce an original thesis acceptable to the department
- Perform satisfactorily on a final public oral examination on the thesis

**Financial Assistance**—Graduate fellowships, research assistantships, and graduate scholarships are available and are awarded on the basis of merit to qualified students. Current practice in the department is for most doctoral students in good standing to receive some financial aid.

**Degree Requirements for MCSE and PhD in Computational Science and Engineering**

**CSE Program Area**—Recognizing the increasing reliance of modern science and engineering on computation as an aid to research, development, and design, the Department of Computational and Applied Mathematics, in conjunction with the Departments of Biochemistry and Cell Biology, Earth Science, Computer Science, Chemical Engineering, Electrical and Computer Engineering, Environmental Science and Engineering, and Statistics, has established an advanced degree program in computational science and engineering (CSE). The program focuses on modern computational techniques and provides a resource for training and expertise in this area.

The program is administered by a faculty committee chosen by the deans of engineering and natural sciences, with ultimate oversight by the provost. The Computational Science Committee (CSC) helps students design an appropriate course of study and sets the examination requirements.

Students may enter the CSE program either directly or indirectly through one of the participating departments (see list above). In all cases, however, students must fulfill the admissions requirements of one department, which is their associated department. Students then meet the normal requirements for graduate study within
that department in every way (including teaching and other duties) except that the curriculum and examination requirements are set by the CSC.

**MCSE Program**—This program’s intent is to produce professional experts in scientific computing able to work as part of an interdisciplinary research team. Training is concentrated in state-of-the-art numerical methods, high-performance computer architectures, use of software development tools for parallel and vector computers, and the application of these techniques to at least one scientific or engineering area. For general university requirements, see Graduate Degrees (pages 57–58).

**Required Courses**
- COMP 412 *Compiler Construction*
  (or ELEC 425 *Computer Systems Architecture*)
- CAAM 420 *Computational Science I* (taken as soon as possible)
- CAAM 520 *Computational Science II* (taken as soon as possible)

**1 course from the following**
- CAAM 452 *Computational Methods for Differential Equations*
- CAAM 453 *Numerical Analysis I*
- CAAM 454 *Numerical Analysis II*
- CAAM 464 *Numerical Optimization*
- CAAM 551 *Numerical Linear Algebra*

**Computational Science Electives**
- 4 courses selected from an approved list of COMP or CAAM courses (at least 2 courses at the 500 level)

**Open Electives**
- 2 approved courses other than CAAM or COMP courses at the 300 level or above
  (a computational project taken within a participating department also satisfies this requirement)

**Application Areas**
- An appropriate sequence of courses from a participating application area at the 300 level or above

For the MCSE degree, students must complete at least 30 semester hours of course work approved by the CSC; no more than 2 of the courses may be taken at the 300 level, taken outside the CSE program area, or satisfied by transfer credit. Each student’s program of study must meet the requirements listed below. Modification of requirements can be requested by petition.

**PhD Program**—Study at the doctoral level seeks to advance the field through original research. For general university requirements, see Graduate Degrees (pages 57–58). For the PhD in computational science and engineering, students must:

- Complete a course of study approved by the CSC, including at least 2 courses outside the major area
- Perform satisfactorily on preliminary and qualifying examinations and reviews
- Complete 2 courses or a reading examination on an approved foreign language
- Produce an original thesis acceptable to the CSC
- Perform satisfactorily on a final public oral examination on the thesis

See CAAM in the Courses of Instruction section.
Computer Science

The George R. Brown School of Engineering

Chair
Keith Cooper

Professors
Robert S. Cartwright, Jr.
Peter Druschel
Ronald N. Goldman
G. Anthony Gorry
Lydia Kavraki
Kenneth W. Kennedy, Jr.
Devika Subramanian
Moshe Y. Vardi
Joe D. Warren

Adjunct Professors
Wah Chiu
Jack Dongarra
Charles Henry
S. Lennart Johnsson

Associate Professors
Alan L. Cox
Dave Johnson
Lydia Kavraki

Adjunct Associate Professors
P. Read Montague
Scott K. Warren

Assistant Professors
Luay Nakhleh
Eugene Ng
Scott Rixner
Walid Taha
Dan Wallach

Joint Appointments
(with Electrical and Computer Engineering)
Professor
J. Robert Jump

Associate Professors
Joseph Cavallaro
Edward Knightly
Peter Varman

Adjunct Assistant Professor
Vikram Adve

Senior Faculty Fellow
John Mellor-Crummey

Research Scientists
Ian Barland
Zoran Budimlic
Robert Fowler
Richard Hanson
Timothy Harvey
Guohua Jin
Charles Koelbel
Linda Torczon

Lecturers
John Greiner
Dung “Zung” Nguyen
Stephen Wong

Postdoctoral Research Associate
Doron Bustan
Arun Chauhan
Daniel Chavarria-Miranda
Mark Moll
Joël Ouaknine
Kedar Swadi

Assistant Professor
Vijay Pai
Yehia Massoud
Kartik Mohanram

(with Chemistry)
Professor
James Tour

Degrees Offered: BA, BSCS, MCS, MS, and PhD

Computer science is concerned with the study of computers and computing, focusing on algorithms, programs and programming, and computational systems. The main goal of the discipline is to build a systematic body of knowledge, theories, and models that explain the properties of computational systems, and to show how this
body of knowledge can be used to produce solutions to real-world computational problems. Computer science is the intellectual discipline underlying information technology, which is widely accepted now as the ascendant technology of the next century. Students in computer science at Rice benefit from the latest in equipment and ideas as well as the flexibility of the educational programs. The research interests of the faculty include algorithms and complexity, artificial intelligence and robotics, compilers, distributed and parallel computation, graphics and visualization, operating systems, and programming languages.

The department offers two undergraduate degrees: the Bachelor of Arts degree (BA) and the Bachelor of Science in Computer Science degree (BSCS). The department offers two master’s degrees: the professional Master of Computer Science degree (MCS) and the research-oriented Master of Science degree (MS). The department also offers a doctoral degree (PhD).

A joint MBA/Master of Engineering degree is also available in conjunction with the Jesse H. Jones Graduate School of Management.

**Degree Requirements for BA in Computer Science**

For general university requirements, see Graduation Requirements (pages 14–15). The undergraduate program in computer science has been designed to accommodate a wide range of student interests. The program is sufficiently flexible for a student to customize it to his or her interests. A student can develop a broad educational program that couples computer science education with a variety of other fields in engineering, natural sciences, the humanities, or social sciences. Alternatively, a program might be designed for a student preparing for graduate study in computer science or for a career in computing and information technology.

The undergraduate program consists of required core courses, which are introductory courses covering material required of all majors; required breadth courses, which are upper-level courses ensuring knowledge in a broad range of areas; and electives, which give students the freedom to explore specific interests. Students majoring in computer science must complete between 58 and 60 semester hours of courses in these three categories. Students graduating with a BA in computer science must have at least 120 semester hours.

**Core Courses**

8 courses for a total of 28 hours, required for all majors, usually taken in the freshman and sophomore years

- MATH 101/102 *Single Variable Calculus I and II*
- COMP 210 *Introduction to Principles of Scientific Computation*
- COMP 212 *Intermediate Programming*
- COMP 280 *Mathematics of Computer Science*

**Breadth Courses**

7 courses for a total of 23 hours, required for all majors, usually taken in the junior and senior years

- STAT 331 or 310 *Probability*
- CAAM 353 *Numerical Analysis*
- MATH 355 or CAAM 355 *Linear Algebra*

**Electives**

2 courses for a total of 6 to 8 hours in computer science at the 300 level or higher. One of these may be an independent study project.
Degree Requirements for BS in Computer Science

The BS degree is designed for students who are interested in a more in-depth study of computer science to prepare themselves for a professional career in the computing industry. To receive a BS degree, a student must complete all the requirements of the BA degree (i.e., core, breadth, and electives), with the addition of PHYS 101/102 (or PHYS 111/112) (7 hours) to ensure a strong scientific background. In addition, the student must complete the depth component. This component consists of a coherent set of four or five courses specializing in some area of computer science. The same course cannot satisfy both the breadth requirement and the depth requirement. Students can adopt a preset depth component or design their own components, consisting of at least 15 hours. BS degree plans have to be approved by departmental advisers by no later than the end of the junior year. Sample curricula are listed on the departmental website; more information is available from departmental advisers. The computer science requirements of the BS degree total 80 to 82 semester hours. For a BS degree in computer science, a total of 128 semester hours is required.

Degree Requirements for MCS and MS in Computer Science

For general university requirements, see Graduate Degrees (pages 57-58). The professional MCS degree is a terminal degree for students intending to pursue a technical career in the computer industry. To earn the MCS degree, students must successfully complete 30 semester hours of course work approved by the department and following the plan formulated in consultation with the department adviser. Areas of concentration for the MCS include algorithms and complexity, artificial intelligence, compiler construction, distributed and parallel computing, graphics and geometric modeling, operating systems, and programming languages. The professional program normally requires three semesters of study.

The professional program with a concentration in Bioinformatics is for students intending to pursue a technical career in the biotechnology industry. Students learn to integrate mathematical and computational methods to analyze biological, biochemical, and biophysical data. This program requires prior background in computer science, biosciences, and mathematics. To earn this degree, students must successfully complete 40 hours of approved course work meeting departmental requirements. This program normally requires four semesters of study.

The MS degree is a research degree requiring a thesis in addition to course work.

Degree Requirements for PhD in Computer Science

The PhD degree is for students planning to pursue a career in computer science research and education. The doctoral program normally requires four to six years of study. To earn a PhD in computer science, students must:

- Meet departmental course requirements
- Complete a COMP 590 project by the end of the third semester
- Complete a master’s thesis by the end of the fifth semester, if a previous master’s thesis has not been approved by the graduate committee
- Pass a qualifying examination in an area of specialization within seven semesters after entering the PhD program
- Conduct original research, submit an acceptable PhD thesis proposal, and successfully defend the thesis proposal
- Submit an acceptable PhD thesis that reports research results and pass a final oral defense
Students who successfully meet the first three requirements are awarded the Master of Science degree. Students successfully meeting all requirements, plus any departmental and university requirements, are awarded the PhD degree.

Financial Assistance—Fellowships and research assistantships are available to students in the PhD program. Both provide a monthly stipend for the academic year and cover all tuition expenses. More substantial monthly stipends may be available during the summer for students working on departmental research projects. In all cases, continued support is contingent on satisfactory progress in the program. PhD students also are expected to assist in the teaching and administration of undergraduate and graduate courses.

Additional Information—For further information and application materials, write the Department of Computer Science–MS 132, Rice University, P.O. Box 1892, Houston, Texas 77251-1892.

See COMP in the Courses of Instruction section.
The following courses are required for all tracks:

- MATH 101/102 Single Variable Calculus I and II
- CHEM 121/122 or 151/152 General Chemistry I and II with lab
- PHYS 101/102 or 111/112 Introductory Physics I and II with lab

ESCI 321 Earth System Evolution and Cycles
ESCI 322 Earth Chemistry and Materials
ESCI 323 Earth Structure and Deformation with lab
ESCI 324 Earth’s Interior
Additional Requirements for the Geology Track

The following courses are required:
MATH 211 Ordinary Differential Equations and Linear Algebra
ESCI 334 Geological and Geophysical Techniques
ESCI 390 Field Camp

Choose one of the following courses:
COMP 110 Computation in Natural Science
CAAM 210 Introduction to Engineering Computation (FORTRAN)
CAAM 211 Introduction to Engineering Computation (C)
COMP 210 Principles of Computing and Programming

Choose one of the following courses:
ESCI 412 Advanced Petrology
ESCI 430 Principles of Trace-Element and Isotope Geochemistry

Choose one of the following courses:
ESCI 427 Sequence Stratigraphy
ESCI 521 Seminar in Applied Micropaleontology

Choose one of the following courses:
ESCI 504 Siliciclastic Depositional Systems
ESCI 506 Carbonate Depositional Systems
ESCI 421 Paleocceanography

Choose one of the following courses:
ESCI 446 Solid Earth Geophysics
ESCI 442 Exploration Geophysics I

Choose one of the following courses:
ESCI 463 Advance Structural Geology
ESCI 428 Geologic Interpretation of Reflection Seismic Profiles
ESCI 464 Global Tectonics

Additional Requirements for the Geochemistry Track

The following courses are required:
BIOS 201 Introductory Biology I
A 6 hour field-based course or equivalent, approved by the department undergraduate adviser

Choose 9 hours from the following:
ESCI 412 Advanced Petrology
ESCI 421 Paleocceanography
ESCI 458 Thermodynamics/Kinetics for Geoscientists
ESCI 203 Biogeochemistry
ESCI 430 Principles of Trace-Element and Isotope Geochemistry

Choose 9 hours from the following:
All upper division ESCI courses
CEVE 401 Introduction to Environmental Chemistry
CEVE 403 Principles of Environmental Engineering
CEVE 434 Chemical Transport and Fate in the Environment
CEVE 532 Physical-Chemical Processes in Environmental Engineering

CEVE 534 Transport Phenomena and Environmental Modeling
CEVE 550 Environmental Organic Chemistry
BIOS 202 Introductory Biology
BIOS 211 Introductory Lab Module in Biological Science
CHEM 211/212 Organic Chemistry
CHEM 311/312 Physical Chemistry
CHEM 415 Chemical Kinetics and Dynamics
CHEM 495 Transition Metal Chemistry
MATH 211 Ordinary Differential Equations and Linear Algebra
MATH 212 Multivariable Calculus
COMP 110 Computation Science and Engineering
CAAM 210/211 Introduction to Engineering Computation
COMP 210 Introduction to Principles of Scientific Computing
Additional Requirements for the Geophysics Track

The following courses are required:
- MATH 211 Ordinary Differential Equations and Linear Algebra
- MATH 212 Multivariable Calculus
- PHYS 201 Waves and Optics
- PHYS 231 Elementary Physics Lab II

In addition, the student must complete a field experience, equivalent to 6 semester hours, approved by the department undergraduate advisor.

Choose one of the following courses:
- COMP 110 Computation in Natural Science
- CAAM 210 Introduction to Engineering Computation (FORTRAN)
- CAAM 211 Introduction to Engineering Computation (C)
- COMP 210 Principles of Computing and Programming

Choose 6 hours from the following:
- ESCI 440 Geophysical Data Analysis: Digital Signal Processing
- ESCI 441 Geophysical Data Analysis: Inverse Theory
- ESCI 442 Exploration Geophysics I
- ESCI 444 Exploration Geophysics II
- ESCI 450 Remote Sensing
- ESCI 454 Geographic Information Science
- ESCI 461 Seismology I
- ESCI 462 Tectonophysics
- ESCI 464 Global Tectonics
- ESCI 532 Advanced Global Tectonics
- ESCI 542 Seismology II

Choose 6 hours from the immediately preceding or following lists:
- Any 3- or 4-hour course in ESCI with a number between 411 and 475, except for research and special studies
- Any 300- or 400-level MATH, CAAM, or PHYS class
- CHEM 311 Physical Chemistry
- CEVE 412 Hydrology & Watershed Analysis

Additional Requirements for the Environmental Earth Science Track

The following courses are required:
- MATH 211 Ordinary Differential Equations and Linear Algebra
- BIOS 201 Introductory Biology I

Choose one of the following courses:
- COMP 110 Computation in Natural Science
- CAAM 210 Introduction to Engineering Computation (FORTRAN)
- CAAM 211 Introduction to Engineering Computation (C)
- COMP 210 Principles of Computing and Programming

Choose 14 hours from the following, including at least two courses in ESCI:
- ESCI 451 Analysis of Environmental Data
- ESCI 353 Environmental Geochemistry
- ESCI 442 Exploration Geophysics
- ESCI 454 Geographic Information Science
- ESCI 463 Advanced Structural Geology I
- ESCI 504 Clastics
- ESCI 506 Carbonates
- ESCI 568 Paleoclimates and Human Response
- CEVE 306 Global Environmental Law and Sustainable Development
- CEVE 434 Chemical Transport and Fate in the Environment
- CEVE 412 Hydrogeology and Watershed Analysis
- CEVE 401 Environmental Chemistry
- CHEM 211 Organic Chemistry
- CHEM 311 Physical Chemistry
- CHEM 360 Inorganic Chemistry
- PHYS 201 Waves and Optics
- PHYS 231 Elementary Physics Lab II
- BIOS 202 Introductory Biology II
**Additional Requirements for the Self-Designed Track**

The department recognizes the interdisciplinary nature of modern earth science and the opportunity for students to specialize in nontraditional and emerging fields. Therefore, students can design their own specialty track, normally in close consultation with one faculty member and followed by approval from the department undergraduate adviser. In addition to required earth science courses and related courses, these tracks will generally comprise 15 additional hours that target a coherent theme from an approved list of 300- or higher-level courses, from inside or outside the department. Interested students are expected to submit a statement of rationale by the beginning of their third year.

**Choose 9 hours from the following:**

- BIOS 201 Introductory Biology I
- COMP 110 Computation in Natural Science
- CAAM 210 Introduction to Engineering Computation (FORTRAN)
- CAAM 211 Introduction to Engineering Computation (C)
- COMP 210 Principles of Computing and Programming
- CHEM 311/312 Physical Chemistry I and II
- MATH 211 Ordinary Differential Equations and Linear Algebra

**Choose 6 hours from the following:**

- MATH 212 Multivariable Calculus
- PHYS 201 Waves and Optics
- PHYS 203 Atmosphere, Weather, and Climate

Complete a field experience, equivalent to 4 semester hours, approved by the department undergraduate adviser.

Choose 15 hours of additional courses numbered 300 or higher targeting a coherent theme selected with approval of the department undergraduate adviser.

**Degree Requirements for BA in Earth Science**

For general university requirements, see Graduation Requirements (pages 14–15).

**The following courses are required:**

- MATH 101/102 Single Variable Calculus I and II
- CHEM 121/122 or 151/152 General Chemistry I and II with lab
- ESCI 321 Earth System Evolution and Cycles
- ESCI 322 Earth Chemistry and Materials
- ESCI 323 Earth Structure and Deformation with lab
- ESCI 324 Earth’s Interior
- ESCI 334 Geological and Geophysical Techniques

**Choose 6 hours from the following:**

- BIOL 201/202 Introductory Biology I and II
- BIOL 211, 213 Biology Lab Modules
- MATH 211 Differential Equations
- PHYS 101/102 or 125/126 Introductory Physics
- COMP 110 Computation in Natural Science
- or CAAM 210 Introduction to Engineering Computation (FORTRAN)
- or CAAM 211 Introduction to Engineering Computation (C)
- or COMP 210 Principles of Computing and Programming

Choose four upper division ESCI courses, approved by the department undergraduate advisor.

Choose 6 hours in science and engineering (including ESCI) courses at the 200 level or above approved by the department undergraduate advisor.

**Undergraduate Independent Research**

The department encourages, but does not require, earth science undergraduate majors to pursue independent supervised research in ESCI 481 Research in Earth Science. See also Honors Programs (page 26).
Degree Requirements for MS and PhD in Earth Science

All incoming students should have a strong background in physics, chemistry, and mathematics and should have, or should acquire, a broad grounding in fundamental earth science. The department encourages applications from well-qualified students with degrees in the other sciences and mathematics. For general university requirements, see Graduate Degrees (pages 57–58). The requirements for the MS and PhD in earth science are similar, but the PhD demands a significantly higher level of knowledge, research skills, and scholarly independence. Most students need at least two years beyond the bachelor’s degree to complete the MS and at least two years beyond the MS degree for the PhD.

Candidates determine, with their major professor and thesis committee, a course of study following the Guidelines for Advanced Degrees in the Department of Earth Science distributed to all incoming students. For both degrees, candidates must:

- Complete 20 semester hours of course work at the 400 level and above (or other approved courses), not including research hours
- Pass a written preliminary exam
- Maintain a grade point average of 3.00 (B) or better
- Prepare a written thesis
- Produce a publishable thesis that represents an original contribution to science
- Defend the research and conclusions of the thesis in an oral examination

Students of exceptional ability with a bachelor’s degree and department approval may work directly toward the PhD, in which case the course of study is equivalent to that required for both degrees; performance on the examinations and the thesis, however, should be at the level required for the PhD. Because the graduate programs require full-time study and close interaction with faculty and fellow students, the department discourages students from holding full (or nearly full) time jobs outside the university. Outside employment must be approved by the chair.

See ESCI in the Courses of Instruction section.
ECONOMICS

THE SCHOOL OF SOCIAL SCIENCES

CHAIR
Hervé Moulin

PROFESSORS
Dagobert L. Brito
Bryan W. Brown
James N. Brown
John B. Bryant
Mahmoud El-Gamal
Malcolm Gillis
Simon Grant
Peter Hartley
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ASSOCIATE PROFESSORS
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Richard Boylan
Yoosoon Chang
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Vivian Ho

ASSISTANT PROFESSORS
Camelia Bejan
Geoffroy de Clippel
Juan Carlos Cordoba

ADJUNCT PROFESSORS
Bruce M. Lairson
John Michael Swint

ADJUNCT ASSOCIATE PROFESSOR
Charles E. Begley

LECTURER
Kenneth Medlock

DEGREES OFFERED: BA, MA, PhD

Undergraduates may major in either economics or mathematical economic analysis. The latter is recommended for students who intend to continue on to graduate work in economics or pursue a business or governmental job in which analytical and quantitative skills are required.

The eight major fields available for graduate study are econometrics, economic development, economic theory, industrial organization and regulation, international trade and finance, labor, macroeconomics and/or monetary theory, and public finance.

REQUIREMENTS FOR MAJORING IN ECONOMICS

1. All economics majors must complete a minimum of 10 courses with a grade point average of at least 2.0. When students repeat courses or complete more than the minimally required number of courses, the departmental GPA will be based on the set of courses that (i) satisfies all requirements for the degree and (ii) results in the highest GPA for the student. Major requirements are not reduced for multiple majors, although some courses can satisfy the requirements for more than one major. (Please note that students may not pursue a double major in economics and mathematical economic analysis.)

2. The following courses are required for all economics majors:
   - ECON 211 Principles of Economics I
   - ECON 370 Microeconomic Theory
   - ECON 375 Macroeconomic Theory
   - STAT 280 Elementary Applied Statistics (or STAT 310/ECON 382)
   - ECON 446 Applied Econometrics (or ECON 400).

Please note that ECON 370 requires MATH 101 (or both MATH 111 and 112) as prerequisites. We suggest that economics majors take ECON 211, ECON 370, MATH
101, STAT 280 (or STAT 310/ECON 382), and ECON 446 (or ECON 400) as early as possible. Please note that failure to take prerequisite courses in earlier years may cause scheduling problems in later years.

3. Given that item 2 has been satisfied, the five remaining required economics courses must be selected from the following:

- ECON 348 *Organization Design*
- ECON 355 *Financial Markets*
- ECON 400 *Econometrics*
- ECN 403/404 *Senior Independent Research*
- ECON 415 *Labor Economics*
- ECON 420 *International Trade*
- ECON 421 *International Finance*
- ECON 435 *Industrial Organization*
- ECON 436 *Regulation*
- ECON 437 *Energy Economics*
- ECON 438 *Business, Law, and Economics*
- ECON 439 *Torts, Property, and Contracts*
- ECON 440 *Risk, Uncertainty, and Info*
- ECON 445 *Managerial Economics*
- ECON 448 *Corporate Finance*
- ECON 449 *Basics/Financial Engineering*
- ECON 450 *World Economy and Social Development*
- ECON 451 *Economy of Latin America*
- ECON 452 *Religion, Ethics, and Economics*
- ECON 455 *Money and Financial Markets*
- ECON 461 *Urban Economics*
- ECON 472 *Introduction to Game Theory*
- ECON 475 *Integer and Combinatorial Optimization*
- ECON 477 *Mathematical Economics*
- ECON 480 *Environmental Economics*
- ECON 481 *Health Economics*
- ECON 482 *Distributive Justice*
- ECON 483 *Public Finance Tax Policy*
- ECON 484 *Public Finance Expenditure*
- ECON 485/486 *Contemporary Economic Issues*
- ECON 495/496 *Senior Seminar*

4. No more than three of the 10 economics courses may be transferred from other schools. Additional transfer credits in economics may count toward meeting University graduation requirements but not toward fulfillment of the departmental major requirements. AP credits do not count against the three allowed transfer credits. In order to transfer ECON 211, the student must pass a qualifying examination. Students wishing to take the ECON 211 qualifying examination must apply to the economics department office in Baker Hall 266A. For additional information on transfer credits, consult “Procedures for Transfer Credit,” available in the economics department office.

5. Students may graduate with “Honors in Economics” by achieving a B+ (3.33) average in all economics courses and completing two semesters of independent research (for details, consult “Economics 403/404 – Senior Independent Research,” available in the economics department office).

6. For additional course information, consult “Economics Course Descriptions,” compiled by the Rice chapter of the Omicron Delta Epsilon National Economics Honor Society.

7. Please note that it is primarily the responsibility of the student to satisfy all degree requirements, including the “University Credit Requirements” and “University Distribution Requirements” specified in the General Announcements. Students are advised that the relevant departmental requirements are those in effect on the day that the student declares economics as their major. Consult with the appropriate departmental advisor, who must sign all registration forms for each major.

* The Department of Statistics has advised that they may introduce a new class especially for economics majors in place of STAT 280. If and when they do, we will replace STAT 280 by that new class. In the meantime, students should take STAT 280 (or STAT 310/ECON 382) before taking ECON 446 (or ECON 400).
8. Students who are considering either graduate work in economics or a business or governmental job in which analytical and quantitative skills are required, should seriously consider obtaining the alternative major in Mathematical Economic Analysis.

**Requirements for Majoring in Mathematical Economic Analysis**

1. The major in mathematical economic analysis (MTEC) is designed for students who are interested in either graduate work in economics or a business or governmental job in which analytical and quantitative skills are required.

2. Students must choose between the two majors offered by the economics department; that is, students may not double major in economics and mathematical economic analysis. Major requirements are not reduced for students with multiple majors.

3. All MTEC majors must complete a minimum of 16 courses in six areas with a grade point average of at least 2.0. These courses must include:

   (a) *Four courses in economic theory:*

   - ECON 211 *Principles of Economics I*
   - ECON 370 *Microeconomic Theory*
   - ECON 375 *Macroeconomic Theory*
   - ECON 477 *Mathematical Economics*

   (b) *Four courses in applied economics, selected from:*

   - ECON 348 *Organizational Design*
   - ECON 355 *Financial Markets*
   - ECON 415 *Labor Economics*
   - ECON 420 *International Trade*
   - ECON 421 *International Finance*
   - ECON 435 *Industrial Organization*
   - ECON 436 *Regulation*
   - ECON 437 *Energy Economics*
   - ECON 438 *Business, Law, and Economics*
   - ECON 439 *Torts, Property, and Contracts*
   - ECON 440 *Risk, Uncertainty, and Info*
   - ECON 445 *Managerial Economics*
   - ECON 446 *Applied Econometrics*
   - ECON 448 *Corporate Finance*
   - ECON 449 *Basics of Financial Engineering*
   - ECON 450 *World Econ and Social Development*
   - ECON 451 *Economy of Latin America*
   - ECON 452 *Religion, Ethics, and Economics*
   - ECON 455 *Money and Financial Markets*
   - ECON 461 *Urban Economics*
   - ECON 472 *Game Theory*
   - ECON 475 *Integer and Combinatorial Optimization*

   (c) *One additional 400-level course in applied economics as listed in (b) or a course in advanced analysis, selected from:*

   - CAAM 452 *NUM Methods for PDES*
   - CAAM 453 *Numerical Analysis I*
   - CAAM 454 *Numerical Analysis II*
   - CAAM 460 *Optimization Theory*
   - CAAM 475 *Integer and Combinational Optimization*
   - STAT 421 *Computation Finance II*
   - STAT 450 *Statistical Modeling*
   - STAT 486 *Computation Finance I: Market Models*

   or an equivalent or higher-level course approved in advance by the chair of the undergraduate committee.

   (d) *One course in econometrics:*

   - ECON 400 *Econometrics*

   (e) *Five courses in mathematics and statistics:*

   - MATH 101 *Single Variable Calculus I*
   - MATH 102 *Single Variable Calculus II*
   - MATH 211 *ORD Differential Equations*
MATH 355 Linear Algebra, or 
CAAM 335 Matrix Analysis, and 
MATH 212 Multivariable Calculus or 
221 Honors Calculus III, and 
ECON 382/STAT 310 Probability and Statistics, STAT 410 Introduction to Regressionn and Statistical Computing, or STAT 431 Overview Mathematical Statistics

**4.** No more than three of the required economics courses and two of the required mathematics (or computational and applied mathematics or statistics) courses may be transferred from other schools. Additional transfer credits in economics, mathematics, computational and applied mathematics or statistics may count toward meeting university graduation requirements, but not toward fulfillment of the departmental major requirements. AP credits do not count against the allowed transfer credits. In order to transfer ECON 211, the student must pass a qualifying examination. Students wishing to take the ECON 211 qualifying examination must apply to the economics department office in Baker Hall 266A. For additional information on transfer credits, consult “Procedures for Transfer Credit,” available in the economics department office.

**5.** Students may graduate with “Honors in Mathematical Economic Analysis” by achieving a B+ (3.33) average in the 16 courses required for the major. When students repeat courses or complete more than the minimally required number of courses, the departmental GPA will be based on the set of courses that (i) satisfies all requirements for the degree and (ii) results in the highest GPA for the student.

**6.** For additional course information, consult “Economics Course Descriptions,” compiled by the Rice chapter of the Omicron Delta Epsilon National Economics Honor Society.

**7.** Please note that it is primarily the responsibility of the student to satisfy all degree requirements, including the “University Credit Requirements” and “University Distribution Requirements” specified in the General Announcements. Students are advised that the relevant departmental requirements are those in effect on the day that the student declares mathematical economic analysis as their major. Consult with the appropriate departmental advisor, who must sign all registration forms for each major.

**Concentration in Business Economics**

Students who complete the requirements for a major in economics or a major in mathematical economics analysis may also request certification from the department that they have completed the requirements for a concentration in business economics if they complete the following courses with a minimum grade point average of at least 2.0:

1. ACCO 305 Introduction to Accounting

2. The following electives for the economics or mathematical economics analysis major:
   
   ECON 348 Organizational Design or ECON 355 Financial Markets and Institutions 
   ECON 438 Business, Law, and Economics 
   ECON 445 Managerial Economics 
   ECON 448 Corporate Finance
3. Note that to complete their major requirements, economics majors will need to choose one additional elective beyond those chosen to satisfy requirement 2, and this could include either ECON 348 or ECON 355 if not taken already. Similarly, mathematical economic analysis majors can choose either ECON 348 and ECON 355, if not taken already, to fulfill the remaining requirements of their major. If students complete both ECON 348 and ECON 355 their grade point average for the concentration in business economics will include the course that results in the highest grade point average for the student.

Substituting Economics Graduate Courses for Undergraduate Courses—Undergraduate majors satisfying the course prerequisites may, subject to the approval of the instructor and of the departmental undergraduate committee chair, substitute certain graduate courses for undergraduate courses. Only highly motivated students with excellent aptitudes for economics and a strong background in mathematics should consider making such substitutions. Typically, but not necessarily, such students will be majors in mathematical economic analysis. Permitted substitutions are as follows:

- ECON 501 for ECON 370 (if student has completed ECON 211 at Rice)
- ECON 502 for ECON 375
- ECON 504 for ECON 382
- ECON 510 for ECON 400
- Furthermore, ECON 505 and ECON 508 also may be taken by undergraduates and may be used toward satisfying MTEC requirements. Specifically, ECON 505 could be used as one of the courses in the applied economics category or in the advanced analysis category, while ECON 508 could be used only in the advanced analysis category.

Note that this set of substitutable graduate courses includes six of the seven courses required during the first year of the PhD program at Rice. Accordingly, such advanced course work would be excellent preparation for graduate study in economics or in some related field such as finance. Taking such graduate courses should also open more opportunities for the student who will be seeking employment immediately after graduation.

The Five-Year MA Program
Advanced undergraduate students can, subject to the approval of the departmental five-year MA adviser, enter our five-year MA program. In this program, a student who has taken advantage of the full menu of graduate course substitutions available could, with an additional year of study at Rice, earn an MA in economics.

To obtain the MA degree, students must satisfy all of the requirements for PhD candidacy. In particular, students must pass general examinations in microeconomic theory and in macroeconomic theory and econometrics, must pass an examination in a specialized field of study in economics, and must complete an original research project (a dissertation prospectus) that could be developed into a PhD dissertation under the supervision of a faculty member. This work could be an extension of a paper written as a senior independent research project (ECON 403/404). In some cases, at the discretion of the independent research adviser, the paper produced in ECON 403/404 may fulfill this requirement. Finally, the first-year graduate requirement to take ECON 507 Mathematical Economics would be waived with the approval of the departmental five-year MA adviser.

Note that any student who subsequently decides to enter the economics PhD program at Rice would be given graduate credit for all 500 level economics courses completed while an undergraduate. The completion of the PhD dissertation typically requires at least one additional year of research (but no additional courses) beyond the MA degree.
Students who opt for the five-year MA degree program will have different backgrounds and interests on entering Rice and will choose to pursue this option at different stages in their academic careers. The following illustrates two (of many) possible paths to satisfying the MTEC major requirements, while at the same time completing all of the requirements for the MA degree over a five-year period.

**Courses: Sample Path One**

The student enters with AP credit for ECON 211 and MATH 101/102, and has an early interest in the five-year MA program.

**Freshman Year**

ECON 370, 375, 477, and MATH 211/212

**Sophomore Year**

ECON 501; 1 course from Applied Economics category; and MATH 355 or CAAM 310

**Junior Year**

ECON 502, 504, 505, 510, and 1 course from Applied Economics category

**Senior Year**

ECON 403/404 and ECON 508

**Fifth Year**

Complete all remaining graduate courses and pass all remaining examinations required to achieve PhD candidacy.

(Note that with AP credit for MATH 101/102, but not for ECON 211, the student could substitute ECON 370 for ECON 211 in the freshman year.)

**Courses: Sample Path Two**

The student has no relevant AP credit and/or decides to enter the five-year MA program only near the end of the sophomore year.

**Freshman Year**

ECON 211 and MATH 101/102

**Sophomore Year**

ECON 370, 375, 477, and 1 course from applied economics category; MATH 211/212

**Junior Year**

ECON 501, 502, 505, 508; MATH 355 or CAAM 310

**Senior Year**

ECON 504, 510, 403/404, and 1 course from applied economics category

**Fifth Year**

Complete all remaining graduate courses and pass all remaining examinations required to achieve PhD candidacy.

(Note that with AP credit for MATH 101/102, but not for ECON 211, the student could substitute ECON 370 for ECON 211 in the freshman year.)

**Degree Requirements for PhD in Economics**

**Preparation for PhD Program.** Applicants to the PhD program should have had at least two semesters in calculus and one in linear algebra. Students who have not met these requirements may complete these prerequisites as Class III students (pages 74–75) before being admitted to the graduate program. All applicants are required to take the Graduate Record Exam.

**Requirements.** For general university requirements, see Graduate Degrees (pages 57–58). Candidates for the PhD degree usually spend from two to two and one-half years in full-time course work and at least one year writing the dissertation; four to five years is a reasonable goal for completing the program. For the PhD, students must:

- Complete an approved program of at least 14 courses not including ECON 593/594 Workshop in Economics I and ECON 595/596 Workshop in Economics II
- Complete an approved program of at least 4 sections of ECON 593/594 Workshop in Economics I and ECON 595/596 Workshop in Economics II
• Perform satisfactorily on written general examinations in economic theory and econometrics
• Demonstrate proficiency in a major field by taking the relevant courses in that field and performing satisfactorily on a written examination
• Complete and defend orally a doctoral dissertation setting forth in publishable form the results of original research

See ECON in the Courses of Instruction section.
No degree is offered through the Education Department. This department offers opportunities for students to explore the background, purposes, and organization of American schools as well as the major issues facing education today. Research seminars allow students to engage in projects in a wide range of topics significant to education. Most courses require observation in the classroom.

Please see the section on Education Certification for information on the three teacher education plans offered at Rice:

1. A secondary teaching certificate in combination with the undergraduate degree in the elected subject field(s)
2. A Master of Arts in Teaching (MAT)
3. A postbaccalaureate plan for Class III students that involves taking those courses and state examinations needed for certification but that does not confer a degree
Degrees Offered: Secondary Teaching Certificate in conjunction with BA in major field, MAT

Students in the teacher education program at Rice show a commitment to teaching, a strong record of scholarship in their subject areas, and promise as thoughtful, engaging teachers. The program emphasizes a sound liberal arts education; extensive knowledge of the subject(s) or area(s) to be taught; professional knowledge, including the relevant historical, philosophical, social, and psychological bases of education; and skills in classroom teaching, which include working with both children and adults. Graduates emerge from the program fully prepared for the teaching profession, trained in a multitude of teaching styles and methods to meet the needs of the diverse student population in schools today.

Rice offers three teacher education plans: (1) a secondary teaching certificate in combination with the undergraduate degree in the elected subject field(s), (2) a Master of Arts in Teaching (MAT), and (3) a postbaccalaureate plan for Class III students that involves taking those courses and state examinations needed for certification but that does not confer a degree. All three plans include student teaching in the Rice Summer School for Grades 8–12. While maintaining its academic integrity, the Rice program complies with state of Texas certification requirements. Students seeking additional information about the teacher education program are encouraged to meet with education faculty.

Texas Teaching Credential—Rice is approved by the state of Texas to offer teacher preparation programs in the following fields: art, English language arts and reading, French, German, health science technology education, history, Latin, life sciences, mathematics, mathematics/physics, physical education, physical science, Russian, science, social studies, and Spanish.

After satisfactory completion of the Rice program, which includes the state-mandated TExES and/or ExCET examinations, students are recommended for a Texas teaching credential. The Texas Education Agency then awards a Texas Standard Teaching Certificate (Grades 8–12).

Student Teaching—Apprenticeship (Plan A) and Internship (Plan B) programs are available. Unpaid apprenticeships are for undergraduates who wish to complete the teacher education program in four years and two six-week summer sessions.
Candidates enroll for the summer sessions following their junior and senior years. Apprentices create and teach courses under the supervision of experienced mentor teachers and university faculty in the Rice Summer School for Grades 8-12.

Paid *internships* are undertaken by Master of Arts in Teaching candidates, by some Class III students, and by undergraduates who begin earning certification in their senior year. Under this plan, students serve one apprenticeship in the Rice Summer School and are then supervised through their first semester of a full-time, paid internship in a neighboring, cooperating school system. Permission for the internship is contingent upon completing a successful apprenticeship.

**Requirements for Secondary Teaching Certificate**

**Admission**—Students may apply to the Rice University Education Certification Office for admission to the teacher education program if they show:

- Attainment of junior standing at Rice (bachelor’s degree for MAT candidates) by the semester of admission to the program
- Grades of C- or better in all semester hours attempted in their teaching field(s), with an overall grade point average of 2.5 or better
- Evidence of adequate physical vigor to perform as a teacher in a classroom
- Exemption or satisfactory scores on all required preprofessional skills tests
- A completed Plan of Study approved by department representatives and the major field adviser is required before admission to the program is complete

**Completion of Program**—To complete the program, students must:

- Be exempted from or pass the Texas Higher Education Assessment (THEA) exam prior to enrolling in any education courses
- Complete the courses specified by the major field adviser(s). Lists of courses for each subject are available in the Education Certification Office
- Complete 18 hours in professional education courses as follows:
  - Either EDUC 301/501 *Philosophical, Historical, and Social Foundations of Education* or EDUC 330/530 *The American High School*
  - EDUC 305/505 *Educational Psychology*
  - EDUC 420 *Curriculum Development*
  - 3 hours in the appropriate seminar(s) in teaching methods
  - 6 hours in student teaching (see following)
- Satisfy a state requirement for computer literacy by completing one course in computer use. EDUC 340 *Computers in Education* is recommended
- Complete all university and program requirements specified for undergraduates, MAT candidates, or nondegree (Class III) candidates
- Make grades of C- or better in all teaching field courses and education courses (B- or better for MAT students)
- Pass appropriate TExES and/or ExCET exams
Apprenticeship Plan (Plan A)
(For students beginning certification in junior year and for some Class III students)

**Junior Year**
- EDUC 301 *Philosophical, Historical, and Social Foundations of Education*
- or EDUC 330 *The American High School*
- EDUC 305 *Educational Psychology*
- EDUC 410–416 Relevant seminar(s) in teaching methods
- EDUC 420 *Curriculum Development*
- EDUC 440 *Supervised Teaching: Summer School*

**Senior Year**
- EDUC 420 *Curriculum Development*

**After Graduation**
- EDUC 440 *Supervised Teaching: Summer School*

Internship Plan (Plan B)
(For students beginning certification in senior year, for some Class III students, and for MAT students)

**Before Graduation**
- EDUC 301/501 *Philosophical, Historical, and Social Foundations of Education* or EDUC 330/530 *The American High School* or EDUC 305/505 *Educational Psychology*
- EDUC 410–416 Relevant seminar(s) in teaching methods
- EDUC 420 *Curriculum Development*

**After Academic Year**
- EDUC 440 *Supervised Teaching: Summer School*
- EDUC 540 *Internship* (paid internship in the fall in a local, accredited secondary school)

## Requirements for MAT

**Admission**—Applicants must have a bachelor’s degree, scholarly ability, and an interest in teaching, and they must have taken the Graduate Record Examination (GRE) aptitude test. Education faculty review each application. A limited number of tuition waivers is available. See Admission to Graduate Study (pages 56–57). Admitted students must pass or be exempted from the state’s Texas Higher Education Assessment (THEA) exam *prior* to enrolling in any education courses.

**Degree Requirements**—For general university requirements, see Graduate Degrees (pages 57–58). The MAT is a non-thesis degree program for students who want to qualify for secondary school teaching following a liberal arts education. Most candidates entering the program have had no professional education courses. By completing the program, candidates fulfill all requirements for a Texas Standard Teaching Certificate for grades 8–12. To earn the professional MAT degree, students must complete, with grades of B- or higher, at least 33 semester hours (the need to remove deficiencies may require additional courses for certification). Requirements are as follows:

- Courses in secondary school educational theory, teaching strategies, educational practice, and evaluation
- Graduate or upper-level courses in the relevant teaching field(s) taken at Rice
- Supervised full-time teaching for one summer in the Rice Summer School for Grades 8–12, including design and implementation of courses, teaching, and evaluation
- Approval to begin an internship, based on a successful summer school teaching experience
• Supervised teaching internship for one semester in a cooperating secondary school, including the accompanying seminar

The cooperating school districts pay a regular salary for internship teaching, which covers the small cost of graduate tuition.

**Requirements for Class III Certification**

A nondegree (Class III) plan leading to secondary teacher certification is available for those who have earned a BA but do not choose to pursue a graduate degree. Candidates complete all requirements for secondary teacher certification, including professional education courses and courses in their selected fields. Interested students should direct their queries to the Education Certification Office.

**Higher Education Act Title II Reports**

The Higher Education Act (HEA) of the U.S. Congress requires each institution of higher education with a teacher preparation program enrolling students receiving federal assistance under this Act to report annually “to the State and the general public” certain information. This information consists of the pass rate of program completers on assessments required by the state for teacher licensure or certification, the statewide pass rate on those assessments, and other basic information on the teacher preparation program.

Rice University’s Teacher Education program is accredited by the State of Texas. The first year pass rate for program completers on assessments required by the state for 2002–03 was 100% compared with 96% for the overall state pass rate. The combined cumulative pass rate for program completers on assessments required by the state for 2001–03 was 100% compared to 96% for the overall state pass rate. Twenty-nine students were enrolled in the program in 2003–04. The students spent an average of 40 hours per week in supervised student teaching with a student/faculty ratio of 2.6-to-1. Rice teacher education program graduates are regularly recruited by school districts in the Houston and surrounding areas because of their innovative ideas, leadership abilities, and dedication to the teaching profession.

See EDUC and PFDV in the Courses of Instruction section.
The Department of Electrical and Computer Engineering (ECE) strives to provide high-quality degree programs that emphasize fundamental principles, respond to the changing demands and opportunities of new technology, challenge the exceptional abilities of Rice students, and prepare these students for roles of leadership in their chosen careers. Undergraduate and graduate programs in ECE offer concentrations in areas that include system and control theory, communications, quantum electronics and lasers, computer systems, and electronic materials, devices, and circuits. The latest information on the department’s faculty, research areas, and degree programs and requirements can be found on the ECE website: http://www.ece.rice.edu/.

Undergraduate Degree Programs
The department offers two undergraduate degrees, the bachelor of arts (BA) and the bachelor of science in electrical engineering (BSEE). The BA degree provides a basic foundation in electrical and computer engineering that the student can build on to construct a custom program. Because of its flexibility and large number of free electives, the BA can be combined easily with courses from other departments to create an interdisciplinary program. This may be particularly appropriate for students planning further study in law, business, or medicine.
The BSEE degree is the usual degree taken by those students planning a career of engineering practice. It is accredited by the Accreditation Board for Engineering and Technology (ABET) and can reduce the time required to become a licensed professional engineer. The program for the BSEE requires more hours and greater depth than the BA degree but still provides considerable flexibility.

Both degrees are organized around a core of required courses and a selection of elective courses from four specialization areas. Each student’s program must contain a depth sequence in one area and courses from at least two areas to provide breadth. The specialization electives provide a flexibility that can be used to create a focus that crosses traditional areas. Because of the number of options, students should consult early with department advisors to plan a program that meets their needs.

**BSEE Degree Requirements**—See Graduation Requirements (pages 14–15) for general university requirements. A BSEE program must have a total of at least 134 semester hours and include the following courses. A course can satisfy only one program requirement, except for design. Students who place out of required courses without transcript credit must substitute other approved courses in the same area. Current degree requirements and planning sheets may be found on the ECE website.

### Mathematics and Science Courses
- MATH 101 Single Variable Calculus I
- MATH 102 Single Variable Calculus II
- MATH 212 Multivariable Calculus
- ELEC 331 Applied Probability
- CAAM 335 Matrix Analysis or MATH 355 Linear Algebra
- PHYS 101 Mechanics
- PHYS 102 Electricity and Magnetism
- ELEC 261 Introduction to Waves and Photonics
- CHEM 121 General Chemistry

Additional approved mathematics and science courses to bring the total to 32 hours.

### ECE Core Courses
- ELEC 220 Fundamentals of Computer Engineering
- ELEC 241 Fundamentals of Electrical Engineering I
- ELEC 242 Fundamentals of Electrical Engineering II
- ELEC 301 Introduction to Signals
- ELEC 305 Introduction to Physical Electronics
- ELEC 326 Digital Logic Systems
- ELEC 391 Professional Issues in Electrical Engineering

**Computation Course:** One from
- COMP 201 Principles of Computing and Programming
- CAAM 210 Introduction to Engineering Computation

### Design Courses
- ELEC 493 Senior Design Seminar
- ELEC 494 Senior Design Laboratory
- One from:
  - ELEC 422 VLSI Design
  - ELEC 432 Digital Radio System Design
  - ELEC 464 Photonic Sensor System Design
  - ELEC 491 Independent Design Project

### Specialization Area Courses

Upper-level ECE courses are organized into four specialization areas: computer engineering, systems, electronic circuits and services, and quantum electronics. The computer engineering area provides a broad background in computer systems engineering, including computer architecture, digital hardware engineering, software engineering, and computer systems performance analysis. The systems area involves the study of processing and communicating signals and information through systems or devices, control theory, signal and image processing, and communications. The electronic circuits and devices area covers the design of
analog circuits, electromechanical devices, and the design and manufacturing of semiconductor devices. The quantum electronics area encompasses studies of electronic materials, including nano-materials, semiconductor and optoelectronic devices, lasers and their applications, and photonics.

The BSEE program must include seven courses total from at least two areas, including at least 4 courses in one area. Graduate courses and equivalent courses from other departments may be used to satisfy area requirements with permission; consult the ECE website for the latest list of specialization area courses.

**Unrestricted Electives**
Additional courses to provide the BSEE minimum requirement of at least 134 semester hours.

**BA Degree Requirements**—See Graduation Requirements (pages 14–15) for general university requirements. A BA program must have a total of at least 120 semester hours and include the following courses. A course can satisfy only one program requirement, except for laboratory. Students who place out of required courses without transcript credit must substitute other approved courses in the same area. Current degree requirements and planning sheets may be found on the ECE website.

**Mathematics and Science Courses**

MATH 101 *Single Variable Calculus I*  
MATH 102 *Single Variable Calculus II*  
MATH 212 *Multivariable Calculus* or CAAM 335 *Matrix Analysis*  
CAAM 335 *Matrix Analysis* or MATH 355 *Linear Algebra*  
One from: ELEC 331 *Applied Probability*, MATH 355 *Linear Algebra*, MATH 381 *Introduction to Partial Differential Equations* or CAAM 335 *Matrix Analysis*  
PHYS 101 *Mechanics*  
PHYS 102 *Electricity and Magnetism*  
ELEC 261 *Introduction to Waves and Photonics* or CHEM 121 *General Chemistry*

**ECE Core Courses**

ELEC 220 *Fundamentals of Computer Engineering*  
ELEC 241 *Fundamentals of Electrical Engineering I*  
ELEC 242 *Fundamentals of Electrical Engineering II*  
ELEC 305 *Introduction to Physical Electronics*  
ELEC 326 *Digital Logic Systems*  
CAAM 210 *Introduction to Engineering Computation*  
COMP 201 *Principles of Computing and Programming*  
ELEC 201 *Introduction to Engineering Design*  
ELEC 327 *Implementation of Digital Systems*  
ELEC 342 *Electronic Circuits*  
ELEC 433 *Architectures for Wireless Communications*  
ELEC 434 *Digital Signal Processing Laboratory*  
ELEC 442 *Advanced Electronic Circuits*  
ELEC 443 *Power Electronic Circuits*  
ELEC 444 *Electromagnetic Interference/Compatibility*  
ELEC 445 *Wireless Electronics*  
ELEC 465 *Physical Electronics Practicum*  
ELEC 494 *Senior Design Seminar*

**Specialization Area Courses**

Upper-level ECE courses are organized into four specialization areas, as described above in the BSEE degree requirements. The BA program must include 4 courses total from at least two areas, including at least two courses in one area. Each course must be at least 3 semester hours. Graduate courses and equivalent courses from other departments may be used to satisfy area requirements with permission; consult the ECE website for the latest list of specialization area courses.
Unrestricted Electives

Additional courses to provide the BA minimum requirement of at least 120 semester hours.

Graduate Degree Programs

The ECE Department offers two graduate degree programs. The master of electrical engineering (MEE) degree is a course-based program designed to increase a student’s mastery of advanced subjects; no thesis is required. The MEE prepares a student to succeed and advance rapidly in today’s competitive technical marketplace. A joint MBA/MEE degree is offered in conjunction with the Jesse H. Jones Graduate School of Management. The doctor of philosophy (PhD) program prepares students for a research career in academia or industry. The PhD program consists of formal courses and original research conducted under the guidance of a faculty advisor, leading to a dissertation. Students in the PhD program complete a master of science (MS) degree as part of their program; the ECE department does not admit students for a terminal MS degree.

Information on admission to graduate programs is available from the ECE Graduate Committee and on the ECE website. See the section Information for Graduate Students (page 55) for the general requirements of graduate degrees at Rice. Students must achieve at least a B (3.0) average in the courses counted toward a graduate degree. In addition, no course in which the student earned a grade lower than a C may count toward a graduate degree.

MEE Degree Requirements—Students must prepare a MEE degree plan and have it approved by the ECE Graduate Committee. The plan must include at least 30 semester hours of courses, all at the 300 level or above. The program should include a major area of specialization (18 semester hours), a minor area (6 semester hours), plus free electives. At least 7 of the major and minor area courses must be at the 400 level or above, and at least 4 must be at the 500 level or above. ELEC 590 or ELEC 599 may not count as major area courses; no more than 3 semester hours can be transfer credit, and at most one one-hour seminar course may be included in the plan. A MEE degree planning form and current requirements may be found on the ECE website.

PhD Degree Requirements—Students are admitted to the PhD program only for the fall semester. ECE PhD students move through the program in stages, starting as first year student, advancing to MS candidate, PhD qualified student, and PhD Candidate; each advancement requires the approval of the ECE Graduate Committee. Students entering with previous graduate work may follow a hybrid program developed in consultation with the faculty and the Graduate Committee. The first academic year concentrates on foundation coursework and on developing a research area. Each student must successfully complete a project, ELEC 599, in his or her chosen area of research, in lieu of an oral or written qualifying exam. In addition to enabling the faculty to evaluate the student’s research potential, the project encourages timely completion of the MS degree. The student must complete a master’s thesis and successfully defend it in an oral examination. Students who have already acquired a master’s degree elsewhere are still required to complete a first-year ELEC 599 project.

Completion of the MS degree, satisfactory performance in coursework, and a recommendation from the prospective PhD advisor is required for advancement to PhD candidacy. A candidate for the PhD degree must demonstrate independent, original research in electrical and computer engineering. After successfully presenting a PhD research proposal and completion of all coursework, a student is eligible
for PhD candidacy. The student then engages in full-time research, culminating in the completion and public defense of the PhD dissertation. Details of the PhD program requirements, the phases of study, and a timetable may be found on the ECE website.

See ELEC in the Courses of Instruction section for course descriptions.
ENGLISH

THE SCHOOL OF HUMANITIES

CHAIR
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Terrence Arthur Doody
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LECTURERS
Jill “Thad” Logan
Mary L. Tobin

LECTURERS ON THEATRE
Trish Rigdon
Matthew Schlief

VISITING ASSISTANT PROFESSORS
Colene Bentley
Ryan Jay Friedman

Courses

Detailed information on current semester course offerings can be found at www.english.rice.edu. Please note that undergraduate level courses range numerically from ENGL 100 through ENGL 499 and graduate courses begin with ENGL 500. Non-majors wishing to enroll in upper-level courses (400 and above), are encouraged to consult with the professor prior to enrollment. Current course information for the Theatre Program, THEA 100–499, can be found at www.theatre.rice.edu.

Degrees Offered: BA, MA, PhD

The undergraduate program offers a broad spectrum of courses, including British and American literature, creative writing, women and gender studies, cultural studies, literary theory, media studies and film. Beyond a critical appreciation of literature, students will also sharpen their written communication and analytical skills. In addition, the department is home to the Theatre Program, which includes studies in theatre and dramatic literature. The graduate program in English offers concentrations in all fields of British and American literature and literary theory.

Degree Requirements for BA in English

For general university requirements, see Graduation Requirements (pages 14–15). Students majoring in English must complete 36 semester hours in English with at least 24 hours in courses at the 300 level or above. A double major requires...
30 hours in English with at least 18 hours in the upper-level courses. HUMA 101 and 102 may be counted toward the English major. All English majors must take the following:

- ENGL 200 Seminar in Literature and Literary Analysis
- ENGL 300 Practices in Literary Study
- 9 hours at the 300 level or above in periods before 1900 A.D.; 6 of the 9 hours must be in periods before 1800 A.D., but only one may be a Shakespearean course
- 3 hours at the 200 level or above in a course that focuses on noncanonical traditions, such as courses in women, African American, Chicano/a, Asian American, ethnic, global, and diasporic writers.

The department recommends that all English majors take courses in British and American history and, if they plan to do graduate work, at least 6 hours of upper-level courses in a foreign language.

**Degree Requirements for MA and PhD in English**

For general university requirements, see Graduate Degrees (pages 57–58). As part of their training, graduate students participate in both the teaching and research activities of the department. Upon entering, students will be assigned a Program Advisory Committee (PAC), consisting of two or three faculty members. In consultation with their PAC, students will design their own individualized program structured by the minimal requirements listed below. For more detailed information, please ask for a copy of the Department’s Program Outline.

**MA Program**—The English department does not have an MA program, but offers the MA degree to those PhD students who have achieved candidacy and are in the process of completing their doctorate and to qualified PhD students who leave the program before completing their doctorate. To receive an MA students must:

- Satisfactorily complete at least 30 hours of graduate work in English at Rice University. Courses must be those that count towards the PhD in English. These include courses numbered in the 500s and 600s in the English department excluding 510, 601/602, 603/604; up to 2 approved graduate or equivalent courses taken in other departments; and up to 2 approved courses in the English department numbered 400 and above. Students must satisfactorily complete ENGL 600 and distribution requirements for the PhD (see below).
- Satisfactorily complete two teaching assistantships (ENGL 601/602). These do not count toward the 30-hour requirement.

**PhD Program**—To gain admission to PhD candidacy, students must satisfy the first seven of the following requirements, and they must receive approval for their dissertation prospectus from the Department’s Graduate Committee. To earn a PhD in English, candidates must also complete the last 2 requirements. Students must:

1. Satisfactorily complete at least 33 hours of course work plus ENGL 510, exclusive of the thesis. Courses can include: graduate courses in the English department numbered 500 to 600, excluding 510, 601/602, 603/604; up to 2 approved undergraduate courses in the English department; and up to 2 approved courses in another department.
2. Satisfactorily complete the following 2 required courses: ENGL 600 Professional Methods, and ENGL 605 Third-Year Writing Workshop. These count toward the 33-hour requirement.
3. Satisfactorily complete the distribution requirement, which consists of 2 approved courses on literature before 1800 and 2 after 1800. These count toward the 33-hour requirement.
4. Satisfactorily complete the teaching requirement by serving twice as a teaching assistant, by completing ENGL 510/511 Pedagogy, and by teaching a lower-level course designed in conjunction with the instructor of ENGL 510. ENGL 510 does not count toward the 33-hour requirement.

5. Pass a six-hour written preliminary examination focusing on two lists of books: one representing the full range of a literary period as defined by the student and his or her preliminary committee, the other representing a second literary period, a single author, a genre traced over a period of time more comprehensive than that covered by the first list, or a particular theoretical or critical approach studied with reference to its own history and traditions as well as to the historical field of the first exam.

6. Complete a dissertation prospectus that proposes a topic and an approach, offers a context to the topic in terms of work already done, offers an outline of chapters or sections, and includes a substantial bibliography.

7. Complete a dissertation that demonstrates a capacity for independent and original work of high quality.


Financial Support—Within the limits of available funds, qualified students may receive graduate scholarships or fellowships for up to five years. To qualify for this continuing financial aid, students must be approved for candidacy for the PhD by the beginning of their ninth semester at Rice.

See ENGL and THEA in the Courses of Instruction section.
ENVIRONMENTAL ANALYSIS AND DECISION MAKING

THE WIESS SCHOOL OF NATURAL SCIENCES

DIRECTOR
Matthew P. Fraser

ASSOCIATE PROFESSORS
Vicki L. Colvin
Matthias Heinkenschloss

PROFESSORS
Andrew R. Barron
Katherine B. Ensor
Neal F. Lane
Erzsébet Merényi
Dale S. Sawyer
Tayfun E. Tezduyar

ASSISTANT PROFESSORS
Evan H. Siemann

FACULTY FELLOW
Kristen M. Kulinowski

DEGREES OFFERED: MS

Rice University introduced a professional master's degree in environmental analysis and decision making in fall 2002. This degree is geared to teach students rigorous methods that are needed by industrial and governmental organizations to deal with environmental issues. As an interdisciplinary program, it aims to give students the ability to predict environmental problems, not just solve them. It emphasizes core quantitative topics such as statistics, remote sensing, data analysis, and modeling. In addition, it teaches laboratory and computer skills and allows students to focus their education by taking electives in relevant fields.

The environmental analysis and decision making degree is one of three tracks in the new Professional Master’s Program at Rice housed in the Wiess School of Natural Sciences. These master’s degrees are designed for students seeking to gain further scientific core expertise coupled with enhanced management and communications skills. These degrees instill a level of scholastic proficiency that exceeds that of the bachelor's level, and they create the cross-functional aptitudes needed in modern industry. This program will allow students to move more easily into management careers in consulting or research and development, design, and marketing of new science-based products.

DEGREE REQUIREMENTS FOR MS IN ENVIRONMENTAL ANALYSIS AND DECISION MAKING

In addition to the core science courses, students are required to complete a three- to six-month internship and take a set of cohort courses focusing on business and communications. At the conclusion of the internship, students must present a summary of their internship project in both oral and written form as part of the Professional Master's Seminar.

Part-time students who already work in their area of study may fulfill the internship requirements by working on an approved project with their current employer. For general university requirements for graduate study, see pages 56-58, and see also Professional Degrees, page 58.

ADMISSION

Admission to graduate study in environmental analysis and decision making is open to qualified students holding a bachelor's degree in a related field that includes general biology, chemistry, calculus, differential equations, and linear algebra.
Department faculty evaluate the previous academic record and credentials of each applicant individually.

**Science core courses**

- CEVE 401 *Introduction to Environmental Chemistry with lab* (F)
- ESCI 450 *Remote Sensing* (S)
- STAT 305 *Introduction to Statistics for Biosciences* (F, S)
- STAT 685 *Quantitative Environmental Decision Making* (S)

**Plus a single course from each of the following:**

**Group A**

- ESCI 451 *Analysis of Environmental Data* (F)
- STAT 305 *Introduction to Statistics for Biosciences* (F, S)

**Group B**

- STAT 385 *Methods for Data Analysis* (S)
- STAT 410 *Introduction to Statistical Computing and Linear Models* (F)
- STAT 421 *Computational Finance II: Time Series Analysis* (S)
- STAT 422 *Bayesian Data Analysis* (S)
- STAT 509 *Advanced Psychological Statistics I* (F)

**Group C**

- CEVE 411 *Air Resource Management* (S)
- CEVE 412 *Hydrology and Watershed Analysis* (S)
- CEVE 434 *Chemical Transport and Fate in the Environment* (F)
- CEVE 511 *Atmospheric Chemistry and Physics* (F)
- CEVE 550 *Environmental Organic Chemistry* (S)

**Cohort Courses**

- MGMT 750 *Management in Science and Engineering* (F)
- NSCI 501 *Professional Master's Seminar* (F, S) [required for two semesters]
- NSCI 512 *Professional Master's Project* (F, S)

**Plus a single course from the following:**

- ENST 312 *Environmental Battles in the 21st Century: Houston as Microcosm* (S)
- PHIL 307 *Social and Political Philosophy* (F)
- POLI 338 *Policy Analysis* (S)
- POLI 537 *Public Policy and Bureaucracy* (F)
- PHIL 316 *Philosophy of Law* (F)

**Internship**

An internship under the guidance of a host company, government agency, or national laboratory. A summary of the internship project is required in both oral and written form as part of the Professional Master's Project.

**Elective Courses**

*Note: Each of these electives is not offered every year, and some courses may have prerequisites or require instructor permission*

Students will choose five elective courses, three of which should be from one of the focus areas. At least one elective should be from the management and policy focus area. Recommended courses include, but are not limited to, the following:

**Sustainable Development**

- BIOS 322 *Global Ecosystem Dynamics* (S)
- BIOS 325 *Ecology* (S)
- CEVE 406 *Introduction to Environmental Law* (S)
- CEVE 411 *Air Resource Management* (S)
- CEVE 434 *Chemical Transport and Fate in Environment* (F)
- ECON 480 *Environmental Economics* (S)
- ESCI 353 *Environmental Geochemistry* (S)
- MGMT 617 *Managerial Decision Making* (S)
- MGMT 661 *International Business Law* (S)
- MGMT 674 *Production and Operations Management* (F)
- MGMT 676 *Project Management/Project Finance* (S)
- MGMT 721 *General Business Law* (S)
- SOCI 367 *Environmental Sociology* (S)

**Management and Policy**

- CEVE 322 *Engineering Economics for Engineers* (F)
CEVE 406 Introduction to Environmental Law (S)
ECON 480 Environmental Economics (S)
MGMT 721 General Business Law (S)
MGMT 661 International Business Law (S)
MGMT 617 Managerial Decision Making (S)
MGMT 751 New Venture Creation in Science and Engineering (S)
MGMT 674 Production and Operations Management (F)
MGMT 676 Project Management/Project Finance (S)
MGMT 636 Systems Analysis and Database Design
SOCl 367 Environmental Sociology (S)

**Biological Sciences**
BIOS 322 Global Ecosystem Dynamics
BIOS 324 Wetland Ecosystems
BIOS 325 Ecology
BIOS 424 Microbiology and Biotechnology
BIOS 425 Plant Molecular Biology (F)
CEVE 536 Environmental Biotechnology
ESCI 468 Climate Change and Human Civilization (S)

**Chemistry**
CENG 630 Chemical Engineering of Nanostructured Materials (S)
CEVE 511 Atmospheric Chemistry and Physics (F)
CEVE 550 Environmental Organic Chemistry (S)
ESCI 353 Environmental Geochemistry (S)

**Fluid Dynamics and Transport**
CENG 571 Flow and Transport in Porous Media I (S)
CENG 671 Flow and Transport in Porous Media II (F)
MECH 371 Fluid Mechanics I (F)
MECH 372 Fluid Mechanics II (S)
MECH 454/554 Finite Element Methods in Fluid Mechanics (F)

**Engineering**
CEVE 411 Air Resource Management (S)
CEVE 434 Chemical Transport and Fate in the Environment (F)
CEVE 530 Physical/Chemical Processes in Environmental Engineering (S)
CEVE 640 Advanced Topics in Environmental Engineering (F)

**Advanced Computation**
CAAM 378 Introduction to Operations Research and Optimization (F)
CAAM 420 Computational Science I (F)
CAAM 451 Numerical Linear Algebra (F)
CAAM 452 Computational Methods for Differential Equations (S)
CAAM 454 Optimization Problems in Computational Engineering and Science (S)
ESCI 441 Geophysical Data Analysis (F)
ESCI 451 Analysis of Environmental Data (F)
ESCI 454 Geographic Information Systems (F)
MECH 454/554 Finite Element Methods in Fluid Mechanics (F, S)
MECH 343 Modeling of Dynamic Systems (F)
MECH 417/517 Finite Element Analysis (S)
MECH 420 Feedback Control of Dynamical Systems (F)
MECH 563/CAAM 563 Engineering Approach to Mathematical Programming (F)
MECH 679 / CEVE 679 Applied Monte Carlo Analysis (F)
STAT 421 Methods in Computational Finance II (S)
STAT 422 Bayesian Data Analysis (S)
STAT 431 Mathematical Statistics (F)
STAT 540 Practicum in Statistical Modeling (S)
STAT 541 Multivariate Analysis (S)
STAT 546 Design and Analysis of Experiments and Sampling Theory
STAT 553 Biostatistics (S)
Environmental Studies

The Environmental Studies Program offers several interdisciplinary courses for students interested in broadening their understanding of environmental issues. These courses are often team-taught by faculty from various areas of study.

Students wishing to major in an environmental program have three options: Environmental Science, Environmental Engineering (see Civil and Environmental Engineering), or Environmental Policy (see Policy Studies).

Students seeking advice regarding environmental programs may contact Dr. Isle, Dr. Harcombe, or the coordinator of the Center for the Study of Environment and Society.

Courses:
ENST 101 The Sustainable Environment
ENST 113 Environmental Crisis Seminar
ENST 301 Introduction to the Environment
ENST 302 Environmental Issues—Rice into the Future
ENST 350 Environmental Internship
ENST 400 Independent Study

See ENST in the Courses of Instruction section.

Degree Requirements for BA in Environmental Science

Environmental Science is an interdisciplinary program that addresses environmental issues in the context of what we know about earth, ecology, and society. In addition to its science core, the major also seeks to provide students with some appreciation of social, cultural, and policy dimensions of environmental issues, as well as exposure to the technologies of pollution control. The double major is designed to accommodate:

- Students wishing to obtain a solid preparation for later graduate study in environmental science or other careers as environmental professionals (e.g., environmental economics, or environmental law)
- Students pursuing other careers (e.g., historians, lawyers, mechanical engineers, chemists) who hope to contribute to solutions to one of the major global issues of the 21st Century.

Students may take environmental science only as a second major. The 67-semester-hour (minimum) double major in environmental science may be taken in conjunction

Directors
Paul A. Harcombe (Ecology and Evolutionary Biology)
Walter W. Isle (English)

Professors
Arthur A. Few (Physics and Environmental Science)
Stephen Klineberg (Sociology)
Neal Lane (University Professor)
Ronald J. Parry (Chemistry)
Mark R. Wiesner (Civil and Environmental Engineering)

Gordon G. Wittenberg (Architecture)
Kyriacos Zygourakis (Chemical Engineering)

Associate Professor
Gerald R. Dickens (Earth Science)
Melissa J. Marschall (Political Science)

Assistant Professor
Carrie Masiello (Earth Science)

Lecturer
Donald Ostdiek (Political Science)
with any stand-alone major offered in any school of the university.

The key components of the double major include:

- Foundation course work in mathematics, physics, chemistry, and biology
- A set of 5 undergraduate core courses, required of all double majors, that acquaint undergraduates with a range of environmental problems encountered by scientists, engineers, managers, and policy makers. Core courses stress the components of the global environment and their interactions.
- 24 semester hours of environmental electives from four categories (1) social sciences and economics, (2) humanities and architecture, (3) natural sciences, and (4) engineering. Students may petition to have electives, in addition to those currently listed, apply toward the double major.

Major tracking forms are available in the Center for the Study of Environment and Society (CSES) office for declared Environmental Science majors.

Specific Course Requirements for a Double Major (BA) in Environmental Science include:

### General Prerequisites

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>CHEM 121 or 151</td>
<td>General Chemistry with Laboratory</td>
</tr>
<tr>
<td>CHEM 122 or 152</td>
<td>General Chemistry with Laboratory</td>
</tr>
<tr>
<td>MATH 101 or 111</td>
<td>Single Variable Calculus I</td>
</tr>
<tr>
<td>MATH 102 or 112</td>
<td>Single Variable Calculus II</td>
</tr>
<tr>
<td>PHYS 101 or 125 or 111</td>
<td>Mechanics</td>
</tr>
<tr>
<td>PHYS 102 or 126 or 112</td>
<td>Electricity and Magnetism</td>
</tr>
<tr>
<td>BIOS 201</td>
<td>Introductory Biology</td>
</tr>
<tr>
<td>BIOS 202</td>
<td>Introductory Biology</td>
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</tbody>
</table>

### Core Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOS 325</td>
<td>Ecology</td>
</tr>
<tr>
<td>ESCI 221</td>
<td>Earth System Evolution and Cycles</td>
</tr>
</tbody>
</table>

### One of the following two courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEVE 411</td>
<td>Air Resource Management</td>
</tr>
<tr>
<td>PHYS 443</td>
<td>Atmospheric Science</td>
</tr>
</tbody>
</table>

### 2 of the following 3 courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEVE 401</td>
<td>Introduction to Environmental Chemistry</td>
</tr>
<tr>
<td>CEVE 412</td>
<td>Hydrology and Watershed Analysis</td>
</tr>
<tr>
<td>ESci 451</td>
<td>Analysis of Environmental Data</td>
</tr>
</tbody>
</table>

### Advanced Electives (24 hours; at least 6 semester hours from each category)

#### Category A—Social Sciences and Economics

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEVE 306</td>
<td>Global Environmental Law and Sustainable Development</td>
</tr>
<tr>
<td>CEVE 406</td>
<td>Environmental Law</td>
</tr>
<tr>
<td>ECON 480</td>
<td>Environmental and Natural Resource Economics</td>
</tr>
<tr>
<td>ENST 302/UNIV 303</td>
<td>Environmental Issues: Rice into the Future</td>
</tr>
<tr>
<td>POLI 317</td>
<td>Congress</td>
</tr>
<tr>
<td>POLI 331</td>
<td>Environmental Politics and Policy</td>
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<tr>
<td>POLI 332</td>
<td>Urban Politics</td>
</tr>
<tr>
<td>POLI 334</td>
<td>Political Parties and Interest Groups</td>
</tr>
<tr>
<td>SOCI 331</td>
<td>Demography</td>
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<tr>
<td>SOCI 367</td>
<td>Environmental Sociology</td>
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<tr>
<td>SOCI 411</td>
<td>Social Change: Making Sense of Our Times</td>
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#### Category B—Humanities and Architecture

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<tr>
<th>Course Code</th>
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<tr>
<td>ANTH 468/ESCI 468</td>
<td>Climate Variability and Human Response</td>
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<tr>
<td>ARCH 313</td>
<td>Sustainable Architecture</td>
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<tr>
<td>ARCH 351</td>
<td>Social Issues and Architecture</td>
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<tr>
<td>ENGL 367</td>
<td>American Ecofeminism</td>
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<tr>
<td>ENGL 378</td>
<td>Literature and the Environment</td>
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<tr>
<td>ENST 301/UNIV 300</td>
<td>Introduction to the Environment: Environmental History and Literature</td>
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#### Category C—Natural Sciences

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<tr>
<td>BIOS 316</td>
<td>Lab Module in Ecology</td>
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<td>BIOS 321</td>
<td>Animal Behavior</td>
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<td>BIOS 322</td>
<td>Global Ecosystem Dynamics</td>
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<td>BIOS 323</td>
<td>Conservation Biology</td>
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<td>BIOS 324</td>
<td>Wetland Ecosystems</td>
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<td>Course Code</td>
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<td>BIOS 334</td>
<td>Evolution</td>
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<td>CHEM 211</td>
<td>Organic Chemistry</td>
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<td>CHEM 395</td>
<td>Advanced Module in Green Chemistry</td>
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<td>Earth Structure and Deformation</td>
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<td>Environmental Geology</td>
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<td>ESCI 353</td>
<td>Environmental Geochemistry</td>
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<td>ESCI 421</td>
<td>Paleoceanography</td>
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<td>ESCI 430</td>
<td>Trace Element and Isotope Geochemistry for Earth and Environmental Sciences</td>
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<td>ESCI 442</td>
<td>Exploration Geophysics</td>
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<td>ESCI 450</td>
<td>Remote Sensing</td>
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<td>ESCI 454</td>
<td>Geographic Information Science</td>
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<td>ESCI 468/ANTH 468</td>
<td>Climate Variability and Human Response</td>
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**Category D—Engineering**

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<tr>
<td>CENG 503</td>
<td>Chemical Engineering Process I: Air Pollution Control</td>
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<td>CEVE 201</td>
<td>Introduction to Environmental Systems</td>
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<td>CEVE 315</td>
<td>Sustainable Development</td>
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<td>CEVE 401</td>
<td>Introduction to Environmental Chemistry</td>
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<td>CEVE 403</td>
<td>Principles of Environmental Engineering</td>
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<td>CEVE 411</td>
<td>Air Resources Management</td>
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<td>CEVE 412</td>
<td>Hydrology and Watershed Analysis</td>
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<td>CEVE 434</td>
<td>Chemical Transport and Fate in the Environment</td>
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<td>CEVE 451</td>
<td>Introduction to Transportation</td>
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<td>CEVE 470</td>
<td>Basic Soil Mechanics</td>
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<td>CEVE 490</td>
<td>Undergraduate Research in Environmental Engineering</td>
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<tr>
<td>STAT 300</td>
<td>Model Building</td>
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<tr>
<td>STAT 305</td>
<td>Introduction to Statistics for the Biosciences</td>
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<tr>
<td>STAT 310</td>
<td>Probability and Statistics</td>
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<td>STAT 339/PSYC 339</td>
<td>Statistical Methods—Psychology</td>
</tr>
</tbody>
</table>
French Studies

The School of Humanities

Chair
Michel Achard

Professors
Bernard Aresu
Jean-Joseph Goux
Deborah Nelson-Campbell

Professor Emerita
Madeleine Alcover

Associate Professors
Michel Achard
Deborah A. Harter
Philip R. Wood

Assistant Professor
Julie Fette
Louisa Shea

Degrees Offered: BA, MA, PhD

Courses in this department hone language skills in French while placing a diverse, generalized knowledge of French literature within a broad spectrum of cultural, historical, philosophical, and theoretical concerns. Students are also urged to take courses in fields closely related to French studies, including European and English history, literature, and philosophy. The department encourages students to spend time studying in a francophone country and to that end the French Studies department and Office of Student Advising will help students select an appropriate program.

Degree Requirements for BA in French Studies

For general university requirements, see Graduation Requirements (pages 14–15). Students majoring in French studies must complete at least 30 semester hours in upper-level courses (at the 300 or 400 level). A double major or an area major must complete 24 hours in upper-level courses.

Required Courses
FREN 311 Major Literary Works and Artifacts of Pre-Revolutionary France
FREN 312 Major Literary Works and Artifacts of Post-Revolutionary France: The Romantic Legacy
FREN 336 Writing Workshop

Electives
7 additional courses (for single majors)—at least 3 courses at the 400 level and at least 1 course from Group III (culture, history, and civilization)
5 additional courses (for double majors)—at least 2 courses at the 400 level and at least 1 course from Group III (culture, history, and civilization)

As many as 2 French courses taught in English may count toward a major in French studies. Students who have taken 300- and 400-level French courses (except those taught in English) cannot enroll simultaneously or afterward in 200-level French courses for credit. Over half of the courses for the major must be taken at Rice University. The department normally requires that the basic courses for the major (FREN 311, 312, and 336) be taken at Rice. Students who matriculate before 2003 may choose to graduate with the requirements listed in the General Announcement of the year of their matriculation or of their graduation.

Students with diplomas from French-speaking institutions must consult with the department before enrolling in courses, and all majors and prospective majors
must have their programs of study approved by an undergraduate adviser. Students wishing to complete the honors program in French studies should also consult one of the advisers.

**Campus Activities**—To acquaint students with French language and culture, the department sponsors a weekly French Table that meets at lunch in a college. The Club Chouette also organizes outings to French movies, sponsors guest lectures, and, in cooperation with the department, helps to produce a play during the spring semester. Students who maintain at least a B average in 2 or more advanced French courses and have a GPA of at least B, are invited to join the Theta chapter of the honorary Pi Delta Phi.

**Travel Abroad**—The department encourages majors to spend time living and studying in a francophone country. The Alliance Française of Houston offers a summer scholarship of $3,000 each year to a qualified sophomore or junior for six weeks’ study in France. The Clyde Ferguson Bull Traveling Fellowship is awarded each year to an undergraduate to spend the junior year studying in France with a program approved by the department. Candidates must have taken at least one 300-level course in the department and have a GPA of at least 3.0. Information about study abroad is available from the department faculty and in the Office of Academic Advising.

**Degree Requirements for MA and PhD in French Studies**

Admission to graduate study in French, granted each year to a limited number of qualified students, requires a distinguished undergraduate record in the study of French literature or a related field and a capacity for independent work. All candidates should have a near-native command of the French language. For general university requirements, see Graduate Degrees (pages 57–58).

**MA Program**—In most cases students take two years to complete work for the MA degree in French studies. While graduate students normally take 500-level courses, as many as 2 courses at the 400 level may count toward fulfillment of the following course requirements. MA candidates must:

- Complete with satisfactory standing 27 semester hours (in addition to BA course work) of upper-level courses, plus 6 hours of independent study in the preparation of three advanced research papers to be defended before their MA committee. The selection of the paper topics must receive preliminary approval from the examination committee.
- Perform satisfactorily on a reading examination in one department-approved language other than French or English
- Perform satisfactorily on preliminary written and oral examinations conducted in French on works specified on the department reading list

**PhD Program**—Candidates normally take 500-level courses, but students entering with a BA may count toward their PhD degree as many as 3 courses at the 400 level; those entering with an MA may count 2 such courses. Graduate student enrollment in a course listed only at the 400 level, however, is subject to the instructor’s approval. Candidates for the PhD degree must meet the following criteria, ensuring that they complete the language requirement and their preliminary exams one year before they submit a dissertation:

- In a program approved by the department, complete with high standing at least 57 semester hours of course work plus 36 thesis hours (for those already holding an MA degree, the requirement is 39 hours of course work plus 36 thesis hours). Six of these units may be fulfilled with a 600-level independent study course.
• Satisfactorily complete 1 course at the 300 level or above in a language other than French or English. With the permission of the graduate committee, this requirement may also be met through satisfactory performance on a written language examination or by such other means as the graduate committee may direct.

• Perform satisfactorily on preliminary written and oral examinations based on readings comprising both required and individually selected texts, including readings in French literature from all major periods and readings in philosophy and theory; history, cultural studies, and film; and postcolonial and gender studies. The oral exam can be taken only after successful completion of the written exam.

• Complete a dissertation, approved by the department, that represents an original contribution to the field of French studies.

• Perform satisfactorily on a final oral examination on the dissertation.

See FREN in the Courses of Instruction section.
German

The School of Humanities

Chair
John Zammito

Professors
Peter Caldwell
Steven Crowell
Margret Eifler
Ewa M. Thompson
Klaus Weissenberger

Associate Professors
Maria-Regina Kecht
Uwe Steiner
Sarah Westphal

Assistant Professor
Christian Emden

Visiting Lecturer
Malgorzata Dabrowska

Degrees Offered: BA in German Studies, BA in Slavic Studies

German

The department offers instruction in the German language, in German literature (studied in the original and in translation), and in the achievements of German culture surveyed as a whole and in particular themes, genres, and periods. The department stresses linguistic competence, interdisciplinary study, and the role of German culture within the broad context of European history. Studies in film, cultural theory, and gender complement traditional studies of German literature, philosophy, history, and art.

The BA in German prepares students for graduate study in German, as well as for careers in law, business, international affairs, economics, and other academic fields. Our language acquisition courses maximize linguistic proficiency and prepare students for study abroad. Our freshman seminars are conducted in small groups and stress written and oral communication. Culture courses under the rubric “Mapping German Culture” are taught in English and consider major cultural and literary topics. For students who have some proficiency in German, the Mapping German Culture courses are accompanied by sections that conduct discussions and study sources in German. Upper-level literary courses and special topics seminars both polish linguistic skills and offer intensive study at a high level.

The department encourages and, by means of the Mitchell Fellowships, facilitates study abroad in Germany and Austria. There are weekly German tables in the colleges.

Degree Requirements for BA in German Studies

For general university requirements, see Graduation Requirements (pages 14–15). Students who have German as their only major must complete at least 30 semester hours above the 200 level. These 30 hours above 200 level = 9 three hour courses + 3 one-hour FLAC sections or 10 three-hour courses.

- GERM 303 or 304 (bridge course in German literary/cultural language)
- GERM 411, 412 (basic German literature survey courses)
- 2 Special Topics Seminars (GERM 351 to any other 400-level Special Topics)
- 3 Mapping German Culture courses with attached one-hour FLAC sections (GERM 321–350)

Students who have German as a double major must complete at least 23 semester hours above the 200 level. These 23 hours above 200 level = 7 three-hour courses + 2 one-hour FLAC sections or 8 three hour courses.
180  DEPARTMENTS / German and Slavic Studies

- GERM 303 or 304 (bridge course in German literary/cultural language)
- GERM 411, 412 (basic German literature survey courses)
- 1 Special Topics Seminar (GERM 351 to any other 400-level Special Topics)
- 2 Mapping German Culture courses with attached one-hour FLAC sections (GERM 321–350)

Honors—Outstanding students are presented annually with the Max Freund Prize. The department also offers an honors program for majors excelling in their studies. Honors work consists of readings and research leading to a substantial honors essay under the supervision of a department faculty member (GERM 403). Students should consider this work to enhance preparation for graduate school.

Slavic

The School of Humanities is currently reviewing the status of the Slavics majors program. At this time, the School is not registering new majors in the Slavics program. The School of Humanities is committed, however, to courses in Russian language, Slavic culture, and East European history, which are expected to be offered next year and in the future.

Degree Requirements for BA in Slavic Studies for Existing Majors

For general university requirements, see Graduation Requirements (pages 14–15). Single majors in Slavic studies must complete 24 semester hours at the 300 level or above. Double majors must complete 18 semester hours at the 300 level or above. At least one of these courses must cover the entire Slavic area (e.g., SLAV 320 Slavic Cultures, RUSS 411 Contemporary Russia, or SLAV 412 Contemporary Eastern and Central Europe).

Courses in Polish are offered subject to availability of an instructor. Students may take two Slavic studies-related courses from outside the department, subject to approval by the Slavic studies advisor (Professor Thompson).

Currently there is a moratorium on new majors in Slavic Studies, approved by the Dean of Humanities at the request of the department.

See GERM, PLSH, RUSS, and SLAV in the Courses of Instruction section.
Hispanic Studies

The School of Humanities

Degrees Offered: BA and MA in Hispanic Studies

The department offers courses on the literatures and cultures of the Spanish-speaking nations of the world, and on Spanish linguistics. The department stresses linguistic competence, interdisciplinary study, and a transnational perspective on Spanish and Spanish American literature and culture. In addition to courses on the novel, poetry, and the essay, the department also offers the opportunity to study film, art, cultural theory, translation, and gender. Our freshman seminars are conducted in English and stress written and oral communication. Qualified students may undertake independent work.

Degree Requirements for BA in Hispanic Studies

For general university requirements, see Graduation Requirements (pages 14–15). Both single and double majors must take at least one course in Hispanic linguistics, one course in Spanish literature and/or culture, and one course in Latin American literature and/or culture. No more than two courses taught in English may count toward the major in Hispanic studies. More than half of the courses for the major must be taken at Rice University.

Single Majors—Students majoring in Hispanic studies must complete at least 30 semester hours in upper-level courses (SPAN 330 and above) as follows:

- 1 course between SPAN 330–SPAN 359
- 4 courses between SPAN 360–SPAN 399
- 4 courses at the 400 level
- 1 elective course

Double Majors—Students double majoring in Hispanic Studies must complete at least 24 semester hours in upper-level courses (SPAN 330 and above) as follows:

- 1 course between SPAN 330–SPAN 359
- 3 courses between SPAN 360–SPAN 399
- 3 courses at the 400 level
- 1 elective course

For a list of recommended elective courses, please see department coordinator.

Honors—Every year, the department presents the Cervantes Award for Outstanding Seniors to its top students. The department also offers an honors program for majors excelling in their studies. Honors work consists of an independent research project leading to a substantial essay. It is undertaken in close cooperation with a departmental faculty member, who must first approve the thesis proposal.
Degree Requirements for MA in Hispanic Studies

For general university requirements, see Graduate Degrees (pages 57–58). For the MA degree, candidates must:

- Complete with high standing an approved program that normally includes 27 semester hours in advanced courses, plus 6 hours of thesis work
- Pass a reading examination in one foreign language (other than Spanish) that has been approved by the department
- Perform satisfactorily on a written comprehensive examination in Spanish, which tests students’ competence in Hispanic literature and linguistics
- Take SPAN 507 *Teaching College Spanish*
- Complete an acceptable thesis
- Perform satisfactorily on a final oral examination on the thesis

See SPAN in the Courses of Instruction section.
History

The School of Humanities

Chair
Peter C. Caldwell

Professors
John B. Boles
Peter C. Caldwell
Ira D. Gruber
Thomas L. Haskell
Michael Maas
Allen J. Matusow
Atieno Odhiambo
Patricia Seed
Richard J. Smith
Martin J. Wiener
John H. Zammito

Professors Emeriti
Katherine Fischer Drew
Harold Hyman
Gale Stokes
Albert Van Helden

Associate Professors
Edward L. Cox
Alex Lichtenstein
Ussama Makdisi
Carol E. Quillen
Paula A. Sanders
Lora Wildenthal
Joel W. Wolfe

Assistant Professors
Alexander X. Byrd
G. Daniel Cohen
Eva Haverkamp
Allison Sneider
Kerry R. Ward

Autrey Visiting Assistant Professor
Moramay Lopez-Alonso

Lecturers
Eric Adler
Carl W. Pearson

Degrees Offered: BA, MA, PhD

The undergraduate program offers courses in the four main areas of ancient and medieval history, modern European history, U.S. history, and the histories of Asia, Latin America, and Africa. Faculty interests range from ancient Greek and medieval Jewish history to modern British and German; from areas in American history that include Colonial America, the Old and New South, the Civil War, and intellectual history; and from general global history to specific areas such as East Asian, Caribbean, and Middle Eastern history. The department encourages its majors to acquaint themselves with other humanistic disciplines, such as literature, fine arts, and philosophy; the contributions of political science, sociology, economics, and anthropology also are vital to historical studies. The graduate program, which trains a limited number of carefully selected students, offers studies in U.S., Europe, Atlantic, and African, and graduate certificate in Study of Women and Gender.

Degree Requirements for BA in History

For general university requirements, see Graduation Requirements (pages 14–15). Students majoring in history must complete a minimum of 30 semester hours (10 courses) in history. No less than 18 hours (6 courses) should be taken at Rice. No more than 6 hours (2 courses) may be satisfied by advanced placement (AP) credit. Transfer credit, foreign or domestic, when combined with AP cannot count for more than 12 hours (4 courses). At least 18 hours (6 courses) are required on the 300 or 400 level. Two courses must be chosen from a departmental list of seminars devoted mainly to writing and discussion. In addition, majors are expected to distribute their 10 courses over four fields (AP credit may not be used for these):

Ancient or medieval—1 course minimum

Modern Europe—2 course minimum
United States—2 course minimum
Africa, Asia, Latin America—2 course minimum

Some foreign language proficiency is desirable and the department highly recommends that students contemplating graduate work in history study at least one foreign language in some depth.

Transfer Credit—The Department of History grants transfer credit on a case-by-case basis to enrolled undergraduates (the registrar determines the credit hours). Courses taken at another institution must be the equivalent in required reading, writing, and testing of a Rice history course. It does not have to have an equivalent in the Rice history offerings. For the current procedures to request transfer credit see the department home page http://history.rice.edu. Rice students planning to study at a foreign university must also obtain approval from the Office of International Programs.

Honors Program—Qualified undergraduates may enroll for 6 semester hours of directed honors research and writing, completing an honors thesis in their senior year (these 6 hours are in addition to the 30 hours required for the major). Application to the program is required. For current procedures see the department home page, http://history.rice.edu. Students must complete both semesters of HIST 403 and 404 to receive credit; the grade for the final project applies to the full 6 hours. Limited financial assistance is available to conduct related research during the summer between the junior and senior year for all students accepted into the Honors Program.

Degree Requirements for MA and PhD in History

The Rice University graduate program in history is primarily a PhD program. Students who have a BA in history (or its equivalent) from an acceptable institution are eligible to apply to the PhD program. Although many successful candidates to the PhD program have an MA or other advanced degree, advanced study is not a requirement for admission. Graduate study is offered in U.S., European, intellectual, and other areas of history. Further information is available on request from the department. For general university requirements, see Graduate Degrees (pages 57-58).

The department awards graduate tuition waivers and fellowship stipends, within the limits of available funds, to qualified PhD candidates with demonstrated ability. University funding is not available for masters program study only. All graduate students in the history department are expected to participate in the professional activities of the department as part of their training. These include, but are not limited to, assisting with the Journal of Southern History or the Papers of Jefferson Davis and serving as research assistants or teaching assistants for department members. Insofar as possible, these assignments are kept consistent with the interests of the students.

MA Program—The department gives priority to applicants for the PhD. Completion of the MA degree usually takes two years; no more than three years may elapse between graduate admission and the completion of the degree unless the department Graduate Committee approves an extension. MA degrees are awarded in two ways: (1) completion of one year of course work (24 credit hours) and a thesis written and defended in an oral examination during the second year; and (2) completion of two years of course work (48 credit hours), normally including at least 2 seminar research papers.

PhD Program—Doctoral candidates must prepare themselves in three fields of history: two in their major area of concentration, whether European, U.S., or other
history, and a third in an area outside of that concentration (e.g., if the major area is European history, the third field must be in U.S. or other non-European history, and if the major area is U.S. history, the third field must be in European or other non-U.S. history, and so on). Students who wish to pursue a third field in an area outside the department should petition the Graduate Committee by the end of their second semester.

The requirements for completing the degree will be administered as flexibly as possible within the bounds of the general university regulations. These requirements state that the PhD degrees “will be awarded after successful completion of at least 90 semester hours of advanced study and an original investigation reported in an approved thesis.” Passing the qualifying exam and receiving approval of a dissertation prospectus allows the student to apply for formal admission to candidacy for the PhD degree.

For the PhD, candidates must:

- Prepare themselves thoroughly in three examination fields.
- Take 8 graduate seminars, including Introduction to Doctoral Studies.
- Pass reading examinations in the principal language of research (unless it is English) and one other language (not English).
- Perform satisfactorily on written and oral examinations. For students entering with a BA, those examinations will normally be taken before the beginning of the fifth semester and no later than the beginning of the sixth semester. Students entering with an MA may take their examinations earlier, with departmental approval.
- Complete a dissertation presenting the results of original research.
- Defend the thesis in a public oral examination.

See HIST in the Courses of Instruction section.
KINESIOLOGY

THE SCHOOL OF HUMANITIES

Chair
Bruce Etnyre

Professors
Bruce Etnyre
Nicholas K. Iammarino

Professors Emeriti
Eva J. Lee
Hally B.W. Poindexter
Dale W. Spence

Associate Professor
James G. Disch

Assistant Professors
Clark Haptonstall
Peter G. Weyand

Adjunct Professors
Becky Gorham
Mark Jenkins
Cathy Sunday

Lecturers
John F. Eliot
Richard Nisbett
Carwyn Sharp
Ryan Zapalac

Part-time Lecturers
Robert A. Anding
Cassius B. Bordelon, Jr.
Brian T. Gibson
Elaine Heywood
Emily Page

Degree Offered: BA

The department was one of the first of its kind in the nation to institute an academic program structure that allows students to concentrate their efforts on a specific subdiscipline. Academic programs include sports medicine, sport management, and health science. Detailed requirements of each program can be obtained on the departmental webpage at http://kinesiology.rice.edu.

Degree Requirements for the BA in Kinesiology

For general university requirements, see Graduation Requirements (pages 14–15). A minimum of 120 semester hours is required for a bachelor of arts degree in kinesiology. Because of the interdisciplinary and diverse nature of the field of kinesiology, each student is required to specify an academic program concentration within the major.

Sports Medicine Program

Advisor: Dr. Peter Weyand

Students who choose the sports medicine program of the kinesiology department typically continue their education at the graduate level or plan on attending medical school or other medically related professional schools such as physical therapy. Graduates may also be directly employed in medical and corporate settings, which include both preventative and rehabilitative programs. Graduates who choose not to seek post-baccalaureate education are generally encouraged to obtain certification for exercise testing, physical fitness evaluation, or exercise prescription through the American College of Sports Medicine at http://www.acsm.org/.

The sports medicine curriculum intends to provide a strong natural science foundation and to interface this foundation with application to the human body. Prerequisite courses in chemistry and physics, elective courses in biology and biochemistry, as well as an array of required and elective courses offered within the department provide this foundation. The sports medicine program is the only academic specialization on campus that provides detailed exposure to human anatomy and human physiology. In addition, students receive a solid foundation in nutrition, biomechanics,
sports psychology, motor learning, measurement and statistics, exercise physiology, and sports medicine. Practical experience is afforded through several academic labs. Other elective courses include writing for professional communication, epidemiology, case studies in human performance, motor control, advanced exercise physiology and preventative medicine, research methods, and muscle physiology and plasticity. During advising sessions, students are encouraged to select from these electives according to their respective career goals. Students in the sports medicine program are expected to develop a strong scientific knowledge base as well as adept critical reading, writing, and oral communication skills.

Qualified students of the sports medicine program will be encouraged to participate in an independent study. This independent study allows integral involvement in basic or applied research directed by a faculty adviser. The application (proposal) process for independent studies is outlined in the webpage listed below. Qualified students are also encouraged to apply for any one of a variety of highly competitive internships. The internships generally provide students with an opportunity to experience the application of preventative and rehabilitative sports medicine concepts and practice at a health care or corporate setting.

**SPORT MANAGEMENT PROGRAM**

*Director: Dr. Clark Haptonstall*

Sport management is an interdisciplinary field of study of fairly modern development. It first appeared in the curricula of American universities under a variety of designations in the early to mid-1980's. Rice University became a pioneer institution in integrating this field into the traditional academic area known as kinesiology by making sport management one of the original programs when the department was reorganized into its present configuration.

As a distinct body of knowledge and field of study, sport management draws from a wide range of academic disciplines: economics, sociology, political science, psychology, law, communication, and managerial studies. Each discipline can be applied to the business enterprise of amateur and professional sport, as well as the management of highly effective teams in sport, corporate America, or other management related professions. While public and private sector sport operation is the topic of a large segment of the curriculum, the thoroughly interdisciplinary emphasis aims at educating students in the skills and theory necessary to assume responsible leadership roles in and out of sport.

Career preparation for leadership and entrepreneurial positions is the ultimate goal of sport management at Rice. Students will acquire a solid foundation in public speech, professional writing, and leadership and thus will be competitive for opportunities at the country's best law and business schools, as well as with journalism programs and premier consulting corporations.

Students wishing to gain employment in the sport industry should pay particular attention to practical experience. Networking and out-of-class development often plays the most significant role in obtaining jobs and promotions along high profile career paths such as those in collegiate or professional sports organizations. Students interested in careers in public relations, media, event direction, or promotion, office management, management of coaching and scouting, human resources, business development, sports information, or advertising will therefore need to demonstrate a commitment to securing and completing internships. Membership in national sport societies, specifically the North American Society for Sport Management (NASSM)—the leading academic association in this field and governing body from which Rice is in the process of obtaining national accreditation—is strongly recommended.
Highly qualified students will also be encouraged to seek an honors major, a double major, and/or consider pursuit of an advanced degree in business, law, sport management, or organizational psychology.

**Health Sciences Program**

*Advisor: Dr. Nicholas K. Iammamino*

The goal of the health science program is to provide students with a fundamental background in health promotion and disease prevention. This background will enable them to understand the complexities of maintaining an optimal level of personal health while also considering the role that health promotion plays in society and the mechanisms that affect community health. The health science program is viewed as an excellent option for undergraduate students who are preparing to enter graduate school in health education, health promotion, or public health, as well as other health-related graduate or professional programs such as medicine or dentistry.

Students must complete a total of 42 semester hours in addition to the general university requirements (see pages 14–15). Six lecture courses are required for a total of 18 required hours. These required courses cover the structure and function of the human body (Human Anatomy), an introductory course designed to acquaint students with the fundamental concepts of health and models of health promotion (Concepts of Health Science), understanding and assessing community health needs (Principles of Community Health), methods of understanding the disease process (Epidemiology), a course that introduces statistics and measurement (Measurement and Statistics), and a professional preparation course (Foundations of Health Promotion/Health Education) that introduces students to the profession.

The remaining 24 semester hours are drawn from elective courses that are both within the kinesiology department and, at present, more than 20 courses from other academic departments. In keeping with the university’s interest in an interdisciplinary approach to undergraduate education, this allows students to choose health-related courses within the natural sciences, social sciences, and humanities divisions.

See **HEAL and KINE in the Courses of Instruction section.**
The mission of Leadership Rice is to help Rice University undergraduates from all disciplines build their leadership capacities to create and manage change effectively. Leadership Rice explores how heart and mind, theory and practice, and ideas and actions come together to facilitate change.

The introductory course, Leadership: Theory to Practice (UNIV 309), is required to apply for participation in the Summer Mentorship Experience and the Leadership Certificate. UNIV 309 is only offered during the fall. Other courses may be taken independently. Leadership Rice's Summer Mentorship Experience places 40 to 50 students each summer in full-time, paid summer mentorships in Houston or nationally. Students are accepted by application between December and February and, if accepted, become part of the Leadership Rice program.

Leadership Rice courses, however, are open to undergraduates from all disciplines:

- UNIV 309: Leadership: Theory to Practice
- UNIV 310: Leadership Certificate Seminar
- UNIV 311: Creativity
- HUMA 311: Leadership Communication
- UNIV 313: Entrepreneurial Leadership
- PHIL 120: Applied Ethics
- UNIV 409: Leadership Practicum (for UNIV 309 teaching assistants)

The Leadership Certificate:

The program offers a Leadership Certificate for students eager to experience personal growth and reflect deeply on their activities while at Rice. The intention of the certificate is not to have students burdened by doing more but to get more from what they will already be doing. More details about the Leadership Certificate can be found on the Leadership Rice website.

Certificate requirements, which can be met in a variety of ways, include:

**Academic Work**

- UNIV 309
- Communications
- Public policy/leadership theory
- Ethics

**Experiential components**

- Summer work experience
- Community service
- International experience
- Campus engagement
Capstone Project:

At the end of the process, certificate students address their understanding of leadership by tackling a “real world” problem, either on campus or beyond. Students are expected to make a public presentation of their work and include documentation in their portfolio.

More information about the program may be found at www.rice.edu/leadership
The mission of the Lifetime Physical Activity Program (LPAP) is to provide a multifaceted learning experience via a program of physical activity to foster physical, social, and emotional wellness. The ultimate goal of the LPAP is to provide each student with:

- Knowledge of health-related concepts of physical activity
- Cognitive and behavioral skills
- An understanding of physical activity as a mode of improved quality of life throughout the life-span
- A sense of emotional well-being
- Satisfying social interaction
- Knowledge of rules and strategies
- An opportunity to learn an activity which is not necessarily mainstream in U.S. culture
- Professional instruction specific to the course material
- An introduction to intramural sports, sport clubs, dance theatre, and recreational programs
- Improved quality of life at Rice University

Lifetime physical activity classes are strongly recommended for all first-year students, including transfers who have not had an equivalent course elsewhere. To satisfy the LPAP requirement, students must complete 2 different courses in the Lifetime Physical Activity Program that do not carry degree credit and do not count toward the total semester hours at graduation. Students with disabilities may make special arrangements to satisfy this requirement. Students may not repeat LPAP courses and students can only take four hours of LPAP courses for credit that count toward the total semester hours at graduation.

The LPAP offers approximately 40 courses each semester. Within scheduling constraints, a student may select a course which offers activities that satisfy his/her interests. The LPAP offers a variety of activities. Some of the current activities offered include racquet sports (tennis, racquetball, badminton), fitness activities (aerobics, personal fitness, weight training, cycling), aquatics, dance (Latin ballroom, ballroom, modern, ballet, country western, Middle Eastern, classical Indian), martial arts, team sports (flag football, basketball, volleyball, soccer, softball), and other activities such as fencing, self defense for women, golf, disc golf, yoga, and nutrition.

See LPAP in the Courses of Instruction section.
DEGREES OFFERED: BA, MA, PhD

BA IN LINGUISTICS

The department offers both a major program in linguistics and a Certificate in Teaching English as a Second Language, which may be earned with or without a linguistics major. For general university requirements, see Graduation Requirements (pages 14–15). In addition, students must satisfy the distribution requirements and complete no fewer than 60 semester hours for a total of at least 120 semester hours.

Because human language is a multifaceted object of study, linguistics is, by its nature, an interdisciplinary field. The undergraduate major in linguistics provides both an in-depth grounding in the field as well as cross-disciplinary breadth. Students beginning a linguistics major should take LING 200, which is a prerequisite for many upper-level courses in the department. All majors are required to take at least 8 courses (24 semester hours) in linguistics at the 300 level or above, including 4 core courses listed below:

**Core Courses**
- LING 300 *Linguistic Analysis*
- LING 301 *Phonetics* or LING 311 *Phonology*
- LING 402 *Syntax and Semantics* or LING 416 *Linguistic Universals and Typology*
- LING 305 *Historical Linguistics* or LING 315 *Semantics: Introduction to the Study of Meaning*
  or LING 415 *Sociolinguistics*

No more than 1 independent study course may be counted toward the major requirements. In addition, competency in 1 language other than English is required. This requirement may be satisfied by 2 courses in a foreign language at the 200 level or above or equivalent, or at the 100 level or above for non-European languages. The general linguistics major requires, in addition to the 4 core courses and the language requirement, at least 4 upper-level linguistics electives.

Students may elect either a general linguistics major or one of four areas of concentration. Majors who plan to pursue graduate training in linguistics are recommended to choose one of the areas of concentration. These students also are urged to apply for admission to the honors program by the end of their junior year. The requirements for the various concentrations include additional courses, as follows.
• **Language Concentration.** In addition to the basic language competency required of all majors, the language concentration requires an advanced level competency in a different language. This can be satisfied by 2 language courses taught in a language other than English at the 300 level or above, or equivalent. In addition to the core courses, 4 advanced linguistics electives also are required, which should be chosen in consultation with the linguistics adviser. Courses in the structure or history of the languages studied are especially appropriate.

• **Cognitive Science Concentration.** This concentration requires 3 additional courses focused on the cognitive aspects of human language, selected from LING 306, 315, 317, 411, and 412; 2 courses from cognitively related disciplines (psychology, computer science, anthropology, philosophy) as approved by the major adviser; and 2 other advanced linguistics electives.

• **Language, Culture, and Society Concentration.** For an in-depth grounding in a particular language and culture, this concentration requires 2 language courses at the 300 level or above. The language may be the same as that used to satisfy the basic language competency. Besides the 4 core courses, the student must select 2 courses from LING 313, 406, 415, 419, 421, or 424; and 2 more linguistics electives. Finally, 2 courses in sociocultural studies outside the department are required, and the selection must be approved by the major adviser. Examples of appropriate courses are ANTH 353, PSYC 202, RELI 393, or HIST 250.

• **Second Language Acquisition Concentration.** Two language courses at the 300 level or above are required; the language may be the same as that used to satisfy the basic language competency. In addition to the linguistics core courses, 4 additional courses are required as follows: LING 340, LING 394 or a foreign language equivalent (e.g., Structure of Spanish, Structure of Japanese, etc.) as approved by the major advisor; and two of the following: LING 309, LING 313, LING 370, LING 415, LING 418, LING 419, LING 420, LING 422, or LING 490.

**Honors Program**—The departmental honors program provides selected undergraduate majors with the opportunity to conduct supervised research within their area of specialization in the major. Majors planning to pursue graduate training in linguistics or a related field are strongly encouraged to apply, as well as others who wish to add the experience of an intensive, individualized research project to their undergraduate education.

Application to the honors program should be made in person to the undergraduate adviser in the second semester of a student’s junior year. In support of the application, the student should prepare a brief description of the proposed project signed by the faculty member who is to supervise the work. Acceptance into the program is by agreement of the linguistics faculty. On acceptance, the student will enroll in LING 482, with the supervising faculty member named as instructor.

The honors program framework is designed to facilitate the development of a mentoring relationship between student and faculty member. Students are thus expected to consult with the project supervisor periodically regarding their progress; the supervisor will provide research guidance and general support.

With the appropriate completion of major requirements and the honors project or thesis, the student will graduate with departmental honors as follows: “With Distinction,” “With High Distinction,” or “With Highest Distinction,” as determined by the linguistics faculty.
Certificate in Teaching English as a Second Language—This program is designed for students who plan to teach English to nonnative speakers in the U.S. or abroad. The Certificate in Teaching English as a Second Language provides undergraduate-level training in applied linguistics and the English language, as well as some practical preparation for English language teaching. It can be easily combined with a major in linguistics, education, or English. To enroll in the program, see the director of the TESL Certificate Program (for 2005, Claire Bowern) or the linguistics undergraduate advisor.

The program consists of 4 required courses and a practical component.

**Required Courses**

- LING 200 *Introduction to the Scientific Study of Language*
- LING 340 *Theory and Methods of Teaching ESL*
- LING 394 *Structure of the English Language*
- LING 205 *Language and Society*, LING 309 *Psychology of Language*, LING 313 *Language and Culture*, LING 415 *Sociolinguistics*, or LING 306 *Language, Thought, and Mind*

**Practical Component**—The practical component consists of a total of 20 contact hours of language teaching/tutoring experience. This requirement may be filled by tutoring in the Rice Student Volunteer Program or by teaching in a high school or community TESL program. Students will be expected to write a short report on their teaching experience.

Successful completion of the certificate program must be certified by the director of the TESL Certificate Program and will be indicated on the Rice transcript upon completion of degree requirements.

**PhD in Linguistics**

The doctoral linguistics program at Rice emphasizes the study of language use and functional/cognitive approaches to linguistic theory. Areas of particular research strength in the department include field studies of particular languages (e.g., languages of North and South America; Australia; Austronesia; Africa; Europe; and East Asia), typology, language and mind (cognitive linguistics, neurolinguistics, schema-based theories, lexical semantics), language change (diachronic typology, grammaticalization theory, semantic change, language classification, and (Indo-European linguistics), phonetics and phonology, and discourse analysis, including corpus linguistics. Additional research areas represented are second language acquisition and applied linguistics.

The program only admits students planning to study for the PhD degree full time. Undergraduate preparation should ideally include language study and course work in linguistics or disciplines related to linguistics, such as anthropology, applied linguistics, psychology, or computational modeling. Interdisciplinary interests are encouraged. A master’s degree may be earned during progress to the PhD degree. Admission to the program is competitive, and an advanced degree is not required. Students admitted to the program are generally offered financial support in the form of tuition scholarships and/or stipends for living expenses.

During the first year of residence, each entering student works closely with the graduate adviser to choose a plan of study congruent with the demands of the program and the student’s interests. Emphasis throughout the program is on a close working relationship with faculty. Students should select areas of specialization that fit well with faculty research interests and activities. See the departmental homepage at http://linguistics.rice.edu.

Students with a master’s degrees in linguistics will progress through the degree
program in four years; those without in five. With no prior linguistics background, course work in the first two years will include:

- 2 courses in the area of phonetics/phonology
- 2 courses in the area of syntactic/semantic analysis
- 1 two-course sequence in field methods
- 1 problem-solving course in linguistic analysis
- 2 courses in other subfields of linguistics

Prior preparation in linguistics will be assessed with regard to its equivalence to particular Rice courses. Students are also normally expected to serve as teaching assistants for 1 course per year during the time they are receiving departmental support; such service is included in the normal course load. Graduate students are required to register for at least 12 hours credit per semester before advancing to candidacy.

In each of the second and third years in addition to course work, students prepare an in-depth research paper on a topic chosen in consultation with two separate committees of the faculty. These two papers must represent different areas of the field, as determined by the linguistics faculty. A separate committee of the three faculty members, to be approved by the student’s advisor, referees each paper. In addition, one of the papers must be presented in the departmental colloquium, and it is expected that students submit their work for presentation at relevant professional meetings, and publish such work in conference proceedings and/or journals (funds may be available to defray the cost of the travel to meetings). Finally, students must demonstrate reading competency in two research languages.

In the course of the second and third years, the student should work toward establishing a close working relationship with various members of the faculty such that multiple faculty members are familiar with the student’s work. After the student’s second paper is accepted, a dissertation advisor is selected and a doctoral committee is formed, by mutual agreement of the student and the anticipated committee members.

During the fourth year, students present to their committee members a third research paper consisting of a substantial dissertation proposal and a comprehensive bibliography. This proposal may take the form of a grant proposal to an external funding agency, particularly in the case of proposed fieldwork. Upon completion of the prospectus, students will submit to an oral qualifying exam, to be administered by the dissertation committee. The exam will consist of two parts, a general exam, demonstrating the student’s knowledge of the field, and a dissertation prospectus hearing. Upon completion of this qualifying examination, the student will advance to candidacy.

The doctoral research project may require fieldwork before writing the dissertation; however, the student is expected to consult regularly with the committee members during the writing process. After a complete draft of the dissertation is submitted, the student defends the dissertation publicly. When the final version of the dissertation is accepted by the doctoral committee and filed with the university, and all other requirements are certified as filled, the degree is then granted.

See LING and SANS in the Courses of Instruction section.
The Jesse H. Jones Graduate School of Management was established in 1974 through a gift from Houston Endowment, Inc. The school provides its highly select graduate students with unique opportunities for professional training in management. The master of business administration (MBA) program includes elective offerings in accounting, entrepreneurship, finance, international business, information technology, marketing, operations management, organizational behavior and human resource management, healthcare management, and strategic management and planning.
The MBA is also offered in a format designed for executives who do not wish to interrupt their careers while they pursue their degrees. Meeting every other weekend, the MBA for Executives Program features the same content and faculty as the traditional two-year MBA program, and is completed in 21 months. This general management program offers no tracks for specialization; however, much of the content of elective courses in the two-year MBA has been incorporated into the course modules for the executive format. The MBA for Executives Program offers 4 electives at the end of the 21-month period.

A joint MBA/master of engineering degree offered by the Jones Graduate School and the George R. Brown School of Engineering, in any of the departments of engineering or in statistics, prepares students to become managers in organizations requiring a high level of technical expertise and management skills.

A joint MBA/MD offered by the Jones Graduate School and Baylor College of Medicine prepares students to become both physicians and managers in institutions involved in the delivery of high-quality health care, as well as biotechnology-focused industries, health insurance/managed healthcare firms, and pharmaceutical and medical supply and equipment companies.

Although no undergraduate major is offered, undergraduate accounting courses are available.

**Admission Requirements for Jones Graduate School**

For general information, see Admission to Graduate Study (pages 56–57). Applicants to the MBA program must submit scores on the Graduate Management Admission Test (GMAT) rather than the Graduate Record Examination (GRE), and, unless they received an undergraduate degree from a U.S. college or university, foreign nationals whose native language is not English must submit recent scores on the Test of English as a Foreign Language (TOEFL). Admission to the Jones Graduate School is open to students regardless of their undergraduate major, but it is highly selective and limited to those who have performed with distinction in their previous academic work and on the GMAT.

**MBA Program**—Although the MBA program has not established specific prerequisite courses for admission, students may find it beneficial to have a background that includes undergraduate course work in principles of accounting, principles of microeconomics, and mathematics. Because spreadsheet and word-processing software are used extensively in course work, students should have a thorough understanding of these types of software packages before enrolling.

**MBA for Executives**—In addition to meeting the standards for admission to the MBA program, students admitted to the executive program typically have at least 10 years of relevant work experience.

**Joint MBA/Master of Engineering Program**—To enter the joint degree program, applicants must be accepted by both the Jones Graduate School and the engineering department in which they wish to enroll. The program requires the Jones Graduate School application and the GRE, rather than the GMAT. Some engineering departments require advanced tests as well.

**Joint MBA/MD Program**—To enter this joint degree program, applicants must first be accepted by Baylor College of Medicine and then apply separately to the Jones Graduate School. The MCAT is accepted rather than the GMAT. Two years of medical school are required before starting MBA classes.

**Degree Requirements for MBA**

For the MBA degree, students must:

- Spend at least 2 academic years in residence at Rice
• Complete at least 60 semester hours in course work
• Register for no fewer than 15 hours and no more than 18 hours each semester
  (any other registration requires special permission)

All registration and drop/add forms require the signature of the MBA program
director or a designee. The school, which must approve all courses, specifies the
sequence of required first-year courses at registration for each entering class.

**Waivers and Transfers of Credit**—At its sole discretion, the school may allow
students to transfer credits. This does not necessarily reduce the residence require-
ment, but it does make additional elective courses available. Students otherwise
must follow the prescribed curriculum of study and are not allowed to waive any
core requirements.

**First-Year Courses**—Students must complete at least 32 approved credit hours. The
modular core curriculum includes financial accounting, data analysis, business ethics,
information technology, marketing, finance, managerial economics, organization behavior,
competitive strategy, managerial and leadership skills, managerial communication,
economic environment of business, globalization of business, cost management, opera-
tions management, business-government relations, organization theory and change
management, and 2 electives. During the second semester, teams of students partici-
pate in an action learning project in which they work at a company to solve a specific
problem. This project allows them to integrate the business disciplines they studied
and to turn knowledge into action. The core courses serve as prerequisites for
required and elective courses taken in the second year.

**Second-Year Courses**—Students must complete at least 28 credit hours that
include required courses in entrepreneurship and strategy formulation and imple-
mentation, and 25 credit hours of electives.

**Areas of Interest**—Although MBA students are not required to select a formal
elective concentration for degree purposes, they may wish to choose 1 or more
areas of interest from among the following: accounting, entrepreneurship, finance,
general management, international business, information technology, marketing,
operations management, organizational behavior and human resource manage-
ment, healthcare management, and strategic management and planning. The MBA
program director and individual faculty members offer students advice on course
selection. Students may also take upper-level or graduate courses from other de-
partments at Rice. Students may not credit basic foreign language courses toward
the MBA degree, but advanced language courses may qualify with approval from
the MBA program director.

**Degree Requirements for MBA for Executives**
This degree requires completion of 11 mini-semesters totaling 56 credits, includ-
ing Extended Learning Labs. The program is a lock-step progression in which all
students take required courses in an identical sequence, except for the 4 elective
courses at the end of the 21-month period.

**Degree Requirements for Joint MBA/Master of Engineering**
Students may earn this nonthesis engineering degree in the fields of chemical
engineering, civil engineering, computational and applied mathematics, computer
science, electrical and computer engineering, environmental science and engineering,
mechanical engineering and materials science, and statistics. Ordinarily, the engineer-
ing degree takes one academic year to complete, whereas the MBA requires two.
Joint-degree candidates, however, can fulfill requirements for both degrees in
two academic years.
For the joint MBA/master of engineering degree, students must complete:

- At least two academic years in residence at Rice
- 63 semester hours in approved course work:
  - 24 hours in an engineering discipline
  - 39 hours in business administration

Students plan their course schedules in consultation with the engineering department in which they are enrolled and with the MBA program director.

**Degree Requirements for the Joint MBA/MD Program**

Students may earn both MBA and MD degrees in five years. They divide their time as follows:

- Years one and two—medical training at Baylor College of Medicine
- Year three—core MBA courses at Rice
- Year four—MBA courses at Rice, including 3 semester hours of required courses and 12 semester hours of healthcare electives during the fall semester, and medical training at Baylor College of Medicine during the spring semester
- Year five—medical training at Baylor College of Medicine

Students use the summer between the third and fourth years to perform healthcare research programs or externships. Students receive their MBA degree from Rice after they have completed 45 hours of approved management course work; they receive their MD degree after they have completed the requirements specified by Baylor College of Medicine.

**Academic and Professional Standards**

Students must meet both academic and professional standards to continue academic work and to graduate. In accepting admission to the MBA degree program, all students agree to be governed by the standards and procedures for dismissal or disciplinary action stated below.

**Academic Standards**—A minimum cumulative grade point average of 3.00 (B) is required for graduation. All courses taken for the MBA degree (including approved courses taken at the university but outside the Jones Graduate School) are counted in the cumulative grade point average calculation.

Students with a cumulative grade point average lower than 3.00 at the end of any semester will be notified of dismissal and may no longer register for courses. A student who has been notified of dismissal may appeal to the Academic Standards Committee of the Jones Graduate School. The committee will decide, based on the circumstances of the appeal, whether the student (1) may resume studies on probation, (2) is to be suspended for one semester or an academic year, or (3) is to be dismissed from the MBA program.

Students proposing to return after a period of academic suspension must apply to the Academic Standards Committee and receive permission to be readmitted. Only grades of C and higher are counted for credit toward graduation. If students receive a grade lower than C in a course required for graduation, they must repeat the course. If students receive a grade lower than C in an elective course, they need not repeat the specific course, but they must make up the hours.

Students may retake a failed course only once and then only if their cumulative grade point average is 3.00 or higher, or they have received the permission of the Academic Standards Committee to do so. Students who fail a course twice will be
notified of dismissal. (Students may not take any course for which the failed course is a prerequisite until they pass the prerequisite course.)

Students on academic probation cannot be candidates for student offices, cannot graduate or drop courses, and must complete all future courses with a grade of C or above. Students are removed from probation only upon achieving a cumulative grade point average of at least 3.00 at the end of the following semester of work.

Students who have completed the required number of hours for the MBA degree, the joint MBA/master of engineering degrees, or the joint MBA/MD degree, but who have a cumulative grade point average lower than 3.00, are dismissed without graduation. If, in an appeal to the Academic Standards Committee, a student can substantiate a claim of extenuating circumstances, i.e., those beyond the student’s control, the student will be permitted to take additional course work at the university within the next year to raise his or her grade point average to 3.00.

**Professional Standards**—MBA students are held to the high standards of professional conduct expected of managers—standards substantially exceeding those expected of them simply as students. Students may be dismissed or suspended for failure to meet professional standards, as defined in the University Code of Conduct. The dean may place a student on disciplinary probation for unacceptable conduct, giving oral and written notice that future misconduct will lead to filing of specific charges. (This probationary notice, however, is not required as a precondition for filing specific charges.)

**Academic Regulations**

**Grading Policy**

*For All Courses:*
- The grade of A+ should be given only as an exceptional grade reflecting extraordinary achievement by a student.
- Only grades of C and higher are counted for credit toward graduation. If students receive a grade lower than C in a (core) course required for graduation, they must repeat the course. If students receive a grade lower than C in an elective course, they need not repeat the specific course, but they must make up the hours.
- Grades are considered final and are rarely, if ever, changed for any reason other than calculation errors.
- Jones School students may not take courses pass/fail to count toward their degree requirements.
- Jones School students may audit course with departmental approval. The course will not count towards the MBA or appear on the transcript.

*For Core Courses:*
- No more than half of all grades assigned by an instructor may be an A- or above.
- A course GPA (combining multiple sections where necessary) between 3.30 and 3.50 should be used as a “target” for assigning grades.
- Instructors in multi-section courses should coordinate the assignment of final grades such that they reflect a consistent grading philosophy for the overall course.

*For Elective Courses:*
- Regardless of class size, instructors “target” the course GPA (combining multiple sections where necessary) to fall between 3.50 and 3.80.
• To the extent that such course exists, instructors in multi-section electives should coordinate the assignment of final grades such that grades reflect a consistent grading philosophy for the overall course.

**Guidelines for Appealing Academic Dismissal**

**The Process**—A student who wishes to appeal a dismissal should address the following issues in a letter to the Academic Standards Committee. The student must send the letter to the chairman of the Academic Standards Committee. The following questions should be answered in the appeal letter.

1. What circumstances led to your academic performance last semester and to what degree were those circumstances beyond your control?

2. If your performance in a particular course(s) last semester was below par, describe any circumstances specific to that course that explain your performance.

3. Do you expect the circumstances that created the problems for you last semester to change next semester? If so, how?

You may include any other information that you deem relevant in your appeal letter.

**Timing**—Timing is critical in the appeals process because classes start immediately after the grades are distributed in January. The student must inform the director of the MBA/E program (by email or written note) immediately of the intention to appeal. The appeal letter to the committee must be filed expediently, within or sooner than the first week of classes. If a student plans to appeal, he/she should attend classes in January without registering. It is important to keep up in his/her studies during the appeal process. If his/her appeal is accepted, the student may register later with a letter from the MBA program office.

Grades are considered final, and are rarely changed for any reason other than calculation errors.

**Appeals**—Appeals beyond the Academic Standards committee must go to the dean of the Jones Graduate School, who may seek guidance from the Dean’s Advisory Council. All decisions rendered by the dean are final.

**Confidentiality**—The Family Educational Rights and Privacy Act of 1974 and amendments govern the records of actions related to appeals.

**Grade Appeal Process**

The procedure below outlines the process by which a student may appeal a grade in a course.

1. The student should first pursue any grading question with the professor following whatever formal or informal process the professor has outlined for the course.

2. If the matter is not resolved in step 1 above, the student must file a written appeal to the professor and send a copy to the director of the MBA/E program. This written appeal must be filed no later than 45 days after the last day of finals for the module (mini-semester) in which the course was offered.

3. The professor must schedule a meeting with the student within two weeks of receiving the written appeal to further discuss the appeal with the student. Notice of the appeal time and date will be provided by the professor to the director of the MBA/E program.

4. If step 3 does not resolve the issue to the satisfaction of both parties, the student may appeal to the Dean’s Advisory Committee by sending a written
notice describing the grounds for the appeal within 2 weeks of the date of the scheduled meeting in step 3.

5. The Dean’s Advisory Committee will seek out information on the appeal from the professor and the student and, at its discretion, hold a hearing to further consider the matter. The decision of the Dean’s Advisory Committee will be rendered within 6 weeks of receiving a written notice of appeal (step 4).

6. In the event that the protested grade is necessary for the student to graduate, an accelerated schedule will be followed.

7. All decisions rendered by the Dean’s Advisory Committee are final.

8. The Family Educational Rights and Privacy Act of 1974 and amendments govern records of these actions.

**ALP Grade Appeal Policy for Individual Student**

The procedure below outlines the process by which an individual student may appeal a grade in the ALP course.

1. The student must send a letter of intent to appeal the grade to the director of ALP. This written appeal must be filed no later than 30 days after the last day of module 6. A copy of the letter must be sent to the director of the MBA program.

2. The director of ALP must schedule a meeting with the student and director of the MBA program by the end of module 1 during the following year to discuss the appeal with the student further. The purpose of the meeting is to review with the student the basis for the individual grade. The director of ALP will provide the meeting time to the director of the MBA program.

2a. Up until this time, all information relevant to the case is confidential. If the student desires to talk with the ALP faculty or ALP team members about the matter, this will require the student to waive confidentiality with respect to the matter of the downgrade status. The student must notify the director of ALP about his/her preference to waive confidentiality. Upon receiving the request to waive confidentiality from the student, the director of ALP will apprise all related parties that an appeal is underway, that they are not obligated to discuss the matter with the appealing student, and that their confidential peer evaluations have not been shared with the appealing student. The student must wait for permission from the director of ALP before contacting team members and/or faculty liaisons.

3. If step 2 does not resolve the issue to the satisfaction of both parties, the student may appeal to the director of ALP by sending a written notice describing the grounds for the appeal within 2 weeks of the date of the scheduled meeting in step 2. A copy of the letter must be sent to the director of the MBA program. The director of ALP will render a decision within 3 weeks of receiving the written notice.

4. If step 3 does not resolve the issue to the satisfaction of both parties, the student may appeal to the Dean’s Advisory Committee by sending a written notice describing the grounds for the appeal within 2 weeks of the decision rendered by the director of ALP in step 3. A copy of the letter must be sent to the director of ALP and the director of the MBA program.

5. The Dean’s Advisory Committee will seek out information on the appeal from the professor and the student and at its discretion hold a hearing to further consider the matter. The decision of the Dean’s Advisory Committee will be rendered within 6 weeks of receiving a written notice of appeal (step 4).

6. All decisions rendered by the Dean’s Advisory Committee are final.
7. In the event that the protested grade is necessary for the student to graduate, an accelerated schedule will be followed.

8. The Family Educational Rights and Privacy Act of 1974 and amendments govern records of these actions.

**ALP Grade Appeal Policy for Student Team**

The procedure below outlines the process by which an individual student may appeal a grade in the ALP course.

1. The student team must send a letter of intent to appeal the grade to all members of the faculty team. This written appeal must be filed no later than 30 days after the last day of module 6. All team members must sign the letter. A copy of the letter must be sent to the director of ALP and to the director of the MBA program.

2. The faculty team must schedule a meeting with the student team by the end of module 1 during the following year to further discuss the appeal with the student team. The professors will provide the meeting time to the director of ALP and to the director of the MBA program.

3. If the matter is not resolved in step 2 above, the student team must file a written appeal to the director of ALP within 2 weeks of the date of the scheduled meeting in step 2. All team members must sign the letter. The director of ALP must schedule a meeting with the student team within 2 weeks of receiving the written appeal to further discuss the appeal with the student team. The director of ALP will provide the meeting date to the director of the MBA program.

4. If step 3 does not resolve the issue to the satisfaction of both parties, the student team may appeal to the Dean’s Advisory Committee by sending a written notice describing the grounds for the appeal within 2 weeks of the date of the scheduled meeting in step 3. All team members must sign the letter. A copy of the letter must be sent to the director of ALP and to the director of the MBA program.

5. The Dean’s Advisory committee will seek out information on the appeal from the professors, the director of ALP, and the student team and, at its discretion, hold a hearing to further consider the matter. The decision of the Dean’s Advisory Committee will be rendered within 6 weeks of receiving a written notice of appeal (step 4). A copy of the decision must be sent to the director of ALP and to the director of the MBA program.

6. All decisions rendered by the Dean’s Advisory Committee are final.

7. In the event that the protested grade is necessary for the student to graduate, an accelerated schedule will be followed.

8. The Family Educational Rights and Privacy Act of 1974 and amendments govern records of these actions.

**Drop/Add Policy and Procedures**

Due to the unique module schedule by which the Jones School abides, MBA students have special procedures by which they follow to make schedule changes. The MBA Program Office has implemented an add/drop policy which allows students the opportunity to add/drop courses at various times throughout the semester. Below are the procedures for adding or dropping a course and students should contact the MBA Program Associate for assistance.

All schedule changes must be approved by the MBA Program Associate prior to the add/drop deadline (either via email or in person) before the student may make
schedule changes on Esther (http://esther.rice.edu/). All class rosters are updated in the MBA Program Office and sent to professors for enrollment counts and attendance records and students are responsible to communicate with the MBA Program Associate regarding all proposed schedule changes.

**If student is taking a ONE CREDIT course:**
1. A student may add/drop a class, including section changes for core courses, with permission from the MBA Program Associate during the first week of the module without penalty.
2. A student must attend the first class, and may not miss class during the first week.
3. A student may not add or drop a course after the first week of class (see add/drop deadlines below for the 2004–2005 academic year).

**If student is taking a TWO CREDIT course:**
1. A student may add/drop a class with permission from the MBA Program Associate, during the first two weeks of module in which the class begins without penalty.
2. A student must attend the first class and may not miss class during the first week.
3. A student may not add or drop a course after the second week of class.

**If student is taking a THREE CREDIT course:**
1. A student may add/drop a class with permission from the MBA Program Associate, during the first three weeks of module in which the class begins without penalty.
2. A student must attend the first class, and may not miss class during the first week.
3. A student may not add or drop a course after the third week of class.

### 2005–2006 Add/Drop Deadlines

#### Fall 2005

<table>
<thead>
<tr>
<th>Add/Drop Period</th>
<th>Module(s)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 23–30</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>August 29–September 6</td>
<td>1–2</td>
<td>2</td>
</tr>
<tr>
<td>August 29–September 12</td>
<td>1–3</td>
<td>3</td>
</tr>
<tr>
<td>September 26–October 3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>September 26–October 10</td>
<td>2–3</td>
<td>2</td>
</tr>
<tr>
<td>November 7–November 14</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Spring 2006

<table>
<thead>
<tr>
<th>Add/Drop Period</th>
<th>Module(s)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 16–24</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>January 16–31</td>
<td>4–5</td>
<td>2</td>
</tr>
<tr>
<td>January 16–February 7</td>
<td>4–6</td>
<td>3</td>
</tr>
<tr>
<td>February 21–February 28</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>February 21–March 7</td>
<td>5–6</td>
<td>2</td>
</tr>
<tr>
<td>March 28–April 5</td>
<td>6</td>
<td>1</td>
</tr>
</tbody>
</table>

All schedule changes must be submitted and approved by Christa VanDrie no later than 5 P.M.

Office: 210-2 Jones School Building  
Phone: 713-348-6223  
Email: cvandrie@rice.edu
INDEPENDENT STUDY

Minimum Hours Requirement—Each 1-unit credit for independent study should contain approximately as much time content as a 1-module course at JGSM, which is 12 hours of class time, plus an average of at least 24–36 outside-class hours, for a minimum total of 36–48 hours of work. Most independent study projects can probably be accommodated in a 1- or 2-unit independent study; 3-unit independent study projects should be less frequent. Occasionally, a group independent study project may arise, though most independent studies will be undertaken by individual students.

The number of credits for an independent study should be negotiated at the beginning of a project. Increases to the number of project credit hours after the project overview has been filed with the MBA program office must be approved by the Academic Standards Committee. The committee will rely on input from sponsoring faculty in making its decision about ex post credit increases. Requests to increase the number of project credit hours must be made before the end of the second week of classes in the module in which the project begins, except when a student is in their last semester, in which case such requests must be made before the end of the second week of the semester.

Restrictions—No student may take more than 3 credit hours of independent study during the course of the degree program without the approval of the Academic Committee. If an independent study is proposed that would cause a student to exceed the three credit limit, the Academic Standards Committee will select two faculty members, other than the faculty member who will supervise the project, within the area most closely related to the study’s academic contact to review and approve the study. Independent study exceeding three credits in total should consider current policies restricting use of independent study as well as the incremental value of additional independent study in light of past independent studies. If the study does not align with any of the JGSM academic groups, the Academic Standards Committee will perform the review and make the final approval decision.

Independent study projects are for academic credit, not for hire. Students may not earn credit for paid research assistance.

Faculty Sponsorship—Independent study projects are normally sponsored only by full-time JGSM faculty. Students wishing for sponsorship by a part time faculty member must submit a project overview to the Academic Standards Committee and obtain the committee’s approval, before the module(s) in which the project is to begin.

Common Requirements—The goal of independent study projects is to advance or deepen a student’s knowledge or competency in a business discipline or activity. To facilitate these goals, independent study projects generally fall into two broad categories: (1) directed reading and study resulting in a research paper, or (2) an experiential or hands-on project resulting in an outcome such as an empirical analysis or a webpage/site with an executive summary of the “deliverable.”

While the content of individual independent study projects are at the discretion of a student and the sponsoring faculty member, JGSM would like to ensure relatively equal workloads per unit of independent study credit, and some common requirements between independent study projects. To that end, students and/or sponsoring faculty should:

1. Prepare and submit to the MBA program office an overview of the independent study project with number of project credits, anticipated final results and a broad timeline of anticipated project milestones.
2. Meet to discuss the project, after the initial agreement on the project scope, at least once every 2–3 weeks.

3. Prepare a final paper (in the case of directed reading and research projects), or complete a concrete deliverable (for example, a completed webpage, computer program, survey results, empirical analyses, etc.) together with an executive summary of the project (in the case of experiential projects).

4. File a copy of each student’s final paper, or executive summary, with the MBA program office.

Applications—Independent Study Applications are available for interested students to pick up in the MBA Program Office. Complete and approved applications are due to the MBA Program Associate by the first week of the module in which the project will be completed. The student will be registered for MGMT 700 Independent study for the appropriate credit amount, only when the MBA Program Associate send the approved application information to the registrar for processing.

Class Attendance Policy
Students are expected to be in class on the first day of each module. The faculty reserves the right to exclude students from their courses who do not show up on the first day. For special circumstances, see faculty and/or director of MBA program immediately.

Withdrawal Policy
A Jones School student may voluntarily withdraw from school at any time. Rice University applies a sliding scale to tuition and fees, so early action to withdraw saves money.

Jones School Student Handbook
Generally, the Jones School adheres to the academic regulations of Rice University. However, the Jones School has unique policies and procedures that vary from the Office of Graduate Studies regarding, but not limited to, leave of absence, withdrawals and readmission, drop/add, academic discipline, dismissal, procedures for resolution of problems, and appeal of academic regulations. All Jones School students are responsible for adhering to policies and procedures listed in the Jones School Student Handbook given to students during pre-term. A copy of the handbook may also be obtained from the MBA program office.

Financial Aid
Financial assistance by the Jones Graduate School is awarded only for a given semester or year. Continuation of assistance depends upon satisfactory academic performance, professional behavior, and availability of funds. Academic or disciplinary probation, suspension, or more than three grades below B- result in the removal of all forms of school financial assistance, whether scholarship, loan, or employment. Scholarships are awarded for a combination of need and academic merit.

See ACCO and MGMT in the Courses of Instruction section.
MANAGERIAL STUDIES

THE SCHOOL OF SOCIAL SCIENCES

PROGRAM DIRECTOR
Ronald Soligo

DEGREE OFFERED: BA

The major in managerial studies is an interdepartmental, nonprofessional program designed to provide undergraduates with an understanding of the environment in which businesses and other organizations exist today, and of some of the tools employed by management in the commitment of its financial and human resources. All students taking the managerial studies major must also complete at least one of the established departmental or interdepartmental majors, other than an area major. Managerial studies is not the equivalent of an undergraduate business major at other universities.

DEGREE REQUIREMENTS FOR BA IN MANAGERIAL STUDIES

For general university requirements, see Graduation Requirements (pages 14–15). For the BA degree, students majoring in managerial studies must complete the following 10 core courses in addition to satisfying all the requirements for their second departmental or interdepartmental major:

ACCO 305 Introduction to Accounting
ECON 211 Principles of Economics I (microeconomics)
ECON 448 Corporation Finance or ENGI 303 Engineering Economics and Management
*MANA 404 Management Communications in a Consulting Simulation
PSYC 101 Introduction to Psychology
PSYC 231 Industrial and Organizational Psychology
**STAT 280 Elementary Applied Statistics
***STAT 385 Methods for Data Analysis and System Optimization

2 courses from the following:
ACCO 406 Management Accounting
ECON 355 Financial Markets and Institutions
ECON 358/POLI 358 Organizational Design
ECON 370 Microeconomics Theory
ECON 421 International Finance
ECON 435 Industrial Organization
ECON 437 Energy Economics
ECON 438 Business, Law, and Economics
ECON 439 Torts, Property, and Contracts
POLI 335 Political Environment of Business
POLI 338 Policy Analysis
STAT 420 Statistical Process Control and Experimental Design
UNIV 309 Leadership: Theory to Practice
* MANA 404 is a capstone course that may not be taken until 8 of the 10 other required courses in the major have been completed.
** Psychology and sociology majors may satisfy this requirement with PSYC 339/STAT 339 or SOCI 398, respectively. Students with a calculus background should take STAT 305, STAT 310/ ECON 382, or STAT 331/ELEC 331.
*** or CAAM 378, ECON/STAT 400, STAT 410, 421, 486.

Honors Program—To apply for admission to the honors program, students must have completed eight of the regular managerial studies courses and have a B+ (3.33) average in those courses. All applications must be approved by the Director of Managerial Studies.
The Honors Program consists of taking 2 additional courses from:

<table>
<thead>
<tr>
<th>MANA 497/498 Independent Research</th>
<th>STAT 486 Methods in Computational Finance</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 440 Risk, Uncertainty, and Information</td>
<td>STAT 421 Methods in Computational Finance</td>
</tr>
<tr>
<td>ECON 445 Managerial Economics</td>
<td>I: Market Models</td>
</tr>
<tr>
<td>ECON 449 Basics of Financial Engineering</td>
<td>II: Time Series</td>
</tr>
</tbody>
</table>

MANA 497/498 are offered in collaboration with faculty in the Jesse H. Jones Graduate School of Management. Admission to these courses must be approved by a participating faculty member. A list of participating faculty and their research interests is available from the director of Managerial Studies.

For more information, students should consult the program director in 268 Baker Hall.

See MANA in the Courses of Instruction section.
Master of Liberal Studies

The School of Continuing Studies

Dean
Mary B. McIntire

Director
TBA

Please refer to the program website http://www.mls.rice.edu for program information and academic policies.

Degree Offered: MLS

Fall 2005 marks the inaugural session of the Rice University Master of Liberal Studies program. The part-time interdisciplinary program is founded on the principle that, in an increasingly complex and fragmented world, a liberal arts education becomes all the more important. Though exploring the liberal arts at a highly integrated level is not frequently possible in a career-focused undergraduate curriculum, it is both possible and well suited to a master’s level program designed for committed, energetic adults. Courses in the Master of Liberal Studies program will be taught by distinguished Rice faculty and invited visiting faculty who appreciate the opportunity to teach more-experienced adults.

The program is designed for working adults and does not follow the traditional university schedule of fall and spring semesters. Classes meet one evening per week for 10-11 weeks with two or three Saturday morning classes. Sessions are offered in the fall, winter, and spring.

Fall classes begin in September and end before Thanksgiving; winter classes begin in January and end in March; spring courses begin in April and end in early June. No classes are held in July or August. Courses will be taught by distinguished Rice faculty and invited visiting faculty who appreciate the opportunity to teach more experienced adults.

Degree Requirements

For general university requirements for graduate study, see pages 56-58. The program consists of 33 credit hours, which include three core courses, seven electives, and a capstone course. A student may take only one course in his or her entering session. The core courses—one in humanities, one in social sciences, and one in natural sciences—are designed to acquaint first-year students with the contrasting perspectives and methodological approaches that define academic inquiry in the three broad fields. Core courses must be completed before electives may be taken. Electives may focus on just one “track” (science, social science, or humanities) or may be chosen more broadly. All courses will require research papers; some may require tests or oral presentations.

The capstone course is designed to help students integrate their knowledge through writing an extended paper or completing a project to be presented to the class orally. A thesis is not part of the degree program. The program can be completed
in approximately four years if one class is completed every session.

**Admission**

Admission to graduate study is open to qualified students holding a bachelor's degree (or equivalent) from an accredited university or college. A minimum GPA of 3.0 from the applicant’s undergraduate work is expected, though the admissions committee also gives consideration to applicants' postgraduate experience and recent accomplishments.

**Courses**

Please refer to the Master of Liberal Studies website for current course listings, http://www.mls.rice.edu
Mathematics

The Wiess School of Natural Sciences

Chair
Robin Forman

Professor Emeritus
F. Reese Harvey

Professors
Michael Boshernitzan
Tim D. Cochran
Robert M. Hardt
John Hempel
Frank Jones
John C. Polking
Stephen W. Semmes
Richard A. Stong
William A. Veech
Michael Wolf

Associate Professor
Brendan Hassett
Zhiyong Gao

Instructors
Pralay Chatterjee
Stefan Friedl
Taehee Kim
Christopher Rosmussen
Ilie D. Ugarcovici

Degrees Offered: BA, MA, PhD

The program in mathematics provides undergraduates with a spectrum of choices, from nontheoretical treatments of calculus and courses in modern algebra, combinatorics, elementary number theory, and projective geometry to a broad variety of sophisticated mathematics, including real and complex analysis, differential geometry, abstract algebra, algebraic and geometric topology, algebraic geometry, and partial differential equations.

Faculty research interests range from differential geometry, ergodic theory, group representation, partial differential equations, and probability, to real analysis, mathematical physics, complex variables, algebraic geometry, combinatorics, geometric topology, and algebraic topology.

Degree Requirements for BA in Mathematics

For general university requirements, see Graduation Requirements (pages 14-15). Students majoring in mathematics may choose between the regular math major and the double major. Regular math majors must complete:

- MATH 101 and 102 Single Variable Calculus I and II
- MATH 211 Ordinary Differential Equations and Linear Algebra and MATH 212 Multivariable Calculus or MATH 221 and 222 Honors Calculus III and IV
- At least 24 semester hours (8 courses) in departmental courses at the 300 level or above (in many instances, the math department will waive the 100- and 200-level courses for a math major)

The requirements for the double major are the same except that students may substitute approved mathematics-related courses for up to 9 of the 24 hours required at the 300 level or above.

Students receive advanced placement credit for MATH 101 by achieving a score of 4 or 5 on the AP AB-level test and for MATH 101 and 102 by achieving a score of 4 or 5 on the BC-level test. Students who have had calculus but have not taken the AP test may petition the department for a waiver of the calculus requirements. Entering students should enroll in the most advanced course commensurate
with their background; advice is available from the mathematics faculty during Orientation Week.

Degree Requirements for MA and PhD in Mathematics

Admission to graduate study in mathematics is granted to a limited number of students who have indicated an ability for advanced and original work. Normally, students take one or two years after the BA degree to obtain an MA degree, and they take four or five years to obtain a PhD. An MA is not a prerequisite for the PhD. For general university requirements, see Graduate Degrees (pages 57–58).

A number of graduate scholarships and fellowships are available, awarded on the basis of merit. As part of the graduate education in mathematics, students also engage in teaching or other instructional duties, generally for no more than 6 hours a week.

MA Program—Candidates for the MA in mathematics must:
- Complete with a grade of B or better a course of study approved by the department (students may transfer credits from another university only with the approval of both the department and the University Graduate Council)
- Perform satisfactorily on an examination in at least 1 approved foreign language (French, German, or Russian)
- Either complete all requirements for qualification as a candidate for the PhD (see below) or present, and provide an oral defense of an original thesis acceptable to the department

PhD Program—Candidates for the PhD in mathematics must:
- Complete with a grade of B or better a course of study approved by the department (students may transfer credits from another university only with the approval of both the department and the University Graduate Council)
- Perform satisfactorily on qualifying examinations (see below)
- Perform satisfactorily on examinations in 1 approved foreign language (French, German, or Russian)
- Write an original thesis acceptable to the department
- Perform satisfactorily on a final oral examination on the thesis

Qualifying Examinations—The qualifying examinations in mathematics consist of the general examinations and the advanced oral examination.

To complete the general examinations, students must take 3 exams, 1 each in algebra, analysis, and topology. Exams are offered every August and January. First-year students may take any combination of exams at any time. After two semesters of study, students must attempt to pass all remaining exams at each offering. Students must perform satisfactorily on all 3 by the start of their fifth semester. Students may take an exam several times.

To complete the advanced oral examination, students must select a special field (e.g., homotopy theory, several complex variables, or group theory) and submit it to the department Graduate Committee for approval. The committee schedules an advanced examination in the selected field, normally six to nine months after the student completes the general examinations. While students failing the advanced examination may, with the approval of the committee, retake it on the same or possibly on a different topic, they generally are not allowed to take the advanced examination more than twice.

See MATH in the Courses of Instruction section.
MECHANICAL ENGINEERING AND MATERIALS SCIENCE

THE GEORGE R. BROWN SCHOOL OF ENGINEERING

Degrees Offered: BA, BSME, BSMS, MME, MMS, MS, PhD

Studies in mechanical engineering may lead to specialization in one of several areas, including mechanics, computational mechanics, stochastic mechanics, fluid dynamics, heat transfer, dynamics and control, robotics, biomedical systems, and aerospace sciences. Studies in materials science may lead to specialization in one of several areas, including nanotechnology, metals physics, statistical mechanics, metallic solid thermodynamics, materials chemistry, aspects of composites, coatings and thin films, and interface science.

The graduate program offers professional degrees in both materials science and engineering, which is based on undergraduate preparation in a number of related fields, and mechanical engineering, which permits specialization in the areas mentioned in the previous paragraph. Graduate students may also pursue research degrees. Faculty research areas are indicated in the previous paragraph. A joint MBA/Master of Engineering degree is available in conjunction with the Jesse H. Jones Graduate School of Management. Also, a combined MD and advanced research degree for research careers in medicine is available with Baylor College of Medicine.

The graduate program collaborates with other departments in its comprehensive educational and research activities. The Department of Computational and Applied Mathematics supports research in applied analysis and computational mathematics.
Work on expert systems and robotics is done in cooperation with the Departments of Electrical and Computer Engineering and Computer Science. Computer graphics research involves the cooperation of the Department of Computer Science and the School of Architecture. The campus-wide Rice Quantum Institute is also active in the research of electronic materials and other aspects of materials science. Finally, biomechanics and biomaterials research involves several institutions in the Texas Medical Center.

**Degree Requirements for BA, BSME in Mechanical Engineering or BA, BSMS in Materials Science and Engineering**

For general university requirements, see Graduation Requirements (pages 14–15). The BA program in either mechanical engineering or materials science and engineering is highly flexible, involves less technical content than the BS, and allows students greater freedom to pursue areas of interest outside of engineering.

The two BS programs prepare students for professional practice of engineering. During their senior year, mechanical engineering students in the BS program take courses in design application while completing a major design project, and materials science and engineering students in the BS program work on a design problem in an industrial setting. The BSME program is accredited by the Accreditation Board for Engineering and Technology (ABET). Departmental goals and objectives are available at http://mems.rice.edu/undergraduate/goals.html.

**BSME Program**—Lists of representative undergraduate courses and the usual order in which students take them are available from the department for either the BA or BS programs in both mechanical engineering and materials science and engineering. The BSME degree contains a core of required courses and selected electives from 1 of 6 specialization areas. The requirements (for a total of 131 hours) are:

**Basic Mathematics and Science (26 hours)**
- CHEM 121 Chemistry
- MATH 101 Single Variable Calculus I
- MATH 102 Single Variable Calculus II
- MATH 211 Ordinary Differential Equations and Linear Algebra
- MATH 212 Multivariable Calculus
- MSCI 301 Materials Science
- PHYS 101 Mechanics
- PHYS 102 Electricity and Magnetism

**Computational and Applied Mathematics (12 hours)**
- COMP 110 Computation in Science and Engineering
- CAAM 210 Engineering Computation
- CAAM 335 Matrix Analysis
- CAAM 336 Differential Equations in Science and Engineering

**Senior Design (7 hours)**
- MECH 407 Mechanical Design Project I
- MECH 408 Mechanical Design Project II

**Labs (3 hours)**
- MECH 331 Mechanics Lab
- MECH 332 Thermo/Fluids Lab
- MECH 431 Senior Lab

**Mechanical Engineering (32 hours)**
- MECH 200 Classical Thermodynamics
- MECH 211 Engineering Mechanics
- MECH 311 Mechanics-Deformable Solids
- MECH 340 Industrial Process Lab
- MECH 343 Modeling of Dynamic Systems
- MECH 371 Fluid Mechanics I
- MECH 401 Machine Design
- MECH 412 Vibrations
- MECH 420 Fundamentals of Control Systems
- MECH 481 Heat Transfer

**Limited Electives:** 3 hours in any 300-level or higher MATH, CAAM, STAT, or MECH course

**Distribution Electives (24 hours)**

**Free Electives (15 hours)**
Specialization Area Options—The specialization area can be 1 of the following 5 clusters. Students must take at least 2 of the following required cluster courses for their selected cluster and 2 from the departmental list of the suggested cluster elective courses, for a total of not less than 12 hours. The cluster advisors will maintain updated lists of electives in the department. The choices for the required cluster courses are:

1. **Biomechanics**
   - BIOE 372 Intro Biomechanics
   - MECH 380 Tissue Mechanics

2. **Computational engineering**
   - MECH 417 Finite Element Analysis
   - MECH 454 Finite Elements in Fluids

3. **Fluid mechanics and thermal science**
   - MECH 372 Fluid Mechanics, II
   - MECH 471 App. of Thermodynamics

4. **Solid Mechanics and Materials**
   - CEVE 400 Mechanics of Solids II
   - MSCI 402 Mech. Properties of Materials

5. **System dynamics and control**
   - MECH 498 Intro to Robotics
   - MECH 435 Electromechanical Systems
   - or ELEC 243 Intro to Electronics

6. **General mechanical engineering**
   - Any 4 required courses listed above may be taken to define a general cluster.

BA in Mechanical Engineering Program—Students seeking the BA degree with a major in mechanical engineering must complete 120 hours with at least 66 semester hours in courses specified by the department along with 24 hours of university distribution electives and 30 hours of free electives. Lists of courses, including general university requirements and the usual order in which students take them are available from the department. The BA program mirrors the BSME program in the freshman and sophomore years with the exceptions that MECH 340 and MECH 331 are not required. Specific major requirements are completed in the junior and senior years along with electives. A summary appears below:

**Freshman Year**
Same as BS with 23 major and 9 elective hours for 32 hours.

**Sophomore Year**
Same as BS (except MECH 340 and 331 are not required) with 18 major and 15 elective hours for 33 hours.

**Junior and Senior Years**
25 major and 30 electives for 55 hours. The following courses are required in junior and senior years:

- CAAM 335 *Matrix Analysis* (3)
- CAAM 336 *Differential Equations in Science and Engineering* (3)
- MECH 343 *Modeling of Dynamic Systems* (4)
- MECH 371 *Fluid Mechanics I* (3)
- MECH 401 *Machine Design* (3)
- MECH 412 *Vibrations* (3)
- MECH 420 *Fundamentals of Control Systems* (3)
- MECH 481 *Heat Transfer* (3)

BA in Materials Science and Engineering Program—Students seeking the BA degree with a major in materials science and engineering must complete at least 52 hours in courses specified by the department plus additional hours for a total of 120 hours at graduation.

BSMS Program—Students seeking the BSMS must complete at least 91 semester hours in courses specified by the department within the total requirements of 134 hours. Basic departmental course requirements for the BSMS are as follows:
CHEM 121–122 General Chemistry
MATH 101 and 102 Single Variable Calculus I and II
MATH 211 Ordinary Differential Equations and Linear Algebra
MATH 212 Multivariable Calculus
MECH 211 Engineering Mechanics
MSCI 301 Materials Science
PHYS 101 Mechanics
PHYS 102 Electricity and Magnetism

Specific requirements
CAAM 210 Introduction to Engineering Computation
CAAM 335 Matrix Analysis
CEVE 300 Mechanics of Solids
ELEC 241 Fundamentals of Electrical Engineering I (or ELEC 243 Introduction to Electronics)
MSCI 301 Materials Science
MSCI 303 Materials Science Junior Lab
MSCI 311 Introduction to Design
MSCI 401 Thermodynamics and Transport Phenomena in Materials Science
MSCI 402 Mechanical Properties of Materials
MSCI 404 Materials Engineering and Design
MSCI 406 Physical Properties of Solids (or MSCI 415 Ceramics and Glasses)
MSCI 411 Metallography and Phase Relations (or MSCI 415 Ceramics and Glasses)
MSCI 500/501 Materials Science Seminar
MSCI 535 Crystallography and Diffraction
MSCI 537 Materials Science Senior Lab
MSCI 594 Properties of Polymers

1 course from the following
PHYS 201 Waves and Optics
CHEM 211 Organic Chemistry
CHEM 311 Physical Chemistry

Electives
1 approved science elective (at the 200 level or higher)
1 approved engineering science elective (not MSCI)
1 approved technical elective

Degree Requirements for MME, MMS, MS, and PhD in Mechanical Engineering or Materials Science and Engineering

Professional Degree Programs—The professional degrees offered by this department, the Master of Mechanical Engineering (MME) and the Master of Materials Science (MMS), involve a fifth year of specialized study, which is integrated with the four undergraduate years leading to either the BA or the BS degree in the same areas of interest. The professional degree programs are open to students who have shown academic excellence in their undergraduate studies.

For general university requirements, see Graduate Degrees (pages 57–58). For both the MME and MMS degrees, students must complete 30 semester hours of course work. Lists of suggested courses are available from the department. Students should develop a specific plan of study based on their particular interests.

Research Degree Programs—The programs leading to the MS and PhD degrees are open to students who have demonstrated outstanding performance in their undergraduate studies. The granting of a graduate research degree presupposes academic work of superior quality and a demonstrated ability to do original research.

For general university requirements, see Graduate Degrees (pages 57–58). Course requirements for the research degrees vary, depending on the extent of individual undergraduate preparation as well as each student’s performance in graduate courses and on qualifying examinations. For both the MS and PhD degrees, students must present a thesis that comprises an original contribution to knowledge and defend it in a public oral examination.

See MECH and MSCI in the Courses of Instruction section.
MEDIEVAL STUDIES

THE SCHOOL OF HUMANITIES

DIRECTOR AND ADVISOR
Jane Chance

PROFESSORS
Jane Chance
Gilbert Morris Cuthbertson
Michael Maas
Donald Ray Morrison
Deborah Nelson-Campbell

ASSOCIATE PROFESSORS
Linda E. Neagley
Nanxiu Qian
Carol E. Quillen
Paula Sanders
Sarah Westphal

ASSISTANT PROFESSORS
David Cook
Eva Haverkamp
Scott McGill

LECTURER AND PLAYWRIGHT IN RESIDENCE
E. Douglas Mitchell

Degree Offered: BA

This interdisciplinary major enables students to compare medieval cultures, noting both their differences and their common traditions, in the period between 500 and 1500 AD. The program combines a broad background in various aspects of medieval culture with more specialized study in a selected field. These fields of emphasis include art history, history, medieval literature (English, French, or Latin), music, philosophy, or religion.

Degree Requirements for BA in Medieval Studies

For general university requirements, see Graduation Requirements in this publication. Students majoring in medieval studies must complete at least 30 semester hours (10 courses); the minimum for double majors is 30 hours. All majors must complete five (5) of these medieval studies courses at the 300 or 400 level.

Required and recommended courses include the following:

A minimum of 30 semester hours (10 semester courses), of which at least five courses must be at the 300/400 level. Double majors must complete a minimum of 24 semester hours.

One course in medieval literature or medieval art or medieval music

Recommended Courses:

• MDST 316 Chaucer
• MDST 317 Arthurian Literature
• MDST 368 Mythologies
• MDST 414 Literature and Culture of the Middle Ages: Saints and Sinners
• MDST 425 Courtly Love in Medieval France
• MDST 330 Early Medieval Art
• MDST 331 Gothic Art and Architecture in Northern Europe, 1140–1300
• MDST 332 Late Gothic Art and Architecture in Northern Europe, 1300–1500
• MDST 222 Medieval and Renaissance Eras
• MDST 429 Music in the Middle Ages
One of the following courses
- MDST 201 History of Philosophy I
- MDST 257/357 Jews and Christians in Medieval Europe
- MDST 382 Classical Islamic Culture

Two semesters of foreign language study, determined in consultation with the medieval studies advisor.

Three courses (at least two at the 300 or 400 level) in the student’s chosen field of emphasis—one of these may be a directed reading course.

Recommended Courses:
- MDST 315 Introduction to Medieval Culture

For single majors, 3 additional courses in the medieval period, one of which may be a senior thesis (1 semester) on a topic in the student’s field of emphasis; for double majors, 1 additional course in the medieval period.

Students work out their programs of study in consultation with the program director. Those contemplating graduate work in medieval studies should study at least one foreign language in some depth (as most graduate schools require a reading knowledge or French and German for the PhD).

Students may select from among the following to fulfill the course requirements for the major in medieval studies.

Please note that not all courses listed below will be offered during the academic year. For a current list of courses that will be offered in fall 2005 and spring 2006, please visit the Medieval Studies web site at http://medieval.rice.edu.

Classical Studies
MDST 101 Elementary Latin I
MDST 102 Elementary Latin II
MDST 211 Intermediate Latin I
MDST 212 Intermediate Latin II

English
MDST 300 Medieval Women Writers
MDST 310 Dante in Translation
MDST 311 Old English
MDST 315 Introduction to Medieval Culture
MDST 316 Chaucer
MDST 317 Arthurian Literature
MDST 318 J. R. R. Tolkien
MDST 368 Mythologies

French Studies
MDST 410 The Literary and Historical Image of the Medieval Woman
MDST 414 Literature and Culture of the Middle Ages: Saints and Sinners
MDST 425 Courtly Love in Medieval France
MDST 436 Literature and Culture of the Middle Ages: King Arthur

German Studies
MDST 126 Freshman Seminar: The Legend of King Arthur in the Middle Ages

MDST 330 Mapping German Culture: Courtship, Love and Marriage in the Age of Chivalry

History of Art
MDST 108 Art in Context: Late Medieval and Renaissance Culture
MDST 111 Introduction to the History of Western Art I: Prehistoric to Gothic
MDST 238 Special Topics in Medieval Art
MDST 239 Independent Study in Medieval Art
MDST 330 Early Medieval Art
MDST 331 Gothic Art and Architecture in Northern Europe, 1140–1300

The Age of Cathedrals
MDST 332 Late Gothic Art & Architecture in Northern Europe, 1300–1500
MDST 440 Jan van Eyck: Problems of Interpretation
MDST 457 Bosch and Bruegel

History
MDST 168 The World of Arabian Nights
MDST 223 Medieval Empires
MDST 257 Jews and Christians in Medieval Europe
MDST 281 Pre-Modern Middle East History: The Middle East from the Prophet Muhammad to Muhammad Ali
MDST 303 Undergraduate Independent Reading
MDST 304 Undergraduate Independent Reading
MDST 308 The World of Late Antiquity
MDST 321 Directed Readings in Medieval History
MDST 322 Directed Readings in Medieval History
MDST 323 Medieval Empires (enriched version)
MDST 345 Humanism and Expansion
MDST 357 Jews and Christians in Medieval Europe (enriched version)
MDST 358 European Intellectual History from Augustine to Descartes
MDST 382 Classical Islamic Cultures
MDST 384 The Crusades: Holy War in Medieval Christendom and Islam
MDST 387 Life on the Nile
MDST 438 Women and Gender in Medieval Islamic Societies
MDST 444 Memory and Commemoration in the Middle Ages
MDST 446 Jewish and Christian Communities in the Middle Ages

MDST 447 The Age of the Crusades
MDST 488 Topics in Medieval History

Linguistics
MDST 311 Old English

Music
MDST 222 Medieval and Renaissance Eras
MDST 429 Music of the Middle Ages
MDST 441 Hildegard of Bingen
MDST 456 Collegium
MDST 486 Illuminated Music Manuscripts

Philosophy
MDST 201 History of Philosophy I
MDST 301 Ancient and Medieval Philosophy
MDST 481 Seminar in Ancient and Medieval Philosophy

Religious Studies
RELI 443 Maimonides’ Guide for the Perplexed

See MDST in the Courses of Instruction section.
The goal of the U.S. Army ROTC program is to develop technically competent, physically fit, and highly motivated men and women for positions of responsibility as commissioned officers in the active army, the army reserve, and the National Guard. Upon completion of the curriculum, students will have an understanding of the fundamental concepts and principles of the military as an art and as a science. The leadership and managerial experience gained through ROTC provides great benefit for students in both their civilian endeavors and in their military careers.

Degree Requirements

Rice does not offer a bachelor’s in Military Science. However, interested students can obtain a degree in any of the other programs offered by Rice, with a minor in Military Science obtained by attending courses at the University of Houston. The financial aid available to a ROTC student may be used for Rice courses as well as the University of Houston ROTC courses.

For general university requirements, see Graduation Requirements (pages 14–15). For requirements for a specific degree program, see the pages for that degree program. Further details on ROTC programs at Rice are available on page 27. For more information on the Army ROTC program in particular, contact the military science department at the University of Houston by calling 713-743-3875.

Statutory Authority—General statutory authority for establishment and operation of the ROTC program, including the scholarship program, is contained in Title 10, United States Code, Chapter 103 (Sec. 2102–2111). Specific rules and procedures are found in U.S. Army Regulation 145–1.

Course Credit. ROTC classes may be taken for elective credit toward any degree plan at the University of Houston or Rice University. Freshman- and sophomore-level classes are open to all students, regardless of age or physical condition. No military obligation is incurred as a result of enrollment in these courses. Junior- and senior-level courses are more restrictive and do require a military obligation. ROTC scholarship students also incur a military obligation.

Four-Year Program—The four-year program is divided into two courses: the basic course, which is normally attended by students during their freshman- and sophomore years, and the advanced course, attended during the junior and senior years. Advanced course students attend a six-week advanced camp in Fort Lewis, Washington, normally between their junior and senior years.

The Basic Course—The basic course consists of four semesters of military science, which include MILI 121, MILI 122, MILI 201, and MILI 202. These freshman- and sophomore-level classes are open to all students without obligation.

The Advanced Course—Students entering the advanced course must enter into a contract to pursue and accept a commission in the active Army, the Army Reserve,
or the National Guard. To be considered for contracting into the advanced course, the student must be a full-time student in a course of instruction that leads to a degree in a recognized academic field, have a minimum of two years of academic work remaining in a curriculum leading to a baccalaureate or advanced degree, be under age 30 when commissioned, and pass a physical and medical examination.

**Two-Year Program**—The two-year program is designed for students who did not take the basic course but are otherwise eligible to enroll in the advanced course. This program allows students completing their sophomore year to attend a four-week Leader's Training Course during June and July at Fort Knox, Kentucky, in lieu of taking the first two years of ROTC. *There is no military obligation for attending Leader's Training Course.* The army provides transportation, room, and board. Students are **paid** approximately $500 for the four-week period.

**Laboratory Requirements**—A military science laboratory is required for students enrolling in MILI 121, MILI 122, MILI 201, MILI 202, MILI 301, MILI 302, MILI 401, and MILI 402. This laboratory provides opportunities for marksmanship training, rappelling, drill and ceremonies, communications training, and other activities.

**Veterans**—Veterans who have served on active duty or in the army reserve or National Guard are also eligible for the ROTC program. Although veterans are not required to take the basic course, they are encouraged to do so. All students, including veterans, must have a minimum of 54 credit hours prior to enrolling in the advanced course.

**National Guard and Army Reserve Members**—Students enrolled in ROTC may also be members of the Army Reserve/National Guard. Through the Simultaneous Membership Program (SMP), those students enrolled in the advanced course will be placed in a leadership position as a cadet and will receive pay and entitlements from the National Guard or Army Reserve in the pay grade of Sergeant (E-5).

**Financial Assistance**—The United States Army offers, on a competitive nationwide basis, four-, three-, and two-year scholarships. The scholarships cover up to $20,000 of tuition. Recipients also receive benefits for educational fees (to include lab fees), a book allowance, and a subsistence allowance ranging from $200 to $400 per month. Applicants must be U.S. citizens and must be under age 27 on the anticipated graduation date. Applications are available from the military science department. Veteran applicants can extend the age limit up to a maximum of three years, based on prior active duty service.

**Other Financial Aid**—All students enrolled in the advanced course will receive a subsistence allowance of $350 per month junior year and $400 per month senior year. For more information, contact the military science department. GI Bill recipients still retain benefits.

**Tuition**—Members of the Army or the Army Reserve, National Guard, Texas State Guard, or other reserve forces may be exempted from the nonresident tuition fee and other fees and charges.

**Special Training**—Basic- and advanced-course students may volunteer for and may attend the U.S. Army Airborne and Air Assault courses during June, July, and August. Cadet Troop Leadership training positions are also available to advanced-course cadets during the summer months.

**Miscellaneous**—All participating cadets are eligible for our internal scholarships provided by our alumni and sponsors of the program.
The Corps of Cadets sponsors an annual military ball in addition to other social events throughout the school year. The Department of Military Science sponsors extracurricular activities such as the University of Houston Color Guard and the Ranger Challenge Team.

**Minor in Military Science**—To qualify for a minor in military science, students must complete a minimum of 18 semester hours of course work, of which 12 must be advanced. Nine semester hours must be completed in residence, of which 6 must be advanced. Students must also attend advanced camp. Students must attain a 3.0 grade point average or higher in military science courses attempted at this university. Students may receive credit for 100- and 200-level courses based on prior military training, completion of ROTC Basic Camp, completion of JROTC training, or completion of one year at a service academy.

See MILI in the Courses of Instruction section (these are University of Houston listings).
The Shepherd School of Music

Dean
Robert Yekovich

Professors
Robert Atherholt
Richard Bado
Richard Brown
Leone Buyse
Marcia J. Citron
James Dunham
Paul V. H. Ellison
Norman Fischer
Kenneth Goldsmith
Arthur Gottschalk
Lynn Harrell
Clyde Holloway
Thomas I. Jaber
Benjamin C. Kamins
Kathleen Kaun
Stephen King
Richard Lavenda
Sergiu Luca
Jon Kimura Parker
Larry Rachleff
Robert Roux
Marie Speziale
William VerMeulen
Kathleen Winkler

Professor Emeritus
Raphael Fliegel

Associate Professors
Walter B. Bailey
Anthony K. Brandt
David Ferris
Pierre Jalbert
David E. Kirk

Thomas LeGrand
Paula Page
Timothy Pitts
Karen Ritscher
Brinton Smith
David L. Waters
Michael Webster

Assistant Professors
Karim Al-Zand
Gregory Barnett
Shih-Hui Chen
Kurt Stallmann

Instructor
Joan DerHovespian

Artist Teachers
Brian Connelly
Jan de Chambrier
Debra Dickinson
Jeanne Kieran Fischer
Michael Franciosi
Christopher French
Hans Graf
Janet Rarick
C. Dean Shank, Jr.

Lecturers
Nancy Gisbrecht Bailey
Susan Dunn
Phillip Kloeckner
David B. Rosenfield

Adjunct Lecturers
Robert Simpson
C. Richard Stansey
Pieter A. Visser

Degrees Offered: BA, BMus, BMus/MMus, MMus, DMA

At the undergraduate level, the Shepherd School of Music offers both professional training and a broad liberal arts curriculum. Degree programs include a BA degree in music and a BMus degree in performance, composition, music history, and music theory. Acceptance into a five-year honors program leads to the simultaneous awarding of the BMus and MMus degrees.

At the graduate level, the school offers professional music training for qualified students who concentrate on music composition, performance, or research that is supported by lab or performing ensembles. This training includes theory and history seminars. Advanced degree programs include a MMus degree in composition, choral and instrumental conducting, historical musicology, performance, and music theory and a DMA degree in composition and selected areas of performance.
Requirements for All Music Majors

For general university requirements, see Graduation Requirements (pages 14–15). All students majoring in music must participate in core music, applied music, and other required music courses, as well as in chamber music and large ensembles, plus electives. They are entitled to one hour of private lessons each week of each semester they are enrolled as a music major; private or group lessons beyond this may result in additional fees. Students in the BA program who wish to continue taking private lessons beyond the required four semesters of instrumental or vocal study must obtain permission from the dean of the Shepherd School.

Examinations—At the end of each semester, a jury examination in applied music is given over the material studied during the semester. (All degree candidates except BA students must demonstrate keyboard proficiency in an examination. If students have little or no knowledge of the keyboard, they should enroll in secondary piano at the beginning of their first semester and continue study until they can meet the examination requirements.)

Performance—Students are expected to perform frequently during their residence at Rice. Performance majors must present at least 2 full recitals. Composition and conducting students should present recitals as specified by their degree programs. Students are expected to attend both faculty and student recitals. In addition, all music majors must participate in the school’s conducted ensembles as assigned.

Degree Requirements for BA in Music, BMus, and BMus/MMus

Admission—An audition, either in person or on tape, is required of each undergraduate applicant. The Shepherd School faculty and the university’s Committee on Admission jointly determine admission, the latter basing its evaluation upon successful academic achievement and other standards of college admission. Transfer applicants from other colleges, conservatories, and universities must also provide an audition, personal or taped, and take placement exams in both music history and music theory. Once admitted, their prior preparation in music is assessed, which may reduce the required period of study at Rice.

BA and BMus Program—For general university requirements, see Graduation Requirements (pages 14–15).

For either bachelor’s degree, students majoring in music must have a total of at least 120 semester hours at graduation. The complete curriculum for each major in music is available in the Shepherd School Student Handbook or in the undergraduate music office on the second floor of Alice Pratt Brown Hall. While the number of required hours vary according to major area, all music students must take the following core courses (those in the BA program are not required to take MUSI 331, 332 and 431).

- **Music Theory:** MUSI 211, 212, 311, 312, and a theory elective chosen from MUSI 416, 512, 513, or 613.
- **Music History:** MUSI 222, 321, 322, and 421.
- **Aural Skills and Performance Techniques:** MUSI 231, 232, 331, 332, and 431.

BMus/MMus Honors Program—The same general university requirements apply, but students seeking the combined BMus/MMus degree must complete a total of at least 150 semester hours by graduation. The number of required hours varies according to major area.
The first five semesters of course work in this program parallel the core curriculum of the bachelor’s degrees. The sixth semester is a transitional semester during which students qualify for admission to the combined program. For further information, including application procedures, see the Shepherd School Student Handbook.

**Degree Requirements for MMus and DMA in Music**

**Admission**—For instrumental, voice, and conducting applicants, an audition is required. Composition majors must submit portfolios, and musicology and theory majors must provide samples of their written work. The Graduate Record Examination (GRE) is required of graduate applicants in musicology and theory. Musicology applicants must also complete the advanced music tests.

**Requirements**—For general university requirements, see Graduate Degrees (pages 57–58). For the MMus degree, candidates must complete at least two semesters of full-time study at Rice. Semester hour minimums for the MMus degree vary according to major area. For the DMA, candidates must complete a total of 90 hours beyond the bachelor’s degree, attending Rice full time for at least four semesters after receiving their MMus degree.

**Thesis**—A thesis is required of both music history and music theory majors. In lieu of a thesis, composition majors must produce an original work of extended scope, and conducting majors must present an extended composition or project.

**Academic Standards**

**Curriculum and Degree Requirements**—Further information on curricular requirements for all majors and degree programs is available from The Shepherd School of Music.

**Grading Policy**—All music students must achieve at least a B- in course work in their major applied area. Students who receive a C+ or lower in their major applied area are placed on music probation. Music probation signifies that the work of the student has been sufficiently unsatisfactory to preclude graduation unless marked improvement is achieved promptly. While on probation, they may not be absent from class except for extraordinary reasons, and they may not represent the school in any public function that is not directly part of a degree program. After receiving a second C+ or lower in their major area, whether in consecutive semesters or not, students are discontinued as music majors.

**Leaves of Absence and Voluntary Withdrawal**—Music majors must obtain permission in writing from the dean of the Shepherd School before requesting a leave of absence from the university. Requests must be in the dean’s office before the first day of classes in the semester for which leave is requested.

Music majors taking voluntary withdrawal from the university are not guaranteed readmission into the Shepherd School and may be asked to reapply/reaudition. Students should explain the reasons for their withdrawal to the dean before leaving campus.

**Other Musical Opportunities**

**For Nonmajors**—Students who are not music majors may take the following courses designed for the general student (other music courses require the permission of the instructor and the approval of the dean of the Shepherd School).

- MUSI 111 *Musical Lives*
- MUSI 112 *Great Literature in Great Music*
- MUSI 117/118 *Fundamentals of Music I and II*
• MUSI 317/318 *Theory for Nonmajors I and II*
• MUSI 327/328 *Music Literature for Nonmajors I and II*
• MUSI 334/335 *Campanile Orchestra and Rice Chorale*
• MUSI 141–197 for individual instruction in all instruments
• MUSI 340 *Concert Band*
• MUSI 342 *Jazz Ensemble*
• MUSI 345 *Jazz Improvisation*
• MUSI 415 *Band Arranging*

**Lectures and Performances**—A visiting lecturer series, a professional concert series, and numerous distinguished visiting musicians contribute to the Shepherd School environment. The Houston Symphony Orchestra, Symphony Chorus, Houston Grand Opera, Texas Opera Theater, Houston Ballet, Houston Oratorio Society, Da Camera, Context, and Houston Friends of Music, as well as the activities of other institutions of higher learning in the area, also provide exceptional opportunities for students to enjoy a wide spectrum of music.

**See MUSI in the Courses of Instruction section.**
Nanoscale Physics

The Wiess School of Natural Sciences

**Degrees Offered: MS**

Rice University introduced a professional master’s degree in Nanoscale Physics in fall 2002. This program combines a strong component in quantum theory, which governs the behavior of systems at the nanoscale, with the study of practical nano- and mesoscale devices. The program provides the student with the knowledge required to successfully navigate the emerging field of nanotechnology. New courses cover cutting-edge areas such as quantum behavior of nanostructures, quantum nanotechnology, nanoscale imaging, and the fabrication of nanostructures. In addition, a year-long course in methods of experimental physics ensures that students obtain the advanced practical skills valuable to industry.

The Nanoscale Physics degree is one of three tracks in the new Professional Master’s Program at Rice housed in the Wiess School of Natural Sciences. These master’s degrees are designed for students seeking to gain further scientific core expertise coupled with enhanced management and communication skills. These degrees instill a level of scholastic proficiency that exceeds that of the bachelor’s level and creates the cross-functional aptitudes needed in modern industry. This will allow students to move more easily into management careers in consulting or research and development, design, and marketing of new science-based products.

**Degree Requirements for the MS in Nanoscale Physics**

In addition to the core science courses, students are required to complete a three- to six-month internship and take a set of cohort courses focusing on business and communication. At the conclusion of the internship, students must present a summary of the internship project in both oral and written form as part of the Professional Master’s Seminar.

Part-time students who already work in their area of study may fulfill the internship requirement by working on an approved project with their current employer. Certain course requirements may be waived based upon prior graduate coursework or industrial experience. For general university requirements for graduate study, see pages 64–70, and see also Professional Degrees, page 58.

**Admission**

Admission to graduate study in nanoscale physics is open to qualified students holding a bachelor’s degree in physics, electrical engineering, or a related field that includes intermediate level work in mathematics, electrodynamics, and quantum physics. Department faculty evaluate the previous academic record and credentials of each applicant individually.
Science core courses:
PHYS 533 Nanostructures and Nanotechnology I (F)
PHYS 539 Characterization and Fabrication at the Nanoscale (F)
PHYS 537 Methods of Experimental Physics I (F)
PHYS 534 Nanostructures and Nanotechnology II (S)
PHYS 538 Methods of Experimental Physics II (S)
PHYS 416 Computational Physics (S)

Cohort courses:
MGMT 750 Management in Science and Engineering (F)
NSCI 501 Professional Master’s Seminar (F, S) [required for two semesters]
NSCI 512 Professional Master’s Project (F, S)

Plus a single course from the following:
ENST 312 Environmental Battles in the 21st Century: Houston as Microcosm (S)
PHIL 307 Social and Political Philosophy (F)
POLI 338 Policy Analysis (S)
POLI 537 Public Policy and Bureaucracy (F)
PHIL 316 Philosophy of Law (F)

Internship
An internship under the guidance of a host company, government agency, or national laboratory. A summary of the internship project is required in both oral and written form as part of the Professional Master’s Project.

Elective Courses
Note: Each of these electives is not offered every year, and some courses may have prerequisites or require instructor permission.

Students will choose four elective courses, two of which must be science or engineering 500 level or above. Recommended courses include, but are not limited to, the following:

CAAM 378 Introduction to Operations Research (F)
CENG 630 Chemical Engineering of Nanostructured Materials (S)
CHEM 533 Nanostructure and Nanotechnology
CHEM 547 Supramolecular Chemistry (F)
CHEM 630 Molecular Spectroscopy and Group Theory (F)
ELEC 561 Topics in Semiconductor Manufacturing (S)
ELEC 562 Submicrometer and Nanometer Device Technology (S)
ELEC 568 Laser Spectroscopy (F)
ELEC 603 Nano-Optics and Nanophotonics (F)
ELEC 645 Thin Films (F)
ELEC 685 Fundamentals of Medical Imaging (F)
ENGI 303 Engineering Economics and Management (S)
MGMT 617 Managerial Decision Making (S)
MGMT 636 Systems Analysis and Database Design
MGMT 661 International Business Law (F)
MGMT 674 Production and Operations Management (F)
MGMT 676 Project Management/Project Finance (S)
MGMT 721 General Business Law (S)
MGMT 751 New Venture Creation in Science and Engineering (S)
PHYS 569 Ultrafast Optical Phenomena (S)

Professional Science Master’s 5th Year Degree Option for Rice Undergraduates
Rice students have an option to achieve the MS in nanoscale physics by adding an additional 5th year to the four undergraduate years of science studies. Advanced Rice students in good standing apply during their junior year, then start taking required core courses of the nanoscale physics program during their senior year. A plan of study based on their particular focus area will need to be approved by the track director and the PSM coordinator.
Students enroll in the Navy Reserve Officers’ Training Corps (ROTC) program as scholarship or nonscholarship students. Sophomores may apply for the optional two-year program. The Department of Naval Science is administered by a senior U.S. Navy officer, assisted by officers and enlisted personnel of the U.S. Navy and Marine Corps.

Degree Requirements

Rice does not offer a bachelor’s in Naval Science. However, interested students can obtain a degree in any of the other programs offered by Rice, with a minor in Naval Science. Financial aid may be available to a Navy ROTC student.

For university requirements for a specific degree, see Graduation Requirements and the section pertaining to that degree. Program requirements differ slightly depending on the student’s scholarship status.

Scholarship Navy ROTC students are appointed midshipmen, U.S. Naval Reserve, on a nationwide competitive basis. They receive stipend pay of $250–$400 per month for a maximum of four academic years, with all tuition, fees, and equipment paid for by the Navy. Additionally, students receive $300 per semester for books. Midshipmen must complete the prescribed naval science courses and participate in drills and three summer cruises. After graduating with a bachelor’s or graduate degree, they accept a commission as an ensign in the U.S. Navy or as a second lieutenant in the U.S. Marine Corps.

Nonscholarship Navy ROTC students enter into a mutual contract with the Secretary of the Navy to take naval science courses and to participate in drills and one summer training cruise. On a competitive basis, students may apply to continue in the Navy ROTC program through their junior and senior years. The U.S. Navy pays these continuing students $300–$400 per month during their junior and senior years, offering them a commission in the U.S. Navy or Marine Corps upon graduation. The program chair may recommend nonscholarship students, on a local competitive basis, for scholarship status.

Two-Year Program Option—In their sophomore year (junior year for five-year Rice students), students may apply for the two-year Navy ROTC program, competing nationwide for available scholarships. If selected, they attend the six-week Naval Science Institute (NSI) at Newport, Rhode Island, during July and August. NSI provides students with course material and training normally covered during the first two years of the regular Navy ROTC program. Successful completion of NSI
qualifies students for enrollment in the advanced Navy ROTC program on an equal footing with the four-year students. Usually about 15 percent of the nonscholarship students finishing NSI are offered two-year Navy ROTC scholarships. Additional scholarships occasionally may be awarded to others upon the recommendation of the program chair.

**U.S. Marine Corps Program**—Navy ROTC students, either scholarship or non-scholarship, may apply for the U.S. Marine Corps program. Students selected for that program are referred to as “Marine Corps option students” and attend separate classes under a U.S. Marine officer instructor during their junior and senior years.

See NAVA in the Courses of Instruction section.
The School of Social Sciences

Degrees Offered: None

In the 1999–2000 academic year, Rice University began offering a new set of courses in the area of neuroscience to supplement a set of courses already offered by various departments in closely allied areas. These courses, which carry the designation NEUR, are offered in part by faculty associated with the Division of Neurosciences at Baylor College of Medicine, in part by faculty at the University of Texas Medical School at Houston, and in part by faculty at Rice in several different departments (including biochemistry and cell biology, computer science, electrical and computer engineering, linguistics, and psychology.) They are intended primarily for Rice graduate students but, with permission, are available to advanced undergraduates. Some of these classes are taught at the nearby Texas Medical Center campus, and some are taught according to Baylor’s or UT’s academic calendars, which is different from Rice’s. For further information on what courses are available and for instructions on how to apply to enter these classes, consult Rice’s neuroscience website at http://www.ruf.rice.edu/~neurosci/.

See NEUR in the Courses of Instruction section.

Director
James R. Pomerantz

Professors
Steven J. Cox
John W. Clark
James L. Dannemiller
Raymon M. Glantz
Don H. Johnson
Randi C. Martin
James R. Pomerantz
Michael Stern
Devika Subramanian
Moshe Y. Vardi
Rick K. Wilson

Professor Emeritus
Sydney M. Lamb

Associate Professors
Tony Ro

Assistant Professors
Darcy Burgund
Denise Chen
Mary E. Lane
Geoffrey F. Potts
Robert Raphael
Philosophy is best described as the attempt to think clearly and deeply about the fundamental questions that arise for us as human beings. What is the nature of knowledge (epistemology)? How are we to distinguish between what really is and what only seems to be (metaphysics)? What is the right thing to do (ethics)? Is there any meaning to existence? To study the history of philosophy is to study the best, most enduring answers that have been given to these questions in the past. Because every other field of study adopts some stance toward these questions, though often implicitly, philosophical issues arise in the natural and social sciences, history, linguistics, literature, art, and so on. Special courses in philosophy deal with each of these. Characteristic of philosophy are commitments to the construction and evaluation of arguments, to expressing thoughts clearly and precisely, and to defending one’s ideas and evaluating the ideas of others. The study of philosophy thus provides resources for critical participation in all realms of human endeavor.

The graduate program trains students to teach and pursue research in the main areas of department concentration: ethics (especially bioethics) and social and political philosophy, history of philosophy, continental philosophy, and core portions of contemporary analytic philosophy.

**Degree Requirements for BA in Philosophy**

For general university requirements, see Graduation Requirements (pages 14–15). Students majoring in philosophy must complete 30 semester hours (10 3-hour departmental courses); at least 18 hours (6 courses) must be at the 300 level or above. A double major must complete 27 hours (9 3-hour departmental courses) with all other requirements remaining the same.

Majors must take the following courses:

- PHIL 201 *History of Philosophy I*
- PHIL 202 *History of Philosophy II*
- Either PHIL 106 *Logic* or PHIL 305 *Mathematical Logic*

In addition, majors must take at least one course from each of the following area lists:

**History**

- PHIL 301 *Ancient and Medieval Philosophy*
- PHIL 302 *Modern Philosophy*

- PHIL 308 *Continental Philosophy*
- PHIL 321 *Kant and 19th Century Philosophy*
Degree Requirements for MA and PhD in Philosophy

For general university requirements, see Graduate Degrees (pages 57–58). Students have the additional option of applying for a doctoral program specializing in bioethics (see below).

For the **MA** in philosophy, candidates must:

- Complete with high standing at least 30 semester hours in advanced courses approved by the department
- Complete a written thesis on a subject approved by the department
- Perform satisfactorily on a final oral examination (not limited to the student’s special field of study)

For the **PhD** in philosophy, candidates must:

- Complete with high standing 42 hours of course work approved by the department (including logic)
- Demonstrate competence in logic
- Pass a qualifying examination
- Perform satisfactorily on an oral defense of their thesis proposal
- Complete a written thesis on a subject approved by the department (at least one year of thesis research must be spent in residence)
- Perform satisfactorily on a final oral examination (not limited to the student’s special field of study)

**Bioethics Program**—The PhD in philosophy with a specialization in medical ethics is offered in cooperation with the Center for Medical Ethics and Health Policy at Baylor College of Medicine. Applicants to this special program must have enough background in philosophy to complete two and a half years of strong general training in philosophy at the graduate level. After completing their general training, students receive instruction in clinical bioethics at Baylor College of Medicine and then write a dissertation drawing upon their philosophical and clinical training. Further information about this program is available from the Department of Philosophy.

**Continental Philosophy Program**

The PhD program in Continental philosophy allows graduate students to take advantage of resource faculty in history, French studies, philosophy, and religious studies, all of whom have done distinguished philosophical work in the Continental tradition. Students master the basic fields of analytic philosophy while doing a substantial amount of their course work with resource faculty. Further information is available from the Department of Philosophy.

See PHIL in the Courses of Instruction section.
Physics and Astronomy

The Wiess School of Natural Sciences

Degrees Offered: BA, BS, MST, MS, PhD

The Department of Physics and Astronomy offers undergraduate and graduate programs for a wide range of interests. The bachelor of arts degrees in physics and in astronomy are suitable for students who wish to obtain a broad liberal education with a concentration in physical science. The bachelor of science degrees in physics, in astrophysics, and in chemical physics provide preparation for employment or further study in physics and related fields. Students in the professional non-thesis MST program obtain training in science teaching. Research facilities and thesis supervision are available for MS and PhD students in atomic, molecular, and optical
physics; biophysics; condensed matter and surface physics; earth systems science; nuclear and particle physics; observational astronomy; solar system physics; space plasma physics; and theoretical physics and astrophysics.

Undergraduate Degree Requirements

For general university requirements, see Graduation Requirements (pages 14–15). Major requirements consist of a common core of basic physics and mathematics courses, with additional course work specific to each degree program. Students may obtain credit for some courses by advanced placement, and the department’s Undergraduate Committee can modify requirements to meet the needs of students with special backgrounds.

All physics majors must complete the following courses:

- PHYS 101 or 111, Mechanics (with Lab)
- PHYS 102 or 112, Electricity and Magnetism (with Lab)
- PHYS 201, Waves and Optics
- PHYS 202, Modern Physics
- PHYS 231, Elementary Physics Laboratory II
- PHYS 301, Intermediate Mechanics
- MATH 101/102, Single Variable Calculus I and II
- MATH 211, Ordinary Differential Equations and Linear Algebra
- MATH 212, Multivariable Calculus
- (MATH 221/222 Honors Calculus III and IV may substitute for MATH 211/ MATH 212)

Additional courses for the BS degree in physics:

- PHYS 302, Intermediate Electrodynamics
- PHYS 311/312, Introduction to Quantum Physics I and II
- PHYS 331/332, Junior Physics Laboratory I and II
- PHYS 411, Introduction to Nuclear and Particle Physics
- PHYS 412, Solid-state Physics
- PHYS 425, Statistical and Thermal Physics
- PHYS 491/492, Undergraduate Research

Additional courses for the BS degree in physics with option in applied physics:

- PHYS 302, Intermediate Electrodynamics
- PHYS 311, Introduction to Quantum Physics I
- PHYS 312, Introduction to Quantum Physics II
- ELEC 306, Electromagnetic Fields and Devices
- 2 of: PHYS 331/332, Junior Physics Laboratory I and II, ELEC 327, Digital Logic Design Laboratory, ELEC 342, Electronic Circuits, and ELEC 465, Physical Electronics Practicum
- PHYS 412, Solid-state Physics
- PHYS 425, Statistical and Thermal Physics
- PHYS 491/492, Undergraduate Research
- (The Undergraduate Research course and seminar must be taken concurrently.)
- MATH 381, Introduction to Partial Differential Equations and MATH 382, Complex Analysis
- or CAAM 335, Matrix Analysis and CAAM 336, Differential Equations in Science and Engineering
- CHEM 121/122, General Chemistry with Laboratory
- or CHEM 151/152, Honors Chemistry with Laboratory

PHYS 231, Elementary Physics Laboratory II
MATH 101/102, Single Variable Calculus I and II
MATH 211, Ordinary Differential Equations and Linear Algebra
MATH 212, Multivariable Calculus
(MATH 221/222 Honors Calculus III and IV may substitute for MATH 211/ MATH 212)
Additional courses for the BS degree in physics with option in biophysics:

PHYS 302 Intermediate Electrodynamics
PHYS 311/312 Introduction to Quantum Physics I and II
PHYS 425 Statistical and Thermal Physics
BIOS 201/202 Introductory Biology

PHYS 302 Intermediate Electrodynamics
PHYS 311/312 Introduction to Quantum Physics I and II
PHYS 425 Statistical and Thermal Physics
BIOS 201/202 Introductory Biology

Additional courses for BS degree in physics with option in computational physics:

PHYS 302 Intermediate Electrodynamics
PHYS 311/312 Introduction to Quantum Physics I and II
PHYS 416 Computational Physics
PHYS 425 Statistical and Thermal Physics
PHYS 491/492 Undergraduate Research
PHYS 493/494 Undergraduate Research Seminar

(The Undergraduate Research course and seminar must be taken concurrently.)

MATH 381 Introduction to Partial Differential Equations and MATH 382 Complex Analysis

PHYS 302 Intermediate Electrodynamics
PHYS 311/312 Introduction to Quantum Physics I and II
PHYS 425 Statistical and Thermal Physics

Additional courses for the BS degree in astrophysics:

PHYS 302 Intermediate Electrodynamics
PHYS 311 Introduction to Quantum Physics I
PHYS 425 Statistical and Thermal Physics
ASTR 230 Astronomy Laboratory
ASTR 350/360 Introduction to Astrophysics—Stars, Galaxies, and Cosmology

3 courses from: ASTR 450 Experimental Space Science, ASTR 451 Solar and Stellar Astrophysics, ASTR 452 Galaxies and Cosmology, ASTR 470 Solar System Physics,
PHYS 312 Introduction to Quantum Physics II,
PHYS 480 Introduction to Plasma Physics

PHYS 491/492 Undergraduate Research
PHYS 493/494 Undergraduate Research Seminar

(The Undergraduate Research course and seminar must be taken concurrently.)

NSCI 230 Computation in Natural Science or
CAAM 210 Introduction to Engineering Computation
CAAM 336 Differential Equations in Science and Engineering
CAAM 420 Computational Science I

or 1 of: CAAM 452 Numerical Methods for Partial Differential Equations, CAAM 453 Numerical Analysis, CAAM 520 Computational Science II
CHEM 121 General Chemistry with Laboratory
or CHEM 151 Honors Chemistry with Laboratory

Additional courses for the BA degree in physics:

PHYS 302 Intermediate Electrodynamics
PHYS 311 Introduction to Quantum Physics I
PHYS 331 Junior Physics Laboratory I
PHYS 425 Statistical and Thermal Physics

1 additional PHYS or ASTR course (3 credit hours) at 400 level

NSCI 230 Computation in Natural Science or
CAAM 210 Introduction to Engineering Computation or 1 MATH or CAAM course (3 credit hours) at or above 300 level

BIOS 301 Biochemistry
CHEM 121/122 General Chemistry with Laboratory
or CHEM 151/152 Honors Chemistry with Laboratory
CHEM 211/212 Organic Chemistry
CHEM 215 Organic Chemistry Laboratory
or CAAM 335 Matrix Analysis and CAAM 336 Differential Equations in Science and Engineering
CAAM 210 Introduction to Engineering Computation
CAAM 353 Computational Numerical Analysis
CAAM 420 Computational Science I

PHYS 491/492 Undergraduate Research
PHYS 493/494 Undergraduate Research Seminar

(The Undergraduate Research course and seminar must be taken concurrently.)

NSCI 230 Computation in Natural Science or
CAAM 210 Introduction to Engineering Computation
CAAM 336 Differential Equations in Science and Engineering
CHEM 121 General Chemistry with Laboratory

or CAAM 335 Matrix Analysis and CAAM 336 Differential Equations in Science and Engineering
CAAM 210 Introduction to Engineering Computation
CAAM 353 Computational Numerical Analysis
CAAM 420 Computational Science I

1 of: CAAM 452 Numerical Methods for Partial Differential Equations, CAAM 453 Numerical Analysis, CAAM 520 Computational Science II
CHEM 121 General Chemistry with Laboratory
or CHEM 151 Honors Chemistry with Laboratory

PHYS 491/492 Undergraduate Research
PHYS 493/494 Undergraduate Research Seminar

(The Undergraduate Research course and seminar must be taken concurrently.)

NSCI 230 Computation in Natural Science or
CAAM 210 Introduction to Engineering Computation
CAAM 336 Differential Equations in Science and Engineering
CHEM 121 General Chemistry with Laboratory

1 additional PHYS or ASTR course (3 credit hours) at 400 level

NSCI 230 Computation in Natural Science or
CAAM 210 Introduction to Engineering Computation or 1 MATH or CAAM course (3 credit hours) at or above 300 level
**Additional courses for the BA degree in astronomy:**

- PHYS 331 *Junior Physics Laboratory I*
- or NSCI 230 *Computation in Natural Science*
- PHYS 425 *Statistical and Thermal Physics*
- or CHEM 311 *Physical Chemistry*
- ASTR 100 *Exploring the Cosmos*

**Additional courses for the BS degree in chemical physics:**

- CHEM 121/122 *General Chemistry* or
- CHEM 151/152 *Honors Chemistry with Laboratory*
- CHEM 211 *Organic Chemistry*
- CHEM 212 *Organic Chemistry*
- or CHEM 360 *Inorganic Chemistry*
- CHEM 311/312 *Physical Chemistry*
- PHYS 302 *Intermediate Electrodynamics*
- 2 of: PHYS 311 or 312 *Introduction to Quantum Physics I or II*, CHEM 415 *Chemical Kinetics and Dynamics*, and CHEM 430 *Quantum Chemistry*

- 6 credit hours from: CHEM 215 *Organic Chemistry Laboratory*, CHEM 351 or 352 *Introductory Module in Experimental Chemistry*,

**Requirements for Advanced Degrees**

For general university requirements, see Graduate Degrees (pages 57–58). More detailed information on courses and requirements is available from the Department of Physics and Astronomy.

The master of science teaching requires 30 credit hours of approved course work. The master of science is a research degree, normally undertaken as the first stage of doctoral study. The MS requires at least 30 credit hours of approved graduate-level studies, including a thesis performed under the direction of a departmental faculty member.

To be eligible for the PhD degree, graduate students must demonstrate to the department their ability to engage in advanced research. This is normally accomplished by successfully completing the work for the MS Students must also complete 60 credit hours of approved graduate-level study at Rice and produce a research thesis under the direction of a departmental faculty member. At least two years of graduate study are required for the PhD.

See ASTR and PHYS in the Courses of Instruction section.
Policy Studies

The School of Social Sciences

Director
Donald Ostdiek

Degree Offered: BA

This interdisciplinary major focuses on policy issues that are of public interest. Students in policy studies evaluate and analyze both the determinants and the effects of policy decisions, gaining an understanding of the policy-making process and acquiring an intellectual base for policy-making skills. The course of study addresses theoretical issues as well as applied and prescriptive policy questions.

Students may take policy studies only as a second major. It complements majors in any university department. For instance, engineering or science majors who are contemplating careers in business or government can investigate how technical innovations or regulations are adopted and implemented as matters of public policy, and humanities majors can explore career options where language skills are particularly valuable.

Students are encouraged to investigate research opportunities with Rice faculty. Students may also elect to participate in the Washington Semester Program at American University, which includes both course work and an internship within the federal government. See the policy studies director for more information.

Degree Requirements for BA in Policy Studies

For general university requirements, see Graduation Requirements (pages 14–15). Students may take the policy studies major only as a second major (their first major cannot also be in an interdepartmental program). The major contains 11 courses divided into the following elements: a basic curriculum, an area curriculum, and a research requirement.

The policy studies basic curriculum introduces students to the basic concepts and tools needed to understand and study policy, regardless of the policy area they choose to focus on. The four courses ensure that all policy studies majors have a common professional vocabulary and conceptual frame of reference. The policy studies area curriculum provides specialized training that builds on students’ work in the basic curriculum.

Students are required to take 6 courses from one of the following areas of specialization:

- Environmental policy
- Government policy and management
- Healthcare management
- International affairs
- Law and justice
- Business policy and management
- Urban and social change

Policy studies students must also engage in a research project in their area of interest. In consultation with the policy studies director, each student must select a
research seminar or complete an approved research project through independent study or other credit. The Policy Studies Research Seminar (SOSC 400) also counts for this requirement.

4 Basic Curriculum Courses
POLI 338/SOSC 301 Policy Analysis
ECON 211 or 212 Principles of Economics I or II
POLI 337 Public Policy and Bureaucracy
1 advanced analysis or methods course approved by the policy studies director

6 Area Curriculum Courses
6 courses from one of the following seven groups:

1. Environmental Policy (Choose 6)
ECON 480 Environmental and Energy Economics I
POLI 331 Environmental Politics and Policy
SOCI 367 Environmental Sociology
ENVI 306 Global Environmental Law and Sustainable Development
ENVI 406 Introduction to Environmental Law
HIST 330 U.S. Environmental History
ARCH 313 Sustainable Architecture
ANTH 468 Palaeoclimate and Human Response
BIOS 322 Global Ecosystem Dynamics
BIOS 324 Wetland Ecosystems
BIOS 325 Ecology
ENGL 478 Literature and the Environment
ENVI/HPHS 201 Introduction to Environmental Systems
ENVI 445 Natural Environmental Factors
GEOL 326 Environmental Geology
GEOL 341 The Oceans
GEOL 345 Geology of National Parks
POLI 336 Politics of Regulation
RELI 362 Environmental Ethics
SPAC 203 Atmosphere, Weather, and Climate
SPAC 443/ENVI 443 Atmospheric Science
UNIV 303 Environmental Problem Solving

2. Government Policy and Management (Choose 6)
ECON 436 Government Regulation of Business
ECON 461 Urban Economics

ECON 483 Public Finance
POLI 300 Federalism and Intergovernmental Politics
POLI 301 State Politics
POLI 332/432 Urban Politics
POLI 436 Politics of Regulation
ANTH 344 City/Culture
ECON 438 Economics of the Law
ECON 480 Environmental and Energy Economics I

POLI 330 Minority Politics
POLI 331 Environmental Politics and Policy
POLI 335 Political Environment of Business
POLI 458 Property Rights and Privatization
ENVI 406 Introduction to Environmental Law
HIST 468 Women and the Welfare State
SOSC 330 Healthcare Reform in the 50 States
SOSC 430 The Shaping of Health Policy in the United States
SOCI 308 Houston: The Sociology of a City
SOCI 331 Politics and Society in Texas
SOCI 370 Sociology of Education
SOCI 350 Sociological Approaches to Poverty
SOCI 399 Immigration and Public Health
SOCI 411 Social Change
SOCI 441 Minorities in the Schooling Process

3. Healthcare Policy and Management (Choose 6)
ANTH 381 Medical Anthropology
ANTH 386 Human Nutrition
ANTH 388 Life Cycle: A Biocultural View
HEAL 212 Consumer Health
HEAL 350 Understanding Cancer
HEAL 407 Epidemiology
HEAL 410 Program Development in Health Education
PHIL 315 Ethics, Medicine, and Public Policy
RELI 462/463 Medical Ethics and American Values I and II
SOSC 330 Healthcare Reform in the 50 States
SOSC 420 Healthcare: Competition and Managed Care
SOSC 430 The Shaping of Health Policy in the United States
SOCI 334 Sociology of the Family
SOCI 345 Sociology of Medicine
SOCI 399 Immigration and Public Health
SPAN 307/308 The Language of Healthcare

4. International Affairs (Choose 6)
ECON 420 International Economics
POLI 372 American Foreign Policy
POLI 376 International Political Economy
POLI 378 The Politics of American National Security Policy
POLI 462 Comparative Public Policy
ANTH 360 Modernity and Social Space
ECON 421 International Finance
ECON 430 Comparative Economic Systems
ECON 451 Political Economy of Latin America
HIST 232 The Making of Modern Africa
HIST 353 The Cold War
HIST 394 War in the Modern World
HIST 464 Foreign Policy of Nixon and Kissinger
HIST 469 US–Latin America Relation
POLI 354 Latin American Politics
POLI 355 Government and Politics of the Middle East
POLI 356 Politics of Latin American Economic Development
POLI 360 West European Democracies
POLI 361 Comparative Post-Communist Systems
POLI 373 International Conflict
POLI 376 International Political Economy
POLI 464 Political Economy of Development

5. Law and Justice (Choose 6)
ANTH 326 Anthropology of Law
ANTH 419 Law and Society
ECON 438/439 Economics of the Law I and II
ENVI 406 Introduction to Environmental Law
HIST 297/298 American Legal History I and II
PHIL 307 Social and Political Philosophy
PHIL 316 Philosophy of Law

POLI 321 American Constitutional Law
POLI 458 Property Rights and Privatization
SOCI 321 Criminology

6. Business Policy and Management (Choose 6)
ECON 436 Government Regulation of Business
ECON 445 Managerial Economics
ECON 435 Industrial Organization
POLI 335 Political Environment of Business
POLI 336 Politics of Regulation
PSYC 231 Industrial and Organizational Psychology
ACCO 305 Introduction to Accounting
ECON 355 Money and Banking
ECON 370 Microeconomic Theory
ECON 375 Macroeconomic Theory
ECON 415 Human Resources, Wages, and Welfare
ECON 420 International Economics
ECON 421 International Finance
ECON 448 Corporation Finance
HIST 331 Labor in America
POLI 376 International Political Economy
POLI 458 Property Rights and Privatization
POLI 464 Political Economy of Development

7. Urban and Social Change
ANTH 344 City/Culture
ANTH 360 Modernity and Social Space
ARCH 311 Houston Architecture
ARCH 313 Sustainable Architecture
ARCH 321 Economics of the Built Environment
ARCH 346 19th- and 20th-Century Architectural History
ARCH 351 Social Issues and Architecture
ARCH 455 Housing and Urban Programs
ECON 461 Urban Economics
ECON 480 Environmental Economics
HIST 377 The Ancient City
HIST 429 Technologies of Nationalism
HART 325 Art and Architecture in the Middle East
PHIL 307 Social and Political Philosophy
SOCI 301 Social Inequality
SOCI 308 Houston: The Sociology of a City
SOCI 309 Race and Ethnic Relations
SOCI 310 Urban Sociology
SOCI 313 Demography
SOCI 411 Social Change
POLI 332 Urban Politics
POLI 438 Race and Public Policy
POLI 441 Common Property Resources
Political Science

The School of Social Sciences

Chair
Rick K. Wilson

Professors
Earl Black
Paul Brace
Gilbert Morris Cuthbertson
Keith Edward Hamm
William P. Hobby
David W. Leebron
T. Clifton Morgan
Robert M. Stein
Richard J. Stoll

Professors Emeriti
John S. Ambler
Chandler Davidson
Fred R. von der Mehden

Associate Professors
John R. Alford
Mark P. Jones
Brett Ashley Leeds
Melissa J. Marschall
William Reed
Randolph T. Stevenson

Assistant Professors
Regina P. Branton
Lanny Martin
Monika A. Nalepa

Lecturer
C. M. Hudspeth

Degrees Offered: BA, MA, PhD

Students majoring in political science are encouraged to achieve both a broad understanding of the field and a specialized knowledge of one or more aspects of political science, including American politics and comparative politics and politics and international relations (see also majors in managerial studies and public policy). Graduate study is grounded in the areas of American government (public policy, Congress, and intergovernmental relations), comparative government (Western Europe, Latin America, and political development), and international relations (international conflict).

Degree Requirements for BA in Political Science

For general university requirements, see Graduation Requirements (pages 14–15). Students majoring in political science must complete 30 semester hours (10 courses) in the field of political science, plus 6 hours (2 courses) of upper-level work in any of the following fields: anthropology, economics, history, philosophy, psychology, or sociology. Students select these upper-level courses in consultation with the department adviser.

For students who entered Rice in fall 1999 and thereafter, political science degree requirements are as follows:

- At least 1 course in each of the following fields: American government, comparative politics, international relations, theory and methods.
- At least 2 of the 4 introductory courses
- A concentration of at least 4 courses in one of the following fields: American government, comparative politics, international relations. These 4 courses must include the introductory course and a seminar.
- A statistics course offered by the Department of Political Science
• 2 seminars, at the 400 or 500 level, with different instructors

Students who entered Rice before fall 1999 may choose to satisfy the above requirements, or they may satisfy requirements in force at the time of their enrollment at Rice, which usually will be as follows:

• At least 1 course in any four of the following areas: American political institutions and behavior, comparative politics, international relations, political philosophy and legal theory, empirical theory and method, and American public policy

• 2 seminars, at the 400 or 500 level, with different instructors

Double majors in one of the related disciplines named above may automatically substitute 6 hours (2 courses) in upper-level studies (at the 300 level or above) from their second field for 6 of the required 30 hours of political science courses. Double majors whose second major is managerial studies or policy studies may automatically substitute 3 hours (1 course). Double majors whose second major is in a field other than those listed above normally must take the full 30 hours (10 courses) in political science. They may petition to substitute a course from another field for a political science course, but this is permitted only when the course to be substituted has a significant relationship to political science. Note: The reduction of political science course requirements for double majors is eliminated for students who entered in and after fall 1999.

**Introductory Courses**—POLI 209 *Introduction to Constitutionalism and Modern Political Thought*, POLI 210 *American Government and Politics*, POLI 211 *International Relations*, and POLI 212 *Introduction to Comparative Politics* constitute the introductory courses in political science. **Students entering in the fall 1999 and after must take at least 2 of these, including one in the field of specialization.** Students should note, however, that POLI 210 is the course that meets the Texas state licensing requirements in political science for teachers. Students who entered Rice before fall 1999 and choose to stay with the old plan may count no more than 2 of the introductory courses toward their major requirements.

**Directed Readings Courses**—Directed readings courses are intended for students who have completed a substantial number of political science courses and who seek to explore a subject not covered in regular courses. They are available only if an appropriate faculty member agrees to supervise. The faculty member supervising a directed readings course must have a full-time appointment, and a student may not take more than 1 readings course from him or her. Students should submit a brief, one-page description of the work to be conducted in the readings course (including the name of the faculty supervisor) to the department director of undergraduate studies no later than two weeks into the semester in which they intend to take the course. Readings courses do not count toward the department’s distribution requirement.

**Honors Program**—Admission to the honors program requires the approval of the department director of undergraduate studies. During the first semester of the two-semester program, students take a readings course that provides them with a basis for drawing up a thesis prospectus. At the end of the first semester, a thesis committee composed of two full-time members of the political science department reviews and approves the prospectus. During the second semester, students write their honors thesis, which also must meet with committee approval. Students may not combine the 2 honors courses into one semester. Those who successfully complete the honors program may substitute it for one of the seminars required.
for the major. See also Honors Programs (page 26). Failure to complete the second semester of the honors program will result in loss of credit for the first semester of the honors program.

**Degree Requirements for MA and PhD in Political Science**

For general university requirements, see Graduate Degrees (pages 57-58). Students in the PhD program must complete 48 semester hours in advanced courses or seminars before candidacy and conclude the degree program with the oral presentation of a dissertation displaying original research. Normally, students take the specified core courses in the three general fields of American government, comparative government, and international relations, completing additional course work and comprehensive examinations in two of those three fields. Before taking the comprehensive examinations, students must:

- Complete courses in statistical analysis
- Demonstrate some familiarity with traditional political theory
- Satisfy the language or skill requirement in their major field
- Complete all course requirements

Students select specific courses for graduate study in consultation with the faculty adviser.

The master of arts degree can be obtained with 36 semester hours of course work, all of which must be taken at the graduate level (400 level or above), and the completion of 2 research papers in seminars taken over the course of study. A minimum G.P.A. of 3.0 is required for awarding the MA.

The political science department requires that not more than three years elapse between the time the student is admitted to graduate study and the completion of the MA degree, unless an extension is approved by the department graduate committee.

See POLI in the Courses of Instruction section.
Psychology

The School of Social Sciences

Department Faculty

Chair
Randi C. Martin

Professors
James L. Dannemiller
Randi C. Martin
James R. Pomerantz
David J. Schneider
Michael J. Watkins

Professors Emeritus
John W. Brelsford
Kenneth R. Laughery

Professors
Richard P. Bagozzi
Jennifer M. George
H. Albert Napier
Ronald N. Taylor
Rick K. Wilson

Associate Professors
Sarah A. Burnett
Michelle ("Mikki") R. Hebl
David M. Lane
Tony Ro

Assistant Professors
Daniel J. Beal
Margaret E. Beier
E. Darcy Burgund
Michael D. Byrne
Xiaohong Denise Chen
Geoffrey F. Potts

Joint Appointments

Professors
Richard P. Bagozzi
Jennifer M. George
H. Albert Napier
Ronald N. Taylor
Rick K. Wilson

Associate Professors
Richard R. Batsell
Steven C. Currall

Assistant Professor
D. Brent Smith

Adjunct Appointments

Adjunct Professors
John H. Byrne
J. Maxwell Elden
William C. Howell
Paul Richard Jeanneret
Katherine A. Loveland
Harvey S. Levin
John E. Overall
Anthony A. Wright

Adjunct Assistant Professors
Janice Bordeaux
Harold K. Doerr
David M. Eagleman
Ronald E. Fisher
Betty S. Sanders
Mihriban Whitmore
Heidi Ziemer

Adjunct Associate Professors
Lindley E. Doran
S. Morton McPhail
Deborah A. Pearson
Anne Bibiana Sereno
Kevin C. Wooten

Adjunct Instructors
Roberta M. Diddel
Anne Victoria Wilkinson

Visiting Scholars
Mary R. Newsome

Adjunct Lecturer
Rachel Winer Flannery

Research Faculty

Research Scientist
Chaiyapoj Nestsiri

Postdoctoral Research Associates
Philip C. Burton
Rachel G. Hull

Professor in the Practice
Philip T. Kortum
DEGREES OFFERED: BA, MA, PhD
The undergraduate program offers the core preparation recommended by the nation’s leading graduate schools of psychology, with advanced courses and research opportunities to fit individual needs. Programs of study may be structured around prospective careers in medicine, law, business, and education as well as in psychology. Program emphasis in graduate study is on doctoral training, which includes course work in memory, cognition, engineering and industrial/organizational psychology, social psychology, and methodology. Faculty research interests include cognitive psychology (human memory, psycholinguistics, perception, and information processing), cognitive neuropsychology (memory, perception, and language disorders), human-computer interaction, and industrial/organizational psychology (personnel selection, training, work motivation, discrimination, and group processes).

DEGREE REQUIREMENTS FOR BA IN PSYCHOLOGY
For general university requirements, see Graduation Requirements (pages 14–15). Students majoring in psychology must complete 29 semester hours in departmental courses, including the following required courses.

Core Courses
PSYC 101 Introduction to Psychology
PSYC 202 Introduction to Social Psychology
PSYC 203 Introduction to Cognitive Psychology
PSYC 339 Statistical Methods—Psychology
PSYC 340 Research Methods (no substitutions or transfer credits allowed for PSYC 339 or 340)

At least 1 course from each block*

Block 1
PSYC 308 Memory
PSYC 309 Psychology of Language

Block 2
PSYC 350 Psychology of Learning
PSYC 351 Psychology of Perception
PSYC 360 Thinking
PSYC 362 Biopsychology

Honors Program—Qualified students may apply to the honors program during preregistration in the spring semester of their junior year. A written proposal for the project must be submitted by the end of the second week of classes in fall of the senior year, and the faculty will decide on final admission to the honors program by the end of the fourth week of classes. Admission to the honors program requires a psychology GPA of 3.7 and an overall GPA of 3.5, completion of PSYC 339, and completion or concurrent enrollment in PSYC 340. To graduate with departmental honors, students must complete the requirements for the psychology major, a written honors thesis approved by a faculty committee, and other requirements as determined by their honors committee (see Honors Program, page 26). Detailed information about the honors program is available from the instructor of the course or the departmental office.

DEGREE REQUIREMENTS FOR MA AND PhD IN PSYCHOLOGY
Students must complete an admission-to-candidacy procedure that should establish their expertise in their chosen specialty. For general university requirements, see Graduate Degrees (pages 57–58). For both MA and PhD degrees, students must complete a research thesis, including a public oral defense, and accumulate
30 semester hours for the MA and 60 hours for the PhD. Course work includes required courses in certain areas, plus whatever offerings are available in the student's specialty area, either cognitive/experimental, industrial/organizational/social, or engineering psychology. Competence in a foreign language is not required.

See PSYC in the Courses of Instruction section.
Religious Studies

The School of Humanities

Chair  
Jeffrey J. Kripal

Professors  
Thomas R. Cole  
Anne C. Klein  
Anthony B. Pinn  
John M. Stroup

Professors Emeriti  
Werner H. Kelber  
Edith Wyschogrod

Associate Professors  
Elias K. Bongmba  
Matthias Henze  
William B. Parsons

Assistant Professors  
David Cook  
Gregory Kaplan

Adjunct Professor  
Stanley J. Reiser

Adjunct Associate Professor  
Elizabeth Heitman

Lecturer  
Beverlee Jill Carroll

Degrees Offered: BA, PhD

The undergraduate major includes courses in methodology (textual, historical, normative, and sociocultural approaches to the study of religion) and religious traditions (African religions, Buddhism, Christianity, comparative religions, Hinduism, Islam, and Judaism). For research degrees in the graduate program, see below. Within these clearly defined fields, students acquire a broad knowledge of religious studies with enough flexibility for interdisciplinary pursuits.

Degree Requirements for BA in Religious Studies

For general university requirements, see Graduation Requirements (pages 14–15). In addition, students must also satisfy the distribution requirements and complete no fewer than 60 semester hours outside the departmental requirements for a program totaling at least 120 semester hours. See Distribution Requirements (pages 15–16) and Majors (pages 17–18).

Students majoring or double-majoring in religious studies must complete:

- 30 hours for majors
- 24 hours for double majors
- 24 hours for majors at 200, 300, or 400 level
- 18 hours for double-majors at 200, 300, or 400 level
- No more than 2 courses outside the Department of Religious Studies

To ensure breadth and depth to the major, students are encouraged to work out a program of study with the undergraduate advisor. The 30 hours (24 for double-majors) must include the following requirements:

- RELI 101 Introduction to Religion
- 2 introductory courses in religious traditions (one Western; one non-Western)
- At least 3 courses concentrated in one of the following fields: Judaism, Christianity, African religion, Buddhism, comparative studies, cross-cultural studies, Islam, Hinduism, methodological studies, or ethics/philosophy of religion

Honors Program. Qualified undergraduates may choose the option of writing a senior thesis. To complete a thesis, the student must enroll for 6 hours in addition to
the 30 hours (24 for double majors) required for the major. Students are expected to have at least a 3.50 average in their religious studies courses before undertaking thesis work and must obtain the permission of a faculty advisor who will supervise the project, usually during the second semester of the junior year and first semester of the senior year. Any additional supervisors and readers of the completed thesis (if any) will be arranged in advance by the primary faculty advisor in consultation with relevant faculty.

**Degree Requirements for PhD in Religious Studies**

The graduate program accepts a limited number of qualified students. A distinguished undergraduate record and high scores on the Graduate Record Examination (GRE) are essential and an advanced degree in the humanities is desirable. For general university requirements, see Graduate Degrees (pages 57–58). Students admitted into the program will normally receive financial assistance in the form of a tuition waiver and a stipend. As part of their training and in return for their stipends, students in their second year and beyond are expected to perform a minimum amount of services in return for their stipend by assisting the department as needed.

The PhD in religious studies is normally a five-year program. Requirements are as follows:

- 18 courses (54 hours required)
  - 6 courses in the major field
  - 3 courses in each of two minor fields (see list of fields below)
  - 2 department seminars (one or more of which may count as a major or minor course) to be taken in each of the first two years
  - 4 to 6 elective courses chosen in consultation with the student’s adviser
- Passing grades on reading examinations in French and German
- Passing grades in 4 qualifying examinations: 3 in the student’s major field, 1 in each of the students 2 minor fields. The nature and content of the examinations or papers will be determined one year prior to the date the student expects to write them, which is ordinarily the end of the third or beginning of the fourth year in the program.
- Oral discussion of dissertation proposal
- Satisfactory completion of dissertation and oral defense

**Reading Lists**—Students should become broadly familiar with the literature of their majors and minors; reading lists will be provided. Students are expected to familiarize themselves with this material enough that they draw on it on their exams and the dissertation itself. The graduate seminar is, in part, an introduction to areas of the reading list and to the techniques for engaging in deep, independent reading.

**Fields of Study**—Religion and contemporary cultures, scriptural interpretation, ethics and philosophy of religion, mysticism, psychology, and religious practices are fields of study in this program. These fields will include courses covering one or more of the following traditions: African and African-based religions, Buddhism, Christianity, Hinduism, Judaism, and new and alternative religions. Students may concentrate in one or more of these traditions in the context of their major and minor fields.
Professional Development

Opportunities may be available to teach undergraduate courses in the department or in local colleges and universities. Limited funds are also available for students to attend conferences to present their research. The department encourages these and other efforts to prepare students for academic careers.

See RELI in the Courses of Instruction section.
SOCIOLGY

THE SCHOOL OF SOCIAL SCIENCES

CHAIR
Elizabeth Long

PROFESSORS
Michael O. Emerson
Stephen L. Klineberg

PROFESSORS EMERITI
Chandler Davidson
Chad Gordon
William Martin

ASSOCIATE PROFESSORS
Katharine Donato

ASSISTANT PROFESSORS
Bridget K. Gorman
Holly Heard

POSTDOCTORAL FELLOWS
Elaine Howard Ecklund
Anne E. Lincoln

DEGREE OFFERED: BA

This undergraduate major fosters an analytic approach to the study of human societies, whether as a preparation for graduate work in sociology and related fields, or as the foundation for a variety of occupations. It is also an important component of a liberal arts education and as such, can serve as effective preparation for professions such as law or medicine. The program provides students with considerable latitude in pursuing personal interests while ensuring familiarity with basic theoretical approaches and research methods.

DEGREE REQUIREMENTS FOR THE BA IN SOCIOLOGY

For general university requirements, see Graduation Requirements (pages 14–15). Students majoring in sociology must complete at least 33 semester hours (11 courses) in sociology. Requirements for the major normally include the following.

SOCI 203 Introduction to Sociology
SOCI 398 Social Statistics
1 of the following:
SOCI 390 Research Methods
SOCI 421 Craft of Sociology

At least 1 theory course, such as:
SOCI 317 Contemporary Sociological Theory

Any other sociology courses to reach a total of 11

Sociology majors must earn a C or better to receive credit for the following courses: statistics (SOCI398), theory (SOCI317, SOCI395, or SOCI359), and research methods (SOCI390 or SOCI421). This rule applies to Rice courses and transfer courses.

Sociology majors are strongly encouraged to complete the required statistics course in the Rice sociology department. To receive credit for a statistics course completed outside the department (another Rice department or another university), the student must: (1) receive prior approval from the undergraduate advisor to enroll in the course (waived for transfer students), and (2) pass the departmental statistics exam.

Sociology majors are not required to take a foreign language, but those planning graduate study should be competent in at least one such language. Some sociology courses listed in the Courses of Instruction section may not be offered every year, and courses among the regular offerings are occasionally added or dropped.
Students are responsible for making sure they satisfy all the requirements for their degree. One of the sociology faculty, preferably department advisor Professor Gorman, should sign each major's registration.

Honors Program—For general information, see Honors Programs (page 26). Students who have maintained an A- average in all sociology courses beyond the introductory level may apply to enter the honors program. They should submit their research proposals:

a) by November 15 of the first semester of their junior year, in which case they will research and write their thesis during the second semester of their junior year and the first semester of their senior year

b) by March 15 of the second semester of their junior year, in which case they will complete their thesis during the two semesters of their senior year.

Since departmental awards for seniors are usually determined around March 1, and the honors thesis is often taken into consideration in this determination, students who wish to be considered for these awards are advised to begin their thesis in the spring of their junior year. Research proposals must be carefully thought out and discussed with at least one professor before being submitted. Once submitted, they will be considered by the department faculty as a whole and, if acceptable, the student will be assigned a faculty adviser.

Students in the honors program register for two successive semesters in Directed Honors Research (SOCI 492 and 493). The first of the 2 courses is typically devoted to a thorough review of the relevant literature, the formulation of hypotheses growing out of the literature review, and a proposal consisting of a research design that clearly describes how the data are to be collected and analyzed. To receive a grade for the first semester, the student must submit a paper to the primary thesis adviser by the last day of classes. This paper must contain the literature review, hypotheses, and research design, along with a bibliography. The research itself is usually carried out in the second semester (and sometimes in the summer following the junior year) and is analyzed, written up, and defended as a completed Honors Thesis during that semester.

All honors students should complete SOCI 390 Research Methods or SOCI 421 The Craft of Sociology before beginning the second semester of the program. If their project requires statistical analysis, students should also complete SOCI 398 Social Statistics before beginning the second semester of their research.

See SOCI in the Courses of Instruction section.
STATISTICS

THE GEORGE R. BROWN SCHOOL OF ENGINEERING

CHAIR
Rudy Guerra

PROFESSORS
Bryan W. Brown (joint appointment: Economics)
Dennis Cox
Mahmoud El-Gamal (joint appointment: Economics)
Katherine B. Ensor
Don H. Johnson (joint appointment: Electrical and Computer Engineering)
Marek Kimmel
Javier Rojo
Rudy Guerra
David W. Scott
Robin Sickles (joint appointment: Economics)
James R. Thompson
Edward E. Williams (joint appointment: Jones Graduate School of Management)
Rick K. Wilson (joint appointment: Political Science)

ASSOCIATE PROFESSORS
Steven Currall (joint appointment: Jones Graduate School of Management)
David M. Lane (joint appointment: Psychology)
Barbara Ostdieck (joint appointment: Jones Graduate School of Management)

ASSISTANT PROFESSOR
Rudolph H. Riedi

ADJUNCT PROFESSORS
E. Neely Atkinson
Christopher I. Amos
Donald A. Berry
Barry W. Brown
Richard Heydorn
J. Jack Lee
Peter Müller
Gary Rosner
Howard D. Thames, Jr.
Stuart Zimmerman

ADJUNCT ASSOCIATE PROFESSORS
Keith A. Baggerly
Joaquin Díaz-Saiz
Kim-Anh Do
Kenneth Hess
Yu Shen
Ya-Chen Shih

ADJUNCT ASSISTANT PROFESSORS
Olga Y. Gorlova
Ilya Shmulevick

LECTURERS
L. Scott Baggett

FACULTY FELLOW
Janet Siefert

DEGREES OFFERED: BA, MStat, MA, PhD

Course work in statistics acquaints students with the role played in the modern world by probabilistic and statistical ideas and methods. Students grow familiar with both the theory and the applications of techniques in common use as they are trained in statistical research. The flexibility of the undergraduate program allows students to concentrate on theoretical or applied training, or they may link their studies in statistics to work in other related departments (see majors in economics, education, electrical and computer engineering, computational and applied mathematics, managerial studies, mathematics, political science, and psychology). Graduate study has concentrations in applied probability, bioinformatics, biomathematics, biostatistics, computational finance, data analysis, density estimation, epidemiology, image processing, model building, quality control, statistical computing, spatial processes, stochastic processes, and time series analysis. A joint MBA/master of engineering degree is also available in conjunction with the Jesse H. Jones Graduate School of Management.

DEGREE REQUIREMENTS FOR BA IN STATISTICS

For general university requirements, see Graduation Requirements (pages 14–15). Students majoring in statistics normally complete the following:
• MATH 101/102 *Single Variable Calculus I* and *II*
• MATH 211 *Ordinary Differential Equations* and *Linear Algebra*
• CAAM 210 or 211 *Introduction to Engineering Computation*
• STAT 310 *Probability and Statistics*
• STAT 410 *Introduction to Statistical Computing and Regression*
• 6 elective courses from the statistics department (or other departments with approval from their adviser) at the 300 level or higher

Mathematically oriented students should also take MATH 212 *Multivariable Calculus* and MATH 355 *Linear Algebra* (or CAAM 335 *Matrix Analysis*).

The department offers a specialization in computational finance and through the Center for Computational Finance and Economic Systems.

## Degree Requirements for MStat, MA, and PhD in Statistics

For general university requirements, see Graduate Degrees (pages 57–58). Admissions applications should include scores on the Graduate Record Examination (GRE) in the quantitative, verbal, and analytical tests. Financial support is available for well-qualified doctoral students. Course work for all degree programs should be at the 400 level or above, although 2 approved 300-level courses may be accepted.

**Master’s Programs**—Candidates for the nonthesis MStat degree must complete 30 semester hours of approved course work. Candidates for the MA degree in statistics must complete 30 semester hours of approved course work as well as one of the following: (1) complete an original thesis and defend it in a public oral examination; or (2) perform satisfactorily on the second-year PhD comprehensive examinations.

**PhD Program**—Candidates for the PhD degree in statistics must complete at least 90 semester hours of approved course work beyond the bachelor’s degree and a minimum of 60 hours beyond a master’s degree, perform satisfactorily on preliminary and qualifying examinations, and complete an original thesis with a public oral defense.

See STAT in the Courses of Instruction section.
Subsurface Geoscience

The Wiess School of Natural Sciences

Director
Alan Levander

Professors
John B. Anderson
Andrew R. Barron
Katherine B. Ensor
Hans G. Ave Lallemant
Neal E. Lane
Dale S. Sawyer
Manik Talwani

Associate Professors
Gerald R. Dickens
André W. Droxler
Colin A. Zelt

Assistant Professor
Julia Morgan

Adjunct Professor
Stephan H. Danbom

Lecturer
W. C. Rusty Riese

Faculty Fellow
Kristen M. Kulinowski

Degrees Offered: MS

Rice University introduced a professional master's degree in subsurface geoscience in fall 2003. This degree is designed for students who wish to become proficient in applying geological knowledge and geophysical methods to finding and developing reserves of oil and natural gas. Students can specialize in one of three focus areas: information technology, geology, and geophysics. The information technology focus area prepares students to apply IT principles to the rapidly growing industry need to store, access, and interpret very large and diverse geological, geophysical, cultural, and infrastructural datasets. The geology focus area prepares students to be explorationists, with strong skills in using seismic and other geophysical methods along with geological principles to find oil and natural gas. The geophysics focus area prepares students to become technical experts in aspects of exploration seismology.

The subsurface geoscience degree is one of three tracks in the new Professional Master's Program at Rice housed in the Wiess School of Natural Sciences. These master's degrees are designed for students seeking to gain further scientific core expertise coupled with enhanced management and communication skills. These degrees instill a level of scholastic proficiency that exceeds that of the bachelor's level, and they create the cross-functional aptitudes needed in modern industry. This program will allow students to move more easily into management careers in consulting or research and development, design, and/or marketing of new science-based products.

Degree Requirements for MS in Subsurface Geoscience

In addition to core science courses, students are required to complete a three- to six-month internship and take a set of cohort courses focusing on business and communication. Students select a group of elective courses from one of three focus areas: geology, geophysics, or information geology. Students must present their internship project in both oral and written form in the Professional Master's Seminar.

Part-time students who already work in their area of study may fulfill the internship requirement by working on an approved project with their current employer.
general university requirements for graduate study, see pages 56–58, and see also Professional Degrees, page 58.

**Admission**

Admission to graduate study in subsurface geoscience is open to qualified students holding a bachelor’s degree in science that includes coursework in general chemistry, physics, calculus, differential equations, and linear algebra. Department faculty evaluate the previous academic record and credentials of each applicant individually.

**Science core courses:**
- ESCI 417 Petroleum Industry Economics and Management (S)
- ESCI 420 Modern Industrial Exploration Techniques (S)
- ESCI 441 Geophysical Data Analysis (F)
- ESCI 442 Exploration Geophysics I (F)
- ESCI 444 Exploration Geophysics II (S)

**Geology Focus Area**
- ESCI 415 Petroleum Geology (S)
- ESCI 427 Seismic Sequence Stratigraphy (S)
- ESCI 428 Interpretation of Reflection Seismograms (F)
- ESCI 450 Remote Sensing (S)
- ESCI 463 Advanced Structural Geology (F)
- ESCI 504 Siliciclastic Depositional Systems (F)
- ESCI 505 Applied Sedimentology (F)
- ESCI 506 Carbonate Depositional Systems (S)

**Information Technology**
- COMP 429 Introduction to Computer Networks (S)
- ESCI 454 Geographic Information Science (F)
- STAT 310 Probability and Statistics (F, S)
- STAT 410 Introduction to Statistical Computing and Computer Models (F, S)

**Geophysics Focus Area**
- CENG 571 Flow and Transport through Porous Media I (S)
- ESCI 427 Seismic Sequence Stratigraphy (S)
- ESCI 428 Interpretation of Reflection Seismograms (F)
- ESCI 454 Geographic Information Science (F)
- ESCI 461 Seismology I (F)
- ESCI 542 Seismology II (F)
- STAT 310 Probability and Statistics (F, S)

**Cohort courses:**
- MGMT 750 Management in Science and Engineering (F)

**Elective Courses**

NOTE: Each of these electives is not offered every year, and some courses may have prerequisites or require instructor permission.

Students will choose five electives, three of which should be chosen from one of the focus areas listed below. Recommended courses for each focus area include, but are not limited to, the following:

**Geophysics Focus Area**
- ENST 312 Environmental Battles in the 21st Century: Houston as Microcosm (S)
- PHIL 307 Social and Political Philosophy (F)
- PHIL 316 Philosophy of Law (F)
- POLI 337 Public Policy and Bureaucracy (F)
- POLI 338 Policy Analysis (S)
- NSCI 401 Professional Master’s Seminar (F, S) [required for two semesters]
- NSCI 512 Professional Master’s Project (F, S)

**Information Technology**
- ECON 486 Energy Economics (S)
- CEVE 322 Engineering Economics for Engineers (F)

**Internship**

An internship under the guidance of a host company, government agency, or national laboratory. A summary of the internship project is required in both oral and written form as part of the Professional Master’s Project.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Semester</th>
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<tbody>
<tr>
<td>MGMT 617</td>
<td>Managerial Decision Making (S)</td>
<td></td>
</tr>
<tr>
<td>MGMT 636</td>
<td>Systems Analysis and Database Design</td>
<td></td>
</tr>
<tr>
<td>MGMT 661</td>
<td>International Business Law (S)</td>
<td></td>
</tr>
<tr>
<td>MGMT 674</td>
<td>Production and Operations Management (F)</td>
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</table>

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGMT 676</td>
<td>Project Management/Project Finance (S)</td>
<td></td>
</tr>
<tr>
<td>MGMT 721</td>
<td>General Business Law (S)</td>
<td></td>
</tr>
<tr>
<td>MGMT 751</td>
<td>New Venture Creation for Science and Engineering (S)</td>
<td></td>
</tr>
</tbody>
</table>

**Professional Science Master’s 5th Year Degree Option for Rice Undergraduates**

Rice students have an option to achieve the MS in subsurface geoscience by adding an additional 5th year to the four undergraduate years of science studies. Advanced Rice students in good standing apply during their junior year, then start taking required core courses of the subsurface geoscience program during their senior year. A plan of study based on their particular focus area will need to be approved by the track director and the PSM coordinator.
THE PROGRAM FOR THE STUDY OF WOMEN AND GENDER

DIRECTOR AND ADVISER
Helena Michie

PROFESSORS
Peter C. Caldwell
Jane Chance
Marcia J. Citron
Margret Eifler
James D. Faubion
Beatriz González-Stephan
Anne C. Klein
Elizabeth Long
Susan Keech McIntosh
Helena Michie
Deborah Nelson-Campbell
Robert L. Patten
Meredith Skura
Ewa M. Thompson

ASSOCIATE PROFESSORS
José F. Aranda, Jr.
Elias K. Bongmba
Scott S. Derrick
Katharine M. Donato
Lucille P. Fultz
Eugenia Georges
Deborah A. Harter
Betty Joseph
Maria-Regina Kecht
Jeffrey J. Kripal
Colleen R. Lamos

ASSISTANT PROFESSORS
Caroline F. Levander
Susan Lurie
William B. Parsons
Nanxiu Qian
Carol E. Quillen
Paula Sanders
Julie M. Taylor
Sarah Westphal
Lora Wildenthal

PROFESSOR OF THE PRACTICE
Diana L. Strassmann

LECTURER
Thad Logan

DEGREES OFFERED: BA AND GRADUATE CERTIFICATE
Both the undergraduate major and the graduate certificate program take an interdisciplinary approach in their exploration of women’s experiences and the role that ideas about sexual differences have played in human societies. Areas of inquiry include women’s participation in social and cultural production; the construction of gender roles and sexuality; the relationship between ideas about gender and concepts inherent in other social, political, and legal structures; and the implications of feminist theory for philosophical and epistemological traditions. Students acquire an understanding of how adopting gender as a significant category of analysis challenges existing disciplines. They also gain proficiency in the methods used to study and compare cultural constructions of gender and sexuality, and they become familiar with the ongoing fundamental debates in women’s and gender studies.

DEGREE REQUIREMENTS FOR BA IN THE STUDY OF WOMEN AND GENDER
For general university requirements, see Graduation Requirements in this publication. Students majoring in the study of women and gender must complete:
I. Courses that Satisfy the Core Requirements

WGST 101 Introduction to the Study of Women and Gender
WGST 201 Introduction to Lesbian, Gay, Bisexual, and Transgender Studies
WGST 498 Research in the Study of Women and Gender (F)
WGST 499 Research in the Study of Women and Gender (S)

II. Courses that Satisfy the Non-Western Studies Requirement

WGST 240 Gender and Politicized Religion
WGST 250 International Political Economy of Gender
WGST 283 Women in the Modern Islamic World
WGST 315 Gender and Islam
WGST 323 The Knowing Body: Buddhism, Gender, and the Social World
WGST 340 Gender and Politicized Religion (enriched version)
WGST 399 Women in Chinese Literature
WGST 432 Islam in South Asia
WGST 455 Women and Gender in Medieval Islam

III. Courses that Satisfy the Critical Race Studies Requirement

WGST 234 U.S. Women’s History I: Colonial Beginnings to the Civil War
WGST 235 U.S. Women’s History II: Civil War to the Present
WGST 370 Survey of African American Literature
WGST 387 Cultural Studies: Race, Gender, and the Politics of Representation
WGST 387 Cultural Studies
WGST 415 Sociolinguistics
WGST 453 Topics in African American Literature: Black Women Writers
WGST 468 Women and the U.S. Welfare State: Sexual Politics and American Poverty

IV. Courses that Satisfy the Theory Requirement

WGST 303 Women’s Stories and Legal Change
WGST 339 Feminist Philosophy
WGST 391 Producing Feminist Knowledge: Methodology and Visual Culture
WGST 395 Feminist Knowledge
WGST 430 Queer Theory
WGST 434 French Feminist Theory
WGST 460 Feminist Social Thought
WGST 480 Feminist Literary Theory
WGST 482 Problems in Contemporary Feminist Theory

• 36 semester hours of departmental course work (30 hours if this is a second major)
• WGST 101 Introduction to the Study of Women and Gender or WGST 201 Introduction to Lesbian, Gay, Bisexual, and Transgender Studies
• WGST 498 and WGST 499 (capstone courses in fall and spring respectively)
• At least one approved non-Western studies course
• At least one approved critical race studies course
• At least one approved theory course

Of the remaining required courses, no more than four (4) courses may be from a single department. All students must work out their individual courses of study with their faculty advisers. Each student’s course of study must be approved by the director of the major. Course requirement tracking forms are available in the SWG office for declared SWG majors.

The following courses are among those that can be used to fulfill requirements for the major. As course offerings may vary from year to year, students are urged to consult with their faculty advisers or with the director at the beginning of each semester.

Please note that not all courses listed below will be offered during the academic year. For a current list of courses that will be offered in fall 2005 and spring 2006, please visit the SWG web site at http://swg.rice.edu.
### V. Other Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>WGST 105</td>
<td>Language, Gender, and Sexuality</td>
</tr>
<tr>
<td>WGST 130</td>
<td>Mapping German Culture: Women and National Socialism</td>
</tr>
<tr>
<td>WGST 205</td>
<td>Language and Society</td>
</tr>
<tr>
<td>WGST 220</td>
<td>Gendered Perspectives on the Law</td>
</tr>
<tr>
<td>WGST 225</td>
<td>Women in Greece and Rome</td>
</tr>
<tr>
<td>WGST 300</td>
<td>Medieval Women Writers</td>
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<tr>
<td>WGST 301</td>
<td>Arthurian Literature</td>
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<tr>
<td>WGST 305</td>
<td>Chaucer</td>
</tr>
<tr>
<td>WGST 324</td>
<td>Sociology of Gender</td>
</tr>
<tr>
<td>WGST 325</td>
<td>Sociology of the Family</td>
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<tr>
<td>WGST 327</td>
<td>20th Century Women Writers</td>
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<tr>
<td>WGST 328</td>
<td>Latin American Genders</td>
</tr>
<tr>
<td>WGST 329</td>
<td>Literature and Culture of the American West</td>
</tr>
<tr>
<td>WGST 330</td>
<td>Mapping German Culture: Courtship, Love, and Marriage in the Age of Chivalry</td>
</tr>
<tr>
<td>WGST 331</td>
<td>The Psychology of Gender</td>
</tr>
<tr>
<td>WGST 332</td>
<td>Self, Sex, and Society in Ancient Greece</td>
</tr>
<tr>
<td>WGST 333</td>
<td>Masculinities</td>
</tr>
<tr>
<td>WGST 335</td>
<td>The Lifecycle: A Biocultural View</td>
</tr>
<tr>
<td>WGST 336</td>
<td>History as a Cultural Myth</td>
</tr>
<tr>
<td>WGST 341</td>
<td>Gender and Politics</td>
</tr>
<tr>
<td>WGST 348</td>
<td>Subjectivity in Modern and Postmodern Art and Thought</td>
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<tr>
<td>WGST 349</td>
<td>Women Writers: 1400–1900</td>
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<tr>
<td>WGST 350</td>
<td>Gender and Symbolism</td>
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<tr>
<td>WGST 358</td>
<td>Mapping German Culture: European Women Filmmakers</td>
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<tr>
<td>WGST 361</td>
<td>New German Cinema</td>
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<tr>
<td>WGST 365</td>
<td>Gender, Subjectivity, and the History of Photography</td>
</tr>
<tr>
<td>WGST 366</td>
<td>Topics in American Literature</td>
</tr>
<tr>
<td>WGST 367</td>
<td>American Ecofeminism</td>
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<tr>
<td>WGST 368</td>
<td>Mythologies</td>
</tr>
<tr>
<td>WGST 369</td>
<td>Seminar on Beauty and Fragmentation in Modern Art</td>
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<tr>
<td>WGST 372</td>
<td>Survey of Victorian Fiction</td>
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<td>WGST 380</td>
<td>Culture, Security, and Human Rights</td>
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<td>WGST 389</td>
<td>Generation X in Literature and Culture</td>
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<td>WGST 390</td>
<td>Hispanic Cinema</td>
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<tr>
<td>WGST 392</td>
<td>History of Sexuality in America</td>
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<tr>
<td>WGST 400</td>
<td>Constructing Identities in Modern Fiction</td>
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<tr>
<td>WGST 405</td>
<td>Austen Only</td>
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<tr>
<td>WGST 410</td>
<td>The Literary and Historical Image of the Medieval Woman</td>
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<tr>
<td>WGST 412</td>
<td>Women and Women’s Voices in French Literature</td>
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<tr>
<td>WGST 420</td>
<td>Women and Gender in 19th-Century Europe</td>
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<td>WGST 422</td>
<td>Feminist Economics</td>
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<td>WGST 440</td>
<td>Women in Music</td>
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<td>WGST 442</td>
<td>Women in Russian Literature</td>
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<td>WGST 444</td>
<td>Family Inequality</td>
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<tr>
<td>WGST 448</td>
<td>Disease and Difference: The Body in Visual Culture</td>
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<tr>
<td>WGST 462</td>
<td>20th-21st-Century American Literary Studies</td>
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<tr>
<td>WGST 465</td>
<td>Gender and Health</td>
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<td>WGST 470</td>
<td>Sex, Sanctity, and Psychoanalysis</td>
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<tr>
<td>WGST 485</td>
<td>Gender and Hollywood Cinema in the 1950s</td>
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<tr>
<td>WGST 495</td>
<td>Independent Study</td>
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<tr>
<td>WGST 496</td>
<td>Applied Women’s and Gender Studies</td>
</tr>
<tr>
<td>WGST 497</td>
<td>Directed Reading</td>
</tr>
<tr>
<td>WGST 498</td>
<td>Research in the Study of Women and Gender (F)</td>
</tr>
<tr>
<td>WGST 499</td>
<td>Research in the Study of Women and Gender (S)</td>
</tr>
</tbody>
</table>

### Requirements for Graduate Certificate in the Study of Women and Gender

The graduate certificate program in the Study of Women and Gender (SWG) is designed to provide interdisciplinary training in the field of women and gender studies to students pursuing a PhD degree at Rice University. Students who have been admitted into a PhD program are eligible to apply to the SWG graduate certificate program. The SWG graduate certificate is not a free-standing degree program; in addition to fulfilling the SWG requirements outlined below, candidates will be required to successfully complete the PhD program into which they have been admitted in order to receive the graduate certificate in SWG. Further information is available on request from the SWG program. For PhD requirements, see the relevant department. For general university requirements, see Graduate Degrees in this publication.
The program awards graduate fellowship stipends, within the limits of available funds, to certificate students during the prospectus-writing semester. Although timelines vary depending on the student’s home department, this semester normally occurs during the semester following the completion of coursework and before passing the qualifying examinations in the PhD program. During the prospectus-writing semester graduate certificate students will be enrolled in WGST 502 “Gender, the Disciplines, and Interdisciplinarity.” Graduate certificate students will be eligible to work as teaching assistants for an SWG undergraduate core or cross-listed course, or in some cases, to teach a course of their own upon approval of the Steering Committee.

For the graduate certificate in SWG, candidates must complete:

- 9 credit hours of courses in SWG, including two core courses (WGST 501 and WGST 502) and one cross-listed elective course (see list of approved courses below)
- 3 non-credit hours for participation in annual colloquium

SWG certificate students are strongly encouraged to include a member of the SWG faculty on their dissertation committee, and to consult regularly with the faculty member as they pursue their dissertation work.

The following courses are those that can be used to fulfill requirements for the graduate certificate. In most cases, students will be able to complete these requirements within the normal time limits for coursework in their PhD program. All students must work out their individual courses of study with the SWG Director and the graduate adviser in their home department. Each student’s course of study must be approved by the SWG Director. Please note that not all courses listed below will be offered during the academic year. For a current list of courses that will be offered in fall 2005 and spring 2006, please visit the SWG web site at http://swg.rice.edu.

I. Courses that Satisfy the Core Graduate Certificate Requirements

WGST 501 Feminist Debates
WGST 502 Gender, the Disciplines, and Interdisciplinarity

II. Courses that Satisfy the Cross-listed Elective Course Requirement

WGST 517 Medieval Women Writers
WGST 520 Shakespeare and Difference
WGST 522 Feminist Economics
WGST 523 Directed Reading in Women’s and Gender History
WGST 525 Self, Sex, and Society in Ancient Greece
WGST 542 Victorian Fiction
WGST 545 Women and Gender: Europe and Beyond
WGST 546 20th Century British Literature
WGST 551 U.S. Women’s History
WGST 556 Seminar in Language Variation
WGST 576 Topics in U.S. Women’s History

WGST 577 Buddhism, Gender, Society
WGST 580 Sex, Sanctity, and Psychoanalysis
WGST 581 Cultural Studies
WGST 585 Postcolonialism and After

III. Annual Colloquium Requirement

Graduate certificate students will participate in a colloquium involving a series of four speakers over the course of a year, to be offered annually at Rice and organized by SWG. Colloquium attendance by graduate certificate students constitutes an official requirement for the certificate. Colloquium topics will be determined by the SWG Steering Committee with a view to highlighting emerging knowledge in the field of women’s studies. The colloquium will provide graduate students with the opportunity to engage in sustained intellectual exchange with leading women’s studies scholars and to participate in cutting edge work in the field.
University courses provide opportunities for dialogue across disciplinary and departmental boundaries. They are an experiment in curriculum development, directed toward students interested in interdisciplinary subjects beyond their elected major.

See UNIV in the Courses of Instruction section.
VISUAL ARTS

THE SCHOOL OF HUMANITIES

CHAIR
Karin Broker

PROFESSORS
Karin Broker
Basilios N. Poulos
George Smith
Geoff Winningham

ASSOCIATE PROFESSORS
Brian M. Huberman
Darra Keeton
John Sparagana

ARTIST TEACHER
Paul Hester

VISITING LECTURER
Gary Feuge

DEGREES OFFERED: BA, BFA

Department of Visual Arts majors are students who declare a major in the studio arts (drawing, digital video and film production, painting, photography, printmaking, or sculpture). Each student will discuss with the faculty advisor the selection of courses and any other matters of concern in the student’s academic life, such as study and travel abroad, scholarships and internships, career goals or options, etc.

DEGREE REQUIREMENTS FOR BA IN VISUAL ARTS

For general university requirements, see Graduation Requirements (pages 14–15).

Single Major in Visual Arts
(12 courses are required)

ARTV 225 Basic Drawing I
ARTV 205 Photography I, ARTV 311 Intaglio I, or ARTV 327 Documentary Production
ARTV 301 Painting, or ARTV 325 Life Drawing or ARTV 337 Color Drawing or ARTV 425 Advanced Drawing
ARTV 365 Sculpture I

Six (6) courses in studio arts (ARTV) and theater design (THEA 300 Introduction to Theater Design, THEA 304 Costume Design, THEA 305 Lighting Design, or THEA 306 Scenic Design)—open selections qualified by course prerequisites and in consultation with a studio art faculty advisor.

Two (2) courses in art or film criticism/theory (ARTV 390 Investigating Drawing: Theory and Practice or ARTV 432 Film Genre: The Western) or art history (HART)—open selections qualified by course prerequisites and in consultation with a studio art facility advisor.

Double Major in Visual Arts
(10 courses required)

ARTV 225 Basic Drawing
ARTV 205 Photography I or ARTV 311 Intaglio I or ARTV 327 Documentary Production or ARTV 365 Sculpture I
ARTV 301 Painting, or ARTV 325 Life Drawing or ARTV 337 Color Drawing or ARTV 425 Advanced Drawing

Five (5) courses in studio arts (ARTV) and theater design (THEA 300 Introduction to Theater Design or THEA 304 Costume Design or THEA 305 Lighting Design or THEA 306 Scenic Design)—open selections qualified by course prerequisites and in consultation with a studio art faculty advisor.

Two 2 courses in art or film criticism/theory (ARTV 390 Investigating Drawing: Theory and Practice or ARTV 432 Film Genre: The Western) or art history (HART)—open selections qualified by course prerequisites and in consultation with a studio art facility advisor.

TRANSFER CREDIT

No more than two (2) courses may be transferred out of the ten (10 for a single studio major, or eight (8) for a double major. The two (2) transfer credit courses must be studio practice courses required for all majors. Advanced placement credit may not be used by art majors to fulfill department requirements.
DEPARTMENT REQUIREMENTS FOR A BACHELOR OF FINE ARTS DEGREE (BFA)

Students with a BA degree in art from Rice University or an equivalent degree from another university may enter the Bachelor of Fine Arts (BFA) program, which consists of a fifth year of intensive study in the creative arts. Students with an undergraduate major other than art may, in exceptional cases, be admitted.

For the BFA degree, a student must complete a total of 30 semester hours in approved courses, at the 300 level or above. In addition to the usual departmental upper-level courses there are special fifth-year courses for BFA candidates only. The purpose of the fifth-year BFA is to provide an opportunity for concentrated independent work. The first semester is provisional. After the final critique of the first semester, the student will be informed if they will be allowed to continue in the BFA program.

Information about application forms, deadlines, and admission standards is available from the Office of Admission.

EXHIBITIONS, LECTURES, AND ARTS PROGRAMS AT RICE

The Department of Visual Arts mounts several art and photography exhibitions each year. Exhibitions and related activities organized by the Rice University Art Gallery enrich the teaching program of the Department of Visual Arts as well as the larger university and Houston community.

The department enjoys an ongoing close relationship with local museums and galleries. The department offers opportunities for students to work and study with local museums, galleries, and alternative art spaces by way of collaborative events and programs. The collections and special exhibitions of local museums are often the subject of course lectures.

Lectures, symposia, and talks are sponsored by the department and are designed to bring local, national, and international scholars, critics, and artists to campus to speak on a broad range of topics and current interests.

RICE CINEMA

Rice Cinema, a public alternative film program, is intimately connected with the curriculum both in film and media studies (HART) and in film and photography production (ARTV), and includes frequent guest lecturers, panel discussions, and media events.

Operating for 35 years, Rice Cinema has screened cult films and revivals as well as festivals and retrospectives. Founded as an integral part of the visual arts, Rice Cinema's mission has long crossed boundaries to bring people together to promote scholarly dialogue and cross-cultural interaction. The legendary vision of the de Menil family, Roberto Rossellini, Colin Young, and James Blue is fulfilled by the presence of this unique program on campus.

Each year we screen films from around the world including foreign features, shorts, documentaries, and animation. Rice Cinema reaches beyond the university’s hedges to the diverse communities of Houston. We offer a living alternative to the monolithic commercial cinema of Hollywood and have screened films from every continent. Among the internationally known filmmakers who have appeared on our campus over the years are include Werner Herzog, Rakhshan Banietemad, Atom Egoyan, Shirin Neshat, Martin Scorsese, Andy Warhol, George Lucas, and Dennis Hopper.

Rice Cinema works in concert with our academic programs to enrich our students’ undergraduate experience. Our film and media studies students are provided state-
of-the-art screening facilities to examine and study the historical and methodological aspects of movies from around the world in 16, 35, or 70 millimeter with Dolby Digital Sound. Film production students can showcase their work during the academic year on our new silver screen in recently renovated projection facilities.

See ARTV, HART, and THEA in the Courses of Instruction section for course descriptions.
FACULTY

EMERITUS FACULTY

BS (1945) Texas Technological College; MS (1944) University of Texas at Austin; PhD (1950) University of Michigan

Acover, Madeleine, 1975–2004. Professor Emerita of French
Licence de lettres modernes (1962), Diplôme d’études supérieures (1963), Doctorat de 3e cycle (1965) France

BA (1953) Willamette University; MA (1954) Stanford University; Certificat d’études politiques (1955) University of Bordeaux; PhD (1964) University of California at Berkeley

Andrews, John E., 1982–91. Professor Emeritus of Environmental Science and Engineering
BSCE (1951), MS (1954) University of Arkansas; PhD (1964) University of California at Berkeley

BA (1963), University of Michigan, MA (1965) Stanford University, PhD (1970) University of Michigan

Awapara, Jorge, 1957–84. Professor Emeritus of Biochemistry
BS (1941), MS (1942) Michigan State University; PhD (1947) University of Southern California

BA (1955) University of Colorado; MBA (1959) Harvard Graduate School of Business Administration

BS (1957) Duke University; MS (1959), PhD (1963) Yale University

Bale, Allen M., 1947–78. Athletic Director Emeritus
BS (1930) Rice Institute; MA (1939) Columbia University

Bally, Albert W., 1981–96. Harry Carothers Wiess Professor Emeritus of Geology
PhD (1953) University of Zurich, Switzerland

Barker, J. R., 1949–86. Professor Emeritus of Health and Physical Education
BS (1949) Rice Institute; MEd (1954) University of Texas at Austin

Beckmann, Herbert W. K., 1957–85. Professor Emeritus of Mechanical Engineering
Cand. Ing. (1939), Dipl. Ing. (1944), Dr. Ing. (1957) Hanover University, Germany

BS (1968) University of California at Berkeley; MS (1971), PhD (1972) Cornell University

BA (1959) Kansas University; MFA (1965) Columbia University

BA (1960), MA (1961) Texas Christian University; PhD (1965) University of Texas at Austin

Brotzen, Franz Richard, 1954–86. Stanley C. Moore Professor Emeritus of Materials Science
BS (1950), MS (1953), PhD (1954) Case Institute of Technology

Brown, Katherine Tsonoff, 1963–89. Professor Emerita of Art History and Honorary Associate of Will Rice College
BA (1938) Rice Institute; MFA (1940) Cornell University

BA (1957), BSEE (1958), Rice Institute; MS (1960) Rice University; PhD (1965) Stanford University

Burt, George, 1984–97. Professor Emeritus of Theory and Composition

AB (1957) Princeton University; MA (1961), PhD (1964) Yale University

BS (1953) Southwest Missouri State University; MS (1955) University of Illinois; PhD (1958) University of Oklahoma

Cason, Carolyn, 1956–74. Lecturer Emerita in Dietetics
BS (1954) University of Texas at Austin; MA (1959) Columbia University

Chapman, Alan Jesse, 1946–95. Harry S. Cameron Professor Emeritus of Mechanical Engineering
BSME (1945) Rice Institute; MS (1949) University of Colorado; PhD (1953) University of Illinois

Clark, Howard Charles, 1966–88. Professor Emeritus of Geology and Geophysics
BS (1959) University of Oklahoma; MA (1965), PhD (1967) Stanford University
Class, Calvin M., 1952–85. Professor Emeritus of Physics
AB (1943), PhD (1951) John Hopkins University

BA (1961) University of Colorado; PhD (1965) Cornell University

BA (1954) Rice Institute; PhD (1957) University of California at Berkeley

Daichman, Graciela S., 1973–99. Lecturer Emerita of Hispanic Studies

BA (1961) University of Texas at Austin; MA (1966), PhD (1969) Princeton University

Davis, Philip W., 1969–2003. Agnes Cullen Arnold Professor Emeritus of Linguistics
BA (1961) University of Texas at Austin; PhD (1965) Cornell University

Davis, Jr., Sam H., 1957–2000. Professor Emeritus in Chemical Engineering and Computational and Applied Mathematics
BA (1952), BS (1953) Rice Institute; ScD (1957) Massachusetts Institute of Technology

De Bremaecker, Jean-Claude, 1959–94. Professor Emeritus of Earth Science
Ingenieur Civil des Mines (1948) University of Louvain, Belgium; MS (1950) Louisiana State University; PhD (1952) University of California at Berkeley

BS (1962); MS (1964), University of Miami; PhD (1966) University of Utah

BS (1952) California Institute of Technology; PhD (1956) Duke University

AB (1958) Duke University; AM (1960), PhD (1964) Harvard University

Drew, Katherine Fischer, 1950–96. Lynette S. Autrey Professor Emerita of History
BA (1944), MA (1945) Rice Institute; PhD (1950) Cornell University

Dyson, Derek C., 1966–2000. Professor Emeritus of Chemical Engineering
BA (1955) University of Cambridge; PhD (1966) University of London

BA (1938) Oklahoma State University; MFA (1954) Yale University

Farwell, Joyce, 1994–2005. Professor Emerita of Voice
BME (1956), MME (1958) University of Oklahoma; DMA (1976) College Conservatory of Music, University of Cincinnati

BA (1953) Hanover College; MS (1958), PhD (1961) Purdue University

Fliegel, Raphael, 1975–89. Professor Emeritus of Violin

Freeman, John W., 1964–2000. Professor Emeritus of Space Physics and Astronomy and Associate of Lovett College
BS (1957) Beloit College; MS (1961); PhD (1965) University of Iowa

BS (1948) Trinity College, Dublin; MSc (1949) Carnegie Mellon University; PhD (1953) Princeton University

BS (1959) Birmingham University, England; PhD (1963) Cambridge University

Gordon, Chad, 1970–99. Professor Emeritus of Sociology
BS (1957), MA (1962), PhD (1965) University of California at Los Angeles

BA (1939), MA (1942) Montclair State College; MS (1946), PhD (1955) Cornell University

BA (1952) Utica College; MA (1957), PhD (1961) University of Wisconsin at Madison

Hackerman, Norman, 1970–85. President Emeritus and Distinguished Professor Emeritus of Chemistry
AB (1932), PhD (1935) Johns Hopkins University

Hale, Elton B., 1963–79. Professor Emeritus of Accounting
BS (1937), MA (1940) Southwest Texas State Teachers College; PhD (1948) University of Texas at Austin

BA (1952) Universidad de la Republica; MA (1987) Rice University

BS, MA (1963) Carnegie Institute of Technology; PhD (1966) Stanford University
BA (1956) Rice Institute; MA (1959) Indiana University

Haymes, Robert C., 1968–98. Professor Emeritus of Space Physics and Astronomy  
BA (1952), MS (1953), PhD (1959) New York University

BS (1950), MS (1958) University of Texas at Austin; PhD (1961) University of Michigan

Heymann, Dieter, 1966–98. Professor Emeritus of Geology and Geophysics  
MS (1954), PhD (1958) University of Amsterdam, The Netherlands

BA (1961), PhD (1963) John Hopkins University

Hodges, Lee, 1930–71. Professor Emeritus of French  
BS (1930) Harvard University; MA (1934) Rice Institute

SB (1945), SM (1947) Massachusetts Institute of Technology; PhD (1956) Pennsylvania State University

Huddle, Donald L., 1964–92. Professor Emeritus of Economics  
BS (1959), MA (1960) University of California at Los Angeles; PhD (1964) Vanderbilt University

BA (1948) University of California at Los Angeles; MA (1950), PhD (1952) Columbia University

Jitcoff, Andrew N., 1950–72. Professor Emeritus of Russian  
Bachelor (1928), Master (1931) Prague Institute of Technology, Czechoslovakia

BA (1957) Millsaps College; MA (1958), PhD (1960) Eastman School of Music, University of Rochester

BS (1960), MS (1962) University of Cincinnati; MS (1965), PhD (1968) University of Michigan


Kiperman, Anita, 1976–98. Lecturer Emerita of Spanish  
BA (1957) Universidad Nacional de Buenos Aires; MA (1971) University of Houston

Kobayashi, Riki, 1951–97. Louis Calder Professor Emeritus in Chemical Engineering  
BS (1944) Rice Institute; MSE (1947), PhD (1951) University of Michigan

BA (1951) Yale University; PhD (1958) University of California at Berkeley

Laughery, Kenneth R., 1982–2002. Herbert S. Autrey Professor Emeritus of Psychology and Research Professor  
BS (1957), MS (1959), PhD (1961) Carnegie Mellon University

Leal, Maria Teresa, 1965–96. Professor Emerita of Spanish and Portuguese  
BA (1946) Pontificia Universidade Católica, Brazil; PhD (1963) Universidade Federal de Rio de Janeiro, Brazil

Lecuyer, Maurice Antoine, 1962–79. Professor Emeritus of French  
Baccalauréat es lettres (1937), Licence es lettres (1943), Diplôme d’études superieures (1944) Universite de Paris, France; PhD (1954) Yale University

BS (1962) North Texas State University; ME (1967) Sam Houston State University; EdD (1974) Louisiana State University

Leeds, Jr., J. Venn, 1964–89. Professor Emeritus of Electrical and Computer Engineering  
BA (1955), BSEE (1956) Rice Institute; MSE (1960), PhD (1963) University of Pittsburgh; JD (1972) University of Houston

BA (1967), MA (1969 Rice University; PhD (1974) University of Oregon

Lewis, Edward S., 1948–90. Professor Emeritus of Chemistry  
BS (1940) University of California at Berkeley; PhD (1947) Harvard University


BA (1963) University of Cincinnati; MA (1965) University of Washington; MA (1968) University of Cincinnati

Meixner, John, 1968–95. Professor Emeritus of English  
BA (1951) City College of New York; MA (1953), PhD (1957) Brown University

Merwin, John E., 1955–98. Professor Emeritus of Civil and Environmental Engineering  
BA (1952), BSM.E. (1953), MSME (1955) Rice Institute; PhD (1962) University of Cambridge
  BA (1955), PhD (1962) California Institute of Technology

Miele, Angelo, 1964–93. Foyt Family Professor Emeritus in Mechanical Engineering and Materials Science and
  Computational and Applied Mathematics
  Dr. CE (1944), Dr. AE (1946) University of Rome

Milburn, Ellsworth, 1975–99. Professor Emeritus of Composition and Theory
  BA (1962) University of California at Los Angeles; MA (1968) Mills College; DMA (1970) College-Conservatory of Music,
  University of Cincinnati

  BA (1957), MA (1959) North Texas State University; BD (1961), PhD (1965) Yale University

  BA (1956) Adelphi University; Certificate (1958) Universita de Perugia; Certificate (1958) Yale University School of
  Languages; Certificate (1960) Goethe Institute, Blaubeuren, Germany

Nielsen, Jr., Niels C., 1951–91. Professor Emeritus of Philosophy and Religious Thought and Honorary Associate of
  Will Rice College
  BA (1942) George Pepperdine University; B.D. (1946), PhD (1951) Yale University

  BS (1957), MS (1958) University of Michigan; PhD (1962) University of California at Berkeley

O’Dell, Charles Robert, 1982–2000. Andrew Hays Buchanan Professor Emeritus of Astrophysics
  BSEd (1959) Illinois State University; PhD (1962) University of Wisconsin at Madison

Oliver, Covy, 1979–81. Radoslav A. Tsanoff Professor Emeritus of Public Affairs
  BA (1933), JD (1936) University of Texas at Austin; LLM (1953), SJD (1954) Columbia University; LLD (1976) Southern
  Methodist University

  BS (1957), PhD (1962) University of Wisconsin

Parsons, David G., 1953–81. Professor Emeritus of Art and Honorary Associate of Will Rice College
  BS (1934), MS (1937) University of Wisconsin

  BSEE (1958), MSEE (1959) University of Arkansas; PhD (1962) Purdue University

Pfeiffer, Paul E., 1947–97. Professor Emeritus of Computational and Applied Mathematics
  BSEE (1938) Rice Institute; B.D. (1943) Southern Methodist University; MSEE (1948), PhD (1952) Rice Institute

Philpott, Charles William, 1964–96. Professor Emeritus of Ecology and Evolutionary Biology
  BA (1957), MS (1958) Texas Technological College; PhD (1962) Tulane University

  BA (1951) Harvard University; MA (1952) Columbia University; PhD (1958) University of Virginia at Madison

Poindexter, Hally Beth W., 1965–98. Professor Emeritus of Kinesiology
  BA (1947) Rice Institute; BS (1949) University of Houston; MA (1950) University of Northern Colorado; EdD (1957)
  Columbia University

  BS (1956) University of Notre Dame; MS (1961), PhD (1966) University of Chicago

Raaphorst, Madeleine Rousseau, 1963–89. Professor Emerita of French
  Baccalauréat es lettres (1939) Universite de Poitiers, France; Licence en droit (1943) Universite de Paris, France;
  PhD (1959) Rice Institute

  BA (1954), BSEE (1955), MA (1957), PhD (1959) Rice Institute

Rachford, Jr., Henry H., 1964–82. Professor Emeritus of Mathematical Sciences
  BS (1945), MA (1947) Rice Institute; Sc.D. (1950) Massachusetts Institute of Technology

  BArch (1947) Carnegie Institute of Technology; MArch (1967) Texas A&M University

Rea, Joan, 1968–2000. Professor Emerita of Hispanic Studies
  BA (1954) New York University; MA (1964) University of Houston; PhD (1970) University of Texas at Austin

  BA (1954) Augustana College; PhD (1957) University of Southern California

  BA (1958) Rosary College; MMus (1960), PhD (1966) University of Illinois
Sellers, James, 1971–1993. Former Professor of Religious Studies
BEE (1947) Georgia Institute of Technology; MS (1952) Florida State University; PhD (1958) Vanderbilt

Sims, James R., 1942–87. Herman and George R. Brown Professor Emeritus of Civil and Environmental Engineering
BS (1941) Rice Institute; MS (1950), PhD (1956) University of Illinois

AB (1956) Washington University; PhD (1966) Harvard University

Spence, Dale W., 1963. Professor Emeritus of Kinesiology
BS (1956) Rice Institute; MS (1959) North Texas State University; EdD (1966) Louisiana State University

Stebblings, Ronald E., 1968–95. Professor Emeritus of Space Physics and Astronomy
BSc (1952), PhD (1956) University College, London

BA (1954) Colgate University; MA (1965), PhD (1970) Indiana University

Stormer, Jr., John C., 1983–95. Croneis Professor Emeritus of Geology
AB (1963) Dartmouth College; PhD (1971) University of California at Berkeley

BA (1949) Hobart College; MA (1952), PhD (1955) University of Missouri

Thrall, Robert, 1969–84. Noah Harding Professor Emeritus of Mathematical Sciences and Professor Emeritus of Administrative Science
BA, MA (1935) Illinois College; PhD (1937) University of Illinois

BA (1943), MFA (1949) Princeton University

Trammell, George T., 1961–93. Professor Emeritus of Physics
BA (1944) Rice Institute; PhD (1950) Cornell University

Trepel, Shirley, 1975–94. Professor Emerita of Violoncello
BMus (1945) Curtis Institute of Music

Profesorado (1956) La Plata National University, Argentina; PhD (1968) Stanford University

AB (1952) Dartmouth College; MS (1953), PhD (1959) Northwestern University

BEng (1962), MS (1964) Stevens Institute of Technology; MA (1967) University of Michigan; PhD (1970) University of London

BA (1948) University of the Pacific; MA (1950) Claremont Graduate School; PhD (1957) University of California at Berkeley

Wadsworth, Philip A., 1964–73. Professor Emeritus of French
AB (1935), PhD (1939) Yale University

BS (1945) Rice Institute; MA (1949), PhD (1952) University of Texas at Austin

Wall, Frederick T., 1972–79. Professor Emeritus of Chemistry
BC (1933), PhD (1937) University of Minnesota

Walters, G. King, 1963–99. Sam and Helen Worden Professor Emeritus of Physics
BA (1953) Rice Institute; PhD (1956) Duke University

BS (1959) National Taiwan University; PhD (1965) Johns Hopkins University

BA (1962) Rice University; MS (1964), PhD (1965) New York University

BA (1951) Yale University; MA (1956) Columbia University; PhD (1975) New York University

Wilson, Joseph B., 1954–98. Professor Emeritus of German
BA (1950), MA (1953) Rice Institute; PhD (1960) Stanford University

Winkler, Michael, 1967–2000. Professor Emeritus of German
BA (1961) St. Benedict's College; MA (1965), PhD (1966) University of Colorado

BEngPhys (1962) Cornell University; PhD (1966) California Institute of Technology

BA (1951), MA (1954) University of Minnesota; PhD (1965) Carnegie Institute of Technology

Faculty

Aazhang, Behnaam, 1985. J.S. Abercrombie Professor in Electrical and Computer Engineering

Abreu, Vitor dos Santos, 2000. Adjunct Assistant Professor of Earth Science

Achard, Michel, 1997. Associate Professor of French Studies and Linguistics

Adler, Eric, 2005. Lecturer in History

Adnan, Sarmad, 2001. Adjunct Assistant Professor of Mechanical Engineering and Materials Science

Adve, Vikram S., 1993. Adjunct Assistant Professor of Computer Science

Akin, John Edward, 1983. Professor of Mechanical Engineering and Computational and Applied Mathematics
BS (1964) Tennessee Polytechnic Institute; MS (1966) Tennessee Technological University; PhD (1968) Virginia Polytechnic Institute

Albin, Verónica S., 1998. Senior Lecturer of Spanish
BA (1989) Millersville University of Pennsylvania

Alemany, Lawrence B., 1994. NMR Manager, Senior Research Scientist, and Lecturer of Chemistry
BS (1975) City College of New York; PhD (1980) University of Chicago

Alexander, David, 2003. Andrew Hays Buchanan Associate Professor of Astrophysics and Associate Professor of Physics and Astronomy
BSc (1985), PhD (1988) University of Glasgow

Alford, John R., 1985. Associate Professor of Political Science
BS (1975), MPA (1977) University of Houston; MA (1980), PhD (1981) University of Iowa


Al-Zand, Karim, 2002. Lynette S. Autrey Assistant Professor of Composition and Theory

Amos, Christopher I., 2001. Adjunct Professor of Statistics
BA Reed College; MS, PhD Louisiana State University Medical Center

Anderson, John B., 1975. W. Maurice Ewing Chair in Oceanography and Professor of Earth Science
BS (1968) University of South Alabama; MS (1970) University of New Mexico; PhD (1972) Florida State University

Anderson, Shannon, 2001. Associate Professor of Management

Anding, Roberta H., 1997. Lecturer of Kinesiology
BS (1977), MS (1980) Louisiana State University

Antoulas, Athanasios C., 1985. Professor in Electrical and Computer Engineering
Dip. in Electrical Engineering (1975), Dip. in Mathematics (1975), PhD (1980) Eidgenössische Technische Hochschule, Switzerland

Anvari, Bahman, 1998. Associate Professor in Bioengineering

Aranda, Jr., José E., 1994. Associate Professor of English

Aresu, Bernard, 1977. Professor of French Studies and Master of E. O. Lovett College
Licence es lettres (1967) Université de Montpellier, France; PhD (1975) University of Washington

Armeniades, Constantine D., 1969. Professor in Chemical Engineering
BS (1961) Northeastern University; MS (1967) Case Institute of Technology; PhD (1969) Case Western Reserve University
Armstrong, James D., 2002. Adjunct Assistant Professor of Biochemistry and Cell Biology
BSc (1992), PhD (1996) University of Glasgow, Scotland

Ashmore, Jean, 2002. Lecturer on Education Certification
BA (1973) University of California at Los Angeles; MS (1976) California State University

Athanasiou, Kyriacos A., 1999. Karl F. Hasselmann Professor of Bioengineering

Atherolt, Robert, 1984. Professor of Oboe
BMus (1976), MMus (1977) Juilliard School of Music

Atherton, Jr., W. Clifford, 1988. Lecturer on Management
BA (1971) Rice University; MBA (1977), PhD (1983) University of Texas at Austin

Atkinsson, E. Neely, 1985. Adjunct Professor of Statistics
BA (1975), MA, PhD (1981) Rice University

Audet, Charles, 2001. Adjunct Assistant Professor of Computational and Applied Mathematics
BS (1992) University of Ottawa, Canada; MS (1993), PhD (1997) École Polytechnique, Montreal, Canada

Austgen, David M., 1997. Adjunct Professor of Management

Avé Lallemant, Hans G., 1970. Professor of Earth Science
BA (1960), MA (1964), PhD (1967) University of Leiden

Awad, Maher M., 2005. Lecturer of Arabic
BA (1988) California State University, MA (1990) University of Colorado

Badgwell, Thomas A., 2000. Adjunct Associate Professor in Chemical Engineering
BS (1982) Rice University; MS (1990), PhD (1992) University of Texas at Austin

Bado, Richard, 2005. Professor of Opera and Director of the Opera Program
BM (1981) West Virginia University; MM (1983) Eastman School of Music

Baggerly, Keith A., 2004. Adjunct Associate Professor of Statistics
BA (1990) Rice University; MA (1993) Rice University; PhD (1994) Rice University

Baggett, L. Scott, 1999. Lecturer on Statistics
BS (1980) University of Oklahoma; MS (1985) Texas A&M University; MS (1994) University of Arkansas;
PhD (1999) Rice University

Bagozzi, Richard P., 1999. J. Hugh Liedtke Professor of Management and Professor of Psychology
PhD (1976) Northwestern University

Bailey, Nancy Gisbrecht, 1997. Lecturer on Vocal Literature
BA (1975) University of the Redlands; MA (1981), PhD (1985) University of Southern California

Bailey, Walter B., 1982. Associate Professor of Musicology and Chair of Musicology
BMus (1976) Lewis and Clark College; MA (1979), PhD (1982) University of Southern California

BA (1990), JD (1993) University of Houston; MBA (1997) Rice University

Baker, Lovett, 1986. Lecturer on Management
AB (1952) Princeton University

Banks, Stephen J., 1991. Adjunct Professor in the Practice of Management
BS (1962) Massachusetts Institute of Technology; MBA (1967) Harvard University

Baraniuk, Richard G., 1992. Victor C. Cameron Professor in Electrical and Computer Engineering and
Associate of Hanszen College

Baring, Matthew G., 2000. Assistant Professor of Physics and Astronomy

Barnett, Gregory, 2002. Assistant Professor of Musicology

Baron, Tiqva, 2003. Lecturer of Hebrew
BA (1968) Hebrew University, Jerusalem; MA (1976) Tel Aviv University

Barrera, Enrique V., 1990. Professor of Mechanical Engineering and Materials Science
BS (1979), MS (1985), PhD (1987) University of Texas at Austin

Barrett, Deborah, 1998. Senior Lecturer in Management, Director and Instructor of Management Communications
BA (1972), MA (1977) University of Houston; PhD (1983) Rice University

Barron, Andrew R., 1995. Charles W. Duncan, Jr.—Welch Professor of Chemistry and Professor of Materials Science
BS (1983), PhD (1986) Imperial College of Science and Technology, University of London
Barry, Michael A., 1998. Associate Professor in Bioengineering  

Bartel, Bonnie, 1995. Professor of Biochemistry and Cell Biology  
BA (1983) Bethel College; PhD (1990) Massachusetts Institute of Technology

Batsell, Richard R., 1980. Jesse H. Jones Distinguished Associate Professor of Management and Associate Professor of Psychology  
BA, BBA (1971), PhD (1976) University of Texas at Austin

Bayazitoglu, Yildiz, 1977. Harry S. Cameron Professor in Mechanical Engineering  
BS (1967) Middle East Technological University; MS (1969), PhD (1974) University of Michigan

Beal, Daniel J., 2004. Assistant Professor of Psychology  
BA (1994) Florida State University; MS (1996); PhD (2000) Tulane University

Beason-Armendarez, Beth, 2001. Lecturer of Biochemistry and Cell Biology  
BS (1990) Auburn University; PhD (1996) University of Alabama

Beckingham, Kathleen M., 1980. Professor of Biochemistry and Cell Biology  
BA (1967), PhD (1972) University of Cambridge

Bedient, Philip B., 1975. Herman Brown Professor of Engineering  
BS (1969), MS (1972), PhD (1975) University of Florida

Bedner, J. Bee, 1997. Adjunct Professor in Computational and Applied Mathematics  
BS (1962) Southwest Texas State University; MA (1964), PhD (1968) University of Texas at Austin

Begley, Charles E., 1989. Adjunct Associate Professor of Economics  
BS (1969) Northern Arizona University; MA (1972), PhD (1978) University of Texas

Behar, Victor, 1998. Assistant Professor of Chemistry  

Beier, Margaret E., 2004. Assistant Professor in Psychology  
BA (1988) Colby College; MS (1999); PhD (2003) Georgia Institute of Technology

Bejan, Camelia, 2005. Assistant Professor of Economics  

Bennett, George N., 1978. Professor of Biochemistry and Cell Biology  
BS (1968) University of Nebraska; PhD (1974) Purdue University

Bentley, Colene, 2005. Visiting Assistant Professor in English  

Berry, Donald, 2000. Adjunct Professor of Statistics  
BA (1965) Dartmouth College; MA (1967) Yale University

Bertin, John J., 2003. Adjunct Professor of Mechanical Engineering and Materials Science  
BA (1960); MS (1962); PhD (1996) Rice University

Bidani, Akhil, 1994. Adjunct Professor in Electrical and Computer Engineering  
BS (1969) Punjab University, India; PhD (1975) University of Houston; MD (1981) University of Texas Medical Branch at Galveston

Billups, W. Edward, 1970. Professor of Chemistry  

Bilin, Karma Singh (John), 1999. Associate Professor of Architecture  

Bissada, K. K., 1996. Adjunct Professor of Earth Science  
BSc (1962) University of Assuit, Egypt; MS (1965), PhD (1967) Washington University

BS (1968) University of California at Berkeley; MS (1971), PhD (1972) Cornell University

Black, David C., 1970. Adjunct Professor of Physics and Astronomy  
BS (1965), MS (1967), PhD (1970) University of Minnesota

Black, Earl, 1993. Herbert S. Autrey Professor of Political Science  
BA (1964) University of Texas at Austin; PhD (1968) Harvard University

Bloem, Suzana Maria Campos Pinto, 1999. Lecturer of Portuguese  
BA (1970) Pontificia Universidade Católica de Campinas, Brazil

Bogomolnaia, Anna, 2002. Associate Professor of Economics  

Boilech, Carols J., 2005. Assistant Professor of Physics and Astronomy  
Boles, John B., 1981. William Pettus Hobby Professor of History and Associate of Will Rice College  
BA (1965) Rice University; PhD (1969) University of Virginia

Bondos, Sarah, 2004. Faculty Fellow in Biochemistry and Cell Biology  

Bongmba, Elias K., 1995. Associate Professor of Religious Studies  

Bonner, Billy E., 1985. Professor of Physics and Astronomy and Director of T.W. Bonner Nuclear Lab  
BS (1961) Louisiana Polytechnic Institute; MA (1963), PhD (1965) Rice University

Boom, Marc L., 2000. Adjunct Professor in the Practice of Management  

Borcea, Liliana, 1996. Associate Professor of Computational and Applied Mathematics  

Bordeaux, Janice, 1994. Adjunct Assistant Professor of Psychology  

Bordelon, Jr., Cassius B., 1972. Lecturer in Kinesiology  
BS (1964) Louisiana State University; PhD (1972) Baylor College of Medicine

Borick, Aladin M., 1997. Adjunct Associate Professor in Bioengineering and Mechanical Engineering and Materials Science  

Bole, Sharad, 2003. Assistant Professor of Management  

Bosshert, Michael, 1982. Professor of Mathematics  

Bottero, Jean-Yves, 1996. Adjunct Professor of Civil and Environmental Engineering  
Docteur d'Etat es Sciences Physiques (1979) Université de Nancy, France

Bowen, Claire L., 2004. Assistant Professor of Linguistics  

Boylan, Richard Thomas, 2005. Associate Professor of Economics  

Braam, Janet, 1990. Professor of Biochemistry and Cell Biology  
BS (1980) Southern Illinois University; PhD (1985) Sloan-Kettering Division of Cornell Graduate School of Medical Sciences

Brace, Paul, 1996. Clarence L. Carter Professor of Political Science  

Brandon, Alan D., 2002. Adjunct Assistant Professor of Earth Science  

Brandt, Anthony K., 1998. Associate Professor of Composition  

Branton, Regina, 2000. Assistant Professor of Political Science  

Brennan, Marcia, 2001. Associate Professor of Art History  

Brito, Dagobert L., 1984. George A. Peterkin Professor of Political Economy  

Brody, Baruch, 1975. Andrew W. Mellon Professor in Humanities  
BA (1962) Brooklyn College; MA (1965), PhD (1967) Princeton University

Brogdon-Gómez, N. Patricia, 2000. Lecturer of Spanish  

Brooker, Karin L., 1980. Professor of Visual Arts  
BEA (1972) University of Iowa; MFA (1980) University of Wisconsin at Madison

Brooks, Philip R., 1964. Professor of Chemistry  
BS (1960) California Institute of Technology; PhD (1964) University of California at Berkeley
Brown, Barry W., 1970. Adjunct Professor of Statistics  
BS (1959) University of Chicago; MS (1961), PhD (1963) University of California at Berkeley

BA (1969), MA (1972) Texas Tech University; PhD (1977) University of Pennsylvania

Brown, James N., 1992. Professor of Economics  
BA (1973) University of Redlands; MA (1975), PhD (1980) University of Chicago

Brownell, William, 2000. Adjunct Professor in Bioengineering  
SB (1968), PhD (1973) University of Chicago

Brownning, Logan D., 1990. Lecturer in Humanities  
BA (1977) University of the South; MA (1980) Oxford University; PhD (1991) University of North Carolina

Bryant, John B., 1981. Henry S. Fox, Sr., Professor of Economics and Professor of Management  

Burch, James L., 1990. Adjunct Professor of Physics and Astronomy  
BS (1964) St. Mary's University; PhD (1968) Rice University; MSA (1973) George Washington University

Burgund, E. Darcy, 2003. Assistant Professor of Psychology  
BA (1993) Skidmore College; PhD (2000) University of Minnesota

Burnett, Sarah A., 1972. Associate Professor of Psychology  
BS (1966) Memphis State University; MS (1970), PhD (1972) Tulane University

Buye, Leon, 1997. Joseph and Ida Kirkland Mullen Professor of Flute and Chamber Music and Chair of Woodwinds  

Byrd, Alexander X., 2001. Assistant Professor of History and Associate of Baker College  

Byrne, John H., 1994. Adjunct Professor of Psychology and in Electrical and Computer Engineering  
BS (1968), MA (1970), PhD (1973) Polytechnic Institute, Brooklyn

Byrne, Michael, 1999. Assistant Professor of Psychology  

Caldwell, Peter C., 1994. Professor of History and German and Slavic Studies  

Cannady, William Tillman, 1964. Professor of Architecture  
BArch (1961) University of California at Berkeley; March (1962) Harvard University

Caprette, David R., 1992. Lecturer in Biochemistry and Cell Biology  
BS (1974) Case Western Reserve University; MS (1979), PhD (1988) Cleveland State University

BA (1958), MA (1959) University College Galway; PhD (1964) Brown University

Carter, Richard, 1997. Adjunct Professor of Computational and Applied Mathematics  
BS (1979) Mississippi State University; PhD (1986) Rice University

Cartwright, Jr., Robert S., 1980. Professor of Computer Science  

Casas, Fernando, 1994. Lecturer in Hispanic Studies  
BA (1970) Colorado College; MA (1972), PhD (1979) Rice University

Casbarian, John Joseph, 1973. Associate Dean of the School of Architecture and Professor of Architecture  
BA (1969) Rice University; MFA (1971) California Institute of the Arts; BArch (1972) Rice University

Castañeda, James Agustín, 1961. Professor of Spanish, and Honorary Master of Will Rice College  
BA (1954) Drew University; MA (1955), PhD (1958) Yale University

Castor-Brooks, Geraldine, 2003. Lecturer in the Practice of Management  

Cates, Mary Susan, 2003. Lecturer of Biochemistry and Cell Biology  
BS (1995) University of Houston; PhD (2000) Rice University

Cavallaro, Joseph R., 1988. Professor in Electrical and Computer Engineering and Computer Science  

Cerillo, Antonio J., 2004. Executive Officer and Associate Professor of Naval Science  
BS (1985) University of Wisconsin
Chan, Anthony A., 1993. Associate Professor of Physics and Astronomy  

Chance, Jane, 1973. Professor of English  
BA (1967) Purdue University; MA (1968), PhD (1971) University of Illinois

Chang, David W., 2002. Adjunct Associate Professor in Bioengineering  
BS (1985) University of Wisconsin Madison; MD (1987) University of Wisconsin Medical School

Chang, Voosoon, 1995. Associate Professor of Economics  

Chang-Diaz, Franklin R., 1998. Adjunct Professor of Physics and Astronomy  
BS (1975) University of Connecticut; PhD (1977) Massachusetts Institute of Technology

Chapman, Walter G., 1990. Professor in Chemical Engineering  

BSc (1992) University of Burdwan; MSc (1995) University of Hyderabad; PhD (2002) Tata Institute of Fundamental Research

Chen, Denise, 2003. Assistant Professor of Psychology  

Chen, Lilly C., 1980. Senior Lecturer of Chinese  
BA (1961) National Taiwan University; MA (1969), PhD (1974) University of Illinois at Urbana-Champaign

Chen, Shih-Hui, 2000. Assistant Professor of Composition and Theory  

Chen, Xiaohong Denise, 2002. Assistant Professor of Psychology  

Chiu, Wah, 2004. Adjunct Professor of Computer Science  
BA (1969), PhD (1975) University of California at Berkeley

Choi, Hyeokho, 2000. Faculty Fellow in Electrical and Computer Engineering  

Cibor, Joseph, 2001. Lecturer on Civil and Environmental Engineering  
BS (1976), MS (1978) Purdue University

Citron, Marcia J., 1976. Martha and Henry Malcolm Lovett Distinguished Service Professor of Musicology  
BA (1966) Brooklyn College; MA (1968), PhD (1971) University of North Carolina

Ciufolini, Marco A., 2000. Adjunct Professor in Chemistry  
BS (1978) Spring Hill College; PhD (1981) University of Michigan

Clark, Jr., John W., 1968. Professor in Electrical and Computer Engineering and Bioengineering  
BS (1962) Christian Brothers College; MS (1965), PhD (1967) Case Western Reserve University

Clementi, Cecilia, 2001. Norman Hackerman-Welch Young Investigators Assistant Professor of Chemistry  

Cloutier, Paul A., 1967. Professor of Physics and Astronomy  
BS (1964) University of Southwestern Louisiana; PhD (1967) Rice University

Cochran, Tim D., 1990. Professor of Mathematics  
BS (1977) Massachusetts Institute of Technology; MA (1979), PhD (1982) University of California at Berkeley

Cogan, Nicholas G., 2005. Lecturer of Computational and Applied Mathematics  

Cohen, G. Daniel, 2003. Assistant Professor of History and Associate of Lovett College  

Cole, Daniel R., 2005. VIGRE Lovett Instructor of Mathematics  

Cole, Thomas R., 2004. Professor of Humanities  
BA (1971) Yale University, MA (1975) Wesleyan University, PhD (1981) University of Rochester

Colvin, Vicki L., 1996. Professor of Chemistry and in Chemical Engineering  
BS (1988) Stanford University; PhD (1994) University of California at Berkeley

Comer, Krista, 1998. Assistant Professor of English  

Connelly, Brian, 1984. Artist Teacher of Piano and Piano Chamber Music and Accompanying  
BMus (1980), MMus (1983) University of Michigan
Cook, David, 2001. Assistant Professor of Religious Studies  

Cooper, Keith D., 1990. Professor of Computer Science and in Electrical and Computer Engineering  
BS (1978), MA (1982), PhD (1985) Rice University

Coppola, Eileen, 2000. Lecturer on Education Certification  

Corcoran, Marjorie D., 1980. Professor of Physics and Astronomy  
BS (1972) University of Dayton; PhD (1977) Indiana University

Cording, Margaret, 2003. Assistant Professor of Management  

Cordova, Juan Carlos, 2001. Assistant Professor of Economics  

Costello, Leo, 2005. Assistant Professor of Art History  

Cox, Alan L., 1991. Associate Professor of Computer Science and in Electrical and Computer Engineering  

Cox, Dennis, 1992. Professor of Statistics  
BA (1972) University of Colorado; MS (1976) University of Denver; PhD (1980) University of Washington

Cox, Edward L., 1989. Associate Professor of History and Associate of Martel College  
BA (1970) University of the West Indies; MA (1973), PhD (1977) Johns Hopkins University

Crist, E. Scott, 2000. Lecturer of Management  

Cronin, Justin C., 2003. Associate Professor of English  

Crosswhite, Katherine, 2004. Assistant Professor of Linguistics  

Crowell, Steven G., 1983. Joseph and Joanna Nazro Mullen Professor in Humanities  

Crull, Brigitte, 1999. Senior Lecturer of French  
licence d'enseignement (1970) University of Caen, France; MA (1991) University of Houston

Cunningham, Robert A., 1986. Lecturer on Mechanical Engineering and Materials Science  
AA (1943) Shriner Institute; BSME (1949), MSME (1955) Rice Institute

Cunningham, Terence, 2004. Adjunct Professor in the Practice of Management  
BS (1967) California State University; MS (1974) George Washington University

Curall, Cheyenne, 2002. Adjunct Professor of Management  

Curall, Steven C., 1993. William and Stephanie Sick Chair in Entrepreneurship and Associate Professor of Management, Psychology, and Statistics  

Cuthbertson, Gilbert Morris, 1963. Professor of Political Science  
BA (1959) University of Kansas; PhD (1963) Harvard University

Cutler, Scott E., 2001. Adjunct Professor in Electrical and Computer Engineering  
BS (1973), MS (1973) PhD (1976) Massachusetts Institute of Technology

Dabak, Anand, 2003. Adjunct Associate Professor in Electrical and Computer Engineering  

Dabney, James B., 2000. Adjunct Assistant Professor in Mechanical Engineering and Materials Science  

Danbom, Stephen, 2001. Adjunct Professor of Earth Science  

Dannemiller, James L., 2003. Lynette S. Autrey Professor of Psychology
BA (1974) Northwestern University; PhD (1983) University of Texas at Austin

Datta, Evelyne D., 1987. Senior Lecturer of French
MA (1979) University of Houston; PhD (1987) Rice University; Maîtrise de Philologie romane (1966) University of Ghent (Belgium)

deChambrier, Janet, 1997. Artist Teacher of Opera Studies
BM (1975), MM (1980) Northwestern University School of Music

DeClippel, Geoffroy, 2005. Assistant Professor of Economics

Deem, Michael W., 2002. John W. Cox Professor in Biochemical and Genetic Engineering and Professor of Physics and Astronomy
BS (1991) California Institute of Technology; PhD (1994) University of California at Berkeley

Dennis, John E., 1979. Research Professor of Computational and Applied Mathematics
BS (1962), MS (1964) University of Miami; PhD (1966) University of Utah

DerHovsepian, Joan, 2001. Instructor of Viola Orchestral Repertoire

Derrick, Scott S., 1990. Associate Professor of English
BA (1975) Albright College; MA (1978) University of Chicago; PhD (1987) University of Pennsylvania

DeVore, Ronald A., 2005. Texas Instruments Visiting Professor in Electrical and Computer Engineering
BS (1964) Eastern Michigan University; PhD (1967) Ohio State University

Dharan, Bala G., 2007. J. Howard Creekmore Professor of Management

Djerejian, Edward P., 2004. The Edward A. and Hermana Hancock Kelly University Chair for Senior Scholars and the Janice and Robert McNair Director of the James A. Baker III Institute for Public Policy of Rice University
BS (1960); Doctor of Humanities (Hon) (1992) Georgetown University

Do, Kim-Anh, 1999. Adjunct Associate Professor of Statistics
BS (1983) Queenslands University; MS (1985) Stanford University; PhD (1990) Stanford University

Donato, Katharine M., 2000. Associate Professor of Sociology and Master of Wiess College

Dongarra, Jack, 1988. Adjunct Professor in Computer Science
BA (1972) Chicago State University; MS (1973) Illinois Institute of Technology; PhD (1980) University of New Mexico

Doody, Terrence Arthur, 1970. Professor of English
Doran, Lindley E., 1991. Adjunct Associate Professor of Psychology
PhD (1976) University of Illinois

Dove, Charles, 2001. Adjunct Lecturer of Art History

Downing, Christopher T., 2004. Assistant Professor of Management and Harold D. Hines Professor of Real Estate
BA (1990) University of Wisconsin, Madison; PhD (1998) University of California, Berkeley

Dravis, Jeffrey, J., 1987. Adjunct Professor of Earth Science
BS (1971) St. Mary's University; MS (1977) University of Miami; PhD (1980) Rice University

Drezek, Rebekah Anna, 2002. Stanley C. Moore Assistant Professor in Bioengineering and in Electrical and Computer Engineering
BSE (1996) Duke University; PhD (2001) University of Texas at Austin

Driskill, Linda P., 1970. Professor of English and Management Communications
BA (1961), MA (1968), PhD (1970) Rice University

Droxtler, André W., 1987. Associate Professor of Earth Science
MS (1978) University of Neuchatel; PhD (1984) University of Miami

Druschel, Peter, 1994. Professor of Computer Science and in Electrical and Computer Engineering
Dipl-Ing (1986) Fachhochschule Munich, Germany; MS (1990), PhD (1994) University of Arizona

D'Souza, Rena N., 2004. Adjunct Professor in Bioengineering
BDS (1977) University of Bombay, India; MS (1985), PhD (1987) University of Texas Health Science Center at Houston

Du, Rui-Rui, 2004. Professor of Physics and Astronomy
BS (1982) Fudan University; PhD (1990) University of Illinois

Duck, Ian M., 1963. Professor of Physics and Astronomy
BS (1955) Queen's University, Canada; PhD (1961) California Institute of Technology

Dudey, Marc Peter, 1990. Associate Professor of Economics

Dufour, Reginald J., 1975. Professor of Physics and Astronomy
BS (1970) Louisiana State University; MS (1971), PhD (1974) University of Wisconsin at Madison

Dugan, Brandon, 2000. Assistant Professor of Earth Science

Dunham, James F., 2001. Professor of Viola and Chamber Music
BFA (1972), MFA (1974) California Institute of the Arts

Dunn, Susan, 2002. Lecturer in Voice

Dunning, F. Barry, 1972. Sam and Helen Worden Professor of Physics and Astronomy
BSc (1966), PhD (1969) University College, London

Durrani, Ahmad J., 1982. Professor of Civil and Environmental Engineering
BSCE (1968) Engineering University, Pakistan; MS (1975) Asian Institute of Technology, Thailand; PhD (1982) University of Michigan; MBA (1999) University of Houston

Eagleman, David M., 2004. Adjunct Assistant Professor of Psychology
BA (1993) Rice University; PhD (1998) Baylor College of Medicine

Eilfer, Margret, 1973. Professor of German and Slavic Studies
BA (1962), MA (1964), PhD (1969) University of California at Berkeley

Eisner, Elmer, 1988. Adjunct Professor of Computational and Applied Mathematics
BS (1939) Brooklyn College; PhD (1943) Johns Hopkins University

El-Bakry, Amr, 1998. Adjunct Associate Professor of Computational and Applied Mathematics

el-Dahdah, Farès, 1996. Associate Professor of Architecture

Elden, J. Maxwell, 1988. Adjunct Professor of Psychology
BA (1962) University of California at Berkeley; MA (1967) California State University; MA (1971), PhD (1976) University of California at Los Angeles


Eliot, John E., 2000. Lecturer of Kinesiology
Ellenzweig, Sarah, 2000. Assistant Professor of English

Ellison, Paul V. H., 1975. Lynette S. Autrey Professor of Double Bass and Chair of Strings
BME (1965) Eastern New Mexico University; MM (1966) Northwestern University

Embree, Mark P., 2001. Assistant Professor of Computational and Applied Mathematics

Emden, Christian, 2003. Assistant Professor of German

Emerson, Michael O., 1999. Allyn and Gladys Cline Professor of Sociology

Engel, Paul S., 1970. Professor of Chemistry
BS (1964) University of California at Los Angeles; PhD (1968) Harvard University

Engelhardt, Jr., Hugo Tristram, 1982. Professor of Philosophy
BA (1963), PhD (1969) University of Texas at Austin; MD (1972) Tulane University School of Medicine

Englebretson, Robert, 2000. Assistant Professor of Linguistics

Ensor, Katherine Bennett, 1987. Professor of Statistics

Epner, Daniel, 1996. Adjunct Assistant Professor in Bioengineering
BA (1982) Stanford University; MD (1986) Baylor College of Medicine

Epstein, Marc J., 1998. Distinguished Research Professor of Management
BA (1968) San Francisco State University; MBA (1970), PhD (1973) University of Oregon

Etnyre, Bruce, 1984. Professor of Kinesiology
BS (1973) Valparaiso University; MS (1977) Purdue University; PhD (1984) University of Texas at Austin

Evans, Gregory, 1998. Assistant Professor in Bioengineering
BS (1980) University of Southern California; MD (1985) University of Southern California School of Medicine

Fabian, Marian, 1998. Senior Faculty Fellow in Biochemistry and Cell Biology

Fagan, Michael W., 2000. Faculty Fellow in Computational and Applied Mathematics

Faubion, James D., 1993. Professor of Anthropology and Associate of Jones College
BA (1980) Reed College; MA (1984), PhD (1990) University of California at Berkeley

Feeback, Daniel L., 1997. Adjunct Associate Professor of Biosciences and Bioengineering
BS (1978) Missouri Western State College; PhD (1982) University of Oklahoma Health Sciences Center

Fernandez, Ariel, (2005) Karl F. Hasselman Professor of Bioengineering

Ferrill, June O., 1998. Lecturer of Managerial Studies
BA (1964) University of Texas; MEd (1971) University of Houston; PhD (1977) University of Michigan

Ferris, David, 1998. Associate Professor of Musicology

Fette, Julie, 2005. Adjunct Professor in French Studies

Feuge, Gary, 2003. Teacher Artist of Printmaking, Department of Visual Arts

Few, Jr., Arthur A., 1970. Professor of Physics and Astronomy and Environmental Science
BS (1962) Southern Methodist University; MBS (1965) University of Colorado; PhD (1969) Rice University

Fine, David J., Adjunct Professor in the Practice of Management
BS (1968) Tufts University; MHA (1972) University of Minnesota School of Public Health

Finger, Jerry E., 1996. Adjunct Professor in the Practice of Management
BS (1954) University of Pennsylvania

Finley, Dawn, 2001. Assistant Professor of Architecture
BS (1993) University of Michigan; March (1999) Rice University

Fischer, Jeanne K., 1992. Artist Teacher of Piano and Collaborative Skills
Fischer, Norman, 1992. Professor of Cello
 BMus (1971) Oberlin College

Fisher, Ronald E., 2003. Adjunct Assistant Professor in Psychology
 BA (1982) Brandeis University; PhD (1990), MD (1991) Baylor College of Medicine

Flannery, Rachel Winer, 2004. Adjunct Lecturer of Psychology
 PhD (2002) St. John’s University

Flatt, Robert N., 1987. Adjunct Professor in the Practice of Management

Fleming, Jeffrey, 1993. Associate Professor of Management

Fletcher, Katherine E., 2003. Lecturer on Electrical and Computer Engineering
 BA (1987); BS (1987); MS (1994) Rice University

Follen, Michele, 2005. Adjunct Professor in Bioengineering

Foote, Jill, 2003. Lecturer of Management

Forman, Robin, 1987. Dean of Undergraduates and Professor of Mathematics

Fossati, Giovanni, 2001. Assistant Professor of Physics and Astronomy
 MS (1994) Universita degli Studi Milano; PhD (1998) International School for Advanced Studies, Italy

Foster, Kevin, 2001. Faculty Fellow in Ecology and Evolutionary Biology
 BA (1997) Cambridge University, UK; PhD (2000) University of Sheffield, UK

Fox, David Stephen, 1990. Adjunct Lecturer of Architecture
 BA (1973), BArch (1975) Rice University

Fox, Robert O., 2003. Adjunct Professor of Biochemistry and Cell Biology
 BS (1976) University of Pittsburgh; MPhil (1978), PhD (1981) Yale University

Franciosi, Michael, 2000. Artist Teacher of Opera Studies
 BM (1982) West Virginia University; MM (1985) Manhattan School of Music

Frantz, J. Patrick, 2000. Lecturer on Electrical and Computer Engineering

Fraser, Matthew P., 1998. Associate Professor in Civil and Environmental Engineering

French, Christopher, 1999. Artist Teacher of Cello Orchestral Repertoire

 BA (1998); MA (2000); PhD (2003) Brandeis University

Friedman, Ryan, 2005. Visiting Assistant Professor in English

Fukuyama, Tohru, 1995. Adjunct Professor in Chemistry
 BS (1971), MS (1973) Nagoya University; PhD (1977) Harvard University

Fultz, Lucille P., 1990. Associate Professor of English
 AB (1959) Spelman College, MA (1968) University of Iowa, PhD (1990) Emory University

Furr, James, 2003. Caudill Visiting Lecturer of Architecture
 BArch (1969) Louisiana State University

Gabbiani, Fabrizio, 2004. Adjunct Assistant Professor of Computational and Applied Mathematics
 MS (1989) Swiss Federal Institute of Technology, Switzerland; PhD (1992) Institute of Theoretical Physics, Switzerland

Gao, Zhiyong, 1986. Associate Professor of Mathematics
 BA (1979) Fudan University; PhD (1984) State University of New York at Stony Brook

Garven, Grant, 2005. Wiess Visiting Professor of Earth Science
 BSc (1976) University of Regina, Canada; MS (1980) University of Arizona; PhD (1982) University of British Columbia

Gauck, Christa, 1998. Lecturer of German
 Mag phil (1985) University of Vienna, Austria; MA (1994), PhD (2000) University of Texas at Austin

Gaytán, Raquel, 1996. Senior Lecturer of Spanish

George, Jennifer M., 1999. Mary Gibbs Jones Professor of Management and Professor of Psychology
Georges, Eugenia, 1986. Associate Professor of Anthropology

Ghorbel, Fathi, 1994. Professor of Mechanical Engineering and Materials Science and Bioengineering
PhD (1991) University of Illinois

Gibson, Brian, 1996. Lecturer in Kinesiology, and Resident Associate of Martel College
BA (1990), MA (1993), PhD (1997) University of Texas at Austin

Gibson, Quentin H., 1996. Distinguished Faculty Fellow in Biochemistry and Cell Biology
MB (1941), MD (1944), PhD (1947) Queen's University, Belfast

Gibson, Susan L., 1994. Adjunct Associate Professor of Biochemistry and Cell Biology

Gill, Jack M., 1998. Adjunct Professor in the Practice of Management
BS (1958) Lamar University; PhD (1962) Indiana University

Gillis, Malcolm, 1993. University Professor, Ervin Kenneth Zingler Professor of Economics, and Professor of Management
BA (1962), MA (1963) University of Florida; PhD (1968) University of Illinois

Glantz, Raymon M., 1969. Professor of Biochemistry and Cell Biology
BA (1963) Brooklyn College; MS (1964), PhD (1966) Syracuse University

Glick, William H., 2005. Dean of the Jesse H. Jones Graduate School of Management and Professor of Management
AB (1975) University of Michigan; PhD (1981) University of California at Berkeley

Glowinski, Roland, 1986. Adjunct Professor of Computational and Applied Mathematics
PhD (1970) University of Paris

Goldman, Ronald N., 1990. Professor of Computer Science
BS (1968) Massachusetts Institute of Technology; MA, PhD (1973) Johns Hopkins University

Goldsmith, Kenneth, 1991. Professor of Violin
BM (1966) George Peabody College for Teachers; MA (1968) Leland Stanford University

Golubitsky, Martin, 2005. Adjunct Professor of Computational and Applied Mathematics

Gomer, Richard H., 1988. Professor of Biochemistry and Cell Biology
BA (1977) Pomona College; PhD (1983) California Institute of Technology

Gonsalves, Joshua David, 2005. Assistant Professor in English

Gonzalez, Ramon, 2005. William Akers Assistant Professor in Chemical and Biomolecular Engineering
BSc (1993) Central University of Las Villas, Cuba; MSc (1999) Catholic University of Valparaiso, Chile;
PhD (2001) University of Chile

González-Stephan, Beatriz, 2001. Lee Hage Jamail Chair of Latin American Literatures

Gordon, Richard G., 1995. W. M. Keck Professor of Earth Science and Associate of Lovett College
BA (1975) University of California at Santa Cruz; MS (1977), PhD (1979) Stanford University

Gorham, Becky, 2002. Adjunct Lecturer in Kinesiology
BS (1976), MS (1979) University of New Mexico

Gorlova, Olga Y., 2004. Adjunct Research Assistant Professor of Statistics
MSc (1992) Novosibirsk University; PhD (2000) Novosibirsk University

Gorman, Bridget K., 2002. Assistant Professor of Sociology and Resident Associate of Jones College

Gorry, G. Anthony, 1976. Friedkin Professor of Management and Professor of Computer Science
BE (1962) Yale University; MS (1963) University of California at Berkeley;
PhD (1967) Massachusetts Institute of Technology

Gottschalk, Arthur W., 1977. Professor of Composition and Theory and Chair of Composition and Theory

Goux, Jean-Joseph, 1990. Laurence H. Favrot Professor of French
Licence de Philosophie (1965), DES Philosophie (1966), Doctorat du 3ème cycle de Philosophie (1973), Doctorat

Grace, Jeremy M., 2001. Lecturer of Humanitites
Graf, Hans, 2002. Artist in Residence

Grande-Allen, Kathryn Jane, 2003. Assistant Professor in Bioengineering
BA (1991) Transylvania University; PhD (1998) University of Washington

Grandy, Richard E., 1980. Carolyn and Fred McManis Professor of Philosophy
BA (1963) University of Pittsburgh; MA (1965), PhD (1968) Princeton University

Grant, Simon, 2002. Lay Family Chair in Economics

Greig, Nancy, 2003. Assistant Professor in Bioengineering
BA (1980), PhD (1991) University of Texas at Austin

Greiner, John, 1997. Lecturer on Computer Science

Grenader, Nonya S., 1995. Professor in the Practice of Architecture
BArch (1976) University of Texas; MArch (1994) Rice University

Gruber, Ira Dempsey, 1966. Harris Masterson, Jr., Professor of History

Grullon, Gustavo, 1998. Associate Professor of Management

Guerrero, Thomas M., 2005. Adjunct Assistant Professor of Computational and Applied Mathematics

Guerrero, Thomas M., 2005. Adjunct Assistant Professor of Computational and Applied Mathematics

Hafner, Jason H., 2001. Assistant Professor of Physics and Astronomy and of Chemistry

Halas, Naomi J., 1989. Stanley C. Moore Professor in Electrical and Computer Engineering and Professor of Chemistry

Hammond, Keith Edward, 1988. Professor of Political Science
AB (1969) Franklin and Marshall College; MA (1972) Florida Atlantic University; PhD (1977) University of Wisconsin at Milwaukee

Hamadeh, Shirine T., 2003. Assistant Professor of Art History

Hampton, Lawrence P., 1999. Lecturer in the Practice of Management
AB (1979) University of Chicago; JD (1985) Case Western Reserve University

Hannon, James P., 1967. Professor of Physics and Astronomy
BA (1962), MA (1965), PhD (1967) Rice University

Hannan, John K., 1990. Adjunct Professor of Management.
BA (1975) Rice University; JD (1988) South Texas College of Law

Haptonstall, Clark D., 2003. Assistant Professor of Kinesiology and Director of Sports Management

Harcombe, Paul A., 1972. Professor of Ecology and Evolutionary Biology
BS (1967) Michigan State University; PhD (1973) Yale University

Hardt, Robert M., 1988. W. L. Moody Professor of Mathematics
BS (1967) Massachusetts Institute of Technology; PhD (1971) Brown University

Harrand, Peter W., 1989. Adjunct Professor of Chemistry
BSc (1968) University of Wales, Aberystwyth; PhD (1971) Edinburgh University; DSc (1993) Edinburgh University

Harrman, Thomas, 1988. Adjunct Professor in Electrical and Computer Engineering
BSEE (1965) University of Maryland; PhD (1972) Rice University

Harrell, Lynn, 2002. Professor of Cello
LHD (Hon.) (1994) Cleveland Institute of Music
Harris, Paul M. (Mitch), 2000. Adjunct Professor of Earth Science
BS (1971), MS (1973) West Virginia University; PhD (1977) University of Miami

Harter, Deborah A., 1990. Associate Professor of French
BA (1973) University of California at Los Angeles; MA (1980), PhD (1989) University of California at Berkeley

Hartgerink, Jeffrey D., 2002. Assistant Professor of Chemistry

Hartigan, Patrick M., 1994. Associate Professor of Physics and Astronomy
BS (1981) University of Minnesota; PhD (1987) University of Arizona

Hartley, Craig, 1998. Adjunct Professor in Bioengineering
BSEE (1966), PhD (1970) University of Washington at Seattle

Hartley, Peter Reginald, 1986. Professor of Economics

Harvey, Shelly L., 2005. Assistant Professor of Mathematics
BS (1997) California Polytechnic State University; PhD (2002) Rice University

Haskell, Thomas L., 1970. Samuel G. McCann Professor of History
BA (1961) Princeton University; PhD (1973) Stanford University

Hassett, Brendan E., 2000. Associate Professor of Mathematics

Hauge, Robert H., 1967. Distinguished Faculty Fellow in Chemistry
BA (1960) Loras College; PhD (1965) University of California at Berkeley

Haverkamp, Eva A., 1999. Assistant Professor of History and Associate of Brown College

Heard, Holly E., 2003. Assistant Professor of Sociology and Associate of Lovett College

Hebl, Michelle (“Mikki”) R., 1998. Associate Professor of Psychology and Management

Heckelman, Elizabeth W., 1990. Lecturer on Education Certification

Heinkenschloss, Matthias, 1996. Professor of Computational and Applied Mathematics
BS (1988), PhD (1991) Universitat Trier, Germany

Heiss, Brian, 2000. Visiting Lecturer of Architecture

Heitman, Elizabeth, 1987. Adjunct Associate Professor of Religious Studies

Hemeyer, Terry, 1998. Adjunct Professor in the Practice of Management
BA (1960) Ohio State University; MA (1968) University of Denver

Hempen, John, 1964. Milton B. Porter Professor of Mathematics
BS (1957) University of Texas; MA (1959), PhD (1962) University of Wisconsin at Madison

Hennessy, Margaret H., 2004. Wiess Instructor of Chemistry

Henning, Alison, 2004. Lecturer in Earth Science
BS (1994), MA (1997) University of Texas at Austin; PhD (2005) Rice University

Henry, Charles, 2001. Adjunct Professor of Computer Science

Henze, Matthias, 1997. Watt J. and Lily G. Jackson Chair in Biblical Studies and Associate Professor of Religious Studies
MDiv (1992) University of Heidelberg; PhD (1997) Harvard University

Hess, Kenneth, 2000. Adjunct Associate Professor of Statistics
BS (1982) Rice University; MS (1986), PhD (1992) University of Texas School of Public Health

Hester, Paul, 2003. Lecturer in Visual Arts
BA (1971) Rice University; MFA (1976) Rhode Island School of Design

Hewitt, Janice, 1999. Instructor for the Cain Project
BA, MA University of Michigan; MA (1986), PhD (1997) Rice University
Heydorn, Richard P., 1998. Adjunct Professor of Statistics
B.E. (1958), MA (1964) University of Akron; PhD (1971) Ohio State University

Hight, Christopher, 2003. Assistant Professor of Architecture
PhD (2003) University of London

Hill, Thomas W., 1979. Professor of Physics and Astronomy
BA (1967), MS (1971), PhD (1973) Rice University

Hirasaki, George J., 1989. A. J. Hartsook Professor in Chemical Engineering
BS (1963) Lamar University; PhD (1967) Rice University

Hirschi, Karen, 2001. Adjunct Assistant Professor of Bioengineering
BS (1984) Pennsylvania State University; PhD (1990) University of Arizona

Hirschi, Kendal, 2003. Adjunct Associate Professor of Biochemistry and Cell Biology

Hitchman, Theron J., 2004. VIGRE Lovett Instructor of Mathematics
BS (1997) The Ohio State University; PhD (2003) University of Michigan

Ho, Vivian, 2004. James A. Baker III Institute Chair in Health Economics and Associate Professor of Economics

Hobby, William P., 1989. Radoslav A. Tsanoff Professor of Public Affairs
BA (1953) Rice Institute

Hokanson, David A., 2000. Adjunct Assistant Professor in Chemical Engineering
BS (1977), MChE (1979) Rice University

Holland, J. Nathaniel, 2003. Assistant Professor of Ecology and Evolutionary Biology
BS (1993) Ferrum College; MS (1995) University of Georgia; PhD (2001) University of Miami

Holloway, Clyde, 1977. Herbert S. Autrey Professor of Organ
BMus (1957), MMus (1959) University of Oklahoma; SMD (1974) Union Theological Seminary

House, Waylon V., 1986. Adjunct Associate Professor of Chemical Engineering

Howell, William C., 1992. Adjunct Professor of Psychology
BA (1954), MA (1956), PhD (1958) University of Virginia

Huang, Huey W., 1973. Sam and Helen Worden Chair of Physics and Astronomy
BS (1962) National Taiwan University; PhD (1967) Cornell University

Huberman, Brian Michael, 1975. Associate Professor of Visual Arts
MFA Equivalent (1974) National Film School of Great Britain

Hudspeth, C. M., 1947. Lecturer on Political Science
BA (1940) Rice Institute; JD (1946) University of Texas at Austin

Hughes, Thomas J.R., 2002. Adjunct Professor in Civil and Environmental Engineering and Mechanical Engineering and Materials Science

Hulet, Randall G., 1987. Fayez Sarofim Professor of Physics and Astronomy
BS (1978) Stanford University; PhD (1984) Massachusetts Institute of Technology

Hussain, Fazle, 2004. Assistant Professor in Bioengineering
BScEng (1963) BUET, Bangladesh; MS (1966), PhD (1969) Stanford University

Huston, J. Dennis, 1969. Professor of English
BA (1961) Wesleyan University; MA (1964), PhD (1966) Yale University

Hutchinson, John S., 1983. Professor of Chemistry, Master of Brown College
BS (1977), PhD (1980) University of Texas at Austin

Hyde, E. McKay, 2004. Assistant Professor of Computational and Applied Mathematics

Iammarino, Nicholas K., 1978. Professor of Kinesiology
BS (1973) University of Dayton; MEd (1975) University of Toledo; PhD (1978) Ohio State University

Isle, Walter Whitfield, 1962. Vice Provost for Academic Affairs and Clarence L. Carter Distinguished Service Professor of English
AB (1955) Harvard University; MA (1957) University of Michigan; PhD (1961) Stanford University

Jaber, Thomas L., 1988. Professor of Music and Director of Choral Ensembles

Jalbert, Pierre D., 1996. Associate Professor of Composition and Theory
Jeanneret, Paul R., 2003. Adjunct Professor of Psychology
BA (1962) University of Virginia; MA (1963) University of Florida; PhD (1969) Purdue University

Jenkins, Mark A., 2001. Adjunct Lecturer of Kinesiology
BA (1985) Rice University; MD (1987) University of Texas

Jimenez, Carlos, 1997. Professor of Architecture
March (1981) University of Houston

Johns-Krull, Christopher M., 2001. Assistant Professor of Physics and Astronomy
BA, BS (1989) University of Texas at Austin; MA (1991), PhD (1994) University of California at Berkeley

Johnson, Bruce R., 1994. Distinguished Faculty Fellow in Chemistry and Executive Director of the Rice Quantum Institute
BA (1975) University of Minnesota; PhD (1981) University of Wisconsin at Madison

Johnson, David B., 2000. Associate Professor of Computer Science and in Electrical and Computer Engineering
BA (1982), MS(1985), PhD (1990) Rice University

Johnson, Don Herrick, 1977. J.S. Abercrombie Professor in Electrical and Computer Engineering and Statistics

Johnsson, S. Lennart, 1995. Adjunct Professor in Computer Science

Jones, Jr., B. Frank, 1962. Noah Harding Professor of Mathematics
BA (1958) Rice Institute; PhD (1961) Rice University

Jones, Mark P., 2004. Associate Professor of Political Science
BA (1989) Tulane University; PhD (1994) University of Michigan

Jones, Thomas A., 2003. Adjunct Professor of Earth Science
BS (1964) MS (1967) Colorado State University; MS (1968); PhD (1969) Northwestern University

Joseph, Betty, 1995. Associate Professor of English

Kamins, Benjamin C., 1987. Professor of Bassoon

Kaminski, Vincent, 2001. Adjunct Associate Professor of Management
PhD (1975) Main School of Planning and Statistics; MBA (1978) Fordham University

Kanatas, George, 1994. Jesse H. Jones Professor of Management
BS (1966) City College of New York; PhD (1971) University of Kansas; PhD (1978) Johns Hopkins University

Kaplan, Gregory, 2001. Anna Smith Fine Assistant Professor of Judaic Studies

Kaufmann, Robert Lane, 1976. Associate Professor of Spanish

Kaun, Kathleen, 1998. Professor of Voice
BM (1966) Indiana University; MM (1970) University of Texas

Kavraki, Lydia, 1996. Noah Harding Professor of Computer Science and Professor of Bioengineering

Kecht, Maria-Regina, 1997. Associate Professor of German
Teacher's Diploma (1978) Pushkin Institute, Moscow State University; MA (1979) University of Illinois at Urbana-Champaign; PhD (1982) Innsbruck University

Keeton, Darrin, 1994. Associate Professor of Visual Arts
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Kehoe, John, 2002. Lecturer of Management
BA (1960) Northwestern University, MA (1964) St. Louis University; DBA (1975) Harvard University

Keller-McNulty, Sallie, 2005. Dean of the George R. Brown School of Engineering and Professor of Statistics
BS (1977), MS (1979) University of South Florida; PhD (1983) Iowa State University of Science and Technology

Kelly, Kevin, 2002. Assistant Professor in Electrical and Computer Engineering

Kelty, Christopher M., 2001. Assistant Professor of Anthropology
BA (1994) University of California, Santa Cruz; PhD (2000) Massachusetts Institute of Technology

Kemmer, Suzanne E., 1993. Associate Professor of Linguistics and Associate of Sid Richardson College
Kennedy, Jr., Kenneth W., 1971. University Professor; Ann and John Doerr Professor in Computational Engineering in Computer Science, and Professor in Electrical and Computer Engineering

Kennedy, Pamela, 2002. Senior Lecturer of Management
BA (1975), MS (1978), PhD (1983) Rice University

Khabashesku, Valery, 2002. Faculty Fellow in Chemistry
BSc and MSc (1973) Lomonosov Moscow State University; PhD (1980), DSc (1998) Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences

Khoury, Dirar, 1998. Adjunct Associate Professor in Electrical and Computer Engineering

Kiang, Ching-Hwa, 2002. Assistant Professor of Physics and Astronomy
BS (1987) National Taiwan University; MPhil (1993) Cambridge University; PhD (1999) Massachusetts Institute of Technology

Killian, Thomas C., 2000. Assistant Professor of Physics and Astronomy

Kimmel, Marek, 1990. Professor of Statistics
MS (1977), PhD (1980) Silesian Technical University

King, Stephen, 2003. Professor of Voice and Chair of Voice

Kinsey, James L., 1987. D. R. Ballard-Welch Foundation Professor of Science in the Department of Chemistry
BA (1956), PhD (1959) Rice Institute

Kirk, David E., 1982. Associate Professor of Tuba
BM (1982) Juilliard School of Music

Kirkpatrick, Nanda D., 2003. Clinical Assistant Professor in Biochemistry and Cell Biology

Klein, Anne C., 1989. Professor of Religious Studies
BA (1969) State University of New York at Binghamton; MA (1971) University of Wisconsin at Madison; PhD (1981) University of Virginia

Klineberg, Stephen L., 1972. Professor of Sociology and Associate of Lovett College

Kloeckner, Phillip, 2003. Lecturer in Music

Kloucek, Petr, 2004. Adjunct Assistant Professor of Computational and Applied Mathematics
MS (1984), PhD (1990) Charles University, Prague

Knightly, Edward W., 1996. Associate Professor in Electrical and Computer Engineering and Computer Science
BS (1991) Auburn University; MS (1992), PhD (1996) University of California at Berkeley

Kohn, Michael H., 2004. Assistant Professor of Ecology and Evolutionary Biology
MSc (1994) University of Munich; PhD (2000) University of California at Los Angeles

Kolomeisky, Anatoly B., 2000. Assistant Professor of Chemistry

Konisky, Jordan, 1996. Vice Provost for Research and Graduate Studies and Professor of Biochemistry and Cell Biology
BS (1963) Providence College; PhD (1968) University of Wisconsin

Kono, Junichiro, 2000. Associate Professor in Electrical and Computer Engineering
BS (1990), MS (1992) University of Tokyo; PhD (1995) State University of New York, Buffalo

Kortum, Philip T., 2005. Assistant Professor-in-the-Practice and Faculty Fellow in Psychology
BS (1985) University of Nebraska; MS (1990) Northeastern University; PhD (1994) University of Texas at Austin

Kosterev, Anatoliy A., 2002. Senior Faculty Fellow
MSC (1989) Moscow Institute for Physics and Technology; PhD (1995) Russian Academy of Sciences

Kroll, Michael H., 1989. Adjunct Associate Professor in Bioengineering  
BS (1977) State University of New York at Binghamton; MD (1981) Cornell University Medical College

Kulinowski, Kristen, 2002. Faculty Fellow in Chemistry and CBEN Executive Director of Education and Policy  
BS (1990) Canisius College; MS (1992), PhD (1995) University of Rochester

Kulstad, Mark, 1975. Professor of Philosophy  
BA (1969) Macalester College; PhD (1975) University of Michigan

Kurtzman, Kenny, 2004. Lecturer in the Practice of Management  
BA (1985) Rice University; MBA (1989) Stanford University

Kwinter, Sanford, 1995. Associate Professor of Architecture  

Laibinis, Paul E., 2002. Associate Professor in Chemical Engineering  

Lairson, David R., 1977. Adjunct Associate Professor of Economics  
BA (1970), MA (1971), PhD (1975) University of Kentucky

Lally, Sean, 2002. Caudill Visiting Assistant Professor  
BS (1996) University of Massachusetts at Amherst; MArch (2002) University of California at Los Angeles

Lamos, Colleen R., 1989. Associate Professor of English  
BA (1978) State University of New York at Binghamton; PhD (1988) University of Pennsylvania

Landecker, Hannah, 2001. Assistant Professor of Anthropology  
BS (1993) University of British Columbia; MA, PhD (2000) Massachusetts Institute of Technology

Landis, Chad M., 2000. Associate Professor in Mechanical Engineering and Materials Science  
BS (1994) University of Pennsylvania; MS (1997), PhD (1999) University of California at Santa Barbara

Lane, David M., 1976. Associate Professor of Psychology and Statistics  
BA (1971) Clark University; MA (1973) Tufts University; PhD (1977) Tulane University

Lane, Mary Ellen, 2000. Assistant Professor of Biochemistry and Cell Biology  

Lane, Neal E., 1996. The Malcolm Gillis University Professor and Professor of Physics and Astronomy  
BS (1960), MS (1962), PhD (1964) University of Oklahoma

Lapinsky, David J., 2004. Wiess Instructor of Chemistry  
BS (1997) Duquesne University; PhD (2002) Ohio State University

Last, Nana, 1999. Assistant Professor of Architecture  

Laufman, Larry Elliot, 2004. Visiting Assistant Professor in Kinesiology  
BA (1968) MA (1971) Brandeis University; EdD (1982) University of Houston

Lavenda, Richard A., 1987. Professor of Composition and Theory  
BA (1977) Dartmouth College; MMus (1979) Rice University; DMA (1983) University of Michigan

Lee, Cin-Ty., 2002. Assistant Professor of Earth Science  

Lee, Clover, 2005. Assistant Professor of Architecture  

Lee, J. Jack, 2004. Adjunct Professor of Statistics  
DDS (1982) National Taiwan University; MS (1984), PhD (1989) University of California at Los Angeles

Leebron, David W., 2004. President and Professor of Political Science  

Leeds, Brett Ashley, 2001. Associate Professor of Political Science  
BA (1991), University of North Carolina–Chappel Hill; PhD (1998) Emory University

LeGrand, Thomas, 2003. Associate Professor of Clarinet  
BMus (1980) Curtis Institute of Music

Lenardic, Adrian, 1999. Assistant Professor of Earth Science  
BA (1986) University of Wisconsin; MS (1990), PhD (1995) University of California at Los Angeles

Lerup, Lars, 1993. Dean of the School of Architecture and William Ward Watkin Professor of Architecture  
BArch (1968) University of California at Berkeley; M. Arch. (1970) Harvard University

Lesnick, Robert M., 2001. Adjunct Professor in Executive Education  
BS (1975) Northern Arizona University; MBA (2000) Rice University
Levander, Alan R., 1984. Chair and Carey Croneis Professor of Earth Science
BS (1976) University of South Carolina; MS (1978), PhD (1984) Stanford University

Levander, Caroline F., 2000. Associate Professor of English and Director of the Center for the Study of Cultures

Levin, Harvey S., 2004. Adjunct Professor in Psychology
BA (1967) City University of New York; MA (1971), PhD (1972) University of Iowa

Levine, Raphael D., 2004. Visiting Professor of Chemistry
PhD (1964)

Levy, Eugene H., 2000. Howard Hughes Provost and Professor of Physics and Astronomy
AB (1966) Rutgers University; PhD (1971) University of Chicago

Lewis, Steven W., 1996. Professor of the Practice in Humanities, Reasearch Fellow at Baker Institute

Li, Haiyang, 2005. Assistant Professor of Management
BA (1991) MA (1994) University of China; PhD (1998) City University of Hong Kong

Li, Hui, 2002. Adjunct Associate Professor of Physics and Astronomy
BS (1990) Beijing University; PhD (1995) Rice University

Liang, Edison P., 1991. Andrew Hays Buchanan Professor of Astrophysics
BA (1967), PhD (1971) University of California at Berkeley

Lichtenstein, Alex, 2002. Associate Professor of History and Associate of Wiess College

Liebschner, Michael A. K., 2000. Assistant Professor in Bioengineering
MS (1995) Ruhr University, Germany; PhD (1998) University of Vermont

Lilleberg, Jorma, 2002. Adjunct Professor in Electrical and Computer Engineering
BS (1984) University of Oulu; PhD (1992) Tampere University of Technology

Linbeck, Leo, III, 2002. Adjunct Professor in the Practice of Management

Lindsay, Bernard G., 1991. Senior Faculty Fellow in Physics and Astronomy
BS (1984), PhD (1987) Queen’s University of Belfast

Lipke, Elizabeth, 2004. Lecturer on Bioengineering
BS (2000) Johns Hopkins University; PhD (2005) Rice University

Llope, William J., 1994. Senior Faculty Fellow in Physics and Astronomy

Logan, Jill (Thad), 1982. Lecturer in English
BA (1973) University of California at Santa Barbara; PhD (1981) Rice University

Long, Elizabeth, 1978. Professor of Sociology and Associate of Baker College
BA (1966) Stanford University; MA (1974), PhD (1979) Brandeis University

Lopez, Jose A., 1999. Adjunct Professor in Bioengineering
BS (1977) New Mexico Institute of Mining and Technology; MD (1981) University of New Mexico

Lopez-Alonso, Moramay, 2005. Lynette S. Autry Visiting Assistant Professor in History

Loveland, Katherine A., 1991. Adjunct Professor of Psychology
BA (1975) University of Virginia; PhD (1979) Cornell University

Luca, Sergiu, 1983. Dorothy Richard Starling Professor of Violin
Artists Diploma (1966) Curtis Institute of Music

Ludwig, Jonathan, 2003. Senior Lecturer of Russian

Lurie, Susan, 1987. Associate Professor of English and Associate Dean for Graduate Student Affairs
BA (1969) State University of New York; MA (1972), PhD (1989) University of California at Berkeley

Luetteg, Andreas, 1999. Associate Professor of Earth Science, Associate Professor of Chemistry, and Associate of Will Rice College

Lyandres, Evgeny, 2004. Assistant Professor of Management
BA (1996) Ben Gurion University; MS (1999) Tel Aviv University; MS (2002); PhD (2004) University of Rochester
Ma, Jianpeng. 2000. Associate Professor in Bioengineering
BS (1985) Fudan University P.R. China; PhD (1996) Boston University

Maas, Michael R., 1984. Professor of History
BA (1973) Cornell University; MA (1975), PhD (1982) University of California at Berkeley

MacKenzie, Kevin R., 2000. Assistant Professor of Biochemistry and Cell Biology

Mackie, Hilary S., 1993. Associate Professor of Classics

Mackwell, Stephen J., 2005. Adjunct Professor of Earth Science
BS (1978), MS (1979) University of Canterbury, Christchurch, NZ; PhD (1985) Australian National University

Magnani, Maria Beatrice, 2004. Lecturer in Earth Science
MSC (1994) PhD (1999) Universita degli Studi di Perugia Perugia, Italy

Makdisi, Ussama S., 1997. Arab American Educational Foundation Associate Professor of History

Manca, Joseph, 1985. Professor of Art History

Mandel, James P., 1986. Lecturer on Management and Economics
BS (1967), M.BA (1969), PhD (1973) University of Illinois

Mantzaris, Nikolaos, 2001. Assistant Professor in Chemical Engineering and in Bioengineering
Diploma (1994), National Technical University of Athens, Greece; PhD (2000) University of Minnesota

Marathi, Upendra, 2002. Adjunct Professor of Management
BS (1989), PhD 1994 Loyola University; MBA (2001) Rice University

Marco, Rex, 2002. Adjunct Assistant Professor in Bioengineering
BS (1987) University of California-Irvine; MD (1992) UCLA School of Medicine

Marcus, George E., 1975. Joseph D. Jamail Professor of Latin American Studies and Professor of Anthropology
BA (1968) Yale University; PhD (1976) Harvard University

Mardis, Jerlyn L., 1988. Adjunct Professor in the Practice of Management
BA (1973), MBPM (1982) Rice University

Marlin, Gary C., 2004. Lecturer in the Practice of Management
BA (1975), MA (1978) University of Houston

Margolis, Eric, 1995. Associate Professor of Philosophy
BA (1990) University of Maryland; PhD (1995) Rutgers University

Marschall, Melissa J., 2003. Associate Professor of Political Science.
BA (1990) Florida State University; MA (1993) Bogazici University; PhD (1998) SUNY at Stony Brook

Martin, Lanny W., 2004. Assistant Professor of Political Science
BA (1990), MA (1997), PhD (2000) University of Rochester

Martin, Randi C., 1982. Elma Schneider Professor of Psychology
BA (1971) University of Oregon; MS (1977), PhD (1979) Johns Hopkins University

Masiello, Caroline A., 2004. Assistant Professor of Earth Science

Massey, Richard P., 1989. Adjunct Lecturer on Electrical and Computer Engineering
BA (1953), BS (1954) Rice Institute; MS (1962) Columbia University

Massimino, Michael J., 2004. Adjunct Associate Professor in Mechanical Engineering and Materials Science

Massoud, Yehia, 2003. Assistant Professor in Electrical and Computer Engineering
BS (1991), MS (1994) Cairo University; PhD (1999) Massachusetts Institute of Technology

Mathur, Anshu, 2005. Adjunct Professor in Bioengineering

Matsuda, Seiichi P. T., 1995. E. Dell Butcher Chair in Chemistry and Professor of Biochemistry and Cell Biology

Matthews, Kathleen Shive, 1972. Dean of the Wiess School of Natural Sciences and Stewart Memorial Professor of Biochemistry
BS (1966) University of Texas at Austin; PhD (1970) University of California at Berkeley

Matusow, Allen J., 1963. William Gaines Twyman Professor of History, and Associate Director, James A. Baker III Institute for Public Policy
BA (1958) Ursinus College; MA (1959), PhD (1965) Harvard University
Matzakos, Andreas N., 2003. Adjunct Assistant Professor in Chemical Engineering
Diploma of Chemical Engineering (1987) National Technical University; PhD (1992) Rice University

Mawlawi, Osama R., 2002. Lecturer on Electrical and Computer Engineering

Mayberry, J. Benton, 2005. Adjunct Professor in the Practice of Management
BA (1973), MA (1976) Rice University

Mazat, Matthew M., 2003. Assistant Professor of Naval Science
BS (1998) EE University of Arizona

BA (1983), MA (1987) Florida State University; PhD (1999) University of Texas at Austin

McCallough, Laurence, 2001. Adjunct Professor of Philosophy
AB (1969) Williams College; PhD (1975) The University of Texas at Austin

McGill, Scott, 2001. Assistant Professor of Classics
BA (1990) Salve Regina College; PhD (2001) Yale University.

McGovern, Patrick J., 2005. Adjunct Assistant Professor in Earth Science

McHale, Mary E.R., 1997. Laboratory Coordinator; Lecturer in Chemistry
BS (1974), MS (1978) University of London; MS (1989) University of Reading; PhD (1997) University of North Texas

McIntosh, Roderick J., 1980. Professor of Anthropology
BA (1973) Yale University; MLitt (1975), PhD (1979) Trinity College, University of Cambridge

McIntosh, Susan Keech, 1980. Professor of Anthropology
BA (1973) University of Pennsylvania; MA (1975) Girton College, Cambridge University; MA (1976), PhD (1979) University of California at Santa Barbara

McKeel, Geoff, 2003. Assistant Professor of Naval Science
BS (1996) Political Science United States Military Academy

McLeish, Rex B., 1964. Professor of Materials Science
B Met (1957) Sheffield University; PhD (1962) Leeds University

McNeil, Linda M., 1984. Professor of Education
BA (1966) Texas Tech University; MA (1968) Baylor University; PhD (1977) University of Wisconsin at Madison

McNew, James A., 2000. Assistant Professor of Biochemistry and Cell Biology
BS (1989) Texas A&M University; PhD (1994) University of Texas Southwestern Medical Center-Dallas

McPhail, Mort, 2003. Adjunct Associate Professor of Psychology
BA (1972) Trinity University; MS (1975), PhD (1978) Colorado State University

McStravick, David, 1999. Lecturer on Mechanical Engineering and Materials Science
BS (1965), MS (1969), PhD (1972) Rice University

McZeal, Cassandra Moore, 2002. Adjunct Assistant Professor of Computational and Applied Mathematics

Meade, Andrew J., 1989. Professor of Mechanical Engineering

Medlock, Kenneth, 2003. Lecturer of Economics

Meffert, Lisa M., 2000. Assistant Professor of Ecology and Evolutionary Biology
BS (1982), PhD (1988) University of Houston

Mellor-Crummey, John M., 1989. Associate Professor and Senior Faculty Fellow in Computer Science and Electrical and Computer Engineering

Mérenyi, Erzsébet, 2000. Research Professor in Electrical and Computer Engineering
MSc (1975) Attila Jozsef University, Hungary; PhD (1980) Attila Jozsef University and Central Research Institute for Physics, Hungarian Academy of Sciences

Merrill, Connie, 2002. Lecturer of Management
BA (1977) North Carolina State University, Raleigh; PhD (1981) Rice University

Metzker, Michael L., 2001. Adjunct Assistant Professor of Chemistry
BS (1984) University of California at Davis; PhD (1996) Baylor College of Medicine

Michie, Helena, 1990. Agnes Cullen Arnold Professor in Humanities and Professor of English
BA (1979) Princeton University; PhD (1984) University of Pennsylvania
Mieszkowski, Peter, 1981. Allyn R. and Gladys M. Cline Professor of Economics and Finance
BS (1957), MA (1959) McGill University; PhD (1963) Johns Hopkins University

Miettinen, Hannu E., 1977. Professor of Physics and Astronomy

Mikos, Antonios G., 1991. John W. Cox Professor in Bioengineering and Chemical and Biomolecular Engineering
Diploma (1983) Aristotle University of Thessaloniki, Greece; MS (1985), PhD (1988) Purdue University

Miller, Clarence A., 1981. Louis Calder Professor in Chemical Engineering
BA, BS (1961) Rice University; PhD (1969) University of Minnesota

Miller, Michael, 1995. Adjunct Associate Professor in Bioengineering
BS (1978) University of Massachusetts, MD (1982) University of Massachusetts Medical School

BA (1952) Baylor University; PhD (1966) University of Texas at Austin

Mittleman, Daniel, 1995. Associate Professor in Electrical and Computer Engineering
BS (1988) Massachusetts Institute of Technology; MS (1990), PhD (1994) University of California at Berkeley

Mohanram, Kartik, 2003. Assistant Professor in Electrical and Computer Engineering
BTech (1998) Indian Institute of Technology; MS (2000), PhD (2005) University of Texas at Austin

Montague, P. Read, 1993. Adjunct Associate Professor in Computer Science
BS (1983) Auburn University; PhD (1988) University of Alabama at Birmingham

Moore, Pat, 1996. Adjunct Professor of Civil and Environmental Engineering
BA (1952), BS (1953) Rice University

Morgan, Julia K., 1999. Assistant Professor of Earth Science and Associate of Hanszen College
Morgan, Michael C., 2005. Adjunct Assistant Professor in the Practice of Management

Morgan, T. Clifton, 1987. Albert Thomas Professor of Political Science
BA (1978) University of Oklahoma; MA (1980), PhD (1986) University of Texas at Austin

Morris, Gary A., 2000. Adjunct Assistant Professor in Physics and Astronomy

Morris, Wesley Abram, 1968. Professor of English
BA (1961), MA (1963) University of Kentucky; PhD (1968) University of Iowa

Morrison, Donald Ray, 1988. Professor of Philosophy

Morton, Scott A., 2004. Adjunct Associate Professor of Computational and Applied Mathematics

Moulin, Hervé, 1999. George A. Peterkin Professor of Economics
Agregation de Mathematiques (1971) Paris, France; PhD (1975) University of Paris, France

Müller, Peter, 2001. Adjunct Professor in Statistics
MS (1985) University of Vienna; PhD (1991) Purdue University

Murphree, Dennis E., 1992. Lecturer on Management
BA (1969) Southern Methodist University; MBA (1971) University of Pennsylvania

Mutchler, Gordon S., 1968. Professor of Physics and Astronomy
BA (1960), PhD (1966) Massachusetts Institute of Technology

Naficy, Hamid, 1993. Nina J. Cullinan Professor of Art History
BA (1968) University of Southern California; MFA (1971), PhD (1990) University of California at Los Angeles

Nagarajaiah, Satish, 1999. Associate Professor in Civil and Environmental Engineering and in Mechanical Engineering and
Material Science
BS (1980) Bangalore University, India; MS (1982) Indian Institute of Science, India; PhD (1990) State University of
New York at Buffalo

Nakahleh, Luay K., 2004. Assistant Professor of Computer Science

Nalepa, Monika A., 2005. Assistant Professor of Political Science

Napier, H. Albert, 1983. Professor of Management and Psychology
BA (1966), MBA (1968), PhD (1971) University of Texas at Austin
Narbona, Jose A., 1999. Senior Lecturer of Spanish
BA (1995) University of Seville, Spain; MA (1999) Rice University

Natelson, Douglas, 2000. Assistant Professor of Physics and Astronomy and in Electrical and Computer Engineering

Neagley, Linda E., 1993. Associate Professor of Art History

Neal, James R., 2003. Assistant Professor of Naval Science
BS (1999) Political Science United States Naval Academy

Nelson, Karen K., 2003. Associate Professor of Management
BS (1988) University of Colorado; PhD (1997) University of Michigan

Nelson-Campbell, Deborah, 1974. Professor of French
BA (1960) Wittenberg University; Certificat d’etudes Francaises, ler Degre (1961) University of Grenoble, France; MA (1964), PhD (1970) Ohio State University

Newell, Charles J., 1993. Adjunct Assistant Professor in Civil and Environmental Engineering

Newman, James H., 1985. Adjunct Professor of Physics and Astronomy

Ng, T.S. Eugene, 2003. Assistant Professor of Computer Science

Nguyen, Dung “Zung”, 1999. Lecturer on Computer Science
BS (1976) Texas Tech University; MA (1979), PhD (1981) University of California at Berkeley

Niedzielski, Nancy A., 1999. Assistant Professor of Linguistics and Associate of Lovett College

Nikonowicz, Edward P., 1993. Associate Professor of Biochemistry and Cell Biology
BS (1985) St. Louis University; PhD (1990) Purdue University

Ninnetto, Amy, 2005. Assistant Professor of Anthropology


Niu, Fenglin, 2002. Assistant Professor of Earth Science
BS (1988) University of Science and Technology of China; MS (1994), PhD (1997) University of Tokyo

Norcross, Alastair, 2002. Associate Professor of Philosophy
BA Classics (1983) Oxford University; MA (1990), PhD (1991) Syracuse University

Norcross, Diana, 2003. Lecturer on Education Certification

Nordlander, Peter, 1989. Professor of Physics and Astronomy and in Electrical and Computer Engineering
BA (1977) Swedish Cavalry Officers’ School; MS (1980), PhD (1985) Chalmers University of Technology, Gothenburg, Sweden

Novotny, Alma M., 2000. Lecturer of Biochemistry and Cell Biology
BS (1968) Duke University; PhD (1972) Purdue University

Nowak, Robert, 1999. Adjunct Associate Professor in Electrical and Computer Engineering
BS (1990), MS (1992), PhD (1995) University of Wisconsin-Madison

Oberholzer, Mark A., 1999. Lecturer in Architecture
BS (1989) Villanova University; March (1994) Rice University

Oberlack, Uwe, 2001. William V. Vietti Assistant Professor of Space Physics
Diploma (1993), PhD (1997) Technical University of Munich

Obeyssekere, Mandri, 2005. Adjunct Associate Professor in Bioengineering
BS (1975) University of Sri Lanka; MS (1986), PhD (1989) Texas Tech University

Oden, Z. Maria, 2004. Lecturer on Bioengineering and Laboratory Coordinator

Odhiambo, Atieno E. S., 1989. Professor of History
BA (1970) Makerere University College; PhD (1973) University of Nairobi

Oghalai, John, 2005. Adjunct Assistant Professor in Bioengineering
BS (1990), MD (1994) University of Wisconsin
Oliver, Douglas E., 1997. Professor in the Practice of Architecture

Olson, John Steven, 1973. Ralph and Dorothy Looney Professor of Biochemistry and Cell Biology
BS (1968) University of Illinois; PhD (1972) Cornell University

O’Malley, Marcia E., 2001. Assistant Professor in Mechanical Engineering and Materials Science
BS (1996) Purdue University, MS (1999), PhD (2001) Vanderbilt University

Orchard, Michael T., 2001. Professor in Electrical and Computer Engineering

Ostdiek, Barbara, 1994. Associate Professor of Management and Statistics
BA (1986) University of Nebraska; PhD (1994) Duke University

Ostdiek, Donald, 1995. Lecturer in the School of Social Sciences, Director of Policy Studies, and Associate Director of Academic Advising

Ostferr, Kirsten, 2002. Assistant Professor of English

O'Sullivan, Elizabeth, 2001. Lecturer of Management

Oubre, Carroll, 1999. Adjunct Professor of Civil & Environmental Engineering
BS (1955) University of Southwestern Louisiana; MS (1956) Ohio State University; PhD (1966) Rice University

Overall, John E., 1983. Adjunct Professor of Psychology
BS (1954) Trinity University; MA (1956), PhD (1958) University of Texas at Austin

Padley, B. Paul, 1996. Associate Professor of Physics and Astronomy
BS (1981) York University; MS (1984), PhD (1987) University of Toronto

Page, Paula, 1985. Associate Professor of Harp
BMus (1969) Cleveland Institute of Music

Papadopoulos, Phaedon P., 2001. Lecturer of Management
BS (1970), MS (1972) Aristotle University; MS (1974), PhD (1979) University of Oklahoma

Papanicolaou, Andrew, 2004. Adjunct Professor of Linguistics
BS (1972), MA (1974) Xavier University, PhD (1977) University of California

Papakonstantinou, Anne, 1993. Clinical Assistant Professor in Natural Science and Adjunct Lecturer on Education Certification

Park, Joon, 2002. Professor of Economics
BS (1978) Seoul National University; PhD (1987) Yale University

Parke, Jr., Robert B., 1998. Adjunct Professor in the Practice of Management
BS (1970) Spring Hill College; MD (1973) Baylor College of Medicine; MBA (1993) Rice University

Parker, Jon Kimura, 2000. Professor of Piano
BMus, MMus (1981), DMA (1989) Juilliard School of Music

Parry, Ronald J., 1978. Professor of Chemistry and Biochemistry and Cell Biology
BA (1964) Occidental College; PhD (1968) Brandeis University

Parsons, Spencer W., 1969. Associate Professor of Architecture
BA (1953) University of Michigan; March (1963) Harvard University

Parsons, William B., 1993. Associate Professor of Religious Studies
BA (1979) Brandeis University; MDiv (1982) Yale University; PhD (1993) University of Chicago

Pasquali, Matteo, 1999. Associate Professor in Chemical Engineering
MS (1992) University of Bologna; PhD (1999) University of Minnesota

Patrick, Charles, 1998. Adjunct Associate Professor in Bioengineering
BScEng (1990) Louisiana State University; PhD (1994) Rice University

Patten, Robert L., 1969. Lynette S. Autrey Professor in Humanities
BA (1960) Swarthmore College; MA (1962), PhD (1965) Princeton University

Patterson, Peggy, 2003. Lecturer of Spanish

Paye, Bradley S., 2004. Assistant Professor of Management
Peaceman, Donald W., 1983. Adjunct Professor of Computational and Applied Mathematics 
BChE (1947) College of the City of New York; ScD (1952) Massachusetts Institute of Technology

Pearson, Carl W., 2004. Lecturer in History 

Pearson, Deborah A., 1991. Adjunct Associate Professor of Psychology 
BA (1979) Wesleyan University; MA (1982), PhD (1986) Rice University


Peercy, Megan M., 2004. Lecturer of Spanish 

Pellis, Neil R., 1997. Adjunct Professor in the Mabee Laboratory

Pennington, Carl W., 2004. Adjunct Assistant Professor of Ecology and Evolutionary Biology 

Pérez, J. Bernardo, 1979. Associate Professor of Spanish 
Licenciatura (1972) Universidad de Granada, Spain; MA (1974), PhD (1982) University of Iowa

Perkins, Andrew, 2003. Assistant Professor of Management 

Peters, Elizabeth A., 1999. Lecturer on Management 
BA (1994) University of Texas; MA (1996) Sarah Lawrence College

Phillips, George N., 2001. Adjunct Professor of Biochemistry and Cell Biology 
BA (1974), PhD (1976) Rice University

Pinn, Anthony B., 2004. Agnes Cullen Arnold Professor of Humanities and Professor of Religious Studies 

Pitts, Timothy, 1992. Associate Professor of Double Bass 

Pomerantz, James R., 1988. Professor of Psychology and Director of the Neurosciences Program 
BA (1968) University of Michigan; PhD (1974) Yale University

Poole, Albert H., 1996. Gus Sessions Wortham Professor of Architecture 

Potts, Geoffrey E., 1998. Assistant Professor of Psychology 

Poulos, Basilio N., 1975. Professor of Visual Arts 
BFA (1965) Atlanta School of Art; MFA (1968) Tulane University

Price, III, Richard A., 2005. Assistant Professor of Management 

Pu, Han, 2003. Assistant Professor of Physics and Astronomy 
BS (1992) University of Science and Technology of China; MS (1994), PhD (1999) University of Rochester

Purugganan, Mary M., 2000. Cain Project Instructor and Promotions Coordinator 
BS (1990) Texas A&M University; PhD (1998) Rice University

Qian, Nanxiu, 1993. Associate Professor of Chinese Literature 
MA (1982) Nanjing University; PhD (1994) Yale University

Queller, David C., 1989. Professor of Ecology and Evolutionary Biology 
BA (1976) University of Illinois; MS (1979), PhD (1985) University of Michigan

Quenemoen, Caroline K., 2002. Assistant Professor of Art History and Classical Studies 

Quillen, Carol E., 1989. Associate Professor of History and Director of the Boniuk Center for the Study and Advancement of Religious Tolerance 

Quiroga, Florante A., 1972. Adjunct Professor of Biochemistry and Cell Biology 
BS (1959) Central Philippine University; MS (1961) Howard University; PhD (1966) Yale University

Rachleff, Larry, 1991. Walter Kris Hubert Professor of Orchestra Conducting 
BS (1977) University of Connecticut; MM (1979) University of Michigan

Radigan, Judy, 2002. Lecturer on Education Certification 
MFA (1985) University of Houston-Central; MEd (1997) University of St. Thomas; PhD (2002) University of Houston-Central

Raphael, Robert M., 2001. T.N. Law Assistant Professor in Bioengineering 
BS (1989) University of Notre Dame; MS (1992), PhD (1996) University of Rochester
Rarick, Janet, 1992. Artist Teacher of Woodwinds and Professional Development
BM (1973) University of Southern California

BA (1997); MS (1998) University of Virginia; PhD (2004) University of Arizona

Rau, Carl, 1983. Professor of Physics and Astronomy
BS (1963), MS (1967), PhD (1970) Technical University, Munich

Ray, Michael B., 2000. Adjunct Professor of Computational and Applied Mathematics
BS (1976), MA (1978), PhD (1981) University of Texas at Arlington

Recknagel, Marsha, 1988. Writer in Residence
BA (1974) Louisiana State University; PhD (1988) Rice University

Reddy, Deepa, 2005. Adjunct Assistant Professor of Anthropology
BA (1994) University of Toronto, PhD (2000) Rice University

Reed, William, 2002. Associate Professor of Political Science

Reiff, Patricia H., 1992. Professor of Physics and Astronomy
BS (1971) Oklahoma State University; MS (1974), PhD (1975) Rice University

Reiser, Stanley J., 1983. Adjunct Professor of Religious Studies

Richards-Kortum, Rebecca, 2005. Stanley C. Moore Professor in Bioengineering and Electrical and Computer Engineering
BS (1985) University of Nebraska; MS (1987), PhD (1990) Massachusetts Institute of Technology

Riedi, Rudolf H., 1999. Associate Professor of Statistics and in Electrical and Computer Engineering
MEDuc (1980), MSc (1986), PhD (1993) ETH and ECE Zurich, Switzerland

Riese, W. C. Rusty, 1985. Adjunct Associate Professor of Earth Science and Lecturer
BS (1975) New Mexico Institute of Mining and Technology; MS (1977), PhD (1980) University of New Mexico

Rigdon, Trish, 2000. Director of Theatre Program and Lecturer of English/Theatre
BA (1997) University of Saint Thomas, MFA (2000) University of Houston

Riley, Wayne, 2003. Adjunct Professor of Management

Ritscher, Karen, 1999. Associate Professor of Viola

Rixner, Scott, 2000. Assistant Professor of Computer Science and in Electrical and Computer Engineering

Ro, Tony, 1999. Associate Professor of Psychology
BA (1993) University of California at Berkeley; PhD (1998) University of California at Davis

Robert, Marc A., 1984. Professor in Chemical Engineering

Roberts, Jr., Jabus B., 1975. Professor of Physics and Astronomy
BA (1965) Columbia University; PhD (1969) University of Pennsylvania

Rojo, Javier, 2001. Professor of Statistics

Roman, Francisco J., 2003. Assistant Professor of Management

Rose, Jerome, 2002. Adjunct Assistant Professor of Civil and Environmental Engineering
MS (1993) University of Nancy; PhD (1996) Institute National Polytechnique de Lorraine de Nancy

Rosenfield, David B., 2004. Lecturer
BA (1966) Brandeis University; MD (1970) University of Illinois College of Medicine

Rosenbrauch, Doreen, 2003. Adjunct Assistant Professor in Bioengineering
RN (1988) Humboldt University, Berlin; MD (1997) Otto von Guericke University, Sachsen-Anhalt, Germany

Rosner, Gary L., 2001. Adjunct Professor of Statistics
B A (1974) University of Buffalo; MS (1977) Rice University; PhD (1985) Harvard University

Rountree, Brian R., 2003. Assistant Professor of Management
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**Roux, Robert,** 1990. Professor of Piano and Chair of Keyboard  
BMus (1970) Loyola University; MMus (1978), DMA (1980) University of Texas at Austin

**Rudgers, Jennifer,** 2005. Assistant Professor of Ecology and Evolutionary Biology  
BS (1996) Denison University; PhD (2002) University of California at Davis

**Rumbaut, Rolando E.**, 2001. Adjunct Assistant Professor of Bioengineering  
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**Sahharwal, Ashutosh,** 2001. Faculty Fellow in Electrical and Computer Engineering  

**Saggau, Peter,** 2000. Adjunct Associate Professor in Bioengineering  
BS (1973) Technical College Ulm, Germany; MS (1977) Technical University, Munich, Germany;  
PhD (1988) University of Munich

**Salaberry, M. Rafael,** 2000. Associate Professor of Spanish  

**Salas, Marcela,** 1995. Senior Lecturer of Spanish.  

**Sams, Clarence E.**, 1997. Adjunct Assistant Professor of Biochemistry and Cell Biology  
BA (1975), PhD (1983) Rice University

**Samuels, Danny M.**, 1981. Harry K. Smith Visiting Professor of Architecture  
BArch (1971) Rice University

**San, Ka-Yiu,** 1984. E. D. Butcher Professor in Bioengineering and Chemical and Biomolecular Engineering  
BS (1978) Rice University; PhD (1984) California Institute of Technology

**Sanders, Betty S.**, 1988. Adjunct Assistant Professor of Psychology  

**Sanders, Paula A.**, 1987. Associate Professor of History  

**Saterbak, Ann E.**, 2002. Lecturer of Bioengineering and Director of Laboratory Instruction  
BA (1990) Rice University; PhD (1995) University of Illinois

**Sato, Hiroko,** 1989. Senior Lecturer of Japanese  


**Sawyer, Dale S.**, 1988. Professor of Earth Science and Associate of Will Rice College  
BS (1976) Purdue University; PhD (1982) Massachusetts Institute of Technology

**Sazkin, Stanislav,** 2005. Faculty Fellow in Physics and Astronomy  
BS (1994) Utah State University; MS (1996) Moscow Institute of Physics and Technology; PhD (2000) Utah State University

**Schlief, Matthew A.**, 2005. Production Manager Theatre Program and Lecturer of English/Theatre  

**Schneider, David J.**, 1989. Professor of Psychology  
BA (1962) Wabash College; PhD (1966) Stanford University

**Schuler, Douglas A.**, 1992. Associate Professor of Management  
BS (1985) University of California at Berkeley; PhD (1992) University of Minnesota


**Scott, David W.**, 1979. Noah Harding Professor of Statistics  
BA (1972), MA, PhD (1976) Rice University

**Scuseria, Gustavo E.**, 1989. Robert A. Welch Professor of Chemistry  
BS (1979), PhD (1983) University of Buenos Aires

**Sedlak, John M.**, 1990. Lecturer on Civil and Environmental Engineering  

**Seed, Patricia,** 1982. Professor of History; Adjunct Professor of Anthropology  
BA (1971) Fordham University; MA (1975) University of Texas at Austin; PhD (1980) University of Wisconsin at Madison

**Seetharaman, Seethu,** 2004. Associate Professor of Management  
Segner, Edmund, 1996. Lecturer on Civil and Environmental Engineering
BS Rice University; MA University of Houston


Seren, Anne Bibiana, 2002. Adjunct Assistant Professor of Psychology

Shah, Gautami, 2001. Senior Lecturer of Hindi
BA (1985) University of Bombay; MS (1988) Purdue University

Shamoo, Yousif, 2000. Adjunct Professor in the Practice of Management
BA (1963) Reesessaer Polytechnic Institute

Sharp, Carwyn P. M., 2005. Lecturer of Sports Medicine
BS (1999) University of Queensland; MS (2001) Ball State University

Shaw, Chad A., 2004. Adjunct Assistant Professor of Statistics

Shea, Louisa, 2003. Assistant Professor of French Studies

Sheafor, Stephen J., 2002. Adjunct Professor in Electrical and Computer Engineering
BS (1972), M.E.E. (1972), Rice University; PhD (1974) University of Illinois; MBA (1979) Santa Clara University

Shehabuddin, Elora, 2001. Assistant Professor of Humanities and Political Science

Sheikh, Tauqir, 2001. Lecturer on Civil and Environmental Engineering
BS (1975) University of Engineering and Technology Pakistan; MS (1980), PhD (1987) University of Texas at Austin

Sheinman, Hanoch, 2004. Assistant Professor of Philosophy

Shen, Chao-Mei, 2000. Lecturer of Chinese
BA (1986) National Tsing-hua University; MA (1989) National Taiwan University; PhD (1998) University of Texas at Austin

Shen, Yu, 2002. Adjunct Associate Professor of Statistics

She, George, 1991. Herbert S. Autrey Professor of Philosophy
BA (1964) Brandeis University; PhD (1972) Columbia University

Shibatani, Masayoshi, 2002. Deedee McMurtry Professor of Humanities, Professor of Linguistics
BA (1970), PhD (1973) University of California at Berkeley

Shih, Ya-Chen Tina, 2004. Adjunct Associate Professor of Statistics
BA (1988) National Taiwan University; MA (1990) National Tsing-Hua University; PhD (1997) Stanford University

Shipp, Stephanie S., 2000. Adjunct Assistant Professor of Earth Science

Shmulevich, Ilya, 2004. Adjunct Assistant Professor of Statistics
BS (1991), MS (1993), PhD (1997) Purdue University

Shook, Joan E., 1998. Adjunct Professor in Practice of Management
BA (1976) Brown University; MD (1986) University of Cincinnati College of Medicine; MBA (1996) University of Houston

Shouval, Harel, 2004. Adjunct Assistant Professor of Computational and Applied Mathematics
BSc (1987) Tel Aviv University; MSc (1990) Weizmann Institute; PhD (1994) Brown University

Shvets, Gennady, 2005. Adjunct Assistant Professor in Electrical and Computer Engineering
PhD (1995) Massachusetts Institute of Technology

Si, Qimiao, 1994. Professor of Physics and Astronomy
BS (1986) University of Science and Technology of China; PhD (1991) University of Chicago

Sickles, Robin, 1985. Professor of Economics and Statistics
BS (1972) Georgia Institute of Technology; PhD (1976) University of North Carolina
Siefert, Janet, 2002. Faculty Fellow in Statistics
BS (1975) University of Central Arkansas; PhD (1997) University of Houston

Stiemann, Evan, 1998. Associate Professor of Ecology and Evolutionary Biology
AB (1989) Cornell University; PhD (1997) University of Minnesota

Sigrist, Markus W., 1994. Adjunct Professor in Electrical and Computer Engineering
Diplom. (1972), PhD (1977) ETH University, Zurich, Switzerland

Silberg, Johathan J., 2004. Assistant Professor in Biochemistry and Cell Biology
BS (1994), PhD (2000) University of California

Simpson, Robert, 2002. Adjunct Lecturer of Church Music
AB (1970) Brown University; SMM (1972) Union Theological Seminary

Sinclair, James B., 1978. Lecturer on Electrical and Computer Engineering and Associate Dean of Engineering
BSEE (1973), MEE (1974), PhD (1979) Rice University

Singh, Siddhartha S., 2003. Assistant Professor of Management

Singleton, Scott, 2003. Adjunct Associate Professor in Biochemistry and Cell Biology

Skinner, David, 2004. Lecturer in the Practice of Management
BS (1987) Oklahoma State University; MBA (1992) Oklahoma City University

Skura, Meredith, 1978. Libby Shearn Moody Professor of English
BA (1965) Swarthmore College; PhD (1971) Yale University

Smalley, Richard E., 1976. University Professor, Gene and Norman Hackerman Professor of Chemistry, and Professor of Physics
BS (1965) University of Michigan; MA (1971), PhD (1973) Princeton University

Smith, Brinton, 2005. Associate Professor of Cello

Smith, Clifton Wayne, 1993. Adjunct Professor in Bioengineering
BS (1963) Texas A&M University; MS (1966), MD (1968) University of Texas Medical Branch at Galveston

Smith, D. Brent, 2000. Associate Professor of Management and Associate Professor of Psychology

Smith, George, 1981. Professor of Visual Arts
BFA (1969) San Francisco Art Institute; MA (1972) Hunter College

Smith, Ian, 2000. Faculty Fellow in Physics and Astronomy

Smith, Richard J., 1973. George and Nancy Rupp Professor of Humanities and Professor of History
BA (1966), MA (1968), PhD (1972) University of California at Davis

Smith, Jr., Roland B., 1996. Adjunct Professor on Education Certification and Associate Provost

Smolen, Paul D., 2004. Adjunct Assistant Professor of Computational and Applied Mathematics
BS (1984), University of California at Berkeley; PhD (1990) University of California at Davis

Sneider, Allison L., 2000. Assistant Professor of History and Associate of Will Rice College

Snow, Edward A., 1981. Professor of English
BA (1964) Rice University; MA (1966) University of California at Riverside; PhD (1969) State University of New York at Buffalo

Soligo, Ronald, 1967. Professor of Economics
BA (1958) University of British Columbia; PhD (1964) Yale University

Sorensen, Danny C., 1989. Noah Harding Professor of Computational and Applied Mathematics
BS (1972) University of California at Davis; MA (1975), PhD (1977) University of California at San Diego

Spanos, Pol D., 1984. Lewis B. Ryon Professor of Mechanical Engineering and Civil and Environmental Engineering
Dip (1973) National Technical University, Greece; MS (1974), PhD (1976) California Institute of Technology

Sparagna, John, 1989. Associate Professor of Visual Arts

Spencer, James, 2003. VIGRE Lovett Instructor of Mathematics
BS (1999) University of Missouri; MS (2000); PhD (2003) Boston University

Speziale, Marie, 2002. Professor of Trumpet and Chair of Brass
BM (1964) College Conservatory of Music, University of Cincinnati
Spuler, Richard, 1992. Senior Lecturer of German and Resident Associate of Lovett College

Stallmann, Kurt, 2002. Lynette S. Autrey Assistant Professor of Composition and Theory

Stauney, C. Richard, 1999. Adjunct Professor of Music
BA (1965) Yale University; MD (1969) Baylor College of Medicine

Stein, Keith, 2001. Adjunct Associate Professor of Mechnical Engineering and Materials Science

Stein, Robert M., 1979. Dean of Social Sciences and Lena Gohlman Fox Professor of Political Science
BA (1972) Ohio Wesleyan University; MA (1974), PhD (1977) University of Wisconsin at Milwaukee

Steiner, Uwe, 2001. Associate Professor of German

Stepinski, Tomasz E., 1994. Adjunct Associate Professor of Physics and Astronomy
MS (1979) Warsaw University; PhD (1986) University of Arizona

Stern, Michael, 1991. Professor of Biochemistry and Cell Biology
BS (1978) Stanford University; PhD (1985) University of California at San Francisco

Stevenson, Paul M., 1984. Professor of Physics and Astronomy and Associate of Brown College
BA (1976) Cambridge University; PhD (1979) Imperial College

Stevenson, Randolph T., 1997. Associate Professor of Political Science

Stewart, Charles R., 1969. Professor of Biochemistry and Cell Biology
BS (1962) University of Wisconsin at Madison; PhD (1967) Stanford University

Stobbaugh, Robert B., 2003. Adjunct Professor of Management
BS Louisiana State University; DBA Harvard University

Stoll, Richard J., 1979. Professor of Political Science
AB (1974) University of Rochester; PhD (1979) University of Michigan

BA, MA (1985) Washington University; PhD (1990) Harvard University

Strassmann, Diana, 2004. Professor of the Practice in Humanities

Strassmann, Joan E., 1980. Professor and Chair of Ecology and Evolutionary Biology
BA (1974) University of Michigan; PhD (1979) University of Texas at Austin

Stroup, John M., 1988. Harry and Hazel Chavanne Professor of Religious Studies
AB (1968) Washington University; MDiv (1972) Concordia Seminary; MPhil (1975), PhD (1980) Yale University

Stuart, Laurence E., 2002. Adjunct Professor of Executive Education

Subramanian, Devika, 1995. Professor of Computer Science and in Electrical and Computer Engineering

BSc (1997) University of Texas; MS (2001); PhD (2003) Rice University

Sublender, Barry, 2003. Lecturer of Ecology and Evolutionary Biology
BS (1984) Virginia Polytechnic Institute and State University; PhD (1993) University of Oregon

Summers, Carolyn, 1999. Adjunct Professor of Physics and Astronomy
BA (1970) Vanderbilt University; MEd (1977), EdD (1979) University of Houston

Sunday, Cathy, 2005. Adjunct Professor of Kinesiology
AA (2002); EMS (2002) San Jacinto College

Swint, John Michael, 1977. Adjunct Associate Professor of Economics
BA (1968) California State University at Humboldt; MA, PhD (1972) Rice University

Symes, William W., 1984. Noah Harding Professor of Computational and Applied Mathematics
BA (1971) University of California at Berkeley; PhD (1975) Harvard University

Taha, Walid, 2002. Assistant Professor of Computer Science
BS (1993) Kuwait University; PhD (1999) Oregon Graduate Institute

Talwani, Manik, 1985. Schlumberger Professor of Advanced Studies and Research in Earth Science
BScHons (1951), MSc(1953) Delhi University; PhD (1959) Columbia University; PhD (Honoris Causa) (1981) Oslo University
Tao, Yizhi Jane, 2002. Assistant Professor in Biochemistry and Cell Biology  
BS (1992) Peking University; PhD (1999) Purdue University

BA (1961), MA (1966), PhD (1967) University of California at Los Angeles

Tari, Gabor, 1997. Adjunct Assistant Professor of Earth Science  
BS (1984), MS (1987) Eotvos University, Budapest; PhD (1994) Rice University

Taylor, Julie M., 1981. Professor of Anthropology  
BA (1966) Harvard University; Diploma (1969), PhD (1973) Oxford University

Taylor, Ronald N., 1983. George R. Brown Professor of Business Policy and Professor of Psychology  
BA (1960) Westminster College; MA (1964) University of Nebraska; PhD (1970) University of Minnesota

Tezduyar, Tayfun E., 1998. James E. Barbour Professor in Mechanical Engineering and Materials Science  
MS (1978), PhD (1982) California Institute of Technology

Thames, Jr., Howard D., 1975. Adjunct Professor of Statistics  
BA (1963), PhD (1970) Rice University

Thompson, Ewa M., 1970. Professor of Slavic Studies  
BA (1963) University of Warsaw; MFA (1963) Sopot Conservatory of Music, Poland; PhD (1967) Vanderbilt University

Thompson, James R., 1970. Noah Harding Professor of Statistics  
BEng (1960) Vanderbilt University; MA (1963), PhD (1965) Princeton University

BS (1964) Loyola University, New Orleans; MS (1966), PhD (1968) University of Wisconsin, Madison

Tinsley, Todd M., 2005. Wiess Instructor of Physics and Astronomy  
BA (1998) Hendrix College; PhD (2005) University of Texas

Tittel, Frank K., 1967. J. S. Abercrombie Professor in Electrical and Computer Engineering  
BA (1955), MA, PhD (1959) Oxford University

Tobin, Mary L., 1979. Lecturer on English  
BA (1963) Carleton College; MA (1966) Columbia University; PhD (1973) Rice University

Toffolatto, Frank R., 1996. Associate Professor of Physics and Astronomy  
BS (1981) La Trobe University; PhD (1987) Rice University

Tomson, Mason B., 1977. Professor in Civil and Environmental Engineering  
BS (1967) Southwestern State College; PhD (1972) Oklahoma State University

Tour, James M., 1999. Chao Professor of Chemistry, Professor of Mechanical Engineering and Materials Science and  
Professor of Computer Science  
BS (1981) Syracuse University; PhD (1986) Purdue University

Tran, Thanh T., 2004. Adjunct Lecturer on Electrical and Computer Engineering  

Trosset, Michael, 1992. Adjunct Associate Professor in Computational and Applied Mathematics  
BA (1978) Rice University; PhD (1993) University of California at Berkeley

Tyler, Stephen A., 1970. Herbert S. Autrey Professor of Anthropology and Linguistics  
BA (1957) Simpson College; MA (1962), PhD (1964) Stanford University

Udden, Mark M., 1983. Adjunct Associate Professor in Bioengineering  
SB, MA (1973) Massachusetts Institute of Technology; M.D. (1977) Southwestern Medical School, University of Texas at Dallas

Uecker, Wilfred C., 1984. Harmon Whittington Professor of Management and Associate Dean of Executive Education for  
the Jesse H. Jones Graduate School of Management  
BA (1968), M.BA (1970), PhD (1973) University of Texas at Austin


Underwood, Shane E., 2004. Assistant Professor of Management  

Vaillancourt Roseau, Pauline, 1995. Adjunct Associate Professor in Social Sciences  
PhD (1972) University of California at Berkeley

Van Delden, Maarten, 1997. Associate Professor of Spanish  

Van Wagener, John, 1997. Adjunct Professor of Earth Science  
BA (1972) College of Wooster; MA (1976), PhD (1977) Rice University
Varadhachary, Atul, 2003. Adjunct Professor of Management
MD University of Bombay; PhD (1992) Johns Hopkins University School of Medicine

Vardi, Moshe, 1993. Karen Ostrum George Professor in Computational Engineering and Professor of Computer Science
BS (1975) Bar-Ilan University; MS (1980) Feinberg Graduate School of the Weizmann Institute of Science; PhD (1982) Hebrew University

Varman, Peter J., 1983. Associate Professor in Electrical and Computer Engineering and Computer Science
B'Tech (1978) Indian Institute of Technology, Kanpur; MSEE (1980), PhD (1983) University of Texas at Austin

Veech, William A., 1969. Edgar Odell Lovett Chair in Mathematics
AB (1960) Dartmouth College; PhD (1965) Princeton University

Veletsos, Anestis S., 1964. Brown & Root Professor in Civil and Environmental Engineering
BS (1948) Robert College, Turkey; MS (1950), PhD (1953) University of Illinois

Verm, Jane L., 1989. Senior Lecturer of Spanish
BA (1967) University of Texas; MA (1989) Rice University

VerMeulen, William, 1990. Professor of French Horn

Viebig, Jr., V. Richard, 1969. Lecturer on Accounting
BA (1962), MAcc (1977) Rice University

Vieux, Baxter, 2003. Adjunct Professor of Civil and Environmental Engineering

Visser, Pieter A., 1979. Adjunct Lecturer on Music

Volz, Tracy, 1999. Instructor for the Cain Project
BA (1989) University of Iowa; MA (1998); PhD (1999) Rice University

Wagner, Daniel S., 2003. Assistant Professor of Biochemistry and Cell Biology
BA (1990) University of Texas; PhD (1997) University of Texas Health Science Center

Wallace, James R., 2001. Executive Officer and Associate Professor of Naval Science
AB (1975) University of Northern Colorado; MS (1983) University of Southern California

Wallace, Kristine Gilmartin, 1966. Lecturer in Classics
BA (1963) Bryn Mawr College; MA (1965), PhD (1967) Stanford University

Wallach, Dan Seth, 1998. Associate Professor of Computer Science and in Electrical and Computer Engineering

Walters, G. King, 1963. Professor Emeritus, Research Professor of Physics and Astronomy
BA (1953) Rice Institute; PhD (1956) Duke University

Wamble, Mark S., 1991. Visiting Cullinan Professor of Architecture

Wang, Fu-Kuo Albert, 1998. Assistant Professor of Management
BA (1982) National Taiwan University; MBA (1989), PhD (1994) University of North Carolina

Warburton, Tim, 2004. Assistant Professor of Computational and Applied Mathematics

Ward, Calvin H., 1966. Foyt Family Professor in Civil and Environmental Engineering and Professor of Ecology and Evolutionary Biology
BS (1955) New Mexico State University; MS (1958), PhD (1960) Cornell University; MPH (1978) University of Texas School of Public Health

Ward, Kerry R., 2001. Assistant Professor of History and Associate of Lovett College

Warren, Joe D., 1986. Professor of Computer Science

Warren, Scott K., 1979. Adjunct Assistant Professor of Computer Science
BA (1972), MA (1974), PhD (1976) Rice University

Watanabe, Masahiro, 2003. Assistant Professor of Management

Waters, David L., 1976. Associate Professor of Trombone
BME (1962) University of Houston; MMus (1964) University of Texas at Austin

Watkins, Michael J., 1980. Professor of Psychology
BSc (1965, 1969), PhD (1972) University of London
Watson, Larry J., 2003. Professor of Naval Science

Weaver, Fred M., 2004. Adjunct Professor of Earth Science
BS (1970) University of Notre Dame; MS (1973), PhD (1976) Florida State

Webster, Michael. 1997. Associate Professor of Clarinet and Ensembles
BM (1966), MM (1967), DMA (1975) Eastman School of Music

Weigelt, Carmen B., 2003. Assistant Professor of Management

Weisman, R. Bruce, 1979. Professor of Chemistry
BA (1971) Johns Hopkins University; PhD (1977) University of Chicago

Weissenberger, Klaus H. M., 1971. Professor of German,
MA (1965) University of Hamburg, Germany; PhD (1967) University of Southern California

Wellington, Gerard M, 2002. Adjunct Professor of Earth Science
BA (1971) San Jose State University; PhD (1981) University of California at Santa Barbara

Wellner, Julia Smith, 2001. Lecturer of Earth Science

Wellner, Robert W., 2002. Adjunct Assistant Professor of Earth Science

West, Jennifer L., 1996. Isabel C. Cameron Professor of Bioengineering, Professor in Chemical and Biomolecular Engineering, and Director, Institute of Biosciences and Bioengineering
BS (1992) Massachusetts Institute of Technology; MS (1994), PhD (1996) University of Texas at Austin

Westbrook, Robert A., 1989. William Alexander Kirkland Professor of Management
AB (1969), MBA (1971), PhD (1975) University of Michigan

Westheimer, Alan D., 1983. Lecturer on Management
BSE (1965) University of Pennsylvania; MBA (1966) University of California at Berkeley

Weston, James P., 2000. Assistant Professor of Management

Westphal, Sarah, 2003. Associate Professor of German
BA (1972) Oberlin College; MA (1976), PhD (1983) Yale University

Weyand, Peter, 2002. Assistant Professor in Kinesiology

BA (1953) Rice University; MS (1958), PhD (1961) University of Wisconsin at Madison

White, Carolyonne, 1988. Lecturer on Education Certification
BS (1964) Springfield College; MEd (1998) University of Houston

White, Frank S., 1982. Lecturer on Architecture
BS (1977) Rochester Institute of Technology

Whitmore, Kenton H., 1982. Professor of Chemistry

Whitmore, Mihriban, 1999. Adjunct Assistant Professor of Psychology

Whitney, Ken, 2005. Assistant Professor of Ecology and Evolutionary Biology

Whitney, Stephen E., 2003. Adjunct Professor of Management
BS (1975) Rice University; MA (1976) Union Theological Seminary; MD (1979) Baylor College of Medicine; MBA (2000) University of Houston

Whitney, Kenneth D., 2005. Assistant Professor in Ecology and Evolutionary Biology

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Widener, Sally K., 2001. Assistant Professor of Management
Wiener, Martin J., 1967. Mary Gibbs Jones Professor of History
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Wiesner, Mark R., 1988. Professor of Civil and Environmental Engineering and Chemical Engineering, Director of Environmental and Energy Systems Institute
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Wihl, Gary S., 2003. Dean of the School of Humanities, Francis Moody Newman Professor in Humanities and Professor of English
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Wildenthal, Lora, 2003. Associate Professor of History and Associate of Will Rice College

Wiley, Gale E., 2002. Lecturer of Management Communications
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Williams, Edward E., 1978. Henry Gardiner Symonds Professor of Management and Professor of Statistics
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BA (1942), MS (1944) University of Texas at Austin; PhD (1949) Yale University

Wilson, Lon J., 1973. Professor of Chemistry
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Wilson, Rick K., 1983. Herbert S. Autrey Professor of Political Science and Professor of Statistics and of Psychology
BA (1975), MA (1977) Creighton University; PhD (1982) Indiana University

Wilson, Jr., William L., 1972. Professor in Electrical and Computer Engineering and Associate of Wiess College
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Wise, J. D., 1995. Lecturer on Electrical and Computer Engineering

Wittenberg, Jr., Gordon G., 1979. Professor of Architecture
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BS and MSc (1992); PhD (1996) Chalmers University

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Wolf, Cary E., 2003. Bruce and Elizabeth Dunlevie Professor of English

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Wong, Michael, 2001. Assistant Professor in Chemical Engineering and in Chemistry

Wong, Stephen B., 2001. Lecturer on Computer Science
Wood, Philip R., 1990. Associate Professor of French

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Worth, David S., 2002. Lecturer of Humanities

Wright, Anthony A., 1989. Adjunct Associate Professor of Psychology

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M.D. (1966) National Taiwan University; MS (1968) Yale University

Xiao, Yitian, 2000. Adjunct Assistant Professor of Earth Science

Xing, Yuhang, 2003. Assistant Professor of Management

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MS (1978) Novosibirsk State University; PhD (1982) Russian Academy of Sciences

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BS (1980) Wright State University; MD (1984) Northwestern University Medical School

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BS (1977), MS (1978) Lehigh University; MD (1983) Georgetown University School of Medicine; PhD (1995) Massachusetts Institute of Technology

Yekovich, Robert A., 2003. Dean of the Shepherd School of Music and Elma Schneider Professor of Music

Yeh, Meng, 2001. Lecturer of Chinese
BA (1986) Tamkang University; MA (1988), PhD (1993) University of Texas at Austin

Yepes, Pablo P., 1994. Senior Faculty Fellow in Physics and Astronomy
BS (1982), MS (1983), PhD (1988) University of Santiago de Compostela

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Yunis, Harvey E., 1987. Professor of Classics

Zambosco-Thomas, Elsa, 1986. Lecturer of Spanish

Zammito, John H., 1994. John Antony Weir Professor of History and Professor of German and Slavic Studies and Associate of Hanszen College
BA (1970) University of Texas at Austin; PhD (1978) University of California at Berkeley

Zapalac, Ryan K., 2004. Lecturer of Sport Management

Zeff, Stephen A., 1978. Herbert S. Autrey Professor of Accounting
BS (1955), MS (1957) University of Colorado; MBA (1960), PhD (1962) University of Michigan; Dr. Econ. (Hon.) (1990) Turku School of Economics and Business Administration, Finland

Zelt, Colin A., 1995. Associate Professor of Earth Science
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Zhong, Lin, 2005. Assistant Professor in Electrical and Computer Engineering

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BA (1955), PhD (1961) University of Chicago

Zodrow, George, 1979. Professor of Economics

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