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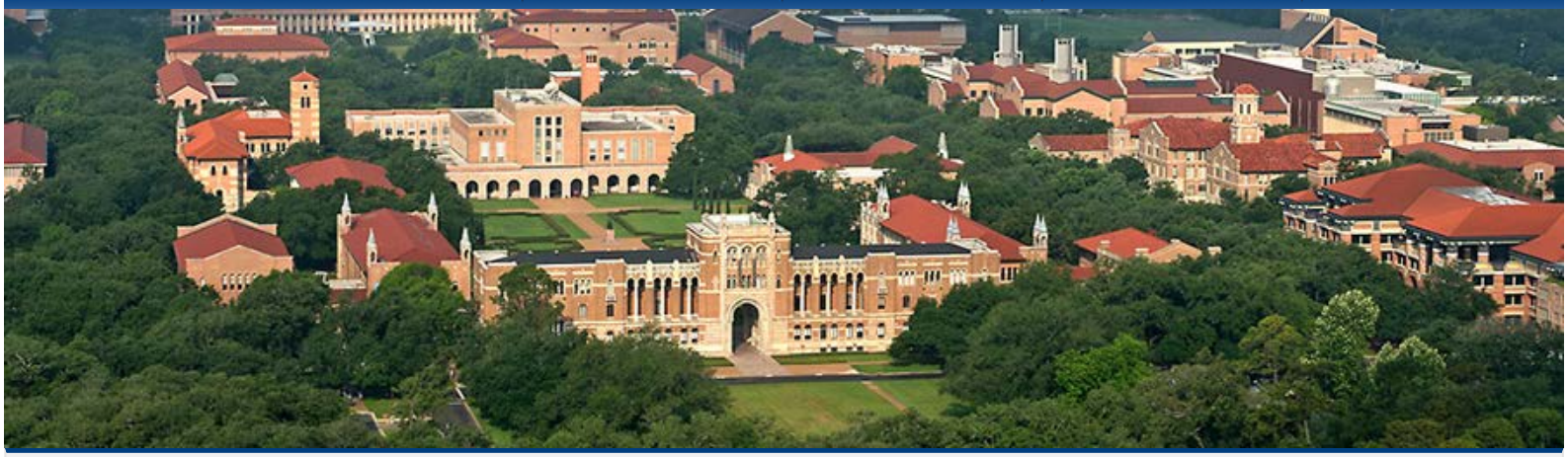
GENERAL ANNOUNCEMENTS 2015-2016



Rice University General Announcements Archive

NOTE: These catalogs represent 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. 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.

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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. “Inside 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 11 U.S. Southern states.

Rice grants 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. The programs leading to the BS degrees in Bioengineering, Civil Engineering, Chemical Engineering, Electrical Engineering and Mechanical Engineering are accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org. 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 and minors also are available, as are various departmental minors and 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 an advanced degree in the field, considerably reducing the time required to complete their graduate studies. The Shepherd School of Music offers a dual 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.

Last Revised : August 03, 2015

Fall 2015 Academic Calendar

Rice University — Office of the Registrar

August	**Fri, 14**	**Deadline:** Last day for instructors to submit final grades to resolve “Other” (OT) grades for courses taken in Summer 2015
	Sun-Fri, 16-21	Orientation week for new students
	Mon, 24	**FIRST DAY OF CLASSES – START OF THE FALL SEMESTER**
	Mon-Fri, 24-28	**Fall Registration Continues:** Registration continues for undergraduate, graduate, and visiting students
	Fri, 28	**Deadline:** Last day for instructors to submit final grades to resolve “Incomplete” (INC) grades for courses taken in Spring and Summer 2015

September	**Fri, 4**	**Deadline:** Last day to complete late registration **Deadline:** Last day to add courses (Please go to ESTHER to add or drop courses) **Deadline:** Last day to adjust variable credit for courses online via ESTHER **Deadline:** Last day to designate a credit course as "Audit" or vice versa **Deadline:** Last day to convert a “Pass/Fail” to an earned letter grade for courses taken in Spring and Summer 2015 **Deadline:** Last day for part-time students to receive a refund for tuition **Deadline:** Last day to withdraw with a 100% refund of tuition and fees
	Mon, 7	**LABOR DAY (HOLIDAY – NO SCHEDULED CLASSES)**
	Fri, 11	**Deadline:** Last day to withdraw with a 70% refund of tuition
	Fri, 18	**Deadline:** Last day to withdraw with a 60% refund of tuition
	Fri, 25	**Deadline:** Last day to withdraw with a 50% refund of tuition
	Wed, 30	**Deadline:** Last day for instructors to submit textbook orders for Spring 2016 to **bookstore@rice.edu**

October	**Fri, 2**	**Deadline:** Last day to withdraw with a 40% refund of tuition
	Fri, 9	**Deadline:** Last day to drop courses (Please go to ESTHER to drop courses) **Deadline:** Last day to withdraw with a 30% refund of tuition
	Fri, 9	**Deadline:** Last day for instructors to submit Mid-semester Grades for first-year undergraduate students online via ESTHER **Deadline:** College course plans due to Dean of Undergraduates office for Spring 2016
	Mon-Tues, 12-13	**MIDTERM RECESS (NO SCHEDULED CLASSES)**
	Fri, 16	**Deadline:** Last day to withdraw with a 20% refund of tuition
	Fri, 23	**Deadline:** Last day to withdraw with a 10% refund of tuition
	Fri, 30	**Deadline:** Last Day to designate a full-term course status to “Pass/Fail” option **Deadline:** Last day to file an application for a December 2015 degree conferral with the Office of the Registrar (Undergraduate and Graduate Students only) **Deadline:** Last day to file an application for a May 2016 degree conferral with the Office of the Registrar (Undergraduate students only) **Deadline:** Last day to file the following in the Office of Graduate and Postdoctoral Studies for December 2015 degree conferral: • Thesis master’s candidacy petitions • Certification of non-thesis master’s • Form for candidacy master’s • Ph.D. candidacy petitions

November	**Mon, 2**	**Spring Registration:** ESTHER Course Registration Planner opens for undergraduate students for Spring 2016 registration.
	Wed, 11	**Deadline:** Last day for instructors to submit Spring semester classroom and lab software requests to **edtech@rice.edu**
	Sun, 15	**Deadline:** ESTHER Course Registration Planner closes at 11:59 PM
	Mon, 16	**Spring Registration**: Spring 2016 registration begins for currently enrolled graduate and fifth-year students at 5:00 PM
	Wed, 18	**Spring Registration**: Spring 2016 ADD/DROP begins for currently enrolled undergraduate students at 7:00 AM
	Fri, 20	**Deadline:** Last day to register for Spring 2016 by 5:00 PM without a Late Registration Fee
	Sat, 21	**Late Registration Begins:** Continuing students that have not registered for any classes are charged a Late Registration Fee to add classes
	Thurs-Fri, 26-27	**THANKSGIVING RECESS (HOLIDAY – NO SCHEDULED CLASSES)**

December	**Fri, 4**	**LAST DAY OF CLASSES** **Deadline:** Last day to drop courses (for Fall 2014 undergraduate matriculants only) - students must go to the Office of the Registrar by 5:00 PM **Deadline:** For a mid-year conferral of degree, students must submit thesis to the Office of Graduate and Postdoctoral Studies by 12:00 noon
	Sat-Tues, 5-8	**STUDY DAYS– NO EXAMS**
	Wed-Wed, 9-16	**Final examinations for undergraduate courses**
	Wed, 16	**END OF THE FALL SEMESTER**
	Fri, 25	**Deadline:** Last day for instructors to submit Final Grades online via ESTHER

Spring 2016 Academic Calendar

Rice University — Office of the Registrar

January	**Mon, 11**	**FIRST DAY OF CLASSES – START OF THE SPRING SEMESTER**
	Mon-Fri, 11-15	Spring registration continues for undergraduate, graduate, and visiting students.
	Fri, 15	**Deadline:** Last day for instructors to submit final grades to resolve "Other" (OT) grades for courses taken in Fall 2015
	Mon, 18	**MARTIN LUTHER KING, JR. DAY (HOLIDAY - NO SCHEDULED CLASSES)**
	Fri, 22	**Deadline:** Last day to complete late registration **Deadline:** Last day to add courses (Please go to ESTHER to add or drop courses) **Deadline:** Last day to adjust variable credit for courses online via ESTHER **Deadline:** Last day to designate a credit course as "Audit" or vice versa **Deadline:** Last day to convert a "Pass/Fail" to an earned letter grade for courses taken in Fall 2015 **Deadline:** Last day for part-time students to receive a refund for tuition **Deadline:** Last day to withdraw with a 100% refund of tuition and fees
	Fri, 22	**Deadline:** Last day for instructors to submit final grades to resolve "Incompletes" (INC) grades for courses taken in Fall 2014
	Fri, 29	**Deadline:** Last day to withdraw with a 70% refund of tuition

February	**Fri, 5**	**Deadline:** Last day to withdraw with a 60% refund of tuition
	Fri, 12	**Deadline:** Last day to withdraw with a 50% refund of tuition
	Fri, 19	**Deadline:** Last day to withdraw with a 40% refund of tuition
	Fri, 26	**Deadline:** Last day to drop full-term courses (Please go to ESTHER to drop courses) **Deadline:** Last day to withdraw with a 30% refund of tuition **Deadline:** Last day to file an application for a May degree conferral with the Office of the Registrar (Graduate Students only) **Deadline:** Last day to file the following in the Office of Graduate and Postdoctoral Studies for May degree conferral: • Thesis master's candidacy petitions • Certification of non-thesis master's • Form for candidacy master's • Ph.D. candidacy petitions
	Fri, 26	**Deadline:** Last day for instructors to submit Mid-Semester Grades for first-year undergraduate students online via ESTHER **Deadline:** Last day for instructors to submit textbook orders for Summer 2016 to bookstore@rice.edu **Deadline:** College course plans due to Dean of Undergraduates office for Fall 2016
	Sat, 27	**SPRING BREAK BEGINS (NO SCHEDULED CLASSES)**

= Faculty and Instructor Deadline
= University Holiday or Event

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March	**Sun, 6**	**SPRING BREAK ENDS (NO SCHEDULED CLASSES)**
	Fri, 11	**Deadline:** Last day to withdraw with a 20% refund of tuition
	Mon, 14	**Summer 2016 Registration Begins**
	Fri, 18	**Deadline:** Last day to withdraw with a 10% refund of tuition
	Fri, 25	**Deadline:** Last day to designate a full-term course status to "Pass/Fail" option **Deadline:** Last day to drop courses (for previous Fall undergraduate matriculants) - students must go to the Office of the Registrar by 5:00 PM **Deadline:** Last day for second year students to declare majors with the Office of the Registrar
	Mon, 28	**Fall Registration:** ESTHER Course Registration Planner opens for undergraduate students for Fall 2016 registration.
	Wed, 30	**Deadline:** Last day for instructors to submit textbook orders for Fall 2016 to **bookstore@rice.edu**
	Thurs, 31	**MIDTERM RECESS (NO SCHEDULED CLASSES)**

April	**Fri, 1**	**MIDTERM RECESS (NO SCHEDULED CLASSES)**
	Wed, 6	**Deadline:** Last day for instructors to submit Fall semester classroom and lab software requests to **edtech@rice.edu**
	Sun, 10	**Deadline:** ESTHER Course Registration Planner closes at 11:59 PM
	Mon, 11	**Fall Registration**: Fall 2016 registration begins for currently enrolled graduate and fifth-year students at 5:00 PM
	Wed, 13	**Fall Registration**: Fall 2016 ADD/DROP begins for currently enrolled undergraduate students at 7:00 AM
	Fri, 15	**Deadline:** Last day to register for Fall 2016 by 5:00 PM without a Late Registration Fee
	Sat, 16	**Late Registration Begins:** Continuing students that have not registered for any classes are charged a Late Registration Fee to add classes
	Fri, 22	**LAST DAY OF CLASSES** **Deadline:** Last day to drop courses (for Spring 2016 undergraduate matriculants only) - students must go to the Office of the Registrar by 5:00 PM **Deadline:** Last day to submit theses in the Office of Graduate and Postdoctoral Studies for May degree conferral by 12:00 noon
	Sat-Tues, 23-26	**STUDY DAYS – NO EXAMS**
	Wed, 27	**Final examinations for all undergraduate courses begin**

= Faculty and Instructor Deadline
= University Holiday or Event

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May	**Wed, 4**	**Final examinations for all undergraduate courses end**
	Wed, 4	**END OF THE SPRING SEMESTER**
	Fri, 6	**Deadline:** Last day for instructors to submit Final Grades for all degree candidates online via ESTHER by 5:00 PM **Deadline:** Last day for academic departments to submit their proposed list of degree candidates to receive the university honor of Distinction in Research and Creative Work to Provost's Office by 4:00 PM
	Mon, 9	**Deadline (May 2016 Undergraduate Degree Candidates only):** Last day to convert a "Pass/Fail" to an earned letter grade for courses taken in Spring 2016 by 12:00 (noon)
	Fri-Sat, 13-14	**ONE HUNDRED AND SECOND COMMENCEMENT**
	Wed, 18	**Deadline:** Last day for instructors to submit Final Grades for all non-graduating students online via ESTHER

June	**Fri, 10**	**Deadline:** Last day for instructors to submit final grades to resolve "Other" (OT) grades for courses taken in Spring 2016

= Faculty and Instructor Deadline
= University Holiday or Event

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Admission

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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, p. 17, third rev. ed. 2006). 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, of keen intellect and diverse backgrounds who not only show potential for success at Rice, but also 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 decision 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 application 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, motivation, 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 experiences, 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 admission 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 admission decision, we do seek to enroll students from underrepresented groups in sufficient and meaningful numbers 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 different cultural, racial, and ethnic groups. In so doing, we endeavor to craft a residential community that fosters creative, intercultural 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 environment 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 college 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 admission 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 admits undergraduate degree candidates on a full-time basis only.

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, students are able to move freely among most divisions after consultation with their advisors. 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

The areas of focus generally used in evaluation of first-year candidates for admission include: scholastic record as reflected by the courses chosen and the quality of academic performance, recommendations from high school, the application presentation of personal information, special talents, essays, and standardized testing.

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 (precalculus) 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 in high school, many at the college level. Therefore, only those students who have more than 20 college preparatory courses may have the Office of 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. The college courses should be part of the normal curriculum of the college and taught by regular members of the college faculty.
2. 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. College-level courses that appear on the high school transcript will not yield credits at Rice.

Recommendations—Candidates must submit evaluations from their guidance counselor and one teacher. The necessary forms are included on the Common Application and the Universal College Application websites.

The Application—All freshman applicants must complete the Common Application or the Universal College Application.

The application and the Rice supplement provide 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. The application fee is $75. 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 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. Only U.S. citizens and permanent residents are eligible for an application fee waiver.

Standardized Testing—All freshman applicants for Fall 2016 must take the current SAT (Reading, Math, and Writing) and two SAT Subject Tests in fields related to their proposed area of study, or the ACT Plus Writing test. These exams are administered by the College Board and the American College Testing Program. The applicant is responsible for arranging to take the tests, and official score reports must be submitted to Rice before the student can be considered for admission. The College Board code for Rice is 6609. The ACT code is 4152.

Rice uses the highest scores from any sitting on the SAT in order to consider each applicant's most positive test results. Recognizing that this policy could disadvantage those students who cannot afford repeated testing or expensive test prep coaching, we believe a comprehensive testing history provides us with the appropriate context required for making a fair judgment of what the test scores mean in a holistic admission process. Therefore, we require all applicants submitting the SAT to submit all scores to Rice. The ACT's definition of a composite score is the average of the four multiple-choice scale scores from a single administration, therefore, it is Rice's policy to use the highest ACT composite score from a single administration.

Additionally, applicants for whom English is not their native language are required to submit official results of either the TOEFL or IELTS exam. A minimum score of 100 is required on the internet-based TOEFL or a 600 on the paper-based TOEFL. The minimum acceptable score for the IELTS exam is 7.0. Applicants may be exempt from this requirement if the language of instruction at the school(s) they attended for the most recent two full years (minimum) is English.

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. Off-campus interviews are conducted throughout the United States and abroad by Rice alumni. The Committee on Admission makes no distinction between on-campus and off-campus interviews. Interviews are available to seniors only.

Music Audition—The deadline for submitting all required documents is December 1.

Architecture Portfolio—Architecture applicants must submit a portfolio along with the required application materials by the deadline for either the Early Decision or Regular Decision Plan.

Decision Plans

Early Decision Plan—Early Decision is a binding decision plan designed for students who have selected Rice as their first choice. Students may initiate applications to other colleges under nonbinding plans but must withdraw those applications if admitted to Rice.

Early Decision applicants must complete the required standardized testing prior to or by the November testing dates in their senior year. All other materials should be submitted by November 1. Admission notices will be mailed by mid December. The committee will admit, defer, or deny Early Decision applicants. Deferred applicants are considered with the Regular Decision pool.

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 $300 nonrefundable deposit by January 1. An additional $100 housing deposit is required of those desiring on-campus accommodations.

Those accepted under Early Decision who demonstrate financial aid eligibility will receive a financial aid package in the admission packet. To apply for need-based aid, Early Decision applicants must submit the College Scholarship Service Profile and the student and parent 2014 income tax and W-2 forms by November 15, 2015. Register for the CSS PROFILE at www.collegeboard.com. Students will complete the PROFILE online. The PROFILE number for Rice is 6609.

Shepherd School of Music—All candidates applying to the Shepherd School of Music must submit their application and all required supporting documents by December 1. Admission notification is April 1. Admitted students must submit a $300 nonrefundable deposit by May 1.

Rice/Baylor Medical Scholars Program—All candidates interested in the Rice/Baylor Medical Scholars Program must submit the Baylor College of Medicine application to Rice University by December 1. Rice application materials are due by November 1 for Early Decision or December 1 for Regular Decision.

Regular Decision Plan—Students who apply Regular Decision must submit their materials by January 1 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 December of their senior year of high school.

Regular Decision applicants who are offered admission should submit a $300 enrollment deposit by May 1 to reserve their places in the incoming class. Those who desire a room on campus must pay an additional $100 deposit. Enrollment deposits are not refundable.

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 with an admission officer well 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, home-schooled applicants are encouraged to provide clear, detailed documentation of curriculum of study, assessment tools, and learning experiences. Rice requires evaluations from a guidance counselor and a teacher from all applicants. For home-schooled applicants, at least one of these evaluations must be from someone not related to the student.

Transfer Students

Students with superior records from two-year or four-year colleges or universities may apply as transfer candidates. Applicants should have completed at least 12 semester hours of college work since graduating from high school. Students with less than 12 semester hours should apply through the freshman admission process. High school students enrolled in an Early College program or Dual Enrollment program are not eligible to apply as transfer students and should apply through the freshman admission process. Students who have already completed a bachelor's degree may not apply for transfer admission.

Applicants for transfer admission must file the following with the Office of Admission:

- The Transfer Common Application and the Rice Writing Supplement or the Universal College Application and Rice Supplement
- Official transcripts of all high school and college work completed to date, as well as courses in progress
- Professional evaluation of transcripts from non-U.S. institutions. Recommended evaluators are SpanTran (www.spantran.com) and Education Credential Evaluators (www.ece.org).
- Two college instructor evaluations
- The college official's report
- SAT or ACT Plus Writing scores
- A $75 application fee

Applications with the appropriate documents must be submitted by March 15 for fall term admission. Notification of the admission decisions are made on a rolling basis between May 1 and June 1. 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 or ACT Plus Writing must be taken by February 15. The SAT Subject Tests are not required.

Additionally, applicants for whom English is not their native language are required to submit official results of either the TOEFL or IELTS exam. A minimum score of 100 is required on the internet-based TOEFL or a 600 on the paper-based TOEFL. The minimum acceptable score for the IELTS exam is 7.0. Applicants may be exempt from this requirement if the language of instruction at the school(s) they attended for the most recent two full years (minimum) is English.

Students for whom the $75 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. Only U.S. citizens and permanent residents are eligible for an application 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/International Certificate Programs

Advanced Placement—Students who score a four or five on the applicable Advanced Placement College Board examinations taken before matriculation at Rice may receive university credit for the corresponding Rice course(s). For more information, see AP Credit.

International Baccalaureate—Students who complete the International Baccalaureate diploma and receive a score of six or seven on a higher-level IB exam may receive course credit for the corresponding Rice course(s). For more information, see IB Credit.

International Certificate Programs—Students who have completed various international certificate programs may receive course credit for corresponding Rice courses; however, each student's documentation will be reviewed individually and on a case-by-case basis.The General Certificate of Education A-Level (United Kingdom), the Abitur (Germany), and the Baccalaureate (France) are eligible for review. For more information, see International Exam Credit.

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Auditing Courses

During the fall and spring semesters, currently enrolled degree-seeking Rice students may audit one or more courses at Rice without charge by securing permission of the instructor and by registering as an auditor with the Office of the Registrar. During the summer sessions, enrolled Rice students may audit one or more courses at Rice at the cost of the auditor fee for Rice alumni (see Cashier's website).

Upon completion, the audited course will appear on the student's transcript with a grade of either "AUD" or "NC" (see Grade Symbols). There are no credit hours associated with audited courses, and auditing a course does not affect a student's GPA. Requests to audit a class or to change from audit must be done by the dates and deadlines documented in the posted Academic Calendar (see Academic Calendar).

Last Revised : August 03, 2015

Majors, Minors, and Certificates

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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, in the section "Departments and Interdisciplinary Programs" or by contacting the department. The process for declaring majors appears in the section Declaring Majors and Minors and Area Majors.

School of Architecture—Students admitted to the university as architecture majors must first complete four 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. The School of Architecture also offers a BA in Architectural Studies, which provides a foundation for graduate level study of architecture and/or pursuit of other fields.

George R. Brown School of Engineering—Rice offers majors in bioengineering, chemical and biomolecular engineering, civil and environmental engineering, computational and applied mathematics, computer science, electrical and computer engineering, mechanical engineering, materials science and nanoengineering, 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, classical studies, English, French studies, German studies, Spanish and Portuguese, history, philosophy, religion, and visual and dramatic arts. Interdisciplinary majors are available in ancient mediterranean civilizations, Asian studies, medieval and early modern studies, and the study of women, gender, and sexuality, 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 biosciences, chemistry, earth science, kinesiology, mathematics, and physics and astronomy offer programs leading to the BA degree. BS degrees are offered in some departments. Majors include astronomy, astrophysics, biochemistry and cell biology, biological sciences, kinesiology, chemical physics, chemistry, earth science, ecology and evolutionary biology, environmental stuides, mathematics, and physics. Students also may 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, linguistics, mathematical economic analysis, political science, psychology, sociology, and sport management. In addition, 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.

Declaring Majors, Minors, and Certificates

Students declare a major via the 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 and/or propose a specific course of

study to help the student improve his or her background. No department or program, except the School of Architecture and Shepherd School of Music, may refuse to admit an undergraduate as a major unless specific curricular conditions for such refusals are included in the relevant description of the requirements for the major, or in cases of resource limitations. Students may not obtain both a BA and a BS in the same major.

Students are encouraged to declare an official major as soon as they have decided on it so that a major advisor can be assigned. Students may declare a major at any time up to, before, or during the spring semester of their second year at Rice. They will not be permitted to register for the fall semester of their third year without having declared a major. The major declaration deadline is listed in the Academic Calendar each year. (Transfer students should declare within their first year or before reaching junior level status.) Students are always free to change their major by completing the Change of Major 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).

Students may declare a minor only after they have first declared a major. The declaration of minor process is identical to that of majors. Students may not major and minor in the same subject.

Additionally, students may declare their intent to pursue a university certificate only after they have first declared a major. The declaration of intent to pursue a university certificate process is identical to that of a major.

Once a student declares a major, minor, or certificate, the title of the major, minor, or university certificate is noted on the student's transcript, and a faculty advisor in the appropriate department is assigned. To gain full benefit of departmental or program course offerings, students should meet regularly with faculty advisors.

To assess progress toward degree requirements, students should:
1) monitor their Degree Works degree audits (via ESTHER) to review progress toward degree requirements; and
2) meet regularly with their faculty advisors to review progress toward completion of major, minor, university certificate, and degree requirements.

For instructions on how to declare a major or minor in ESTHER, visit the Major, Minors, and University Certificates page of the Office of the Registrar's website.

Area Majors

Students with well-defined needs that are not met by established departmental or interdisciplinary majors may propose an area major. Area majors combine courses from more than one department into a cohesive plan of original study that is equivalent in quality and rigor to a traditional major.

Area majors are rare and limited by the available academic resources and must be distinct from other majors at Rice. They differ from double majors, which must conform to the requirements of both departments. An area major constitutes a single major with specific requirements that include courses from two or more departments. An area major may not be used to form a double major, and students with area majors must still meet all the other university graduation requirements.

Students initiate an area major after first consulting with faculty advisors from each of the departments involved. Once support has been obtained from these faculty advisors, students should consult the Office of Academic Advising (OAA) which serves as a liaison to the Committee on the Undergraduate Curriculum (CUC). Students work closely with each faculty advisor to design a comprehensive and substantial course of study and to decide on an appropriate title. This course of study must be formulated in a written proposal. Each faculty advisor and the OAA must sign off on the plan before submission to the chair of the CUC. The CUC determines final approval. As part of the review process, the CUC consults chairs of the involved departments to confirm that courses necessary for successful and timely completion of the major will be offered. If approved, the OAA officially certifies the area major plan to the Office of the Registrar and goes on to oversee the major on behalf of the faculty advisors. Any change in the area major requirements needs the approval of both the faculty advisors and the CUC.

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 propose an area major in their final semester before graduation.

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Non-Traditional Coursework

Courses tailored for individual students provide a valuable opportunity for them to pursue an academic or professional interest under the supervision of a Rice faculty member. Such courses are typically titled as independent study or research, directed reading, or internships. Although the organization of these courses is quite variable, they are subject to the same basic requirements as other course offerings. In particular:

- The subject matter and intellectual level of the course must be appropriate for Rice.
- The instructor of record must hold a regular faculty appointment at Rice. This instructor is responsible for submitting the final grade, in consultation with the student's immediate supervisor, if appropriate.
- The course must have a written syllabus that meets published Rice Syllabus Standards. In addition, the syllabus must include a description of anticipated activities and topical content.
- Credit hours assigned are subject to the same amount-of-work considerations as other courses. Credit hours will be awarded in accordance with the Rice credit hour guidelines and fixed at the time of registration.
- All Registrar deadlines for registration, add/drop, completion of course work, and grade submission must be met.

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Study Abroad

Rice University Study Abroad provides substantial, intellectually rigorous and culturally enriching international opportunities. Rice Study Abroad is committed to providing high quality academic-based educational programs in collaboration with prestigious international universities and select program providers. Rice approved programs are distinguished by their academic focus contributing to the curricular needs of Rice University as well as integration with host communities through intensive language instruction, field studies, professional internships and independent study opportunities.

Students must make their study abroad arrangements through Rice Study Abroad in order to ensure proper enrollment, credit transfer, financial aid portability, scholarship eligibility and risk management coverage.

Transfer credit for study abroad is governed by the guidelines established by the Faculty Senate, available here.

Last Revised : May 05, 2015

Teacher Education

Students in the teacher education program earn Texas state teacher certification at the secondary level, grades 7–12. Subjects include art, English, history, Latin, life sciences, mathematics, physical sciences, physics/mathematics, science, social studies, and Spanish. For more information on teacher education programs at the undergraduate and graduate levels, see Teacher Education.

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Undergraduate Degrees

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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 Wiess 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, mathematics, 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

- Chemical Engineering (BSChE)
- Civil Engineering (BSCE)
- Computer Science (BSCS)
- Electrical Engineering (BSEE)
- Materials Science (BSMSNE)
- Mechanical Engineering (BSME)
- Bioengineering (BSBE)

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 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). The civil and environmental engineering department specifies 93 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, mechanical engineering, civil and environmental engineering, computer science, and materials science and nanoengineering—a total of at least 134 hours
- Chemical engineering majors—a total of at least 132 hours, depending on area, up to 137 hours
- Mechanical engineering and civil engineering—132 hours total
- Computer science majors—a total of at least 128 hours
- Materials science and nanoengineering majors—a total of at least 130 hours

The programs leading to BS degrees in Bioengineering, Civil Engineering, Chemical Engineering, Electrical Engineering and Mechanical Engineering are accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.

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 Music (BMus) degree requires advanced courses in performance and ensemble in addition to the core music curriculum.

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Undergraduate Degree Chart

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School Department	Undergraduate Degrees Offered	Additional Options or Focus Areas (within majors)
SCHOOL OF ARCHITECTURE		
Architecture Sarah Whiting (Dean)	BA, BArch	BA in Architecture, preprofessional major leading to the BArch; BA in Architectural Studies, nonprofessional major
SUSANNE M. GLASSCOCK SCHOOL OF CONTINUING STUDIES		
Teacher Education Judy Radigan	N/A	Leads to secondary teaching certificate in conjunction with BA in major field. See Teacher Education
GEORGE R. BROWN SCHOOL OF ENGINEERING		
Bioengineering Michael Deem	BSBE	
Chemical and Biomolecular Engineering Michael Wong	BA, BSChE	Focus areas in bioengineering, environmental science and engineering, materials science and engineering, sustainability and energy engineering, and computational engineering
Civil and Environmental Engineering Robert Griffin	BA, BSCE	BA degree in civil and environmental engineering; BS with focus areas in environmental engineering, hydrology and water resources, structural engineering and mechanics, and urban infrastructure, reliability and management
Computational and Applied Mathematics Beatrice Riviere	BA	Focus areas in numerical analysis, operations research, optimization, differential equations, and scientific computation

Computer Science Vivek Sarkar	BA, BSCS	Focus areas in architecture, artificial intelligence, computational science, foundations, human-computer interaction, and software systems
Electrical and Computer Engineering Edward W. Knightly	BA, BSEE	Focus areas in computer engineering; photonics, electronics, and nano-devices; neuroengineering; and systems: communications, control, networks, and signal processing
Materials Science and NanoEngineering Pulickel M. Ajayan	BA, BSMSNE	Nanotechnology; metals physics; statistical mechanics; metallic solid thermodynamics; materials chemistry; aspects of composites; coatings and thin films; interface science
Mechanical Engineering Laura Schaefer	BA, BSME	Focus areas in aerospace engineering, biomedical systems, computational fluid dynamics, computational mechanics, fluids-thermal science, mechanical design, mechanics, robotics, and systems dynamics and controls
Statistics Marina Vannucci	BA	Focus areas include applied and theoretical statistics, statistical computing, large data sets, bioinformatics/biostatistics, environmental statistics and finance
SCHOOL OF HUMANITIES		
Art History Linda Neagley	BA	History of art
Classical and European Studies Scott McGill	BA	Classics, classical civilizations, classical languages, classical legacy, Greek, Latin; French literature and culture; German literature, intellectual history, film and media studies, politics, and political theory
English Rosemary Hennessy	BA	American and British literature and culture 1300–present; literary theory
History Alida Metcalf	BA	Courses in social, cultural, and political history of the United States, Europe, Latin America, the Caribbean, Asia, the Middle East, and Africa; the ancient world
Philosophy Steven Crowell	BA	Ethics, especially bioethics, history of philosophy, philosophy of mind, metaphysics
Religion April DeConick	BA	Focus areas in specific religious traditions and methodologies
Spanish, Portuguese and Latin American Studies José F. Aranda, Jr.	BA	Spanish and Latin American literature and Spanish linguistics, Portuguese literature and culture
Visual and	BA	Studio, film and photography, and theatre arts

Dramatic Arts John Sparagana		
JESSE H. JONES SCHOOL OF BUSINESS		
N/A	N/A	See minors section
SHEPHERD SCHOOL OF MUSIC		
Music Robert Yekovich (Dean)	BA, BMus	BA in music; BMus in composition, music history, music theory, and performance; coordinated BMus/MMus with fifth year of study
WIESS SCHOOL OF NATURAL SCIENCE		
Biosciences Janet Braam	BA, BS	Degree programs include BA in biochemistry and cell biology, biological sciences, and ecology and evolutionary biology; BS in biochemistry and cell biology, and ecology and evolutionary biology
Chemistry Matteo Pasquali	BA, BS	Degree programs include BA and BS with specialization in organic and medicinal chemistry, inorganic and materials chemistry, physical and theoretical chemistry
Earth Science Richard G. Gordon	BA, BS	Major tracks in geology, geophysics, geochemistry, and environmental earth science.
Kinesiology Nicholas K. Iammarino	BA	Degree programs include BA in Kinesiology with concentrations in Health Sciences and Sports Medicine.
Mathematics David Damanik	BA, BS	300-level courses oriented toward problem solving and applications and 400-level courses and above oriented toward theory and proofs; preparation for graduate studies in mathematical or other sciences, professional schools, employment in the scientific or financial sector 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, algebraic geometry, dynamics, etc.
Physics and Astronomy Thomas Killian	BA, BS	Majors in physics with specific options in applied physics, biophysics, computational physics, astrophysics, and astronomy
SCHOOL OF SOCIAL SCIENCES		
Anthropology Eugenia Georges	BA	Focus areas in archaeology and social/cultural anthropology
Economics Antonio Merlo	BA	Majors in economics and in mathematical economic analysis
Linguistics Michel Achard	BA	Focus areas in language, cognitive science, second language acquisition, and language, culture, and society
Political Science B. Ashley Leeds	BA	Focus areas in American politics, comparative politics, and international relations
Psychology David W. Wetter	BA	Course offerings cover major areas within basic and applied areas of psychology, including cognitive, neuroscience, developmental, social/personality, industrial/organizational, and clinical

Sociology Bridget K. Gorman	BA	Theory, methods, and major substantive areas of the field, including major social institutions and social processes
Sport Management Clark D. Haptonstall	BA	Core classes include: introduction to sport management, sport marketing, sport law, event and facility management, sales and revenue generation in sport, media relations, and internship. Students also will complete classes to fulfill research, speech, and writing requirements. Electives include: classes from the business minor, economics, and managerial studies (sport.rice.edu)
INTERDEPARTMENTAL MAJORS		
Area Majors	BA	Requires approval of two or more departments, the Office of Academic Advising, and the Committee on Undergraduate Curriculum
Ancient Mediterranean Civilizations Susan McIntosh	BA	Anthropology, classical studies, Greek, Hebrew, Latin, history, history of art, linguistics, philosophy, and religion
Asian Studies Sonia Ryang	BA	Anthropology, Arabic, Chinese, film, Hindi, history, history of art, humanities, Japanese, Korean, linguistics, medieval studies, policy studies, political science, religion, sociology, study of women, gender, and sexuality, Tibetan
Chemical Physics Philip R. Brooks Stanley A. Dodds	BS	Joint major between the departments of physics and astronomy and chemistry
Cognitive Sciences Suzanne E. Kemmer	BA	Computer science, linguistics, neuroscience, philosophy, and psychology
Environmental Studies Andre Droxler	BA	Core science classes and interdepartmental environmental electives in social sciences, economics, humanities, architecture, natural sciences, and engineering
Managerial Studies Richard J. Stoll	BA	Accounting, economics, and statistics
Medieval and Early Modern Studies Diane Wolfthal	BA	Art history, Asian studies, classics, English, French, German, history, humanities, linguistics, Spanish, music, philosophy, political science, and religion
Policy Studies Donald Ostdiek	BA	Environmental policy, government policy and management, healthcare policy and management, international affairs, law and justice, business policy and management, and urban and social change
Study of Women, Gender, and Sexuality Susan Lurie	BA	Anthropology, art history, English, French studies, German, Spanish, history, humanities, economics, linguistics, music, psychology, philosophy, poverty and justice, religion, and sociology
DEPARTMENTAL AND INTERDISCIPLINARY MINORS		
African Studies Kerry Ward	N/A	Interdisciplinary minor

Anthropology Eugenia Georges	N/A	Departmental minor
Biosciences Janet Braam	N/A	Departmental minors in biochemistry and cell biology, and ecology and evolutionary biology
Business Rick Schell	N/A	Departmental minor (business.rice.edu/Business_Minor.aspx)
Computational and Applied Mathematics Matthias Heinkenschloss	N/A	Departmental minor
Energy and Water Sustainability Jim Blackburn	N/A	Interdisciplinary minor
Financial Computation and Modeling Katherine B. Ensor	N/A	Interdisciplinary minor in statistics, economics, and finance (cofes.rice.edu)
Global Health Technologies Rebecca Richards-Kortum	N/A	Interdisciplinary minor Complementary contributions from the humanities, social sciences, policy, bioscience, and engineering programs (btb.rice.edu)
Jewish Studies Matthias Henze	N/A	Interdisciplinary minor (jewishstudies.rice.edu)
Mathematics David Damanik	N/A	Departmental minor
Naval Science Michael A. Carambas	N/A	Interdisciplinary minor
Neuroscience J. David Dickman	N/A	Interdisciplinary minor
Poverty, Justice, and Human Capabilities Diana Strassmann	N/A	Interdisciplinary minor
Sociology	N/A	Departmental minor

Bridget K. Gorman		
Statistics David Scott	N/A	Departmental minor

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Academic and Judicial Discipline

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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
- 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 previous suspension will again be suspended if in any succeeding semester they fail to achieve at least one of the following requirements:

- a cumulative and semester grade point average of at least 1.67, or
- a semester grade point average of at least 2.00.

The first suspension period is normally one semester; the second suspension period is at least two semesters. Students may only return for a fall or spring semester following suspension, not for summer school. Students are not readmitted after a third suspension.

Participation in student activities on and off campus and use of Rice facilities, including, but not limited to, the student center, the colleges, the playing fields, the gym, and the computer labs, are limited to *enrolled* students.

Students placed on academic suspension are notified by the Office of 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.

Students facing a first or second academic suspension who verify with the Office of the Registrar, academic advising, and their department that successful completion of their proposed academic plan would satisfy their degree requirements in one semester if allowed to return, may petition the Dean of Undergraduates for immediate readmission. This is known as the “senior exception rule”, and students may be granted this exception only once. If granted, both the immediate readmission and the exception will be noted on the student’s academic transcript.

Senior exception students that do not complete their degree requirements in the one semester for which they were readmitted, but finish with a GPA which allows for good academic standing may be allowed to continue with their studies at Rice, but only by petitioning and receiving approval from the Dean of Undergraduates.

Senior exception students should note that if they do not complete their degree requirements in the one semester for which they were readmitted, and finish with a GPA resulting in an academic suspension, that second or third suspension will be applied to their academic record.

Readmission After Academic 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 June 1 for readmission in the fall semester and November 1 for readmission in the spring semester. The petition should demonstrate what the student did while they were separated from Rice and how they have prepared themselves to successfully function as a student at Rice. 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, as well as an academic plan. Academic plans must be reviewed and approved by the Office of Academic Advising by June 1 for readmission in the fall semester and November 1 for readmission in the spring semester. To allow time for review and revision of the academic plan, students must submit their first draft academic plan at least three weeks in advance of the deadline. Guidelines for completing an academic plan can be found at www.rice.edu/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 or a designated faculty advisor throughout the semester. In the first semester upon return from an academic suspension, students may not become candidates for, or hold, any elected or appointed office, nor are they allowed to enroll in more than 17 semester hours.

In some instances, the committee may postpone approval of readmission or rule that suspension is permanent. 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.

Disciplinary Probation, Suspension, and Expulsion

The Code of Student Conduct applies to all Rice students and encompasses conduct both on and off campus. The Office of Student Judicial Programs may sanction students--including implementing disciplinary probation, suspension, or expulsion--for violations of the Code of Student Conduct or the Honor Code. Students who have been expelled, who are serving a suspension, who are under investigation for disciplinary violations, or who have pending Code of Conduct or Honor Code proceedings against them may not receive their degree, even if they have met all academic requirements for graduation. Students who are suspended or expelled must leave the university within the timeframe specified by Student Judicial Programs, generally 48 hours from being informed of the decision, though in cases of unusual hardship, Student Judicial Programs may extend the deadline. Any tuition refund will be prorated from the official date of suspension or expulsion, determined by the Office of the Registrar. A grade of "W" will be awarded to all enrolled courses regardless of when the suspension or expulsion began. Expelled students will have the expulsion noted on their transcript.

While on disciplinary probation or 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, including, but not limited to the student center, the colleges, the playing fields, the recreation center, and the computer labs, are reserved for enrolled students.

Students seeking readmission after a suspension for Honor Code or Code of Conduct violations or other nonacademic action should submit a petition in writing to the Office of Student Judicial Programs by emailing SJP@rice.edu. That petition should include information on what the student did while away from Rice, including any schooling or employment; how the student met any requirements described by Rice at the time of separation; what the student did to address any issues leading to the separation; and what the student learned from the separation. Once approved by Student Judicial Programs, the petition is forwarded to the dean of undergraduates for final readmission approval and action.

Degree Revocation

The University reserves the right to revoke any degrees granted. A degree awarded may be revoked if the University becomes aware that the degree should not have been granted, such as a degree that was obtained by violating the Honor Code or Code of Student Conduct or by deception, misrepresentation, falsification of records, academic misconduct, research misconduct, or if the work submitted in fulfillment of -- and indispensable to -- the requirements for such degree are determined to fail to meet the academic standards that were in effect at the time the degree was awarded. Notification of the date of revocation will appear on the student's transcript, and the student will be asked to return the diploma. The Provost receives all recommendations for revocation of degrees and, after consideration and review, forwards to the President any recommendations deemed to be warranted. The Provost may also initiate and forward to the President his or her own recommendation for a degree revocation. The President will consider all such recommendations forwarded by the Provost and effectuate those he or she determines to be warranted. Procedures

governing degree revocations may be obtained from the offices of the Registrar, Provost or President.

The University also reserves the right to withdraw a degree to correct an administrative error, such as an incorrectly listed degree, or in a situation where it was found that a student had not actually fulfilled all graduation requirements.

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Attendance and Excused Absences

Students are expected to attend all scheduled activities for all of the classes for which they are registered during the entire course of the academic semester for which they are enrolled. The academic calendar indicates normal class days, recesses, and holidays. Instructors, however, may schedule required activities on other days, including recesses, holidays, and weekends, if required by programmatic needs, such as laboratories or field trips. Such requirements must be clearly stated in the online course description available at registration and on the syllabus, and instructors should try to provide compensatory time off for students.

The university understands 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.

No nonacademic university-sponsored event at which student attendance is required may be scheduled or rescheduled for any date after the day following the last day of classes. Exceptions may be granted by a quorum of the Committee on Examinations and Standing only for events where scheduling is not under the control of the university. On the class days falling during the last calendar week of classes, an individual student may participate in only one university-sponsored event, which may be scheduled or rescheduled, so long as no more than one night would be spent outside of Houston for travel. For events during the last week of classes, the reading period, and the final examination period, a quorum of the Committee on Examinations and Standing must be satisfied that each student is in satisfactory academic standing to participate in an event. If a quorum of the Committee on Examinations and Standing cannot meet in a timely fashion, then the executive committee of the Faculty Senate will handle exception requests.

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.

Resolving conflicting course obligations scheduled outside of assigned class time

Many courses require presentations that cannot reasonably be accommodated within the scheduled class period. Problems occur when faculty schedule these presentations during times that conflict with other regularly scheduled classes.

Principles

- Generally, faculty should plan their course activities to avoid conflicts with other regularly scheduled classes.
- Generally, all deadlines and schedules will be included in the syllabus or announced, in writing, early in the semester.
- It is the responsibility of faculty members to make appropriate accommodations and adjustments when required class exercises are scheduled outside of assigned class time.
- A student must not be penalized either directly or indirectly.

Resolution of scheduling conflicts

- Class presentations outside of the scheduled class time should be held on evenings and weekends.
- Registrar-assigned class times take priority over activities of other classes.
- When two or more classes require activities outside of class time, the order of priority is determined by the date at which the exercise was announced in writing and scheduled.
- When two or more classes require activities outside of class time, activities which require external reviewers or coordination of multiple schedules have priority over individual exercises that can rescheduled.
- Required exercises outside of assigned class times that are announced at the last minute do not take priority over those announced earlier, even if they require coordination of multiple schedules.

Roles and responsibilities

- Ideally, faculty will cooperate with one another when they need to resolve scheduling conflicts.
- If faculty involved are unable to find a solution that does not penalize or unduly disadvantage the student,

department chairs will resolve the scheduling conflict.

- If department chairs are unable to resolve the scheduling conflict, the matter will be referred to the Dean of Undergraduates or the Dean of Graduate and Postdoctoral Studies, or their designees, who will have final authority for resolution.

Last Revised : August 03, 2015

Final Examinations

The decision to give a final exam as a required part of the course rests with the instructor. All tests and examinations are conducted under the honor system. No examinations or other course assignments may be due between the last day of classes and the first day of the final examination period.

Examinations are considered final examinations when they:

- Cover more than the material learned since the last exam, 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.

All undergraduate-level courses are assigned a final examination time by the Office of the Registrar. Upon request, graduate-level courses may be scheduled for a final examination time. Instructors may choose to use that assigned time for a scheduled final examination. If they choose this option, the Office of the Registrar will assign a room, and the final exam will be administered in that room at the designated time. Instructors may choose instead to give a take-home exam or no exam at all. Some instructors assign end-of-term projects or papers rather than final examinations. With regard to due dates, final papers or projects will be treated the same as take-home exams.

Take-home exams should be available to the students as soon as possible after the end of classes, but must be available no later than the end of the next business day after classes have ended. Take-home exams may be no longer than five hours in length. The due date of take-home exams may be no earlier than the end of the examination time assigned to that class by the Office of the Registrar. Instructors may specify due dates later than this time, but not later than the end of the last day of the examination period.

No student should be given an extension of time or opportunity to improve a grade that is not available to all members of the class, except for verified illness or justified absence from campus. However, students cannot be required to take more than two scheduled exams in two consecutive calendar days. Students also cannot be required to complete more than two take-home and/or scheduled final exams on the same calendar day (unless this is the last day of the examination period). In both instances, if the student wishes to make alternative arrangements and is unable to work out such arrangements with the instructor(s) involved, the instructor of the third and any subsequent exams will be required to allow the student to reschedule that exam.

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Grades

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See also Faculty Grading Guidelines and Syllabus Standards.

Pass/Fail Option

Undergraduates may register for courses on a pass/fail basis. Students:

- May not take more than one course as a 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 four courses 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 one course as pass/fail in a semester.
- May not take as pass/fail a repeatable course previously taken and designated as pass/fail.
- May not take as pass/fail those courses used to meet the requirements for their major. If students take such courses pass/fail, the Office of the Registrar will replace the P with the grade earned during the final degree audit. This same rule and process applies to minors.
- Must submit the proper online form for a course to be taken pass/fail no later than the posted deadline, usually the end of the 10th week of semester.
- May not take First-Year Writing-Intensive Seminar (FWIS) courses as Pass/Fail.

Students may convert a pass/fail course to a graded course by submitting the proper online form with the Office of the Registrar, and must adhere to the pass/fail deadlines as stated in the Academic Calendar. Students wishing to designate a course as pass/fail during the summer sessions should see Regstration During Summer Sessions.

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 in their GPA. Students who take a course during the Rice summer session as pass/fail also should be aware that this counts toward their allowable total of four courses. For more information, see The Pass/Fail Option.

Satisfactory/Unsatisfactory

Satisfactory/unsatisfactory courses are those that do not use traditional grading procedures and instead assign a grade of S or U rather than a letter grade. Such courses or labs are designated by the instructor and are, in most cases, graduate level courses. With S/U courses, instructors report the S if the student successfully completes the course, or the U if they have not. 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.

Audit

Students have the option of auditing courses. For auditing students, instructors report either the AUD or the NC grade symbol, the AUD if the student met the audit requirements of the class, or the NC if they have not. There are no credit hours associated with audited courses, and auditing a course does not affect a student's GPA. Request to audit a class or to change from audit to credit or vice versa must be done by the end of the second week of the semester. (See Grade Designations AUD and NC below.)

Grade Symbols

Instructors are required to report a grade for all students whose names appear on the class roster. They grade their students using the following conventional symbols: A+, A, A-, B+, B, B-, C+, C, C-, D+, D, D-, F.

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:

AUD ("Audit")—This designation is only used for people auditing the course, and specifically where the auditing student has met the audit requirements of the course. A grade designation of "NC" (No Credit) is given to students who do not meet the audit requirements. There are no credit hours associated with an AUD grade designation. (See Audit above.)

INC ("Incomplete")—Instructors report this designation to the Office of 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 provide independent corroboration of their illness or circumstances, and they are expected to coordinate with the instructor prior to final grades being submitted. For an INC received in the fall semester, students must complete the work by the end of the first week of the spring semester or an earlier date as defined by the instructor, and instructors must submit a revised grade by the end of the second week. For an INC received in the spring or summer semester, students must complete the work before the start of the fall semester or an earlier date as defined by the instructor, and instructors must submit a revised grade by the end of the first week. If a grade is not submitted by the appropriate deadline, the INC will be automatically converted to a failing grade.

Students with an INC 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 according to the timeline previously stated, 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. Students also should be aware that they may be placed on probation or suspension when the INC is changed to a grade, either by an instructor or by default.

NC ("No Credit")—This designation signals that no credit was granted for the course. It is used in situations where a person auditing a course has not met the audit requirements of the course as defined by the instructor.

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. An OT awarded during a summer semester must be resolved and the grade sumbitted by the start of orientation week. If a grade is not submitted by the appropriate deadline, the OT will be automatically converted to a failing grade. Students should be aware that they may be placed on probation or suspension when the OT is changed to a grade, either by an instructor or by default.

W ("Official Withdrawal from University")—Students who officially withdraw from the university after the designated drop deadline, the seventh week of classes, will receive a final grade of "W" for each course in which they were enrolled at the time of withdrawal.

Students who officially withdraw from the university by the drop deadline 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 Office of 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. New matriculants in their first semester at Rice may drop a class up until the last day of classes, and through the end of week ten in their second semester, if that is a full-term Spring semester, and the course will not be included on the student's official transcript.

XII ("Article XII")—This designation is used in various honor council or judicial cases when a student has opted to voluntarily withdraw from the university and forfeit credit for the course in question, with the understanding that the accusation will not otherwise be pursued.

Grade Points

To compute grade point average, letter grades are assigned numeric values as follows:

A+	4.33*	**C**	2.00
A	4.00	**C-**	1.67

A-	3.67	**D+**	1.33
B+	3.33	**D**	1.00
B	3.00	**D-**	0.67
B-	2.67	**F**	0.00
C+	2.33		

* Effective in Fall 2018 semester, the grade A+ will be worth 4.0, not 4.33, in calculating the GPA.

Grade Point Average Calculation—For each course carrying standard letter grades, the credit hours attempted and the points for the grade earned are multiplied. The grade 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. Courses taken on a S/U or pass/fail basis are excluded from the grade point average calculation.

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Last Revised : August 13, 2015

Graduation Requirements

The General Announcements (GA) is the official Rice curriculum. In the event that there is a discrepancy between the GA and any other websites or publications, the GA shall prevail as the authoritative source.

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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 at least 60 hours outside of their major for Bachelor of Arts and Bachelor of Science degrees (exceptions: requirement does not apply to Bachelor of Science degrees with an engineering major; Architecture majors are required to complete only 36 hours outside the major)
- 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 and/or minor* requirements (as designated by the department) with a cumulative grade point average of at least 2.00 or higher
- Satisfy the Writing and Communication requirement (see below)
- Complete one Lifetime Physical Activity Program (LPAP) course for one credit. Students with disabilities may make special arrangements to satisfy this requirement
- Complete courses to satisfy the distribution requirements (see below)
- Otherwise be a student in good academic and disciplinary standing and not under investigation

In addition to meeting the degree requirements for all bachelor's degrees, to qualify for the Bachelor of Arts or the Bachelor of Science, students must complete at least 60 hours in course work outside the major. Exceptions include:

- Students majoring in architecture must complete at least 36 hours in course work outside the major.
- Students pursuing a Bachelor of Science degree in engineering are not subject to this requirement.

No more than three hours of credit for student-taught College Courses (COLL) may be counted toward graduation. This includes all courses COLL 100-199 as well as COLL 200 Teaching Practicum.

No more than four hours of credit for LPAP courses may be counted toward graduation.

In order to earn a second degree, students must fulfill the requirements outlined in the Dual-Degree Requirements section below.

Writing and Communication Requirement

All students must complete and pass a First-Year Writing-Intensive Seminar (FWIS). An FWIS is a content-based, 3-

credit hour seminar open only to first-year students that can focus on any topic, and in which writing and communication pedagogy plays a significant role in assignments and grading. To facilitate success in meeting this requirement, all students must take the English Composition Examination prior to matriculating. Students who fail the English Composition Exam, or fail to take it, must successfully complete the FWIS 100 Fundamentals of Academic Writing and Communication course during their first semester, and prior to enrolling in the FWIS course used to meet the graduation requirement. FWIS 100 cannot be used to meet the FWIS graduation requirement.

All first-year students must enroll in and successfully complete an FWIS during their first year at Rice, and all first-year students will be notified prior to Orientation Week if they have been assigned to take an FWIS during the fall or spring of their first year. Students who matriculate as freshmen may not substitute transfer credit for the FWIS. Transfer students who wish to satisfy the FWIS requirement with courses from another institution must apply for this credit before the end of their Orientation Week. Neither freshmen nor transfer students may satisfy the FWIS requirement by taking an equivalent course at another institution after matriculating at Rice.

All FWIS courses carry the FWIS designation and cannot be taken as Pass/Fail. Students are allowed to change FWIS sections during the first two weeks of classes each semester, but they cannot drop one FWIS section without simultaneously adding another. After week two, FWIS courses cannot be dropped. In extraordinary circumstances, students may submit a petition to the Dean of Undergraduates, who may approve a drop on an exception basis.

See the Program in Writing and Communication's web site for FWIS section descriptions and for more information on the required English Composition Exam.

Distribution Requirements

Purpose of Distribution Requirements

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. There are three groups of required courses.

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 that address the problems, methodologies, and substance of different disciplines in the social sciences. The second are departmental courses that draw on 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.

Academic Planning for 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.

Applicable Academic Graduation Requirements

Students enrolled in four- (or five-) year bachelor's programs may decide whether to follow the graduation general and major requirements in effect when they first matriculated at Rice or those in effect when they graduate. If they graduate

more than seven (or eight) years after their matriculation, 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. When declaring the major or minor, students and advisors should identify and clearly document the set of major requirements to be followed. Each should retain a copy of the documented major requirements. If a new degree program, major, or minor is created during the student's time at Rice, the new program will be available to the student as if the program appeared in the General Announcements at the time of matriculation.

Application for Degree and Degree Conferral

All students must complete and submit an Application for Degree Form available in ESTHER. This form is required for all students who plan to complete their degree requirements at the end of the fall or spring semester. A late fee will be assessed for applying after the deadline (please consult the semester-specific Academic Calendar for deadline).

Upon completion of degree requirements, degrees are approved by the faculty and conferred only in December and May. Degree recipients may then participate in the annual commencement ceremony, celebrated each year after the conclusion of the spring semester. Under specific, limited circumstances, an undergraduate student may participate in commencement without being a degree recipient, provided that the student would be joining his or her matriculating class in that commencement. The specific policy, rules and procedures are available on the Office of the Dean of Undergraduates' website.

Dual-Degree Requirements

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 a second degree should submit an additional declaration of major form with the Office of the Registrar. This paperwork should include the addition of the proposed degree and major programs along with the approval of the chair or undergraduate advisor of each department involved, indicating that the proposed course program satisfies all major and degree requirements.

Students with a previously earned bachelor's degree from Rice who wish to earn a second bachelor's should look at the Non-Traditional Student section.

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Leaves and Withdrawals

General Information

All students taking a leave or withdrawal from Rice should submit their written request on an Undergraduate Separation Request Form. Student separations are effective when acknowledged by the university. Approval of a withdrawal and 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 an academic suspension.

After a separation of more than four semesters, students seeking to return to Rice must submit a written petition to the Committee on Examinations and Standing no later than June 1 for the fall semester and November 1 for the spring semester. The petition should include an academic plan approved by the Office of Academic Advising and two letters of support. Academic plans must be reviewed and approved by the Office of Academic Advising by June 1 for readmission in the fall semester and November 1 for readmission in the spring semester. To allow time for review and revision of the academic plan, students must submit their first draft academic plan by October 7 in the fall semester and by May 7 in the spring semester. Guidelines for completing an academic plan can be found on the Academic Advising web site.

Coordination of Separations and Returns

Rice administrators are committed to students' long-term success and to seeing them thrive during their college experience. Part of that commitment means that Rice supports students if they decide to leave the university for a period of time. Administrators in these areas also work with students to plan a roadmap back to Rice.

The Dean of Undergraduates Office oversees readmission processes. Each request for readmission will be reviewed individually. The Dean of Undergraduates or his/her designee will make readmission decisions. Students are encouraged to contact the Dean of Undergraduates Office with questions about separations and re-enrollment at the university.

Students are expected to follow the process outlined in their letter from the Dean of Undergraduates and any other communications from Rice regarding expectations for separation and readmission. Additionally, sometimes students are separated from Rice through more than one process and are required to submit readmission requests to multiple university departments. In certain cases, readmission may be accompanied by additional requirements to support the success and wellbeing of the student.

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 a 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 no later than June 1 for the fall semester and November 1 for the spring semester. We strongly recommend that the student consult with the Office of Academic Advising about their academic plan.

After a leave of more than four semesters, students must submit a written application to the Committee on Examinations and Standing no later than June 1 for the fall semester and November 1 for the spring semester. Academic plans must be reviewed and approved by the Office of Academic Advising by June 1 for readmission in the fall semester and November 1 for readmission in the spring semester. To allow time for review and revision of the academic plan, students must submit their first draft academic plan by October 7 in the fall semester and by May 7 in the spring semester. Guidelines for completing an academic plan can be found through the Office of Academic Advising.

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.

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 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 grades reflective of any missed academic work.

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. The petition, received no later than June 1 for the fall semester, and November 1 for the spring semester, should include an academic plan approved by the Office of Academic Advising and two letters of support. Academic plans must be reviewed and approved by the Office of Academic Advising by June 1 for readmission in the fall semester and November 1 for readmission in the spring semester. To allow time for review and revision of the academic plan, students must submit their first draft academic plan by October 7 in the fall semester and by May 7 in the spring semester. Guidelines for completing an academic plan can be found on the Academic Advising web site.

If students withdraw within five weeks of the last day of classes, they must submit the written application to the dean of undergraduates who has discretion to submit it to the Committee on Examinations and Standing. 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. For purposes of readmission, students whose grades would have led to suspension had they not withdrawn are treated as if they had been suspended.

If students voluntarily withdraw for medical or psychological/psychiatric reasons, however, they must meet the readmission conditions for a medical or involuntary withdrawal.

Medical Withdrawal

Students may request a medical withdrawal from the university by applying in writing to the Office of the Dean of Undergraduates at any time during the semester, up until the last day of classes. Students considering taking time off for personal reasons related to their wellbeing and mental health are also encouraged to contact the Student Wellbeing Office about the roadmap back to Rice. The Student Wellbeing Office is part of the Dean of Undergraduates Division and serves as a liaison to the medical readmission process during the separation process and when students are ready to return.

Following a medical withdrawal, students should submit a written petition for readmission to the Office of the Dean of Undergraduates no later than June 1 for the fall semester and November 1 for the spring semester. This petition must include documentation of treatment provided. Students also may be required to schedule an interview with the director of the Rice Counseling Center or Student Health Services or their designees. Academic plans must be reviewed and approved by the Office of Academic Advising by June 1 for readmission in the fall semester and November 1 for readmission in the spring semester. To allow time for review and revision of the academic plan, students must submit their first draft academic plan by October 7 in the fall semester and by May 7 in the spring semester. Guidelines for completing an academic plan can be found at the Office of Academic Advising.

Students who withdraw for psychological reasons within the last five weeks of a semester are strongly encouraged to focus on their wellbeing needs and will not be eligible to apply for immediate readmission. Therefore, petitions for readmission will be considered in the following readmission request cycle and must be received no later than the applicable June 1 or November 1 deadline.

Involuntary Withdrawal

The university may insist on a student's involuntary withdrawal if, in the judgment of the Dean of Undergraduates or his/her designee, the student's behavior includes, but is not limited to, one or more of the following:

- Poses a threat to the safety or welfare of him/herself or other members of the Rice community;
- Has a serious medical or a psychological condition that the student cannot effectively address while enrolled or which is likely to be severely exacerbated by the Rice academic and/or living environment;
- Demonstrates behavior that seriously interferes with the education of other members of the Rice community;
- Is not able to continue functioning as a student.

Following an involuntary withdrawal, students should submit a written petition for readmission to the Office of the Dean of Undergraduates no later than June 1 for the fall semester and November 1 for the spring semester. This petition must include documentation of treatment provided. Students may be required to schedule an interview with the director of the Rice Counseling Center or Student Health Services or their designees. Academic plans must be reviewed and approved by the Office of Academic Advising by June 1 for readmission in the fall semester and November 1 for

readmission in the spring semester. To allow time for review and revision of the academic plan, students must submit their first draft academic plan by October 7 in the fall semester and by May 7 in the spring semester. Guidelines for completing an academic plan can be found on the Academic Advising web site. Further information is available by contacting the Office of the Dean of Undergraduates.

Students taking time off due to an involuntary withdrawal are also encouraged to contact the Student Wellbeing Office about the roadmap back to Rice. The Student Wellbeing Office is part of the Dean of Undergraduates Division and serves as a liaison to the medical readmission process during the separation process and when students are ready to return.

Students who are involuntarily withdrawn for psychological reasons after the designated drop deadline of the fall or spring semester may not petition for readmission for the semester immediately following the semester from which they are withdrawn. Petitions should be received no later than the applicable June 1 or November 1 deadline to be considered for readmission for the upcoming semester.

Unauthorized Withdrawal

Students who leave the university without proper notification of withdrawal are considered to have resigned. Resigned students will only be considered for readmission under exceptional circumstances. In order to be considered for readmission, students must submit a petition no later than June 1 for the fall semester and November 1 for the spring semester to the Committee on Examinations and Standing, in care of the Office of the Dean of Undergraduates. Academic plans must be reviewed and approved by the Office of Academic Advising by June 1 for readmission in the fall semester and November 1 for readmission in the spring semester. To allow time for review and revision of the academic plan, students must submit their first draft academic plan by October 7 in the fall semester and by May 7 in the spring semester. Guidelines for completing an academic plan can be found on the Academic Advising web site.

Resignation

A student may resign from the university by notifying the Dean of Undergraduates in writing. Resignation means the student is withdrawing, is no longer a student at Rice, and will not return to Rice. A resignation becomes effective when accepted by the Dean of Undergraduates. In general, if a student is under investigation for a potential Code of Student Conduct violation or has charges pending under the Code, those proceedings will terminate upon the Dean of Undergraduate's acceptance of the resignation.

All Separated Students, Presence on Campus

All students separated from Rice, whether voluntarily or involuntarily, withdrawn, resigned, or due to academic or disciplinary suspension, must leave campus within 48 hours. Exceptions are granted by the Dean of Undergraduates or, in the case of disciplinary suspensions, the Office of Student Judicial Programs and, if the student is living on campus, the college master. All separated students must return their college key to their college coordinator and their student ID to the Dean of Undergraduates. Participation in student activities on and off campus and use of Rice facilities, including, but not limited to, the student center, the colleges, the playing fields, the recreation center, and the computer labs, are limited to enrolled students. Separated students are expected to be away from Rice during the term of the separation. If the student is employed by Rice at the time of separation, he or she must relinquish such employment or petition the Dean of Undergraduates for written permission to continue the on-campus employment. Noncompliance with these requirements may delay readmission.

All Readmitted Students, Return to Campus

Students who have been readmitted must comply with any restrictions or requirements placed upon them by the Dean of Undergraduates or the Office of Student Judicial Programs. Failure to comply with or follow the restrictions or requirements may be cause for disciplinary action under the Code of Student Conduct. Student Judicial Programs may implement a period of disciplinary probation and/or other restrictions as a condition of any readmission.

Completing Graduation Requirements Elsewhere

Students planning to complete graduation requirements at another institution must first secure formal written approval from the Dean of Undergraduates. Transfer credit is subject to all Rice's transfer credit policies and must be approved by the Registrar. All other graduation requirements apply, and the student is expected to adhere to all requirements and deadlines.

Last Revised : August 21, 2015

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).

Last Revised : June 20, 2011

Registration

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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 completed and on academic history. Students matriculating in the fall complete their registration during Orientation Week before classes begin in August. Students matriculating mid-year register during Mid-Year Orientation before classes begin in January. Students are strongly encouraged to meet with their divisional or major advisor to discuss their courses for the upcoming semester.

New students may not register or attend classes until they return a properly completed health data form and meet immunization and TB screening requirements. Additionally, all first-time undergraduate students, including transfers, must meet the meningococcal meningitis vaccine requirement to live on campus. Immunizations required for admission are diphtheria/tetanus, measles, rubella, and mumps, meningococcal meningitis, 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 specific registration deadlines for the semesters of that year in the Academic Calendar. Deadline due dates for student account balances for each term are published here in the General Announcements under the appropriate sections and on the Cashier's website. 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. Withdrawn students will 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 add classes late and must pay a late registration fee of $125. Additionally, students who are readmitted after being withdrawn for nonpayment will be assessed a $350 readmission fee.

Drop/Add

During the first two weeks of classes, 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:

- May not add courses after the second week of classes, except in extenuating circumstances and with the approval of the Committee on Examinations and Standing (a $75 fee per course will be assessed).
- May drop courses through the seventh week without penalty.
- May not drop courses after the end of the seventh week of classes except in extenuating circumstances and with the approval of the Committee on Examinations and Standing (a $75 fee per course will be assessed). Students who receive approval to drop a course after the designated drop deadline will receive a grade of "W" for that course.

Newly matriculated undergraduate students, both new first-time and transfer students in their first full-term semester at Rice (Fall or Spring), are permitted to drop courses up to the last day of classes. These same students, in their second semester at Rice, if that semester is a full-term Spring semester, are permitted to drop courses through the tenth week of classes without a fee.

Students are allowed to change FWIS sections during the first two weeks of classes each semester, but they cannot drop one FWIS section without simultaneously adding another. After week two, FWIS courses cannot be dropped. In extraordinary circumstances, students may submit a petition to the Dean of Undergraduates who may approve a drop on an exception basis.

For courses with start and end dates not coinciding with Rice's typical semester calendar, otherwise known as "part of

term" courses, the Office of the Registrar will consult with the instructor and:

- Set the add deadline approximately one-seventh of the way into the course
- Set the drop deadline approximately one-half of the way into the course
- Post these special deadlines on the Office of the Registrar's website.

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 completion of graduation requirements in eight semesters. Students must secure permission in writing from the Office of the Academic Advising if they want to register for more than 20 credits. Guidelines for securing permission for more than 20 credits can be found on the Academic Advising website. Petitions for more than 24 credit hours will not be considered. No student may receive credit for more than 20 credits in a semester, including courses taken elsewhere, without prior written approval.

Students must secure permission in writing from the Office of the Dean of Undergraduates before registering for courses if they want to:

- Complete graduation requirements elsewhere
- Register for less than 12 credits, which will move the student to part-time status
- Register concurrently at another university, regardless of the delivery method of the course
  i. In the absence of extenuating circumstances necessitating concurrent registration, such permission will not generally be granted.
  ii. Credit for coursework at another college or university completed in a semester while enrolled at Rice will not be recorded by the Office of the Registrar without prior receipt of written permission from the Dean of Undergraduates.

Students also should be aware that the Office of the Registrar 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.

For more information, visit the Office of the Registrar website.

Course Numbering System

Courses numbered 100-499 are generally considered undergraduate level, with the 100-299 sequence classified as lower-level (freshman/sophomore) and the 300-499 sequence classified as upper-level (junior/senior). Courses numbered 500 and above are generally considered to be at the post-baccalaureate or graduate level. Graduate and undergraduate students may, with departmental approval, take certain courses outside their designated level.

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

E– Excluded from both GPA and earned hours

Some Rice University courses may be repeated for credit. They are specifically noted in the Course Offerings 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.

If students repeat courses for which they have received either advanced placement or transfer credit, credit will not be counted. Nor can credit be received twice for students transferring courses that repeat previous enrollment at Rice.

Students may not receive credit twice 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.

Change in Registration

The academic calendar lists deadlines for dropping or adding a course 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 online or through the completion of the appropriate forms and submission to the Office of the Registrar. Changing a course to/from audit must be done by the deadlines as posted in the Academic Calendar for the applicable semester. If a student feels they have exceptional circumstances, they can request exceptions to these deadlines by petitioning the Committee on Examinations and Standing.

Registration During Summer Sessions

Currently enrolled Rice students should register online via ESTHER as per normal registration processes and procedures. Rice students should be aware that the registration and payment deadlines do differ, depending on the summer session, and should familiarize themselves with the Academic Calendar. Summer courses that do not generate enrollments sufficient to cover their costs may be canceled prior to the first day of class.

Pass/Fail during summer sessions--Currently enrolled Rice students can designate a summer course as Pass/Fail during the summer sessions, but can do so only by visiting the Office of the Registrar in person and completing a Pass/Fail Designation form. Similarly, conversions of summer Pass/Fail grades can only be done via paper form at the Office of the Registrar. Students should adhere to the applicable pass/fail deadlines, as stated in the Academic Calendar.

Auditing courses during the summer sessions--Currently enrolled Rice students may audit one or more courses at Rice at the cost of the auditor fee for Rice alumni (see Cashier's Website).

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Last Revised : August 21, 2015

Transcript Policies

Rice University provides official hard-copy transcripts and electronic transcripts. Official transcripts are issued only at the request of the student. Official transcript requests should be made at least five working days before the desired date of issue. A $10 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.

Last Revised : August 18, 2015

Transfer Credit

Jump to:

Prematriculation Transfer Credit
Postmatriculation Transfer Credit
International 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. Students must have taken the course at a United States academic institution accredited by a regional accrediting agency, or at a foreign institution accredited by the appropriate agency, such as the government's Ministry of Education. Studies done in one's home country constitute transfer credit through the Office of the Registrar. Official transcripts from the transfer credit institution must be sent directly from the institution's registrar to Rice's Office of the Registrar or hand-delivered in an official sealed envelope. For students participating in an official study abroad program (i.e., studying in a country that is not one's home country) this coursework must be approved by Rice's Study Abroad Office.

All coursework must have earned a grade of at least a C- or the equivalent. Students may not transfer courses taken pass/fail or on a similar basis at other institutions. Generally, grades earned for transfer credit are not entered on the Rice transcript, and transferred courses have no effect on a student's Rice grade point average. However, where coursework taken at other institutions has been approved by the faculty as an explicitly specified component to a program's curriculum, the courses will be entered on the transcript and counted in the student's Rice grade point average (including grades lower than C-). Such opportunities are listed in the program curriculum description. Students should keep in mind that if they choose to pursue an advanced degree, the transcripts from transfer credit institutions, with the actual grades earned in the transferring courses, will be requested as part of a graduate school's admission process.

After matriculation at Rice, students are limited to 15 semester hours of summer school transfer credit. This restriction is waived for credit earned during an official summer study abroad program through the Study Abroad Office. Additionally, transfer credit taken at another institution while concurrently enrolled at Rice is subject to Rice's course load policy. Individual departments may place additional restrictions on particular courses and/or institutions. Similarly, various majors, minors, certificates and degree programs may limit the amount of transfer credit that students may apply to them.

All transferable credits from schools utilizing a system other than the semester hour (such as quarter hours or ECTS credits) will be converted to semester hours. In accordance with university guidelines and based on the external transcript, the Office of the Registrar will determine appropriate transferable credit hours and whether the credits are upper-level or lower-level.

Students with much transfer credit should be aware of the general graduation requirements: Students must be registered at Rice full time for at least four full fall and/or spring semesters, complete at least 60 semester hours, 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).

Prematriculation Transfer Credit

For transfer work completed prior to matriculation, the Office of the Registrar, in conjunction with the academic departments, determines whether courses are appropriate for transfer to Rice as Rice equivalent courses or as TRAN, general elective hours. TRAN will be indicated as either upper- or lower-level and will count toward the total hours needed for graduation and for required upper-level credit if the TRAN credit is designated by the Office of the Registrar as upper-level. 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.

Postmatriculation Transfer Credit

Continuing students who plan to transfer courses are strongly advised to seek prior approval. Without such approval, students cannot be certain transfer credit will be accepted at Rice. To receive Rice equivalent credit, students are required to complete the appropriate form through the Office of the Registrar and secure approval from the designated transfer credit advisor in the department offering the Rice equivalent course. Unless approval is secured before or after completing the transfer credit, students can expect transferable courses to be granted TRAN. Transfer credit will be evaluated only after the Office of the Registrar receives an official transcript from the other college or university.

International Transfer Credit

Students seeking transfer credit for courses taken prematriculation and postmatriculation at institutions outside the United States must present a professional course-by-course evaluation of the foreign official transcript. The professional evaluation must verify that the foreign institution is equivalent to a regionally accredited U.S. academic institution and must include an explanation of credits earned (including U.S. semester hour equivalents), grade equivalents, and course levels (lower or upper level). Two reliable services with course-by-course evaluations that include this required information are:

SpanTran (www.spantran.com) and
Education Credentials Evaluators (www.ece.org).

All professional evaluations should be obtained from one of these two recommended credential services and submitted to the Office of the Registrar. Payment for the professional evaluation is the responsibility of the student.

Students participating in an official study abroad program through the Study Abroad Office are exempt from the requirement of having the international transcript professionally evaluated, unless the Office of the Registrar is unable to make a clear distinction of the credit earned. Study abroad international transfer credit may be transferred back to Rice in the following situations:

Third-Party Providers -- Students participating in a study abroad program with a third party provider must provide a School of Record transcript in order to transfer credit back to Rice.

Direct Enrollment -- Students participating in a study abroad program with direct enrollment into a foreign university should be prepared to provide a professionally evaluated transcript if the Office of the Registrar is unable to make a clear distinction of the credit earned.

A number of European institutions use the European Credit Transfer System (ECTS). One ECTS credit is comparable to one-half (0.5) semester credit at Rice. It is suggested that students take 30 ECTS credits per semester, which will transfer to Rice as 15 semester hours. A minimum full-time load during the fall and spring semesters is 24 ECTS, which will transfer as 12 Rice semester hours.

Transfer credit for study abroad is governed by the guidelines established by the Faculty Senate, available here.

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Last Revised : August 03, 2015

Veterans Information

Qualified veterans, dependents of deceased or disabled veterans whose death or disability is a direct result of their military service, or dependents in receipt of transferred benefits from a veteran may be eligible for VA educational benefits under one of the following programs while attending Rice University:

- Chapter 30: Montgomery G.I. Bill-Active Duty/Discharged
- Chapter 31: Vocational Rehabilitation
- Chapter 32: Veterans Educational Assistance Program (VEAP)
- Chapter 33: Post 9/11 G.I. Bill
- Chapter 35: Dependents Education Assistance
- Chapter 1606: Montgomery G.I. Bill-Selected Reserve
- Chapter 1607: Reserve Education Assistance Program (REAP)

At Rice University, veterans' benefits are managed through the Office of the Registrar. This office assists all veterans and their dependents who wish to receive Veterans Administration (VA) educational benefits

Please see the Registrar's website regarding the documentation required to obtain educational allowances from the VA.

Veterans who are planning to attend the university should contact Rice University's Veterans Affairs Representative at least two months before the date of entry. Such time is required to expedite the processing of paperwork for educational allowances from the VA.

For certification of benefits, students should have an enrollment of at least half time (6 credits for undergraduates).

For additional information regarding other veterans' educational programs, contact the Office of the Registrar at 713-348-4999 or registrar@rice.edu.

Last Revised : August 11, 2014

Clubs and Organizations

Jump to:

Office of Student Activities

The Office of Student Activities, located in the Rice Student Center, oversees the activities of various campus wide student organizations, student requests for facilities usage, and coordination of various leadership development programs.

In addition to managing the registration process, finances, and general advising for the 250 plus registered clubs at Rice University, Student Activities provides direct advising to the following organizations:

- Student Association (SA) - Undergraduate student government, including college presidents
- Graduate Student Association (GSA) - Graduate student government
- Impact Rice Retreat (IRR) - freshmen and sophomore leadership development retreat
- Leadership Summit - advanced leaders' retreat
- Rice Program Council

The Rice University clubs are divided into eight categories: Academic/Honorary, Cultural/International, Political, Recreational/Sport, Religious/Spiritual, Service, Social, and Special Interest. Additional information about the clubs can be found online at http://clubs.rice.edu. Student Activities also provides leadership development opportunities in the form of Lunch and Lead Programs, the Impact Rice Retreat, the Leadership Summit, the Women LEAD program, and the Club Development program.

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 College Republicans. There also are numerous sport related clubs such as sailing, rugby, volleyball, and soccer. Some of the special-interest groups include a pre-med society, a pre-law society, and Habitat for Humanity.

Many organizations are associated with academic and professional disciplines, such as foreign language clubs, honor societies, and student affiliates groups such as the American Chemical Society, the American Society of Civil Engineers, and the American Society of Mechanical Engineers.

Student Activities also recognizes a number of religious and spiritual organizations. These include, but are not limited to, Chi Alpha Christian Ministries, the Baptist Student Union, Canterbury Association, Catholic Student Association, Hillel Foundation, InterVarsity Christian Fellowship, the Muslim Student Association, and an Interfaith association. Many of these clubs are assisted by local clergy or staff, and form the Joint Campus Ministers.

The Clubs Office is located in the basement of the Rice Memorial Center, and provides computers, workspace, and a color copier for club convenience. The student organization workspace offers office space, computers, and storage in the same area for student use.

Center for Civic Leadership

The Center for Civic Leadership (CCL) fosters engaged citizenship among Rice undergraduates through integrated curricular and experiential learning opportunities. These opportunities help students develop the capacity to exercise civic leadership by better understanding themselves, their responsibilities as citizens, the complexity of social issues, and the mechanisms for creating sustainable change in Houston and communities beyond. By serving as the hub for the university's engagement with off-campus partners in Houston, the United States, and around the world, the CCL assists Rice faculty and staff with creating additional experiential learning opportunities with external partners

In addition to academic coursework in leadership, the CCL offers research, service, and internship opportunities that enable students to work with a range of off-campus partners in the public, private, and non-profit sectors. Programs include Urban Immersion, Alternative Spring Break, Houston Action Research Teams, the Loewenstern Fellowship in Civic Research and Science, and the Leadership Rice Mentorship Experience. While CCL programs are open to all undergraduates, those who seek greater depth and intentionality in their leadership development have the opportunity to pursue the Certificate in Civic Leadership. As home to undergraduate fellowships advising, the CCL also enables students to build upon their academic and leadership experiences to identify undergraduate and post-baccalaureate opportunities that best meet their future goals.

Further information can be found at http://ccl.rice.edu

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. To learn more about the programs sponsored by the Rice Student Volunteer Program, visit http://www.rice.edu/rsvp.

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 admission 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: www.ruf.rice.edu/~forensic/.

Office of Multicultural Affairs

The Office of Multicultural Affairs (OMA) has, as its primary mission, coordinating and implementing comprehensive educational, cultural and social programs designed to emphasize inclusiveness, while promoting intercultural dialogue, awareness and respect for diversity. Through advocacy, cultural programs and education, OMA also helps students understand and appreciate racial, ethnic, gender and other differences, while creating opportunities for students to challenge prejudice and expand their cultural knowledge and appreciation. OMA utilizes its programming and support systems to provide an optimum developmental environment where all members of the University community may develop to the highest level of their potential in an atmosphere free from harassment and bias, thereby ensuring Rice's standing as an intellectually and culturally vibrant community. Cultural student clubs, such as the Black Student Association, the Hispanic Association for Cultural Enrichment at Rice and the Rice Native American Student Association, meet regularly with OMA to discuss programming logistics and other issues. OMA also directly advises ADVANCE (Advancing Diversity and the Need for Cultural Exchange), a student club that hosts a weekly discussion on a topical issue and organizes an annual cultural fair. Other programs for students under OMA include HARAMBE, (Swahili for "working together in unity" or "let's pull together") a group that seeks to create a unifying event for entering African-American students, allowing them to build social and academic connections with peers, faculty, and staff, and FRESH, a group dedicated to forming relationships through education, scholarship and heuristics at Rice. For more information about OMA, please visit this website.

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Last Revised : August 03, 2015

Disability Support Services

Located on the first floor of Allen Center, Disability Support Services coordinates campus services for individuals with documented disabilities. For academic accommodations, adaptive equipment, or disability-related housing needs, Disability Support Services 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://dss.rice.edu. Students can schedule an appointment with the director of Disability Support Services by calling 713-348-5841.

Section 504/ADA Coordinator—The director of affirmative action serves as the Section 504/ADA coordinator at Rice University. Concerns or complaints relative to disability issues should be directed to the Office of Affirmative Action 205 Allen Center, 713-348-4930.

Last Revised : August 12, 2013

Financial Aid

Jump to:

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 also are 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 its 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). The FAFSA school code for Rice is 003604. Student and parent income tax documents, including W-2 forms, are required to be submitted to The College Board using Institutional Documentation (IDOC) Service.

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 documents and W-2 forms to The College Board.

“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. The Office of Financial Aid 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 March 1
- Free Application for Federal Student Aid (FAFSA), priority date March 1
- Student and parent income tax documents 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 documents 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 , file the FAFSA, and submit parent and student tax documents 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 Admission 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 Financial Aid participates in the following programs:

- **Federal Direct Loans—**These are low-interest loans made to students attending school on at least a half-time basis. Subsidized loans require need-based financial aid eligibility, but unsubsidized loans are not based on financial need.
- **Federal Direct 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 Financial Aid.

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 either the Federal Work-Study Program or the Rice University Work Program. Students interested in employment should access the Office of Financial Aid webpage.
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. 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 may be eligible to apply for limited financial aid for the summer terms.

Financial Aid Eligibility

Undergraduate students are eligible to apply for need-based Rice sponsored and federal/state/private aid during the first eight 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 toward 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

Federal regulations (CRF § 668.34) require that students demonstrate satisfactory academic progress toward completion of their degree to continue to receive institutional, federal and state financial aid. With the exception of the

five-year program in architecture, eligibility for institutional aid is limited to the equivalent of 8 semesters of undergraduate enrollment, including coursework taken at other colleges and universities. In addition to meeting the standard for receiving financial aid, students must also meet the academic standards of Rice University.

Satisfactory academic progress is comprised of three areas as required by federal regulations. A student must complete their degree within a specified period that does not exceed 150% of the published length of the program, demonstrate they are making progress towards the completion of their degree by successfully completing 66% percent of all attempted courses, and maintain a cumulative 1.67 GPA, which is consistent with meeting graduation requirements. This regulation applies to each financial aid applicant, whether a previous recipient or not.

Credits counted in the maximum time are all attempted credits (even when not a financial aid recipient). Attempted credits include:

- Earned credits – Passed (A+ through D-), Satisfactory (S)
- Repeated courses
- Withdrawal
- Failures – Failed (F), Unsatisfactory (U)
- Incomplete
- All accepted transfer credits (including Study Abroad courses) toward the degree program

If a student fails to meet the satisfactory academic progress standards by the end of the academic year, the student will be placed on Financial Aid Suspension and will not be eligible for aid until the satisfactory academic progress standards are met.

Appeal—Students are allowed to appeal their Financial Aid Suspension in cases of the death of a relative, an injury or illness of the student, or other special circumstances. Students must submit a letter discussing why the student failed to make satisfactory academic progress, and what has changed in the student's situation that will allow the student to demonstrate satisfactory academic progress at the next evaluation. Supporting documentation (doctor's letter or academic plan) must accompany the appeal letter and must be submitted to the Office of Financial Aid prior to the beginning of the subsequent term. The Appeals Committee will review appeals on a case-by-case basis.

If an appeal is approved by the Appeals Committee, the student will be placed on financial aid probation and may receive financial aid for one probationary semester. At the end of the probationary term, the student must meet the satisfactory academic progress standards or meet the requirements of an approved academic plan developed by the student’s academic department(s).

Financial Aid after academic 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 the Office of Financial Aid to determine their aid eligibility.

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 the Office of Financial Aid for information about “Return of Title IV Funds” policies and procedures.

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GENERAL ANNOUNCEMENTS 2015-2016

Health, Counseling and Wellbeing

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Health and Wellness Support Services Fee

By paying an annual student Health and Wellness Support Services Fee, all students gain access to the Student Health Services, Rice Counseling Center and the Student Wellbeing Office. Detailed information on the care and services each provide is available from these centers.

Student Health Services

Student Health Services, an outpatient medical clinic, is located in the Morton L. Rich Health Center. The clinic is staffed by primary care physicians, nurses, and ancillary support staff. More information can be found at health.rice.edu.

Clinic hours are from 8:00 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 clinics and hospitals (guidance on self-care as well as local healthcare options can be found on the website). 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.

Care at the clinic is arranged through appointment at 713-348-4966. In emergencies, students should call the Rice University Police Department at 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 Thanksgiving and the winter break. The clinic also is open for reduced hours during the summer months.

The Student Health Service provides the following:

- Medical care for illness and injury with referrals to specialists when needed
- Maintenance of health records for all students
- Immunizations and other preventive services
- General information for all students
- Contraceptive counseling and routine Pap smears
- Allergy shots (students must provide serum after a specialist allergy workup)
- Physical examinations

Confidentiality for Health Services

The Student Health Service physician–patient relationship is a confidential one. Medical records will be released only on receipt of written authorization from the student or as required by law or when the patient poses a significant risk to herself or himself or another person. Physicians with Student Health Services are considered confidential employees under Title IX, meaning that should a student wish to speak about domestic or sexual violence or stalking with their physician, his/her information is confidential and will not be released without the student's written consent. The only exception is for students under the age of 18.

Health Insurance

All registered students are required to maintain health insurance coverage, compliant with the Affordable Care Act, while enrolled at Rice University. Therefore, all students are required to either enroll in the Rice student health insurance plan,

administered by Aetna Student Health, or complete an online waiver application demonstrating comparable insurance coverage. Every student is pre-billed the annual amount of health coverage. Once a student enrolls or waives coverage, the Cashier's office will update tuition bills based on the selection. Insurance and waiver applications, as well as specific dates for enrolling, frequently asked questions, and more can be found on the Rice Student Insurance website: http://studenthealthinsurance.rice.edu.

Fall semester students who do not complete either an enrollment or waiver application by September 4th will be automatically enrolled in the annual insurance plan. The deadline to enroll of waive for the spring semester is January 22nd. Please note the automatic enrollment process can take up to two weeks to complete. Once enrolled in coverage, a student cannot cancel it for any reason.

For questions concerning the Rice plan, please contact studentinsurance@rice.edu or call (713) 348-5544.

NOTE: If you waive coverage in the fall, you are still expected to have ACA compliant coverage for the spring.

International students should visit the OISS website for detailed information concerning the approved alternative insurance option through Student Assurance Services (SAS), as well as application and rate information.

Wellbeing and Counseling Center Services

Center contact information

The Wellbeing and Counseling Center provides confidential counseling treatment as well as wellbeing case management services and Title IX support for graduate and undergraduate students. The Center also provides mental health and wellbeing related education for the student body. The Wellbeing and Counseling Center is located in the Barbara and David Gibbs Recreation and Wellness Center. The Center is open Monday - Friday from 8:30a.m. to 5:00p.m. Walk-ins are available during business hours. For appointments contact the Wellbeing and Counseling Center at 713-348-3311 (24/7) or visit http://wellbeingandcounseling.rice.edu for more information. In emergencies, students should call the Rice University Police Department at 713-348-6000.

General information about counseling

Rice Counseling Center addresses students' psychological needs with various programs and services. Typically, 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 and relationship 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 long term or specialized counseling or treatment, counselors refer them to an outside provider. The students, or their health insurance, must pick up these costs. All students who have paid the Health and Wellness Support Services Fee are eligible for initial assessment sessions, consultations, crisis intervention, and educational programming. Students who have worked with a mental health professional prior to enrolling at Rice are encouraged to make contact with the Rice Counseling Center prior to coming to Rice. This will allow the student to make arrangements for a continued care plan. This plan may involve working with the Rice Counseling Center or working with the center to find a suitable off-campus provide

The Rice Counseling Center can be contacted at 713-348-3311 and at http://wellbeingandcounseling.rice.edu/rcc/ . The Rice Counseling Center provides the following services:

- Psychological crisis intervention, on a walk-in emergency basis during regular office hours or by phone at any time, 24 hours a day, by calling 713-348-3311. This includes after hours and weekends.
- Brief initial assessments, often by phone, to quickly receive information about a situation and assign an appropriate counselor
- Short-term individual and couples counseling
- Group therapy and support groups
- Medication consultations with the center's 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)

Confidentiality for counseling

Rice Counseling Center services are confidential; information about a student is not released without the student's written consent. Before entering a therapeutic relationship with a counselor, students may review and discuss confidentiality with their counselor, ask all necessary questions, and be certain they understand how confidentiality will be applied in their case. As detailed in RCC's treatment agreements, state law does not extend confidentiality to several

circumstances, including 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; or (4) the counselor suspects that the student has been the victim of sexual exploitation by a former health care provider during the course of treatment with that provider. In addition, RCC sometimes provides de-identified information to administrative officials who are in a need-to-know capacity. In some cases the terms of the treatment engagement with RCC may require a student to share assessments, diagnoses, or treatment plans from non-Rice treating professionals with Rice counselors.

Therapists with Rice Counseling Services are considered “confidential” employees under Title IX, meaning that should a student wish to speak about domestic or sexual violence or stalking with their therapist, their information is confidential and will not be released without his or her written consent. The only exception to this is for students under the age of 18.

General information about wellbeing case management

The Student Wellbeing Office provides case management services and supports students who have experienced wellbeing challenges that may be impacting their personal and/or academic goals and overall success at Rice. Wellbeing case managers connect students to university resources and procedural options to help students during their enrollment. If students decide to take time off to focus on their wellbeing needs, the office works with them and serves as a liaison to the medical readmission process when students are ready to return. Contact the office by calling 713-348-3311 (24/7) or visit http://wellbeingandcounseling.rice.edu/rcc/.

General information about Title IX Support

Rice encourages any student who has experienced an incident of sexual, relationship, or other interpersonal violence, harassment, or gender discrimination to seek support. There are many options available both on and off campus for all students, regardless of whether the perpetrator was a fellow student, a staff or faculty member, or someone unaffiliated with the university.

Students should be aware when seeking support on campus that most employees are required by Title IX to disclose all incidents of non-consensual interpersonal behaviors to Title IX professionals on campus who can act to support that student and meet their needs. The therapists at the Rice Counseling Center and the doctors at Student Health Services are 'confidential' employees, meaning that Rice will not be informed about the incident if a student discloses it to one of these Rice staff members. Rice prioritizes student privacy and safety, and only shares disclosed information on a need-to-know basis.

Students who have been accused of committing interpersonal violence or harassment can also seek support under Title IX. The student will be assigned a Title IX Resource Navigator who will assist the student through the process. Contact the office by calling 713-348-3311 (24/7) or visit http://wellbeingandcounseling.rice.edu/rcc/.

Privacy for wellbeing case management and Title IX Support

Wellbeing staff follow FERPA guidelines. These staff members may inform others on the campus who have a legitimate educational interest in knowing about a student's general situation in order to perform their work to address the safety of the student or the community. This includes contacting a student's emergency contact(s) in the event of a health and safety emergency. Wellbeing staff are considered 'responsible' employees under Title IX, meaning that should a student wish to speak about domestic or sexual violence or stalking with their staff member, he or she is required by law to report the information to a Title IX Coordinator who may assign a Title IX Navigator to assist the student, including helping the student choose the best path for him or her.

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Last Revised : August 03, 2015

Student Government

All undergraduates are members of the Rice Student Association (SA), which is governed through the Student Senate. The senate includes the president, two vice presidents, the secretary, the treasurer, the eleven college presidents, and eleven college senators. Each year committees are appointed within the SA to work on immediate projects. The SA strives to communicate with the Rice administration, faculty and staff to implement changes benefiting the Rice population and to collaborate with the eleven colleges to establish a Rice identity. The SA is also the umbrella organization for all registered undergraduate student clubs and is a constant resource for any student. Please visit http://sa.rice.edu for more information about the SA.

Award Presentations—The Rice Student Association presents three coveted awards annually, two to students and one to a faculty or staff member. The Rice Outstanding Senior Awards are presented to graduating seniors who have contributed the most to excellence throughout their time at Rice. 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.

Last Revised : August 11, 2014

Tuition, Fees and Expenses

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Charges for tuition, fees, room/board, and insurance are billed to students each semester. Students must pay the charges in full by the due date or enroll in a payment plan to avoid a late payment fee. Payment plans are only available at the beginning of a new term. Fall semester bills are due August 10. NOTE: Student accounts will not be charged until they have registered for classes (with the exception of first-time students). Students who register between July 25 and the Add/Drop deadline on the Registrar's Academic Calendar must pay by September 10 to avoid a late payment fee.

Spring semester bills are due January 10. Students who register between December 20 and the Add/Drop deadline on the Registrar's Academic Calendar must pay by January 27 to avoid a late payment fee.

Payments made in person must be received by the Cashier's office no later than 4pm on the payment due date. Payments made online via credit card or e-check must be made no later than 11:59pm on the payment due date.

The following costs apply to undergraduates in the 2015-16 school year:

Tuition	**Hour***	**Semester**	**Annual**
Undergraduate tuition (entering & continuing)	$1,732	$20,780	$41,560
*By special permission only			
Required Fees	**Fall**	**Spring**	**Annual**
Student activities**	$56.50	$56.50	$113
Student Rec Center fee	$49	$49	$98
Health and Wellness Support Services Fee	$241	$241	$482
***Health Insurance - student premium only (unless waiver has been approved)	$951	$1553	$2504
**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			**Fall**
O-Week room and board – freshman			$325
O-Week activity fee – freshman			$300
iPrep Program fee (incoming international undergraduate and exchange students)			$175
Room and Board		**Semester**	**Annual**
Room		$4,670	$9,340
Board - Option A		$2,155	$4,310

Telecommunication fee	$15	$30
Off-campus board–Plan B	$730	$1,460
Off-campus board–Plan C	$680	$1,360
Off-campus board–Plan D	$400	$800
Off-campus board–Plan E	$200	$400

Late Payment Fees

Late payment fees will be assessed monthly at the rate of 1.5% of the unpaid balance due on the e-bill. Any account with a past due amount will be charged a late payment fee. NO EXCEPTIONS.

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, Federal PLUS Loans, 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 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 $300 enrollment deposit they paid as incoming students.

Part-Time Students

Students must receive approval to enroll with a course load of fewer than 12 hours. Approval must be received and the course schedule must be adjusted within the first two weeks of the semester. Students with part-time approval and a course load of fewer than 12 hours will be charged the per hour rate plus a part-time registration fee. There are no refunds for part-time enrollment or for students whose course load drops below 12 hours 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 2015–16, the annual room and board charge for residence in a residential college is $13,650. This charge includes the room and all the meals eaten during the year.

Housing—When current students receive their residential college room assignments for the academic year to follow, they must sign a housing agreement electronically by accessing their Esther account online. To reserve their space, a housing agreement must be signed by the date established by their respective colleges but no later than April 30.

New students must make a $100 housing deposit before May 1. These nonrefundable deposits are applied to the following semester's room and board charges.

For more information about housing, see Undergraduate Student Life.

Meal Plans—The College Food Service provides all-you-care-to-eat meals with the purchase of the meal plan. All students living on campus must purchase a meal plan. It is recommended that students living off-campus also purchase a meal plan. More information is available from the residential dining website (dining.rice.edu).

Payments and Refunds—Students may pay their residence fee in installments. The exact amounts and due dates appear on the student's e-bill in the Bill Payment Suite, which can be accessed through Esther. Students who move out

of their college for any reason may receive a refund (or a credit to their account) equal to the difference between the payments received and the reduced room and board charges. They will be charged 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 - Undergraduates

Special Courses—Courses that require additional charges are noted on the Cashier's website. In some cases the associated charges may be in lieu of Rice tuition and/or required fees.

The following charges are separate from the regular fees. Charges due to late registration or course changes made after the deadline are described in the Registration section.

Preceptorship per semester		$300
Internship per semester		$300
Study Abroad fee per semester		$396
Study Abroad fee for summer		$198
Late payment fee (charged monthly)		1.5% of balance due
Undergraduate application fee		$75
Part-time registration		$140
Orientation Week room and board (coordinators)		$190
Late registration fee 1		$75
Late registration fee 2		$125
College withdrawal-suspension		$150
College withdrawal-breaking of housing agreement		$750
Diploma fee: parchment		$50
Diploma fee: facsimile		$20
Diploma mailing fee: Domestic		$30
Diploma mailing fee: International		$50
Transcript fee		$10
Letter of standing		$10
Replacement ID		$10
Readmission fee after withdrawal for nonpayment		$350
Returned check fee		$30
Late course change fee (add/drop)		$75
Summer Health and Wellness Support Services Fee 1		$134
Recreation Center Membership Fees	*Summer*	*Annual*
Student only	$32	$98
1 *Applies to early matriculants and summer returns from leave* 2 *Student nine-month fee for membership paid with tuition. Summer additional*		

*** Health Insurance

All students, full time or part time--including those on away status--must have appropriate health insurance. For information about health insurance, visit Health, Counseling and Wellbeing.

Education Certification Program Fees

Students enrolling in the summer student teaching apprenticeship must pay a $90 registration fee. The registration fee for the internship is $300. These fees are in lieu of tuition for the apprenticeship or internship. For more information, see Teacher Education.

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 campus housing agreement may be withdrawn from the university. Accounts not settled by the first day of classes incur a late payment penalty and are subject to a billing hold that prevents them from dropping or adding classes.

Transcripts

Transcripts can be ordered online through ESTHER and electronic transcripts can be ordered through the National Student Clearinghouse. There is a $10 charge for each transcript ordered. Charges can be paid in advance using a major debit or credit card or eCheck. Current students can also have the charge added to their student account.

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Last Revised : August 13, 2015

Undergraduate Student Life

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Residential Colleges

Each undergraduate student at Rice, whether living on campus or not, is a member of one of 11 residential colleges. All colleges are sex and gender neutral.

Each college has faculty masters who live in a house next to the college. Reporting to the dean of undergraduates, 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 advisors 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 academic, 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 also may request membership in the same college as a close relative. Except for these cases, students have no individual choice of college.

Housing

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

The university guarantees housing for all incoming students. 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.

About 75 percent of Rice undergraduates live in the on-campus residential colleges. **On-campus housing is not guaranteed beyond the freshman year at Rice.** Although most of the students who want to live in the colleges can be accommodated, demand usually exceeds the available number of rooms. The determination of housing for sophomores, juniors, and seniors is made by their residential college government. Sophomores, juniors, and seniors draw for rooms according to the priority system of their residential college. Some students, while remaining full members of the college, choose voluntarily to live off-campus for one or more years. 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. Further information on housing in the residential colleges is available from the Office of the Dean of Undergraduates, and information on off-campus housing is available from the Student Center Administration Office.

Meal Plans

The College Food Service provides all-you-care-to-eat meals with the purchase of the meal plan. All students living on campus must purchase a meal plan. It is recommended that students living off-campus also purchase a meal plan. Its other services include:

- Assistance with food allergies confirmed and clearly diagnosed 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

Meals are served cafeteria style. 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, winter break, or spring break.

For more information on room and board, see Tuition, Fees and Expenses.

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.

For more information, see the College Courses listing.

Rice Student Center

The Student Center provides excellent services and developmental opportunities to build community and enrich the Rice experience through facilities, events, student run businesses, and student activities. It currently houses a variety of retail operations including the campus bookstore, a copy center, a convenience store, restaurant facilities, as well as student life and other offices. There are a variety of meeting rooms for departments, clubs and organizations. Visitors can also make use of a copier, fax machine, and ATM. Most popular stops are the student-run businesses. For example, students and visitors alike can enjoy a beverage of their choice and fellowship with their peers at the ever-bustling Rice Coffee House or Willy's Pub and can purchase or rent a bike for the semester from Rice Bikes.

For more information on the Student Center, go to http://studentcenter.rice.edu.

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Last Revised : August 03, 2015

Access to Student Records

Notification of Rights under the Family Educational Rights and Privacy Act (FERPA)

The Family Educational Rights and Privacy Act (FERPA) is a federal law designed to protect the privacy of, and limit access to, student education records. The law affords students the following rights with respect to their education records:

1. the right to inspect and review the student's education records within 45 days after the date Rice University ("Rice") receives a request for access;

2. the right to seek amendment of the student's education records that the student believes are inaccurate, misleading, or otherwise in violation of the student's privacy rights under FERPA;

3. the right to provide written consent to disclosures of personally identifiable information (PII, as defined by law) contained in the student's education records, except to the extent FERPA authorizes disclosure without consent;

4. the right to file a complaint with the U.S. Department of Education concerning alleged failures by Rice to comply with the requirements of FERPA. The name and address of the federal office that administers FERPA is: Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Ave. S.W., Washington, DC 20202-8520.

Inspect and review records: A student should make written request to any offices that maintain student education records, identifying the record(s) the student wishes to inspect. Though not exhaustive, as a guide for students, this is a list of offices that maintain student education records: Office of the Registrar, Office of the Dean of Undergraduates, Office of Graduate and Postdoctoral Studies, Office of Student Judicial Programs, Office of Admissions, Office of Financial Aid, Center for Career Development, Office of Student Activities, Office of Academic Advising, Office of International Students and Scholars, Cashier's Office, and departmental offices. The appropriate Rice official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the Rice official to whom the request is submitted, that Rice official will advise the student of the correct official to whom the request should be addressed.

Amendment of records: Any questions, problems, or written requests for amendment of records should be submitted to the Office of the Registrar. A student requesting to amend a record should clearly identify the part of the record the student wants changed and specify why it should be changed. If Rice decides not to amend the record as requested, Rice will notify the student in writing of the decision and of the student's right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when the student is notified of the right to a hearing.

Disclosure of information: As permitted by FERPA, Rice reserves the right to publish or release the following directory information without prior consent.

1. Name, local and permanent address, telephone and mobile number(s), campus email address(es), and instant messenger address(es)
2. Date and place of birth
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

Students who would like Rice to withhold this directory information may do so by logging in to ESTHER, clicking Personal Information, clicking Release or Withhold Directory Information, and indicating that the information should be withheld; thereafter, Rice will withhold access to, or release of, the student's directory information until further written

instruction is received. For more information regarding FERPA, please visit the U.S. Department of Education's website.

FERPA permits the disclosure of PII from students' education records, without consent of the student, if the disclosure meets certain conditions found in 34 CFR §99.31 of the FERPA regulations. Except for disclosures to school officials, disclosures related to some judicial orders or lawfully issued subpoenas, disclosures of directory information, and disclosures to the student, §99.32 of FERPA regulations requires the institution to record the disclosure. Eligible students have a right to inspect and review the record of disclosures. A postsecondary institution may disclose PII from the education records without obtaining prior written consent of the student –

- To other school officials, within Rice whom Rice has determined have legitimate educational interests and require this information in order to perform instructional, supervisory, advisory, administrative, or other duties for Rice. These school officials include faculty, research personnel, staff (including law enforcement unit personnel and health staff), trustees, or students serving on official committees (such as disciplinary or grievance committees) or assisting another school official. A school official has a legitimate educational interest if the official needs to review an educational record in order to fulfill his or her professional responsibility for Rice. This includes contractors, consultants, auditors, attorneys, collection agents, volunteers, or other parties to whom Rice has outsourced institutional services or functions, provided that the conditions listed in §99.31(a)(1)(i)(B)(*1*) - (a)(1)(i)(B)(*2*) are met. (§99.31(a)(1))

- To officials of another school where the student seeks or intends to enroll, or where the student is already enrolled if the disclosure is for purposes related to the student's enrollment or transfer, subject to the requirements of §99.34. Disclosures may be made and information forwarded by Rice without prior notification to the student. (§99.31(a)(2))

- To authorized representatives of the U. S. Comptroller General, the U. S. Attorney General, the U.S. Secretary of Education, or State and local educational authorities, such as a State postsecondary authority that is responsible for supervising the university's State-supported education programs. Disclosures under this provision may be made, subject to the requirements of §99.35, in connection with an audit or evaluation of Federal- or State-supported education programs, or for the enforcement of or compliance with Federal legal requirements that relate to those programs. These entities may make further disclosures of PII to outside entities that are designated by them as their authorized representatives to conduct any audit, evaluation, or enforcement or compliance activity on their behalf. (§§99.31(a)(3) and 99.35)

- In connection with financial aid for which the student has applied or which the student has received, if the information is necessary to determine eligibility for the aid, determine the amount of the aid, determine the conditions of the aid, or enforce the terms and conditions of the aid. (§99.31(a)(4))

- To organizations conducting studies for, or on behalf of, the school, in order to: (a) develop, validate, or administer predictive tests; (b) administer student aid programs; or (c) improve instruction. (§99.31(a)(6))

- To accrediting organizations to carry out their accrediting functions. ((§99.31(a)(7))

- To parents of an eligible student if the student is a dependent for IRS tax purposes, though Rice limits such information to financial details of the student's enrollment. (§99.31(a)(8))

- To comply with a judicial order or lawfully issued subpoena. (§99.31(a)(9))

- To appropriate officials in connection with a health or safety emergency, subject to §99.36. (§99.31(a)(10))

- Information the school has designated as "directory information" above and pursuant to §99.37. (§99.31(a)(11))

- To a victim of an alleged perpetrator of a crime of violence or a non-forcible sex offense, subject to the requirements of §99.39. The disclosure may only include the final results of the disciplinary proceeding with respect to that alleged crime or offense, regardless of the finding. (§99.31(a)(13))

- To the general public, the final results of a disciplinary proceeding, subject to the requirements of §99.39, if the school determines the student is an alleged perpetrator of a crime of violence or non-forcible sex offense and the student has committed a violation of the school's rules or policies with respect to the allegation made against him or her. (§99.31(a)(14))

- To parents of a student regarding the student's violation of any Federal, State, or local law, or of any rule or policy of the school, governing the use or possession of alcohol or a controlled substance if the school determines the student committed a disciplinary violation and the student is under the age of 21. (§99.31(a)(15))

For further information regarding Rice's policy on student education records, please contact the Office of the Registrar.

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

Last Revised : August 03, 2015

Code of Student Conduct

The Office of Student Judicial Programs oversees the judicial system and enforces the Code of Student Conduct, which governs the administration of student order and discipline, and participates in Title IX investigations. The Code of Student Conduct applies to all students, including undergraduate, graduate, and transfer students; those enrolled in professional and Continuing Studies programs; and visiting students, Visiting Post Baccalaureates, second degree students, and auditors, from the time they arrive on campus for orientation until their degree is conferred or they have permanently left Rice. Organizations also are subject to this Code. All enrolled students also are subject to Rice University policies, rules, and regulations.

Alleged violations of university or college rules are handled in accordance with the Code of Student Conduct. Students may appeal decisions as described in the Code of Student Conduct. Rice retains ultimate authority in all matters of discipline and over all actions that affect its educational function or the safety and wellbeing of members of the university community. The Code is not intended to–and does not–confer any contractual rights on any individuals involved.

The Code of Student Conduct can be found here.

After Rice's grievance process has been exhausted and documented, students may also pursue an external complaints process.

Last Revised : August 21, 2015

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 Office of Student Judicial Programs, which reviews the results of the investigations and hearings, 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://honor.rice.edu/.

Last Revised : July 20, 2011

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 utilizes e-mail as an official form of communication and sends correspondence to a student's Rice email address. Students should frequently check and maintain their Rice email inbox. Failure to do so does not relieve students of the responsibility to act or respond in a timely manner to official notices sent via email.

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.

Last Revised : August 01, 2012

Academic 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 (Tau 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).

For more information on these honor societies, please visit the Rice Clubs page at the following link: http://clubs.rice.edu/ or the department associated with the Honor Society.

Last Revised : May 05, 2015

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 advisor to guide their research. The project concludes in an honors thesis, which the advisor and two readers evaluate, and an oral examination. Departments also use honors programs to formally recognize students who have shown outstanding work through the 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.

Last Revised : August 01, 2012

President’s Honor Roll

The President's 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. Courses taken as Pass/Fail may not be counted for the purposes of this rule. 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 eight semesters.

Last Revised : September 19, 2013

University Honors

Latin Honors

Unlike the President's Honor Roll, which recognizes academic excellence achieved over a single semester, eligibility for the three categories of Latin Honors (summa cum laude, magna cum laude, and cum laude) are based on the cumulative grade point average for all undergraduate work at Rice. Recipients are determined at the end of the spring semester and after receipt of all grades. The grade point average within the highest five percent of the year's graduating majors within each school is recommended for the summa cum laude honor. The grade point average included within the next highest 10 percent is used to determine those eligible to graduate with the magna cum laude honor. Finally, the grade point average included within the next 15 percent is used to determine those majors eligible to graduate with the cum laude honor. Thus, approximately 30 percent of each graduating class, distributed approximately evenly across all schools, receives Latin Honors on graduation.

Distinction in Research and Creative Work

Distinction in Research and Creative Work is a university award for select undergraduates, granted at Commencement, which appears on the transcript and diploma. Students must apply to be considered for the award, and the application must be supported by a letter from a faculty member (or center director). The most common path of application would be to the student's major department. A student whose research or other creative project is in a field outside of his or her major should submit an application to the academic department or program most closely associated with the subject matter of their project.

Eligibility for the award extends widely to include a variety of research, design, and other creative projects, as well as persistent dedication to research. Projects completed in part or entirely at other institutions or with community partners will be eligible for consideration.

Applicants must be in good academic standing and have a cumulative GPA of at least 3.30 in courses completed at Rice at the time of their graduation. The award will be granted only to projects that produce a concrete outcome--e.g. an essay, invention, design, musical composition--and demonstrate commitment and/or achievement above and beyond the norm. Students who complete senior theses, senior design projects or other **required** senior capstone projects are eligible and may submit their thesis or capstone project for consideration; however, these students do not qualify automatically for consideration for this university distinction.

Responsibility for judging applications and determining those that merit the distinction award rests with the undergraduate degree programs or departments. Annually, departments and degree granting programs publish clear expectations and criteria for the research and design projects that will be considered for the award, as well as guidelines for what constitutes research or creative work above and beyond the norm within their respective fields. Departments may designate additional requirements as well, such as completion of a research seminar or oral defense.

Last Revised : August 03, 2015

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, graduate study has expanded to encompass the schools of architecture, engineering, humanities, management, music, natural sciences, and social sciences, as well as interdepartmental programs. Rice now enrolls approximately 2,300 graduate students and offers advanced degrees in 34 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 5–11 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 graduate.rice.edu.

Last Revised : August 01, 2012

Fall 2015 Academic Calendar

Rice University — Office of the Registrar

August	**Fri, 14**	**Deadline:** Last day for instructors to submit final grades to resolve “Other” (OT) grades for courses taken in Summer 2015
	Sun-Fri, 16-21	Orientation week for new students
	Mon, 24	**FIRST DAY OF CLASSES – START OF THE FALL SEMESTER**
	Mon-Fri, 24-28	**Fall Registration Continues:** Registration continues for undergraduate, graduate, and visiting students
	Fri, 28	**Deadline:** Last day for instructors to submit final grades to resolve “Incomplete” (INC) grades for courses taken in Spring and Summer 2015

September	**Fri, 4**	**Deadline:** Last day to complete late registration **Deadline:** Last day to add courses (Please go to ESTHER to add or drop courses) **Deadline:** Last day to adjust variable credit for courses online via ESTHER **Deadline:** Last day to designate a credit course as "Audit" or vice versa **Deadline:** Last day to convert a “Pass/Fail” to an earned letter grade for courses taken in Spring and Summer 2015 **Deadline:** Last day for part-time students to receive a refund for tuition **Deadline:** Last day to withdraw with a 100% refund of tuition and fees
	Mon, 7	**LABOR DAY (HOLIDAY – NO SCHEDULED CLASSES)**
	Fri, 11	**Deadline:** Last day to withdraw with a 70% refund of tuition
	Fri, 18	**Deadline:** Last day to withdraw with a 60% refund of tuition
	Fri, 25	**Deadline:** Last day to withdraw with a 50% refund of tuition
	Wed, 30	**Deadline:** Last day for instructors to submit textbook orders for Spring 2016 to **bookstore@rice.edu**

October	**Fri, 2**	**Deadline:** Last day to withdraw with a 40% refund of tuition
	Fri, 9	**Deadline:** Last day to drop courses (Please go to ESTHER to drop courses) **Deadline:** Last day to withdraw with a 30% refund of tuition
	Fri, 9	**Deadline:** Last day for instructors to submit Mid-semester Grades for first-year undergraduate students online via ESTHER **Deadline:** College course plans due to Dean of Undergraduates office for Spring 2016
	Mon-Tues, 12-13	**MIDTERM RECESS (NO SCHEDULED CLASSES)**
	Fri, 16	**Deadline:** Last day to withdraw with a 20% refund of tuition
	Fri, 23	**Deadline:** Last day to withdraw with a 10% refund of tuition
	Fri, 30	**Deadline:** Last Day to designate a full-term course status to “Pass/Fail” option **Deadline:** Last day to file an application for a December 2015 degree conferral with the Office of the Registrar (Undergraduate and Graduate Students only) **Deadline:** Last day to file an application for a May 2016 degree conferral with the Office of the Registrar (Undergraduate students only) **Deadline:** Last day to file the following in the Office of Graduate and Postdoctoral Studies for December 2015 degree conferral: • Thesis master’s candidacy petitions • Certification of non-thesis master’s • Form for candidacy master’s • Ph.D. candidacy petitions

November	**Mon, 2**	**Spring Registration:** ESTHER Course Registration Planner opens for undergraduate students for Spring 2016 registration.
	Wed, 11	**Deadline:** Last day for instructors to submit Spring semester classroom and lab software requests to **edtech@rice.edu**
	Sun, 15	**Deadline:** ESTHER Course Registration Planner closes at 11:59 PM
	Mon, 16	**Spring Registration**: Spring 2016 registration begins for currently enrolled graduate and fifth-year students at 5:00 PM
	Wed, 18	**Spring Registration**: Spring 2016 ADD/DROP begins for currently enrolled undergraduate students at 7:00 AM
	Fri, 20	**Deadline:** Last day to register for Spring 2016 by 5:00 PM without a Late Registration Fee
	Sat, 21	**Late Registration Begins:** Continuing students that have not registered for any classes are charged a Late Registration Fee to add classes
	Thurs-Fri, 26-27	**THANKSGIVING RECESS (HOLIDAY – NO SCHEDULED CLASSES)**

December	**Fri, 4**	**LAST DAY OF CLASSES** **Deadline:** Last day to drop courses (for Fall 2014 undergraduate matriculants only) - students must go to the Office of the Registrar by 5:00 PM **Deadline:** For a mid-year conferral of degree, students must submit thesis to the Office of Graduate and Postdoctoral Studies by 12:00 noon
	Sat-Tues, 5-8	**STUDY DAYS– NO EXAMS**
	Wed-Wed, 9-16	**Final examinations for undergraduate courses**
	Wed, 16	**END OF THE FALL SEMESTER**
	Fri, 25	**Deadline:** Last day for instructors to submit Final Grades online via ESTHER

Spring 2016 Academic Calendar

Rice University — Office of the Registrar

January	**Mon, 11**	**FIRST DAY OF CLASSES – START OF THE SPRING SEMESTER**
	Mon-Fri, 11-15	Spring registration continues for undergraduate, graduate, and visiting students.
	Fri, 15	**Deadline:** Last day for instructors to submit final grades to resolve "Other" (OT) grades for courses taken in Fall 2015
	Mon, 18	**MARTIN LUTHER KING, JR. DAY (HOLIDAY - NO SCHEDULED CLASSES)**
	Fri, 22	**Deadline:** Last day to complete late registration **Deadline:** Last day to add courses (Please go to ESTHER to add or drop courses) **Deadline:** Last day to adjust variable credit for courses online via ESTHER **Deadline:** Last day to designate a credit course as "Audit" or vice versa **Deadline:** Last day to convert a "Pass/Fail" to an earned letter grade for courses taken in Fall 2015 **Deadline:** Last day for part-time students to receive a refund for tuition **Deadline:** Last day to withdraw with a 100% refund of tuition and fees
	Fri, 22	**Deadline:** Last day for instructors to submit final grades to resolve "Incompletes" (INC) grades for courses taken in Fall 2014
	Fri, 29	**Deadline:** Last day to withdraw with a 70% refund of tuition

February	**Fri, 5**	**Deadline:** Last day to withdraw with a 60% refund of tuition
	Fri, 12	**Deadline:** Last day to withdraw with a 50% refund of tuition
	Fri, 19	**Deadline:** Last day to withdraw with a 40% refund of tuition
	Fri, 26	**Deadline:** Last day to drop full-term courses (Please go to ESTHER to drop courses) **Deadline:** Last day to withdraw with a 30% refund of tuition **Deadline:** Last day to file an application for a May degree conferral with the Office of the Registrar (Graduate Students only) **Deadline:** Last day to file the following in the Office of Graduate and Postdoctoral Studies for May degree conferral: • Thesis master's candidacy petitions • Certification of non-thesis master's • Form for candidacy master's • Ph.D. candidacy petitions
	Fri, 26	**Deadline:** Last day for instructors to submit Mid-Semester Grades for first-year undergraduate students online via ESTHER **Deadline:** Last day for instructors to submit textbook orders for Summer 2016 to bookstore@rice.edu **Deadline:** College course plans due to Dean of Undergraduates office for Fall 2016
	Sat, 27	**SPRING BREAK BEGINS (NO SCHEDULED CLASSES)**

= Faculty and Instructor Deadline
= University Holiday or Event

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March	**Sun, 6**	**SPRING BREAK ENDS (NO SCHEDULED CLASSES)**
	Fri, 11	**Deadline:** Last day to withdraw with a 20% refund of tuition
	Mon, 14	**Summer 2016 Registration Begins**
	Fri, 18	**Deadline:** Last day to withdraw with a 10% refund of tuition
	Fri, 25	**Deadline:** Last day to designate a full-term course status to "Pass/Fail" option **Deadline:** Last day to drop courses (for previous Fall undergraduate matriculants) - students must go to the Office of the Registrar by 5:00 PM **Deadline:** Last day for second year students to declare majors with the Office of the Registrar
	Mon, 28	**Fall Registration:** ESTHER Course Registration Planner opens for undergraduate students for Fall 2016 registration.
	Wed, 30	**Deadline:** Last day for instructors to submit textbook orders for Fall 2016 to **bookstore@rice.edu**
	Thurs, 31	**MIDTERM RECESS (NO SCHEDULED CLASSES)**

April	**Fri, 1**	**MIDTERM RECESS (NO SCHEDULED CLASSES)**
	Wed, 6	**Deadline:** Last day for instructors to submit Fall semester classroom and lab software requests to **edtech@rice.edu**
	Sun, 10	**Deadline:** ESTHER Course Registration Planner closes at 11:59 PM
	Mon, 11	**Fall Registration**: Fall 2016 registration begins for currently enrolled graduate and fifth-year students at 5:00 PM
	Wed, 13	**Fall Registration**: Fall 2016 ADD/DROP begins for currently enrolled undergraduate students at 7:00 AM
	Fri, 15	**Deadline:** Last day to register for Fall 2016 by 5:00 PM without a Late Registration Fee
	Sat, 16	**Late Registration Begins:** Continuing students that have not registered for any classes are charged a Late Registration Fee to add classes
	Fri, 22	**LAST DAY OF CLASSES** **Deadline:** Last day to drop courses (for Spring 2016 undergraduate matriculants only) - students must go to the Office of the Registrar by 5:00 PM **Deadline:** Last day to submit theses in the Office of Graduate and Postdoctoral Studies for May degree conferral by 12:00 noon
	Sat-Tues, 23-26	**STUDY DAYS – NO EXAMS**
	Wed, 27	**Final examinations for all undergraduate courses begin**

= Faculty and Instructor Deadline
= University Holiday or Event

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May	**Wed, 4**	**Final examinations for all undergraduate courses end**
	Wed, 4	**END OF THE SPRING SEMESTER**
	Fri, 6	**Deadline:** Last day for instructors to submit Final Grades for all degree candidates online via ESTHER by 5:00 PM **Deadline:** Last day for academic departments to submit their proposed list of degree candidates to receive the university honor of Distinction in Research and Creative Work to Provost's Office by 4:00 PM
	Mon, 9	**Deadline (May 2016 Undergraduate Degree Candidates only):** Last day to convert a "Pass/Fail" to an earned letter grade for courses taken in Spring 2016 by 12:00 (noon)
	Fri-Sat, 13-14	**ONE HUNDRED AND SECOND COMMENCEMENT**
	Wed, 18	**Deadline:** Last day for instructors to submit Final Grades for all non-graduating students online via ESTHER

June	**Fri, 10**	**Deadline:** Last day for instructors to submit final grades to resolve "Other" (OT) grades for courses taken in Spring 2016

= Faculty and Instructor Deadline
= University Holiday or Event

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Admission

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 and Postdoctoral Studies. For the Shepherd School of Music, the equivalent to the baccalaureate degree will be determined by its 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 online application information. The Graduate Studies website also has links to the graduate departments' websites. The Graduate Degree Chart lists department chairs with department phone/fax numbers and email addresses.

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. The ETS school code for Rice is 6609; in addition, applicants should send their test scores directly to the admitting department. See individual departmental listings for specific requirement information.

To make sure scores are available when admission decisions normally are made, applicants should take the GRE by the December before the fall for which they are applying. Application deadlines vary by department and degree program. In general, these occur between December and February for fall semester admission, and departments may occasionally consider late applications. Some departments will also accept spring applications. See individual departmental websites for specific information regarding application deadlines.

Admission depends on students' previous academic records, available test scores, and letters of reference from scholars under whom they have studied. Writing samples, portfolios, statements of purpose, and work experience may be evaluated as part of the admissions decision. In general, applicants should have at least a 3.00 (B) grade point average, or the equivalent, in undergraduate work. Applicants who are foreign nationals or whose native language is not English must take either the TOEFL or IELTS test and must score at least 90 on the iBT TOEFL or at least 600 on the paper-based TOEFL. For those students who choose to take the IELTS in lieu of TOEFL, the minimum score is 7. The TOEFL school code for Rice is 6609. The TOEFL and IELTS are not necessary for an international student who has received a degree from a university in which English is the official language of communication. Waiver of the TOEFL and IELTS test may be requested by the admitting department if the department deems that the student has sufficient English communication skills to be successful in their degree program. Departments must send a justification letter for waiving the TOEFL test requirement for applicants with degrees from non-English speaking institutions to the Office of International Students and Scholars. If admitting departments require the student to take additional language courses at the student's expense, this should be explicitly stated in the offer letter.

Graduate students seeking to transfer to another graduate department at Rice must be admitted to the new degree program and be released from their current department.

Last Revised : August 11, 2014

RICE

SEARCH GA

Previous Editions

GENERAL ANNOUNCEMENTS 2015-2016

Auditing Courses

During the fall and spring semesters, currently enrolled degree-seeking Rice students may audit one or more courses at Rice without charge by securing permission of the instructor and by registering as an auditor with the Office of the Registrar. During the summer sessions, enrolled Rice students may audit one or more courses at Rice at the cost of the auditor fee for Rice alumni (see Cashier's website).

Upon completion, the audited course will appear on the student's transcript with a grade of either "AUD" or "NC" (see Grade Symbols). There are no credit hours associated with audited courses, and auditing a course does not affect a student's GPA. Requests to audit a class or to change from audit must be done by the dates and deadlines documented in the posted Academic Calendar (see Academic Calendar).

Last Revised : August 03, 2015

Graduate Degrees

The General Announcements (GA) is the official Rice curriculum. In the event that there is a discrepancy between the GA and any other websites or publications, the GA shall prevail as the authoritative source.

Jump to:

Research Degrees

Research degrees are offered in seven of the eight schools at Rice, with some degrees combining studies in more than one school. Specific requirements for advanced research degrees in each field of study appear in the appropriate departmental pages (see Departments and Programs). Students seeking additional material should contact the appropriate department (see Graduate Degree Chart).

PhD Programs

The PhD degree is awarded for original studies in the departments listed in the Graduate Degree Chart; in architecture, the equivalent degree is the DArch. Candidates receive a PhD degree after successfully completing at least 90 semester hours of graduate 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 and submit the approved thesis to the Office of Graduate and Postdoctoral Studies. (See also Candidacy, Oral Examinations and Thesis.) The residency requirement for the doctorate is four semesters of full-time study at the university.

Thesis Master's Programs

The MA degree is available in the departments listed in the Graduate Degree Chart, 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 graduate semester hours of study at the 500 level and above (including thesis hours), 24 hours of which must be taken at Rice. Thesis 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 fall or spring semester of full-time study.

Nonthesis Master's Programs

Students also may 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:

- At least 30 graduate semester hours of study
- At least 24 semester hours must be at Rice University
- Minimum residency is one fall or spring semester of full-time graduate study, with the exceptions of professional master's programs in the schools of engineering, natural sciences, and social sciences, as well as the Master's of Liberal Studies. For these programs, minimum residency is one fall or spring semester in full-time or part-time graduate study.
- At least 30 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 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 and Postdoctoral Studies by the deadline specified in the official academic calendar for degree conferral in the year in which the degree is to be awarded. (See also Candidacy, Oral Examinations and Thesis and Course Numbering System.)

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 Chart. In some departments, the professional degree also prepares the student for a doctoral-level program. All professional degrees are master's degrees with two exceptions: candidates earn the Artist Diploma or Doctorate of Musical Arts after concluding a program of advanced music study.

Requirements for professional degrees include the successful completion of 30 graduate semester hours or more of courses at the 500 level or higher with at least 24 hours taken at Rice. Minimum residency for professional master's degrees in the schools of natural sciences and engineering, as well as the Master's of Liberal Studies, is one fall or spring semester of either full-time or part-time study. For all other professional master's degrees, minimum residency is one fall or spring semester of full-time study. All courses must be in the relevant field. Specific information and requirements for individual degrees appear in the Graduate Degree Chart. Program information and application materials also are available from the departments. (See also Course Numbering System.)

Institutional financial aid and tuition waivers are not available to professional master's students. This should be stated in the department's offer letter.

Graduate Certificates

Graduate certificate programs are formally recognized programs of study attesting to a level of competence or to the development of skills in a particular area or field. They are intended only for students already enrolled in graduate programs at Rice. Graduate certificates are offered in these areas both to recognize students who have achieved this level of competence or skill and to encourage students to pursue these areas. A certificate comprises a specific grouping of courses and related activities (such as internships) that either:

1. form a coherent yet distinctive complement to a degree program, or
2. leads to the acquisition of specific skills or professional expertise

The certificate would include, but not be limited to the following requirements:

1. Minimum standards: twelve graduate (12) credits, or nine such (9) credits plus a graduate-level internship or other experiential learning opportunity. Each department or program is responsible for determining the number of credits and the courses that are acceptable for satisfaction of the certificate requirements.

- All departments are eligible to submit proposals for the granting of certificates. Programs eligible to submit applications for certificates are restricted to faculty-based centers, institutes or other consortia reporting directly to one or more of the deans of the university or the vice provost of research.
- All courses counting toward the certificate must be taken on either a letter-grade or S/U basis. Courses taken for a letter grade must be completed with a grade of B- or better.
- No more than one-third of the credit hours required for the certificate may be taken on an S/U basis.
- No more than one-third of the credit hours required for the certificate may be transfer credit.
- Students must obtain the approval of their director of graduate studies to apply for a certificate.

2. A certificate program is not intended to substitute for a graduate degree but may be taken by graduate students to complement their graduate program.

3. Multiple certificates: Students may acquire more than one certificate provided that the credits in each certificate are unique and non-redundant with those of any other certificate.

Additional information on graduate certificates can be found here.

Rice Undergraduates Entering Graduate Professional Degree Program

Rice undergraduate students who wish to enter a professional master's degree program should apply for admission through the normal procedures and in accordance with the normal timetables for application to such programs. While the GRE requirement may be waived in these cases, the authority for the waiver rests with the graduate program. Graduate programs may consider counting courses taken by the students while an undergraduate as credit toward the degree, if the credit was not already counted towards the undergraduate degree. With these requirements, the student

will complete a combined minimum of 150 semester hours for the baccalaureate and masters degrees, including a minimum of 30 graduate semester hours.

The graduate program has authority to accept or reject a particular graduate level course to meet the degree requirements for the master's degree. For more information, see "Coursework Taken While an Undergraduate at Rice" in the Registration section. In addition, the graduate program also must include in the offer letter a list of those courses taken by the student as an undergraduate that the graduate program will accept to meet the degree requirements for the master's degree. These courses must be verified and approved by the Office of the Registrar and accepted by the graduate program.

Transferring from Research/Thesis Program to Professional Program

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 and Postdoctoral 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 apply for admission into a research program.

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Graduate Degree Chart

Jump to:

School of Architecture
Susanne M. Glasscock School of Continuing Studies
George R. Brown School of Engineering
School of Humanities
Jesse H. Jones Graduate School of Business
Shepherd School of Music
Wiess School of Natural Sciences
School of Social Sciences
Interdepartmental and Cooperative Programs
Interdepartmental Programs
Cooperative Programs

*Students accepted into PhD program only; MA or MS may be earned by students as they work towards PhD.

**No applications being accepted at this time.

School, Department or Program and Chair	Graduate Degree Offered and Contact Information	Additional Options or Focus Areas (within programs)
SCHOOL OF ARCHITECTURE		
Sarah M. Whiting (Dean)	MArch, MA, MArch in Urban Design**, DArch** *No applications are being accepted at this time for MAarch in Urban Design or DArch. 713-348-4044 fax: 713-348-5277 arch@rice.edu arch.rice.edu/	Architecture design, urbanism, theory, and practice
SUSANNE M. GLASSCOCK SCHOOL OF CONTINUING STUDIES		
Master of Liberal Studies Mary McIntire (Dean) John W. Freeman (MLS Director) Rebecca Sharp Sanchez (MLS Associate Director)	MLS 713-348-4767 fax: 713-348-3123 mls@rice.edu mls.rice.edu	Humanities, natural sciences, and social sciences
Teacher Education	MAT 713-348-4826	Secondary Education

Jennifer Gigliotti (Associate Dean) Judy Radigan (MAT Director)	fax:713-348-5459 teach@rice.edu teach.rice.edu	
GEORGE R. BROWN SCHOOL OF ENGINEERING		
Bioengineering Michael Deem	MBE, MS, PhD MD/PhD (with Baylor College of Medicine) 713-348-5869 fax:713-348-5877 bioeng@rice.edu bioe.rice.edu	Biomedical imaging and diagnostics, cellular and biomolecular engineering, computational and theoretical bioengineering, drug delivery and biomaterials, tissue engineering and biomechanics, and systems and synthetic biology.
Chemical and Biomolecular Engineering Michael Wong	MChE, MS, PhD 713-348-4902 fax: 713-348-5478 chbe@rice.edu chbe.rice.edu	Catalysis and nanotechnology, thermodynamics and phase equilibria, interfacial phenomena, colloids, microemulsions, rheology and fluid mechanics, biosystems engineering, biocatalysis and metabolic engineering, cell population heterogeneity and biological pattern formation, cellular and tissue engineering, energy and sustainability, gas hydrates, enhanced oil recovery, reservoir characterization, and pollution control
Civil and Environmental Engineering Robert Griffin	MCEE, MS, PhD 713-348-4949 fax: 713-348-5268 cee@rice.edu cee.rice.edu	Civil engineering: sustainable urban infrastructure, structural dynamics and control, structures and mechanics, reinforced and prestressed concrete, geotechnical engineering, computional mechanics, probability and random vibrations, reliability of systems, and solid mechanics Environmental engineering: environmental biotechnology, environmental nanotechnology, chemistry, toxicology, hazardous waste remediation; surface and groundwater hydrology; water and wastewater treatment; urban and regional air quality; water resources engineering; and numerical modeling
Computational and Applied Mathematics Beatrice Riviere	MCAM, MA, PhD 713-348-4805 fax: 713-348-5318 caam_dept@rice.edu caam.rice.edu	Numerical analysis, scientific computing, numerical linear algebra, numerical methods of partial differential equations, continuous and discrete optimization, optimal control, operations research, inverse problems, compressed sensing, model reduction, and computational neuroscience; additional program in computational science and engineering (see Interdepartmental and Cooperative Programs below).
Computer Science Vivek Sarkar	MCS, MS, PhD 713-348-4834 fax: 713-348-5930 comp@rice.edu compsci.rice.edu	Algorithms and complexity, artificial intelligence and robotics, bioinformatics, compilers, distributed and parallel computation, graphics and visualization, operating systems, and programming languages
Electrical and Computer Engineering Edward W. Knightly	MEE, MS*, PhD 713-348-4020 fax: 713-348-5686 elec@rice.edu ece.rice.edu	Computer engineering topics include: computer architecture, high performace application specific systems, mobile and embedded systems, integrated circuits and antennas for medical imaging and bio-sensing, and parallel I/O for large-scale network storage systems. Photonics and nanoengineering topics include: nanophotonics/nanospectroscopy, molecular electronics, biophotonics, ultrafast optics and optoelectronics, semiconductor optics and devices, multispectral imaging and terahertz imaging, and condensed matter physics/materials science. Systems topics include: communications systems, dynamical systems and computation, networks, signal and image processing, wireless networking, pattern recognition, scalable personal healthcare, and computational neuroscience

		and neuroengineering. Neuroengineering topics include: neural signal processing, brain-computer interfaces at the device, circuit and systems levels
Materials Science and NanoEngineering Pulickel Ajayan	MMSNE, MS, PhD 713-348-3698 713-348-5423 fax msne@rice.edu msne.rice.edu	Biomaterials; carbon nanomaterials; composites; computational materials science and material theories; electron microscopy and in situ methods; electronic materials; energy conversion and storage; low dimensional materials; mechanical properties and nanomechanics; nanotechnology; optical materials; photonics and nanoplasmonics, surfaces; interfaces, coatings and thin films; ultralight-weight ultrahigh-strength multifunctional materials
Mechanical Engineering Laura Schaefer	MME, MS, PhD 713-348-4906 fax: 713-348-5423 mech@rice.edu mech.rice.edu	Mechanics, computational mechanics, stochastic mechanics, fluid dynamics, heat transfer, dynamics and control, robotics, biomedical systems, and aerospace sciences
Statistics Mariana Vannuci	MStat, MA*, PhD 713-348-6032 fax: 713-348-5476 stat@stat.rice.edu statistics.rice.edu	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
SCHOOL OF HUMANITIES		
Art History Linda Neagley	MA*, PhD 713-348-3316 fax: 713-348-4039 arthist@rice.edu arthistory.rice.edu	Art of the Americas, Europe, Africa, and Asia, from antiquity to the present
English Rosemary Hennessy	MA*, PhD 713-348-4840 fax: 713-348-5991 englgrad@rice.edu english.rice.edu	British and American literature and culture; literary theory
French Studies Bernard Aresu	MA**, No applications are being accepted at this time. 713-348-4851 fax: 713-348-5951 fren@rice.edu french.rice.edu	French literature, language, and culture
History Alida Metcalf	MA*, PhD (including dual PhD with Universidade Estadual de Campinas in Brazil) 713-348-2288 fax: 713-348-5207 hist@rice.edu history.rice.edu	United States (Including colonial America and the U.S. South), U.S. and the World, Latin America and the Caribbean, the Atlantic World, and transnational Asia and the Middle East
Philosophy Steven Crowell	MA*, PhD 713-348-4994 fax:713-348-5847 philos@rice.edu philosophy.rice.edu	Specialization in medical ethics, value theory, history of philosophy, and philosophy of mind, language, and science
Religion	MA*, PhD in Religion	African religions, African-American religions, the Bible and Beyond, Buddhism, Contemplative Studies, Islam, Jewish

April DeConick	713-348-5201 fax: 713-348-5486 reli@rice.edu reli.rice.edu/	thought and philosophy, modern Christianity in thought and popular culture, GEM (gnosticism, esotericism, mysticism), and psychology of religion
JESSE H. JONES GRADUATE SCHOOL OF BUSINESS		
William H. Glick (Dean) K. Ramesh (Deputy Dean of Academic Affairs) Barbara Ostdiek (Sr. Associate Dean for Programs) D. Brent Smith (Sr. Associate Dean for Executive Education)	MBA MBA/Master of Engineering MBA/Master of Science (with Wiess School of Natural Sciences) MBA/MD (with Baylor College of Medicine) MBA for Executives MBA for Professionals MAcc, MA* PhD 713-348-6147 ricemba@rice.edu business.rice.edu/ Rice University Executive Education 713-348-6060 oed@rice.edu	Focus area options: accounting, energy, entrepreneurship, finance, global business, health care, marketing, management consulting, mastering creativity and innovation, and real estate
SHEPHERD SCHOOL OF MUSIC		
Robert Yekovich (Dean)	BMus/MMus, MMus AD DMA 713-348-4854 fax: 713-348-5317 musi@rice.edu music.rice.edu	Composition, choral and instrumental conducting, historical musicology, performance, and music theory Selected areas of performance Composition and selected areas of performance
WIESS SCHOOL OF NATURAL SCIENCES		
BioSciences Janet Braam	MA*, MS*, PhD in Biochemistry & Cell Biology MA, MS*, PhD in Ecology & Evolutionary Biology 713-348-4015 fax: 713-348-5154 bioc@rice.edu biochem.rice.edu	Biochemistry; biophysics; cancer biology; cell biology; cellular regulation; circadian rhythms; computational biology; developmental biology; enzymology; extracellular matrix; eye development; genetics; metabolic engineering; molecular biology; molecular evolution; molecular genetics of plants, animals, fungi, bacteria, and viruses; neurobiology; NMR and crystallography; peroxisome function; structure and function of nucleic acids and proteins; synthetic biology; and systems biology Ecology, plant and insect communities, populations, diversity, mutualisms, invasive species, evolution, quantitative genetics, mate choice, speciation, molecular evolution, adaptive evolution, behavioral ecology, sociobiology, genomics, and microbial evolution
Chemistry Matteo Pasquali	MA*, PhD 713-348-6158	Organic chemistry, inorganic chemistry, physical chemistry, nanotechnology, biological chemistry, theoretical and computational chemistry, materials chemistry, bio-organic

	fax: 713-348-5155 chem@rice.edu chem.rice.edu	chemistry, and bio-inorganic chemistry
Earth Science Richard G. Gordon	MS, PhD 713-348-4880 fax: 713-348-5214 geol@rice.edu earthscience.rice.edu/	Sedimentology, stratigraphy, paleoceanography, paleoclimatology, carbon cycling, climate change, sediment deformation, hydrogeology, terrestrial-biosphere interactions. Kinetics of fluid-solid interactions, and low-temperature aqueous geochemistry. Volcanology and magmatic processes. Petrology, high-temperature geochemistry, and igneous processes. Neotectonics, tectonophysics, geomechanics, and geodynamics. Planetology and planetary differentiation. Space geodesy and remote sensing. Reflection, refraction, and global seismology; seismic wave imaging and inversion
Mathematics David Damanik	MA*, PhD 713-348-4829 fax: 713-348-5231 math@rice.edu math.rice.edu	Differential and algebraic geometry, partial differential equations, probability and combinatorics, real analysis, complex variables, geometric and algebraic topology, mathematical physics, dynamics, and ergodic theory
Physics and Astronomy Thomas Killian	MST, MS, PhD 713-348-4938 fax: 713-348-4150 physics@rice.edu physics.rice.edu	Atomic, molecular, and optical physics; biophysics; nuclear and particle physics; condensed matter physics; nanoscale physics; surface physics; space plasma physics; solar physics; astronomy, high-energy astrophysics; and theoretical physics
SCHOOL OF SOCIAL SCIENCES		
Anthropology Eugenia Georges	MA*, PhD 713-348-4847 fax: 713-348-5455 anth@rice.edu anthropology.rice.edu	Archaeology, anthropological linguistics, social/cultural anthropology, theory, history, and global change
Economics Antonio Merlo	MA*, PhD 713-348-2289 econ@rice.edu economics.rice.edu	Econometrics, economic theory, industrial organization and regulation, international trade and finance, labor, macroeconomics/monetary theory, public finance, economic development, and energy economics
Global Affairs Mark P. Jones	MAGA 713-348-2367 fax: 713-348-5161 mga@rice.edu mga.rice.edu	Focus areas in international political economy, international security, regional cultures, and economic or political development
Linguistics Michel Achard	MA**, PhD** Applications are not being accepted for Fall 2015. 713-348-6010 fax: 713-348-4718 ling@rice.edu linguistics.rice.edu/	Anthropological, applied, cognitive, field, functional or discourse, and English, German, or Romance linguistics; second language acquisition; language typology and universals, sociolinguistics, phonetics, phonology, and speech technology
Political Science B. Ashley Leeds	MA*, PhD 713-348-4842 poli@rice.edu politicalscience.rice.edu	American politics, comparative politics, and international relations
Psychology	MA*, PhD	Cognitive psychology, systems and cognitive neuroscience, human factors/human-computer interaction,

David W. Wetter	713-348-4856 fax: 713-348-5221 psyc@rice.edu psychology.rice.edu	industrial/organizational psychology, and training
Sociology Bridget K. Gorman	MA*, PhD 713-348-4831 fax: 713-348-5296 soci@rice.edu sociology.rice.edu	Focus areas in five broad susbstantive areas: race/ethnicity, urban and community, culture and religion, population health and gender

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 also has 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.

Program	Degrees Offered	Departments/Focus Areas
INTERDEPARTMENTAL PROGRAMS		
Applied Physics Kevin Kelly	MS*, PhD	Departments of physics and astronomy, chemistry, electrical and computer engineering, materials science and nanoengineering, mechanical engineering, bioengineering, and chemical and biomolecular engineering; sciences that underlie important new and emerging technologies. Contact: Rice Quantum Institute, 713-348-3566 or rqiapp@rice.edu.
Bioscience and Health Policy Janet Braam	MSBHP	Departments of biochemistry and cell biology, sociology, economics, and the Baker Institute for Public Policy. Contact Professional Science Master's Program: 713-348-3188 or profms@rice.edu.
Computational Science and Engineering Beatrice Riviere	MCSE, MA*, PhD	MA, PhD: 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. MCSE: Terminal degree offered jointly by the departments of computational and applied mathematics, computer science and statistics. Modern computational techniques with application in a wide range of industries and technical and managerial functions within them. Contact: mcse@rice.edu.
Environmental Analysis and Decision Making Katherine B. Ensor	MSEADM	Departments of statistics, civil and environmental engineering, earth science, ecology and evolutionary biology, chemical and biomolecular engineering, and sociology. Contact Professional Master's Program: 713-348-3188 or profms@rice.edu.
Nanoscale Physics F. Barry Dunning	MSNP	Departments of physics and astronomy, electrical and computer engineering, materials science, and chemistry. Contact Professional Master's Program: 713-348-3188 or profms@rice.edu.

Space Studies David Alexander Andrew Meade	MSSPS	Departments of physics and astronomy, mechanical engineering, chemistry, electrical and computer engineering, and statistics. Contact Professional Science Master's Program: 713-348-3188 or profms@rice.edu.
Study of Women, Gender, and Sexuality Susan Lurie	Graduate Certificate	Departments in anthropology, English, French, history, linguistics, philosophy, psychology, religion, and sociology
Subsurface Geoscience Dale S. Sawyer	MSSG	Departments in earth science, chemistry, and statistics. Contact Professional Master's Program: 713-348-3188 or profms@rice.edu.
Systems, Synthetic, and Physical Biology Herbert Levine	MS*, PhD	Synthetic biology, systems biology (theoretical or experimental), and physical biology (theoretical or experimental). Contact: 713-348-5961 or sspb@rice.edu.
COOPERATIVE PROGRAMS		
Joint Program in Computational Biology	Training opportunities for PhD students	Research in a lab setting, seminars, and workshops and access to advanced resources of W.M. Keck Center for Computational Biology (fellowships available); with Baylor College of Medicine, the University of Texas Health Science Center, Houston, MD Anderson Cancer Center, the University of Texas Medical Branch, and the University of Houston. Contact: 713-348-4752 or bioc@rice.edu.
Joint Programs with Medical Colleges	MD-MBA, MD-PhD	MD-MBA dual degree program with Baylor College of Medicine (BCM) and the Jones Graduate School of Business (see JGSB listing above); and MD-PhD dual degree program with BCM and the Department of Bioengineering for research careers in medicine; contact: 713-348-5869 or bioeng@rice.edu.

*Students accepted into PhD program only; MA or MS may be earned by students as they work towards PhD.
**No applications being accepted at this time.

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Non-Traditional Coursework

Courses tailored for individual students provide a valuable opportunity for them to pursue an academic or professional interest under the supervision of a Rice faculty member. Such courses are typically titled as independent study or research, directed reading, or internships. Although the organization of these courses is quite variable, they are subject to the same basic requirements as other course offerings. In particular:

- The subject matter and intellectual level of the course must be appropriate for Rice.
- The instructor of record must hold a regular faculty appointment at Rice. This instructor is responsible for submitting the final grade, in consultation with the student's immediate supervisor, if appropriate.
- The course must have a written syllabus that meets published Rice Syllabus Standards. In addition, the syllabus must include a description of anticipated activities and topical content.
- Credit hours assigned are subject to the same amount-of-work considerations as other courses. Credit hours will be awarded in accordance with the Rice credit hour guidelines and fixed at the time of registration.
- All Registrar deadlines for registration, add/drop, completion of course work, and grade submission must be met.

Last Revised : August 03, 2015

Academic and Judicial Discipline

Jump to:

See also Academic Regulations and Grades.

Academic Probation

Graduate students are placed on academic probationary status by the Office of Graduate and Postdoctoral Studies if their cumulative grade point average falls below 2.67 or their semester GPA falls below 2.33. The period of probation extends to the end of the next semester in which the student is enrolled. If that probationary semester results in cumulative grade point average below 2.67 or semester grade point average below 2.33, the student will be immediately dismissed without further warning. As a courtesy, students will be notified of their probationary status once final grades have been received and posted to their records. S/U grades cannot be used to end probationary status for low GPA.

A degree program can define stricter standards by publishing those expectations in its graduate student handbook. A program can dismiss a student without a probationary semester by faculty vote.

Dismissal

The two most common grounds for dismissal of a graduate student are (1) inadequate academic progress and (2) a disciplinary violation. The latter is discussed in detail under Disciplinary Probation, Suspension and Expulsion. The following relates to academic progress.

Graduate programs must provide students upon entry to the program with detailed requirements, deadlines, and other program policies. Students are then responsible for meeting program and university requirements in their program of education. A student who is failing to meet departmental or university requirements, such as failing to meet grade requirements, failing to pass required examinations by the required time, or failing to advance to candidacy or defend her/his thesis within the required time, is subject to dismissal without further warning.

When a student is judged not to be making adequate academic progress, he or she must be warned in writing of the possibility of dismissal and given clear information about what must be done within a specified time period to alleviate the problem. These expectations must be reasonable and consistent with expectations held for all students similarly situated in the program. If the student does not meet the stated requirements within the time frame specified, he or she will be dismissed by the graduate program. A student is not eligible to return to Rice following a dismissal.

It is difficult to give a precise and general definition of “adequate academic progress” for graduate students, due to the variation in requirements among different graduate programs. Nevertheless, some general principles do apply. For example, most graduate programs consist of two stages. The first stage, preceding candidacy, typically consists of explicit requirements and milestones, such as course requirements, exams, research projects, and the like. In this stage, adequate academic progress typically means compliance with the requirements and milestones of the program, as well as research progress when applicable. The second stage, post-candidacy, is often referred to as “all but dissertation” (ABD). In this stage, graduate students are expected to conduct research and write and defend their theses/dissertations. As the second stage typically lacks explicit intermediate milestones, it is harder to assess academic progress during this stage. It is extremely important, therefore, for graduate programs to make their expectations explicit for post-candidacy graduate students.

Post-candidacy graduate students often enroll only in research courses. Such courses can offer standard letter grades or satisfactory/unsatisfactory (S/U) grades. Grading mode, however, must be uniform within a section of a research course. Thus, all students in such a section should receive letter grades or all should receive S/U grades.

Graduate programs must establish mechanisms for tracking, reviewing, and documenting academic progress of graduate students on an ongoing basis and must provide graduate students a written assessment of their academic progress at least annually. In some graduate programs this ongoing progress review is carried out by a student's thesis committee, while in others it is carried out by a standing faculty committee. Although a student's supervisor plays an important role in reviewing the student's academic progress, the responsibility for conducting the review process lies with the program and requires the involvement of additional faculty members in the program. For graduate students who are primarily engaged in coursework, for example, professional master's students, the transcript is an adequate form of written assessment.

Dismissal of a graduate student requires that the student be notified of his/her dismissal from the graduate program. Such a notice is distinct from any earlier warning, which lets the student know of the possibility of dismissal. All dismissal notices, as well as warnings of possible dismissal, must be in writing, with a copy sent to the Office of Graduate and Postdoctoral Studies. Email communication is considered to be "in writing". (Academic units should archive copies of all email communications pertaining to student dismissal.)

Because of the serious consequences of dismissal from a graduate program, dismissed students must receive a 15-day notice of the dismissal. Such a notice may precede the trigger for the dismissal. For example, a program can notify a student 15 days before an examination that failure to pass the examination with a certain minimal grade would result in dismissal. In general, dismissal should not take effect during a semester in which the student is enrolled. Dismissals that take effect during a semester are exceptional and must be approved by the Dean of Graduate and Postdoctoral Studies. A dismissal will be held in abeyance until the petition and appeal process is concluded, as students may petition for a dismissal to be revoked as described in the Dispute Resolution section .

Disciplinary Probation, Suspension and Expulsion

The Code of Student Conduct applies to all Rice students and applies to conduct both on and off campus. The Office of Student Judicial Programs may sanction students — including implementing disciplinary probation, or suspension or expulsion — for violations of the Code of Student Conduct or the Honor Code. Students who have been expelled, who are serving a suspension, who are under investigation for disciplinary violations, or who have Code of Conduct or Honor Code proceedings pending against them may not receive their degree even if they have met all academic requirements for graduation. Students who are suspended or expelled must leave the university within the timeframe specified by Student Judicial Programs, generally 48 hours of being informed of the decision, though in cases of unusual hardship, Student Judicial Programs may extend the deadline. Any tuition refund will be prorated from the official date of suspension or expulsion, which is determined by the Office of the Registrar. A grade of "W" will be awarded to all enrolled courses regardless of when the suspension or expulsion began. Expelled students will have the expulsion noted on their transcript.

While on disciplinary probation or 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, including, but not limited to, the student center, the colleges, the playing field, the recreation center, and the computer labs, are limited to enrolled students.

Students seeking readmission after a suspension for Honor Code or Code of Conduct violations or other nonacademic action should submit a petition in writing to the Office of Student Judicial Programs by emailing SJP@rice.edu. That petition should include information on what the student did while away from Rice, including any schooling or employment; how the student met any requirements described by Rice at the time of separation; what the student did to address any issues leading to the separation; and what the student learned from the separation. Once approved by Student Judicial Programs, the petition is forwarded to the dean of graduate and postdoctoral studies for final readmission approval and action.

Termination of Financial Support

Graduate students often receive financial support in the form of graduate stipend and tuition waivers. The termination of financial support to a graduate student, while not equivalent to dismissal, is a serious action that could deprive students of their financial ability to continue graduate studies. Consequently, the procedure to terminate a student's financial support before the end of the financial-support commitment period should be analogous to those for dismissal as described above. Therefore, termination of financial support of a graduate student requires that the student be notified of the termination 15 days prior to the cancellation of support. Such a notice is distinct from any earlier warning, which lets the student know of the possibility of support termination. All termination of support notices, as well as warnings of possible termination, must be in writing, with a copy sent to the Office of Graduate and Postdoctoral Studies.

Active participation in required academic activities (for example, laboratory work in certain science and engineering programs) is a basic condition for continued financial support. Students who are absent from such required activities for contiguous two weeks without permission and without mitigating circumstances may be subject to termination of financial support. In addition, they may be judged to be not making adequate academic progress. Thus, if absences have to occur, they must be pre-arranged with the student's supervisor, except for medical and family emergencies, in

which cases timely notification is required. Graduate advisors and programs should be aware of unexplained student absences and must provide immediate written warnings when students are not present and carrying out required academic activities for more than one week.

When the source of a graduate stipend is an externally sponsored research grant, the principal investigator is responsible for certifying that compensation paid to those who are supported by the grant faithfully corresponds to actual effort in carrying out the sponsored research. This process is referred to as “effort certification.” The requirements above to give students warnings and notices before dismissal or termination of stipend are separate and independent of the effort-certification requirement. If a principal investigator determines that a graduate student is not contributing to the sponsored project that is the source of the student’s stipend, then the charge for the affected pay period must be reallocated to another fund by the program.

Degree Revocation

Rice University reserves the right to revoke any degrees granted. A degree awarded may be revoked if the university becomes aware that the degree should not have been granted, such as a degree that was obtained by violating the Honor Code or Code of Student Conduct or by deception, misrepresentation, falsification of records, academic misconduct, research misconduct, or if the work submitted in fulfillment of -- and indispensable to -- the requirements for the degree are determined to fail to meet the academic standards that were in effect at the time the degree was awarded. Notification of the date of revocation will appear on the student’s transcript, and the student will be asked to return the diploma. The Provost receives all recommendations for revocation of degrees and, after consideration and review, forwards to the President any recommendations deemed to be warranted. The Provost may also initiate and forward to the President his or her own recommendation for a degree revocation. The President will consider all recommendations forwarded by the Provost and effectuate those he or she determines to be warranted. Procedures governing degree revocations may be obtained from the offices of the Registrar, Provost or President.

The university also reserves the right to withdraw a degree to correct an administrative error, such as an incorrectly listed degree, or in a situation where it was found that a student had not actually fulfilled all graduation requirements.

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Academic Regulations and Good Standing

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See also Registration, Grades, Academic and Judicial Standings, and Code of Student Conduct.

Good Standing

Graduate students must meet the minimum deadlines, and course or grade requirements detailed in Academic Regulations and Grades to remain in good standing and to graduate from the university. Graduate students must meet other requirements specifically mandated as essential for good standing by the graduate student handbook published by the relevant department or program. Failure to remain in good standing may result in probation, separation from the university or dismissal.

Residency

PhD and DMA students must complete at least four full fall and/or spring semesters in full-time study at Rice University. Minimum residency for master's programs is one fall or spring semester of full-time graduate study, with the exceptions of professional master's programs in the schools of engineering, natural science, and social sciences, as well as the Master's of Liberal Studies. For these programs, minimum residency is one fall or spring semester in full-time or part-time graduate study.

Full-Time Study

Semester course load for full-time students is nine hours or more as required by specific departments for the fall and spring semesters. Full-time enrollment during the summer semester is at least six hours. Graduate programs at Rice generally require full-time study. For information about dropping below full-time or changing to part-time status, see below.

Part-Time Study

Part-time students must register for at least three hours in a semester. All time boundary and degree requirements apply to part-time students. Students who wish to become part-time time in the upcoming semester must obtain written permission from the academic department before the semester begins. Students who wish to obtain part-time status after the semester has started must also obtain the approval of the Office of Graduate and Postdoctoral Studies. In order for students to receive the part-time tuition rate, they must obtain verification of part-time approval from the Office of the Registrar by the end of the second week of classes. Part-time students are not eligible to receive fellowships, assistantship aid, tuition scholarships, or reduced rate tuition from Rice. See also Financial Aid. International students should consult the Office of International Students and Scholars about the possible impact on their visa status of

dropping below full-time.

Minimum Hours

Students must register for at least three hours in a semester.

Time to Degree

PhD and DMA students are required to complete their program, including thesis defense, within 10 years of initial enrollment in the degree program. All master's 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 and Postdoctoral Studies. These time boundaries include any period in which the student was not enrolled or enrolled part time, for whatever reason. Failure to meet any university time to degree deadline may result in the student not being able to continue in their degree program.

Time to Candidacy

PhD and DMA students must be approved for candidacy before the beginning of the ninth semester of their enrollment at Rice. MArch students must be approved for candidacy before the October 31st prior to their juried defense. All other master's students must be approved for candidacy before the beginning of the fifth semester of their enrollment at Rice. See Candidacy, Oral Examinations and Thesis.

Time to Defense

PhD and DMA students must defend their theses before the end of the 16th semester of their enrollment at Rice. Master's students must defend their theses before the end of the eighth semester of their enrollment at Rice. See Candidacy, Oral Examinations and Thesis.

Time to Thesis Submission

Candidates who successfully pass the oral examination in defense of the thesis must submit the thesis must submit the thesis to the Office of Graduate and Postdoctoral Studies no later than six months from the date of the examination. See Candidacy, Oral Examinations and Thesis.

Deadlines

Students must observe all deadlines listed in the Academic Calendar.

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.

Standard of Conduct

Students are expected to live up to the high standards Rice sets for its community members, as described in the Code of Student Conduct. Graduate students should be in compliance with the Code of Student Conduct at all times and not have holds from Student Judicial Programs or other offices.

Research and Scholarly Activities

Research and other scholarly activities of all students must conform to Rice University policies. It is recommended that students familiarize themselves with these policies before embarking on research or other scholarly activities. Particularly pertinent to students are policy 324–00 (Research Misconduct), policy 326–98 (Human Health and Safety in the Performance of Research), policy 333 (Patent and Software Policies) and policy 334 (Copyright Policy).

Non-course Training

Within their first semester of enrollment, graduate students are expected to complete some non-course training:

- Orientation – New graduate students are expected to attend all orientation events.
- Preventing Sexual Harassment – New graduate students are required to complete this online training.
- Responsible Conduct of Research – All graduate students are required to complete this online training. Students in the MBA and MLS programs are exempt from this training.

- Lab Safety Training - Lab Safety training is mandatory for all new students in the School of Engineering; in the School of Natural Science, with the exception of the Mathematics Department; and any student outside those schools who will be working in a laboratory at Rice. This training is provided through the Office of Environmental Health and Safety.

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.

Second Degree Programs

Graduate students may enroll in a second degree program only with the approval of their home academic department.

Continuous Enrollment

Students must maintain continuous program involvement and enrollment during fall and spring semesters unless granted an official leave of absence. See Leaves, Interruptions of Study and Withdrawals for more information.

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Candidacy, Oral Examinations and Thesis

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Approval of Candidacy

Candidacy marks a midpoint in the course of graduate education. Achieving candidacy for the PhD/DMA signals 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 master's degree are determined at the departmental level. The department is also authorized to grant waivers or substitutions of specific course requirements, but not to make exceptions to university requirements.

Students enrolled in research degree programs submit their petitions for candidacy for a master's or doctoral degree through the department chair to the dean of graduate and postdoctoral studies. In the petition sent to the dean, 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 in nonthesis master's programs, including professional master's programs, must submit a certification of nonthesis master's through their department chair to the Office of Graduate and Postdoctoral Studies.

PhD/DMA students must be approved for candidacy before the beginning of the ninth semester of their enrollment at Rice. Master's students must be approved for candidacy before the beginning of the fifth semester of their enrollment at Rice. However, in order to qualify for a given commencement, they must meet the submission deadline for that commencement per the Academic Calendar. This date falls at the end of October for December degree conferral and the end of February for May degree conferral

Students who are unable to meet the university time boundary for candidacy may petition the dean of graduate and postdoctoral studies or his/her designee for an extension of time to candidacy. Students who exceed their time boundaries without an approved extension request will be charged a fee of $125 for reinstatement to good standing. Students who exceed their time boundaries and do not receive an extension to their time to candidacy are subject to immediate dismissal by the Office of Graduate and Postdoctoral Studies.

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 have his or her primary appointment in 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
- Qualified individuals who have been certified as thesis committee members by the dean of graduate and postdoctoral studies

The composition of the thesis committee must always meet the guidelines mentioned above, with the following exceptions:

- **Interdisciplinary programs (Applied Physics & SSPB)-** The Chair of the thesis committee is either the advisor or in

the host department of the student, and is affiliated with the program. The second member of the committee is affiliated with the program. The third committee member is neither in the student's host department nor affiliated with the program. Thesis committee make-up is approved by both the head of the host department and the program. The formal structure of the thesis committee for the programs is in the General Announcements and regularly reviewed by the Office of Graduate and Postdoctoral Studies.

- **Master of Architecture-** The committee chair must be a tenured or tenure-track faculty member. Other committee members can be tenured, tenure-track, or non-tenure track Rice faculty.

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 student's major department. In addition to the three required members, additional members of the committee may be selected with the approval of the department chair.

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.

Announcement of Thesis Defense

Oral examinations for the doctoral degree must be announced at least 14 days in advance. Oral examination announcements are to be submitted to the Office of Graduate and Postdoctoral Studies by entering the information into the Graduate Students Thesis Defense Announcement form at http://events.rice.edu/rgs.

Oral examinations for the master's degree must be announced at least 7 days in advance in the same manner as the doctoral defense.

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 thesis is essentially completed. Students may take the final oral examination in defense of their thesis only after the dean of graduate and postdoctoral studies approves their candidacy. All regulations in this section apply to both masters and doctoral theses, unless otherwise noted.

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. The length of the oral examination and the subject matter on which the candidate is questioned are left to the judgment of the committee. The defense should be scheduled by the student after consultation with the thesis advisor, who agrees that the thesis is completed and ready to be defended. All oral thesis defenses must take place on the Rice University campus with the candidate and all thesis committee members in physical attendance. In exceptional cases, appeals to this requirement can be made in writing to the Dean of Graduate and Postdoctoral Studies. A candidate must be enrolled in the semester in which his or her oral examination is held. Students who defend during the summer must enroll in the summer session of classes. 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. 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 will be dismissed from the university.

Students must submit a copy of their approval of candidacy form, signed by the thesis committee signifying successful defense of the thesis, to the Office of Graduate and Postdoctoral Studies within one week after the oral examination. Instructions to submit this form are located online at graduate.rice.edu/thesis. The original approval of candidacy form must be turned in when the thesis is submitted.

PhD and DMA students must defend their theses before the end of the 16th semester of their enrollment at Rice. Master's students must defend their theses before the end of the eighth semester of their enrollment at Rice. Students who are unable to meet the university time boundary for thesis defense may petition the dean of graduate and postdoctoral studies or his/her designee for an extension of time to defense. Students who exceed their time boundaries without an approved extension request will be charged a fee of $125 for reinstatement to good standing. Students who exceed their time boundaries and do not receive an extension to their time to defense are subject to dismissal by the Office of Graduate and Postdoctoral Studies.

Thesis Submission Regulations and Procedures

The thesis is the principal record of a student's work for an advanced degree. Instructions for online thesis submission

and guidelines for thesis formatting are available at: graduate.rice.edu/thesis/.

Candidates who successfully pass the oral examination in defense of the thesis must submit the thesis to the Office of Graduate and Postdoctoral Studies no later than six months from the date of the examination. If the thesis is not submitted by the end of the six-month period, the "pass" will be revoked and an additional oral defense will need to be scheduled. Applications for an extension without reexamination must be made by the candidate with the unanimous support of the thesis committee, endorsed by the school dean, and approved by the Office of Graduate and Postdoctoral Studies. Extensions of this six-month period for completion without reexamination will be granted only in rare circumstances. Approved petitions for extension without reexamination received after the 6 month time boundary expired will be charged a fee of $125 for reinstatement to good standing.

Students must have the original signatures of each member 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 ProQuest/University Microfilms International (UMI) publishing contract. Students must pay their thesis submission fee before submitting the thesis to the Office of Graduate and Postdoctoral Studies for degree approval.

All theses are permanently preserved in Rice's Institutional Repository and are available via scholarship.rice.edu shortly after the final submission of the thesis. In limited cases, a student's advisor may request an embargo of six months, one year, or two years; this is subject to approval by the dean of graduate and postdoctoral studies or his/her designee.

Students have six months from the date of their defense to submit their thesis. However, in order to qualify for a given commencement, they must meet the submission deadline for that commencement per the Academic Calendar. This date falls on the last day of classes in the Fall and Spring semesters.

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Grades

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See also Faculty Grading Guidelines and Syllabus Standards.

Minimum GPA

To remain in good standing, graduate students must maintain a grade point average above the 2.67 minimal institutional threshold and any department or program thresholds. The term GPA must be above the 2.33 institutional threshold and any department or program thresholds. See also Academic and Judicial Discipline.

To graduate, students must achieve at least a B- (2.67) grade point average both in courses counted toward the graduate degree as well as the cumulative GPA. A degree program can define stricter standards.

Pass/Fail Option

Graduate students may not take a course pass/fail within their graduate degree requirements. Courses outside of their degree requirements must be designated as pass/fail no later than the end of the 10th week of classes; however, a pass/fail course may later be converted to a graded course by submitting the proper online form with the Office of the Registrar by the end of the second week of the following semester. Students wishing to designate a course as pass/fail during the summer sessions should see Registration During Summer Sessions.

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 in their GPA. Graduate students cannot use a course taken pass/fail toward a graduate certificate. Visiting Post Baccalaureates cannot take courses on a pass/fail grading basis.For more information, see The Pass/Fail Option.

Satisfactory/Unsatisfactory

Satisfactory/unsatisfactory courses are those that do not use traditional grading procedures and instead assign a grade of S or U rather than a letter grade. With S/U courses, instructors report the S if the student successfully completes the course, or the U if they have not. 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. Visiting Post Baccalaureates cannot take courses on a satisfactory/unsatisfactory grading basis.

Audit

Students have the option of auditing courses. For auditing students, instructors report either the AUD or the NC grade symbol, the AUD if the student met the audit requirements of the class, or the NC if they have not. There are no credit hours associated with audited courses, and auditing a course does not affect a student's GPA. Request to audit a class or to change from audit to credit or vice versa must be done by the end of the second week of the semester. (See Grade Designations AUD and NC below.)

Grade Symbols

Instructors are required to report a grade for all students whose names appear on the class roster. They grade their students using the following conventional symbols: A+, A, A-, B+, B, B-, C+, C, C-, D+, D, D-, F.

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:

AUD ("Audit")—This designation is only used for people auditing the course, and specifically where the auditing student has met the audit requirements of the course. A grade designation of "NC" (No Credit) is given to students who do not meet the audit requirements. There are no credit hours associated with an AUD grade designation. (See Audit above.)

INC ("Incomplete")—Instructors report this designation to the Office of 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. For an INC received in the fall semester, students must complete the work by the end of the first week of the spring semester or an earlier date as defined by the instructor, and instructors must submit a revised grade by the end of the second week. For an INC received in the spring or summer semester, students must complete the work before the start of the fall semester or an earlier date as defined by the instructor, and instructors must submit a revised grade by the end of the first week. If a grade is not submitted by the appropriate deadline, the INC will be autmatically converted to a failing grade.

Students with an INC 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 according to the timeline previously stated, 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 INC in a semester may not enroll in the next semester for more than 14 semester hours. Students also should be aware that they may be placed on probation or suspension when the INC is changed to a grade, either by an instructor or by default.

NC ("No Credit")—This designation signals that no credit was granted for the course. It is used in situations where a person auditing a course has not met the audit requirements of the course as defined by the instructor.

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. An OT awarded during a summer semester must be resolved and the grade submitted by the start of orientation week. If a grade is not sumbitted by the appropriate deadline, the OT will be automatically converted to a failing grade. Students should be aware that they may be placed on probation or suspension when the OT is changed to a grade, either by an instructor or by default.

W ("Official Withdrawal from University")—Students who officially withdraw from the university after the designated drop deadline, the seventh week of classes, will receive a final grade of "W" for each course in which they were enrolled at the time of withdrawal.

Students who officially withdraw from the university before the drop deadline 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 Office of Graduate and Postdoctoral Studies 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, the Office of 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. Graduate students are reminded that the rule allowing new matriculants in their first semester at Rice to drop a class up until the last day of classes applies only to undergraduates.

Grade Points

To compute grade point average, letter grades are assigned numeric values as follows:

A+	4.33*	**C**	2.00
A	4.00	**C-**	1.67
A-	3.67	**D+**	1.33
B+	3.33	**D**	1.00
B	3.00	**D-**	0.67
B-	2.67	**F**	0.00
C+	2.33		

* Effective in Fall 2018 semester, the grade A+ will be worth 4.0, not 4.33, in calculating the GPA.

Grade Point Average Calculation—For each course carrying standard letter grades, the credit hours attempted and the points for the grade earned are multiplied. The grade 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. Courses taken on a S/U or pass/fail basis are excluded from the grade point average calculation.

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Last Revised : August 13, 2015

Leaves, Interruptions of Study and Withdrawal

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There are two types of interruptions in study: short-term releases and separations. Both releases and separations may be either voluntary or involuntary. Separations are periods of nonenrollment and require specific reinstatement or readmission processes.

Short-Term Medical and Parental Release

There are two types of short-term releases: medical and parental. Short-term releases can be up to six weeks in length.

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, the student may be temporarily released from their academic responsibilities.

Enrollment and stipend support may be continued for up to six weeks or until the appointment expires (whichever occurs first). A student may apply for short-term medical or parental release at any time during the semester. Complete guidelines for obtaining a medical or parental release are available at http://graduate.rice.edu/leaves. Students taking a voluntary short-term release should make arrangements with their advisor and instructors to complete their academic responsibilities in a timely way.

The university may also insist on a student's short-term medical release if, in the judgment of the dean of graduate and postdoctoral studies, or her/his designee, the student has a serious medical or psychological condition that the student cannot effectively address while enrolled or which is likely to be severely exacerbated by the Rice academic and/or living environment.

Students may not do degree work or work involving Rice faculty or facilities while on short-term medical release. Students returning from a short-term medical release will be required to provide documentation that they are able to return to their studies.

Voluntary Separations

Voluntary separations include leaves of absence (generally one to two semesters in length) and withdrawals (medical and nonmedical). Students on a leave of absence are not required to petition for readmission. Withdrawn students are eligible to reapply. If students voluntarily withdraw for medical or psychological/psychiatric reasons, however, they must meet the readmission conditions for a medical or involuntary withdrawal.

Leave of Absence—A leave of absence allows a student to take time off from their studies and later resume study without having to petition for readmission to the university. Normally, students may take a leave of absence for no more than two consecutive semesters. The semesters that a student is on leave do not count against the time to candidacy or the time to defense. They do, however, count against time to degree.

A leave of absence is granted only by the Office of Graduate and Postdoctoral Studies on 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 beginning of the academic semester in which the leave is taken. Leave requests, endorsed by the department, must be received in the Office of Graduate and Postdoctoral Studies prior to the first day of classes. (see Leaves)

Students must pay a reinstatement fee of $125 on their return from an official leave.

Nonmedical Withdrawal and Readmission—Students who wish to withdraw from Rice during the semester, for any nonmedical reason, are to notify the chair of their academic department in writing (see Refund of Tuition and Fees).

Failure to register before the end of the fourth week of classes without a leave of absence granted by the Office of Graduate and Postdoctoral Studies constitutes a de facto withdrawal.

Students who later wish to resume study after a voluntary or de facto withdrawal must petition for readmission to the university. The petition must include an academic plan devised in consultation with the student's advisor, advising committee, or director of graduate studies (depending upon the graduate program's advising structure). The semesters that a student is not enrolled do not count against the time to candidacy or the time to defense. They do, however, count against time to degree. Readmission requires the recommendation of the department chair and the approval of the dean of graduate and postdoctoral studies. Readmitted students must pay a readmission fee of $350.

Medical Withdrawal and Readmission—Graduate students may request a medical withdrawal from the university by applying in writing to the Office of Graduate and Postdoctoral Studies at any time during the semester, up until the last day of classes; the withdrawal does not take effect until approved in writing. Email communication is considered to be "in writing." Students considering taking time off for personal reasons related to their wellbeing and mental health are also encouraged to contact the graduate affairs manager or the Student Wellbeing Office about the roadmap back to Rice. The Student Wellbeing Office serves as a liaison to the medical readmission process during the separation process and when students are ready to return.

Graduate students who wish to seek readmission following a medical withdrawal must submit to the Office of Graduate and Postdoctoral Studies a written petition for readmission no later than June 1 for the fall semester and November 1 for the spring semester after the medical withdrawal. This petition must include documentation of treatment provided and demonstration of medical stability (usually six months); students may also be required to interview with the director of the Rice Counseling Center or Student Health Services or their designees. The petition also must include an academic plan devised in consultation with the student's advisor, advising committee, or director of graduate studies (depending upon the graduate program's advising structure) and approved by the department chair. Detailed petition requirements can be found on the Graduate and Postdoctoral Studies website.

Students who withdraw for psychological reasons within the last five weeks of a semester are strongly encouraged to focus on their wellbeing needs and will not be eligible to apply for immediate readmission the following semester. Students who withdraw for psychological reasons while enrolled during the summer session are not eligible to apply for immediate readmission in the fall.

The semesters that a student is not enrolled do not count against the time to candidacy or the time to defense. They do, however, count against the time to degree. Readmission requires the approval of the dean of graduate and postdoctoral studies, and readmitted students must pay a readmission fee of $350.

Involuntary Separations

Sometimes, the university will require a student to withdraw, which requires a specific readmission process. An involuntary separation may result from a disciplinary and/or a medical reason.

The university may insist on a student's involuntary separation from the university if, in the judgment of the dean of graduate and postdoctoral studies or her/his designee, or, in the case of disciplinary action, of Student Judicial Programs, the student's behavior includes, but is not limited to, the following:

- Poses a threat to the safety or welfare of him/herself or other members of the Rice community;
- Has a serious medical or a psychological condition that the student cannot effectively address while enrolled or that is likely to be severely exacerbated by the Rice academic and/or living environment;
- Demonstrates behavior that seriously interferes with the education of other members of the Rice community; behavior that violates the Rice Code of Student Conduct, the Rice Honor Code, the Rice Sexual Misconduct Policy, the Rice Weapons Policy; or other relevant policies, or behavior that otherwise requires disciplinary action;
- Is not able to continue functioning as a student.

An involuntary separation can be the result of an interim decision or a final decision. An interim decision is usually a summary process that may result in a temporary separation.

A final decision comes after a process that includes notification, opportunity to respond, and opportunity to appeal. It can result in a suspension (i.e. temporary separation) or in an expulsion (i.e. permanent separation), as well as other sanctions.

Readmission following Involuntary Separations—Following an involuntary separation, graduate students who wish to seek readmission must submit a written petition for readmission to the Office of Graduate and Postdoctoral Studies no later than June 1 for the fall semester and November 1 for the spring semester. Petitions for return following a medical withdrawal must include documentation of treatment provided and demonstration of medical stability (usually six months); students may be required to interview with the director of the Rice Counseling Center or Student Health Services or their designees. The petition also must include an academic plan devised in consultation with the student's advisor, advising committee, or director of graduate studies (depending upon the graduate program's advising structure)

and approved by the department chair.

Students who are involuntarily separated from the university for psychological reasons within the last 5 weeks of either the fall or spring semester are not be eligible to apply for readmission for the following semester. Students who are withdrawn for psychological reasons while enrolled during the summer session are not eligible to apply for immediate readmission in the fall; they must wait to reapply for readmission for the spring semester.

Students taking time off due to an involuntary withdrawal are also encouraged to contact the graduate affairs manager or the Student Wellbeing Office about the roadmap back to Rice. The Student Wellbeing Office serves as a liaison to the readmission process, during the separation process and when students are ready to return.

Students involuntarily separated from the university for violations of the student code of conduct or other disciplinary reasons, including honor code violations, must submit a petition to the Office of Student Judicial Programs and receive approval prior to returning to the university or for the award of a degree (See Academic and Judicial Discipline).

The semesters that a student is not enrolled do not count against the time to candidacy or the time to defense. They do, however, count against the time to degree. Readmission requires the approval of the dean of graduate and postdoctoral studies, and readmitted students must pay a readmission fee of $350.

Further information is available by contacting the Office of Graduate and Postdoctoral Studies.

Resignation

A student may resign from the university by notifying the dean of graduate and postdoctoral studies in writing. Resignation means the student is withdrawing, is no longer a student at Rice, and will not return to Rice. A resignation becomes effective when accepted by the dean of graduate and postdoctoral studies. In general, if a student is under investigation for a potential Code of Student Conduct violation or has charges pending under the Code, those proceedings will terminate upon acceptance of the resignation by the dean of graduate and postdoctoral studies.

Nonenrollment Restrictions

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.

All separated students must return their student ID to the Office of Graduate and Postdoctoral Studies. All university keys must be returned to the appropriate offices. Participation in student activities on and off campus and use of Rice facilities, including, but not limited to, the student center, the playing fields, the recreation center, and the computer labs, are limited to enrolled students.

Separated students are expected to be away from Rice during the term of the separation. If the student is employed by Rice at the time of separation, he or she must relinquish such employment or petition the Office of Graduate and Postdoctoral Studies for written permission to continue the on-campus employment. Noncompliance with these requirements may delay or prevent readmission.

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Last Revised : August 20, 2015

Registration

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See also Academic Regulations.

Drop/Add

During the first two weeks of classes, students may change their registration, add or drop courses without penalty. After the second week, the following conditions apply for adds and drops. Graduate students:

- May not add courses after the second week of classes, except in extenuating circumstances and with the approval of the Office of Graduate and Postdoctoral Studies (a $75 penalty fee per course will be assessed). The student's request to add a course first must be supported and approved by the student's advisor along with the course instructor and then forwarded to the Dean of Graduate and Postdoctoral Studies for consideration.
- May drop courses through the seventh week without penalty.
- May not drop courses after the end of the seventh week of classes, except in extenuating circumstances and with the final approval of the Office of Graduate and Postdoctoral Studies (a $75 penalty fee per course will be assessed). The student's request to drop a course first must be supported and approved by the student's advisor, the course instructor, the appropriate department chair, and the school dean. Afterward, it should be forwarded to the Dean of Graduate and Postdoctoral Studies for consideration. Students who receive approval to drop a course after the designated drop deadline will receive a grade of "W" for that course.

Graduate students that drop a class after the second week should keep in mind that there is no refund of tuition, assuming the student continues to be enrolled in at least one other class.

Course Registration

Currently enrolled students register in April for the fall semester and in November for the spring semester. Students are strongly encouraged to meet with their advisor to discuss their courses for the upcoming semester. Please see the Drop/Add section below for requirements for adding or dropping a course after the semester has begun.

Course Numbering System

Courses numbered 100-499 are generally considered undergraduate level, with the 100-299 sequence classified as lower-level (freshman/sophomore) and the 300-499 sequence classified as upper-level (junior/senior). Courses numbered 500 and above are generally considered to be at the post-baccalaureate or graduate level. Graduate and undergraduate students may, with departmental approval, take certain courses outside their designated level.

Coursework Taken While an Undergraduate at Rice

Departments may consider counting courses taken by a student while an undergraduate at Rice as credit toward a master's degree.

The following guidelines must be followed:

- The courses must be chosen from those that normally satisfy requirements for the advanced degree
- No course can be used simultaneously to satisfy both an undergraduate and a graduate degree requirement
- Coursework taken as an undergraduate will not be converted to indicate a graduate level in the student's academic

history until after the bachelor's degree is awarded

- Coursework taken as an undergraduate does not indicate the student's matriculation term for the graduate program—the matriculation term will be the term the student officially enters the program as a graduate student after completing all undergraduate requirements
- Regardless of the number of graduate courses taken at the undergraduate level, a student must spend at least one semester (fall or spring) studying at Rice as a graduate student

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 then 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

E– Excluded from both GPA and earned hours

Some Rice University courses may be repeated for credit. They are specifically noted in the Course Offerings 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.

If students repeat courses for which they have received either advanced placement or transfer credit, credit will not be counted. Nor can credit be received twice for students transferring courses that repeat previous enrollment at Rice.

Students may not receive credit twice 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.

Final Examination In Graduate Courses

Graduate courses, especially those with significant undergraduate student enrollment, should follow the guidelines for undergraduate courses (see Final Examinations section) regarding scheduling of projects, papers, and finals during the last weeks of classes, reading periods, and final exam periods. However, instructors have the discretion to modify those guidelines as appropriate for their specific courses. Such modifications and the final schedule must be made clear at the beginning of the semester.

Application for Degree

All students must complete and submit an Application for Degree Form available in ESTHER. This form is required for all students who plan to complete their degree requirements at the end of the fall or spring semester. A late fee will be assessed for applying after the deadline (please consult the semester-specific Academic Calendar for deadline).

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Last Revised : August 24, 2015

Transfer Credit

Courses taken at another accredited college or university are not automatically approved for transfer credit. Transfer credit is only granted with the approval of the student's major department. Transfer credits are subject to the following restrictions:

- Courses must be from a regionally accredited U.S. institution or an international institution officially recognized by that country's Ministry of Education or equivalent.
- The course must be recorded on an official transcript sent directly from the original institution to Rice or hand-delivered by the student in an official sealed envelope.
- The minimum grade for transferred credits is a C- or equivalent. Some departments or programs may set a higher standard.
- The major department must approve the credits.
- Students seeking transfer credit must submit an approved Graduate Request for Transfer Credit form to the Office of the Registrar.

Please note that all transferable credits will be converted to semester hours. In no instance will a course transfer in with credit greater than the semester hour equivalent originally earned for the coursework.

Last Revised : July 20, 2011

Veterans Information

Qualified veterans, dependents of deceased or disabled veterans whose death or disability is a direct result of their military service, or dependents in receipt of transferred benefits from a veteran may be eligible for VA educational benefits under one of the following programs while attending Rice University:

- Chapter 30: Montgomery G.I. Bill-Active Duty/Discharged
- Chapter 31: Vocational Rehabilitation
- Chapter 32: Veterans Educational ssistance Program (VEAP)
- Chapter 33: Post 9/11 G.I. Bill
- Chapter 35: Dependents Education Assistance
- Chapter 1606: Montgomery G.I.Bill-Selected Reserve
- Chapter 1607: Reserve Education Assistance Program (REAP)

At Rice University, veterans' benefits are managed through the Office of the Registrar. This office assists all veterans and their dependents who wish to receive Veterans Administration (VA) educational benefits

Please see http://registrar.rice.edu/students/veterans/ regarding the documentation required to obtain educational allowances from the VA.

Veterans who are planning to attend the university should contact Rice University's Veterans Affairs Representative at least two months before the date of entry. Such time is required to expedite the processing of paperwork for educational allowances from the VA.

For certification of benefits, students should have an enrollment of at least half time (4.5 credits for graduate students).

For additional information regarding other veterans' educational programs, contact the Office of the Registrar at 713-348-4999 or registrar@rice.edu.

Last Revised : August 12, 2013

Clubs and Organizations

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Office of Student Activities

The Office of Student Activities, located in the Rice Student Center, oversees the activities of various campus wide student organizations, student requests for facilities usage, and coordination of various leadership development programs.

In addition to managing the registration process, finances, and general advising for the 250 plus registered clubs at Rice University, Student Activities provides direct advising to the following organizations:

- Student Association (SA) - Undergraduate student government, including college presidents
- Graduate Student Association (GSA) - Graduate student government
- Impact Rice Retreat (IRR) - freshmen and sophomore leadership development retreat
- Leadership Summit - advanced leaders' retreat

The Rice University clubs are divided into eight categories: Academic/Honorary, Cultural/International, Political, Recreational/Sport, Religious/Spiritual, Service, Social, and Special Interest. Additional information about the clubs can be found online at http://clubs.rice.edu. Student Activities also provides leadership development opportunities in the form of Lunch and Lead Programs, the Impact Rice Retreat, the Leadership Summit, the Women LEAD program, and the Club Development program.

A large number of student organizations address special student interests, such as the Black Graduate Student Association, the Rice Chinese Students and Scholars, Rice Young Democrats, and Rice College Republicans. There also are numerous sport related clubs such as sailing, rugby, volleyball, and soccer. Some of the special-interest groups include the Rice MBA Consulting Club, KTRU Rice Radio, and Habitat for Humanity.

Many organizations are associated with academic and professional disciplines, such as foreign language clubs, honor societies, and various departmental graduate student associations.

Student Activities also recognizes a number of religious and spiritual organizations. These include, but are not limited to, Chi Alpha Christian Ministries, the Baptist Student Union, Canterbury Association, Catholic Student Association, Hillel Foundation, InterVarsity Christian Fellowship, the Muslim Student Association, and an Interfaith association. Many of these clubs are assisted by local clergy or staff, and form the Joint Campus Ministers.

The Clubs Office is located in the basement of the Rice Memorial Center, and provides computers, workspace, and a color copier for club convenience. The student organization workspace offers office space, computers, and storage in the same area for student use.

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. To learn more about the programs sponsored by the Rice Student Volunteer Program, visit http://www.rice.edu/rsvp.

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 admission 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:www.ruf.rice.edu/~forensic/.

Office of Multicultural Affairs

The Office of Multicultural Affairs (OMA) has, as its primary mission, coordinating and implementing comprehensive educational, cultural and social programs designed to emphasize inclusiveness, while promoting intercultural dialogue, awareness and respect for diversity. Through advocacy, cultural programs and education, OMA also helps students understand and appreciate racial, ethnic, gender and other differences, while creating opportunities for students to challenge prejudice and expand their cultural knowledge and appreciation. OMA utilizes its programming and support systems to provide an optimum developmental environment where all members of the University community may develop to the highest level of their potential in an atmosphere free from harassment and bias, thereby ensuring Rice's standing as an intellectually and culturally vibrant community. Cultural student clubs, such as the Black Student Association, the Hispanic Association for Cultural Enrichment at Rice and the Rice Native American Student Association, meet regularly with OMA to discuss programming logistics and other issues. OMA also directly advises ADVANCE (Advancing Diversity and the Need for Cultural Exchange), a student club that hosts a weekly discussion on a topical issue and organizes an annual cultural fair. Other programs for students under OMA include HARAMBE, (Swahili for "working together in unity" or "let's pull together") a group that seeks to create a unifying event for entering African-American students, allowing them to build social and academic connections with peers, faculty, and staff, and FRESH, a group dedicated to forming relationships through education, scholarship and heuristics at Rice. For more information about OMA, please visit this website.

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Disability Support Services

Located on the first floor of Allen Center, Disability Support Services coordinates campus services for individuals with documented disabilities. For academic accommodations, adaptive equipment, or disability-related housing needs, Disability Support Services 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://dss.rice.edu. Students can schedule an appointment with the director of Disability Support Services by calling 713-348-5841.

Section 504/ADA Coordinator—The director of affirmative action serves as the Section 504/ADA coordinator at Rice University. Concerns or complaints relative to disability issues should be directed to the Office of Affirmative Action 205 Allen Center, 713-348-4930.

Last Revised : August 23, 2013

Financial Aid

Jump to:

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.

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. In most cases, these assistantships provide a stipend plus tuition.

Fellowship, scholarship, and assistantship recipients are selected by the individual departments, subject to the approval of the Office of Graduate and Postdoctoral 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.

Please see the Graduate and Postdoctoral Program website for more information.

Summer Assistance

Graduate students may register for summer research hours at no charge.

However, with limited exception, tuition is charged for all other courses offered in the summer semester. As with fall and spring, the Office of the Registrar manages the summer course schedule, and any questions on course offerings should be directed to that office. Tuition waivers are not available for summer classes, even for students who receive full tuition waivers during the fall and spring semesters.

Graduate students are eligible to apply for private educational loans if they are registered during the summer semester.

Loans

In addition to fellowships, scholarships, and assistantships, the Office of Financial Aid offers assistance in the form of loans. Interested students must file a Free Application for Federal Student Aid (FAFSA). If selected for federal verification, students may also be required to submit copies of income tax transcripts and W-2's. The priority deadline to apply is May 15. (Loan assistance through Rice is not available to Master of Liberal Studies students.)

To be eligible to apply for loans, 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 4.5 hours in a term will not be eligible for financial aid.

Federal Student Loans

These are loans made to students attending the university at least half time. Federal Direct Unsubsidized Loans and PLUS Loans are available to all students regardless of need. Loan eligibility is subject to annual and lifetime borrowing limits; Federal Direct PLUS Loans require a satisfactory credit check.

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; the funds are limited. Interested students may contact the Office of Financial Aid.

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, with the exception of MBA and MLS students. Students wishing to apply for such a loan should obtain an application from the Office of Student Financial Services. Guidelines for the program are:

- Individual loans are made for an amount not to exceed $2,000.
- 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 Office of Graduate and Postdoctoral Studies for approval.
- Loans are available during the full course of the academic year.
- Loans must be repaid in full before graduation.
- Registration, transcripts, and diplomas will be held for students and former students who are in arrears on these loans.

For more information, visit http://graduate.rice.edu/mosleyadams.

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 $500 and must be repaid within 90 days. In lieu of interest, a charge of 2% of the principal loan is

assessed to maintain the fund.

Student On Campus Employment

Opportunities for employment are available to students during the academic year. Students are eligible to work under either the Federal Work-Study Program or the Rice University Work Program. Students interested in employment should access the Office of Financial Aid webpage.

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. Details are available to eligible students each semester at the time of billing. Students arrange for deferred payment through the Cashier's Office.

Satisfactory Academic Progress

Federal regulations (CRF § 668.34) require that graduate students demonstrate satisfactory academic progress toward completion of their degree to continue to receive federal and state financial aid. In addition to meeting the standard for receiving financial aid, students must also meet the academic standards of Rice University.

Satisfactory academic progress is comprised of three areas as required by federal regulations. A student must complete their degree within a specified period that does not exceed 150% of the published length of the program, demonstrate they are making progress towards the completion of their degree by successfully completing 66% percent of all attempted courses, and meet the minimum cumulative GPA requirement for the program in which they are enrolled. This regulation applies to each financial aid applicant, whether a previous recipient or not.

Credits counted in the maximum time are all attempted credits (even when not a financial aid recipient). Attempted credits include:

- Earned credits – Passed (A through D-), Satisfactory (S)
- Repeated courses
- Withdrawal
- Failures – Failed (F), Unsatisfactory (U)
- Incomplete
- All accepted transfer credits toward the degree program

If a student fails to meet the satisfactory academic progress standards by the end of the academic year, the student will be placed on Financial Aid Suspension and will not be eligible for aid until the satisfactory academic progress standards are met.

Appeal—Students are allowed to appeal their Financial Aid Suspension in cases of the death of a relative, an injury or illness of the student, or other special circumstances. Students must submit a letter discussing why the student failed to make satisfactory academic progress, and what has changed in the student's situation that will allow the student to demonstrate satisfactory academic progress at the next evaluation. Supporting documentation (doctor's letter or academic plan) must accompany the appeal letter and must be submitted to the Office of Financial Aid prior to the beginning of the subsequent term. The Appeals Committee will review appeals on a case-by-case basis.

If an appeal is approved by the Appeals Committee, the student will be placed on financial aid probation and may receive financial aid for one probationary semester. At the end of the probationary semester, the student must meet the satisfactory academic progress standards or meet the requirements of an approved academic plan developed by the student's department or program.

Financial Aid after Academic Suspension—Students who have been suspended by the university for academic reasons need to be aware that if they are readmitted, they may not be eligible for financial aid based on their prior academic performance. Students who are petitioning for readmission are advised to contact the Office of Financial Aid to determine their aid eligibility.

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 the Office of Financial Aid for information about policies and procedures regarding the return of Title IV funds.

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 also are 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.

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Graduate Student Government

Graduate Student Association

All full-time students in graduate programs are members of the Graduate Student Association (GSA). The mission of the GSA is to enrich the graduate student experience and to represent, support, and promote graduate student interests and values. An integral and essential part of the Rice community, the GSA provides programs and services aiding in recruitment and retention of graduate students, represents graduate student interests to the University administration, and builds a strong sense of community both on and off campus.

The GSA represents all graduate students and is comprised of two branches: the Council and the Executive. The Council consists of representatives from all departments who serve as the voting body for the graduate students. The Executive is led by the president, internal vice president, external vice president, secretary, and treasurer, and these positions are 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 function of the GSA is to promote academic, professional, and personal development of graduate students. The association accomplishes this by supporting professional development opportunities, alumni networking, and well-being programs for students. Another function of the GSA is to encourage social interaction among graduate students from different departments and cultures. To that end, the association organizes a variety of social activities, including picnics, intramural sports, and volunteer opportunities, that are open to all members of the graduate student body. For more information on the Graduate Student Association, see gsa.rice.edu.

School and Department Graduate Student Associations

A second strata of graduate student governance on campus are the specific GSAs of schools and departments who represent particular concerns and interests of students to the deans, to the chairs, and to the larger GSA. Each school and/or department is encouraged to develop its own governing structure to advocate for graduate concerns and initiatives at Rice.

Last Revised : August 03, 2015

Graduate Student Life

Housing for Graduate Students

Graduate students have three different housing facilities: Rice Graduate Apartments, Rice Village Apartments, and Morningside Square Apartments. All three properties are within walking distance from the campus, and also provide easy transportation to and from campus and all shopping needs on the weekend through a shuttle service. They also provide social activities and events to help students take a break from their studies. Each community is unique in its own way and provides a broad living environment. For all property information, please visit http://campushousing.rice.edu/graduate.

Rice Graduate Apartments is a garden style complex located just north of campus on Bissonnet. The community includes quick and easy access to campus, study rooms, laundry facilities, bike rooms, two courtyards, and recreational areas. Electronically controlled access gates for pedestrian and vehicular paths are provided. ADA accessible units are available to students requesting reasonable accommodations. Each apartment is furnished with a bed, desk, desk chair, night stand, chest of drawers, and a bookshelf. In addition, each unit includes basic cable, water, and Wi-Fi Internet. Housing is assigned through a lottery for incoming students, with priority given to incoming graduate students. For further information, visit the website above, call 713-348-GRAD (4723), or email gradapts@rice.edu.

The Morningside Square Apartments is a two-story 1950's building located in a quiet neighborhood adjacent to Rice Village on Shakespeare Street at Morningside Drive. The community is a short walking distance to campus, restaurants, and shopping areas. The bedrooms are furnished with a bed, desk, desk chair, chest of drawers, and a nightstand. Basic cable TV is provided and on-site laundry is available. Controlled access gates for pedestrian and vehicular use are included. Apartments are assigned on space availability. Call 713-348-4050 or email msapts@rice.edu for further information.

The Rice Village Apartments is a four-story contemporary style community located on Shakespeare Street across from Morningside Square Apartments and within a short walk of the Village. It offers four ADA accessible units for students requesting reasonable accommodations, and also offers family housing. Each unit offers appliances equipped with Energy Star efficiency to conserve energy and protect the environment. In addition, it is furnished with a dresser, nightstand, desk, chair, and bed. Basic cable, Wi-Fi Internet, and water also are included. The laundry facility has a system that can email alert you when your laundry is done. Other amenities include common areas, study rooms, a recreational area, bike room, and a community herb garden. Controlled security access is provided by a keyless front door using either a biometric fingerprint or a key fob system. Housing is assigned through a lottery for incoming students, with priority given to incoming graduate students. For more information, call 713-348-4050, or email rvapts@rice.edu.

For more information regarding services and resources for graduate students, please visit http://graduate.rice.edu/studentlife.

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GENERAL ANNOUNCEMENTS 2015-2016

Health, Counseling and Wellbeing

Jump to:

Health and Wellness Support Services Fee

By paying an annual Health and Wellness Support Services Fee, all students gain access to the Student Health Services, Rice Counseling Center and the Student Wellbeing Office. Detailed information on the care and services each provide is available from these centers. The Health and Wellness Support Services Fee is a required fee for all enrolled students, except those in "away" status. See Away Status for more information.

Student Health Services

Student Health Services, an outpatient medical clinic, is located in the Morton L. Rich Health Center. The clinic is staffed by primary care physicians, nurses, and ancillary support staff. More information can be found at health.rice.edu.

Clinic hours are from 8:00 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 clinics and hospitals (guidance on self-care as well as local healthcare options can be found on the website). 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.

Care at the clinic is arranged through appointment at 713-348-4966. In emergencies, students should call the Rice University Police Department at 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 Thanksgiving and the winter break. The clinic also is open for reduced hours during the summer months.

The Student Health Service provides the following:

- Medical care for illness and injury with referrals to specialists when needed
- Maintenance of health records for all students
- Immunizations and other preventive services
- General information for all students
- Contraceptive counseling and routine Pap smears
- Allergy shots (students must provide serum after a specialist allergy workup)
- Physical examinations

Confidentiality for Health Services

The Student Health Service physician–patient relationship is a confidential one. Medical records will be released only on receipt of written authorization from the student or as required by law or when the patient poses a significant risk to herself or himself or another person. Physicians with Student Health Services are considered confidential employees under Title IX, meaning that should a student wish to speak about domestic or sexual violence or stalking with their physician, his/her information is confidential and will not be released without their expressed written consent. The only exception to this is for students under the age of 18.

Health Insurance

All registered students are required to maintain health insurance through Rice University or provide proof of acceptable coverage. To ensure compliance with this university policy, all students are required to either enroll in the Rice Plan, or

file a waiver application indicating other coverage is in place. The plan must meet the waiver criteria in order to be considered in compliance with the Affordable Care Act (ACA). Students are allowed to enroll for fall-only or annual coverage. These updates will be reflected on the student's tuition bill within two weeks. All updates for the fall term must be made by September 4th. All updates for the spring term must be made by January 22nd.

The open enrollment dates, waiver requirements and waiver application can all be found on the Rice Student Health Insurance website.

For questions concerning the Rice plan, please contact studentinsurance@rice.edu or call (713) 348-5544.

NOTE: If you waive coverage in the fall, you are still expected to have ACA compliant coverage for the spring.

International students should visit the OISS website for detailed information concerning the approved alternative insurance option through Student Assurance Services (SAS), as well as application and rate information.

Wellbeing and Counseling Center Services

Center contact information

The Wellbeing and Counseling Center provides confidential counseling treatment as well as wellbeing case management services and Title IX support for graduate and undergraduate students. The Center also provides mental health and wellbeing related education for the student body. The Wellbeing and Counseling Center is located in the Barbara and David Gibbs Recreation and Wellness Center. The Center is open Monday - Friday from 8:30a.m. to 5:00p.m. Walk-ins are available during business hours. For appointments contact the Wellbeing and Counseling Center at 713-348-3311 (24/7) or visit http://wellbeingandcounseling.rice.edu/ for more information. In emergencies, students should call the Rice University Police Department at 713-348-6000.

General information about counseling

The Rice Counseling Center addresses students' psychological needs with various programs and services. Services are confidential. Student information is not released to anyone without the student's written consent. There are no costs for Counseling Center services.

Typically, 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 and relationship 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 long term or specialized counseling or treatment, counselors refer them to an outside provider. The students, or their health insurance, must pick up these costs. All students who have paid the Health and Wellness Support Services Fee are eligible for initial assessment sessions, consultations, crisis intervention, and educational programming. Individual or group counseling may also be available, if appropriate.

Students who have worked with a mental health professional prior to enrolling at Rice are encouraged to make contact with the Rice Counseling Center prior to coming to Rice. This will allow the student to make arrangements for a continued care plan. This plan may involve working with the Rice Counseling Center or working with the center to find a suitable off-campus provider.

The Rice Counseling Center can be contacted at 713-348-3311 and at http://wellbeingandcounseling.rice.edu/rcc. The Rice Counseling Center provides the following services:

- Psychological crisis intervention, on a walk-in emergency basis during regular office hours or by phone at any time, 24 hours a day, by calling 713-348-3311. This includes after hours and weekends.
- Brief initial assessments, in person to quickly receive information about a situation and assign an appropriate counselor
- Short-term individual and couples counseling
- Group therapy and support groups
- Medication consultations with the center's 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)

Confidentiality for counseling

Rice Counseling Center services are confidential; information about a student is not released without the student's written consent. Before entering a therapeutic relationship with a counselor, students may review and discuss confidentiality with their counselor, ask all necessary questions, and be certain they understand how confidentiality will be applied in their case. As detailed in RCC's treatment agreements, state law does not extend confidentiality to several circumstances, including 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; or (4) the counselor suspects that the student has been the victim of sexual exploitation by a former health care provider during the course of treatment with that provider. In addition, RCC sometimes provides de-identified information to administrative officials who are in a need-to-know capacity. In some cases the terms of the treatment engagement with RCC may require a student to share assessments, diagnoses, or treatment plans from non-Rice treating professionals with Rice counselors.

Therapists with Rice Counseling Services are considered “confidential” employees under Title IX, meaning that should a student wish to speak about domestic or sexual violence or stalking with their therapist, their information is confidential and will not be released without his or her written consent. The only exception to this is for students under the age of 18.

General information for wellbeing case management

The Student Wellbeing Office provides case management services and supports students who have experienced wellbeing challenges that may be impacting their personal and/or academic goals and overall success at Rice. Wellbeing case managers connect students to university resources and procedural options to help students during their enrollment. When students decide to take time off to focus on their well-being needs, the office works with them and serves as a liaison to the medical readmission process when students are ready to return. The Student Wellbeing Office also coordinates with the Rice Counseling Center to provide mental health and wellbeing related education for the student body. The Student Wellbeing Office is located in the Barbara and David Gibbs Recreation and Wellness Center. For appointments or more information, contact the Student Wellbeing Office at 713-348-3311, wellbeing@rice.edu or at http://wellbeingandcounseling.rice.edu/.

General information about Title IX Support

Rice encourages any student who has experienced an incident of sexual, relationship, or other interpersonal violence, harassment or gender discrimination to seek support. There are many options available both on and off campus for all students, regardless of whether the perpetrator was a fellow student, a staff or faculty member, or someone not affiliated with the university. Students should be aware when seeking support on campus that most employees are required by Title IX to disclose all incidents of non-consensual interpersonal behaviors to Title IX professionals on campus who can act to support that student and meet their needs. The therapists at the Rice Counseling Center and the doctors at Student Health Services are ‘confidential’ employees, meaning that Rice will not be informed about the incident if a student discloses to one of these Rice staff members. Rice prioritizes student privacy and safety, and only shares disclosed information on a need-to-know basis. Students who have been accused of committing interpersonal violence or harassment can also seek support under Title IX. The student will be assigned a Title IX Resource Navigator who will assist the student through the process.

Privacy for wellbeing case management and Title IX Support

Wellbeing staff follow FERPA guidelines. These staff members may inform others on the campus who have a legitimate educational interest in knowing about a student’s general situation in order to perform their work to address the safety of the student or the community. This includes contacting a student’s emergency contact(s) in the event of a health and safety emergency. Wellbeing staff are considered ‘responsible’ employees under Title IX, meaning that should a student wish to speak about domestic or sexual violence or stalking with their staff member, the staff is required by law to report the information to a Title IX Coordinator who may assign a Title IX Navigator to assist the student, including helping the student choose the best path for him or her.

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Tuition, Fees and Expenses

Jump to:

Tuition and fee charges for graduate students are billed to students each semester. Students must pay the charges in full by the due date or enroll in a payment plan to avoid a late payment fee. Payment plans are only available at the beginning of a new term. Fall semester bills are due August 10. NOTE: Student accounts will not be charged until they have registered for classes (with the exception of first-time students). Students who register between July 25 and the Add/Drop deadline on the Registrar's Academic Calendar must pay by September 10 to avoid a late payment fee.

Spring semester bills are due January 10. Students who register between December 20 and the Add/Drop deadline on the Registrar's Academic Calendar must pay by January 27 to avoid a late payment fee.

Payments made in person must be received by the Cashier's office no later than 4pm on the payment due date. Payments made online via credit card or e-check must be made no later than 11:59pm on the payment due date.

Tuition and fees for all graduate students for academic year 2015-16 are:

Tuition Graduate Programs	Hour	Semester / Reduced*	Annual / Reduced*
Architecture	$1,678	$15,100 / $839*	$30,200 / $1,678*
Shepherd School of Music	$1,498	$13,475 / $749*	$26,950 / $1,498*
Professional Master's in Natural Science			
Entered Fall '13	$1,556	$14,000	$28,000
Entered Fall '14	$1,612	$14,500	$29,000
Entering Fall '15	$1,667	$15,000	$30,000
Professional Master's in Engineering	$1,945	$17,500	$35,000
All other graduate students	$2,309	$20,780 / $1,155*	$41,560 / $2,310*
Jones School PhD		$20,780	$41,560
Required Fees			

Graduate Student Association	$22	$44
Student organization fund	$4	$8
Honor Council	$1	$2
Humanities GSA (School of Humanities only)	$2.50	$5
Health and Wellness Support Services Fee (no spouses)	$241	$482
**Health Insurance - student premium only (unless waiver has been approved)	Fall: $951 Spring: $1553	$2504
MLS Graduate Program	**Per Course**	
Master's of Liberal Studies and Postgraduate Program	$2,700	
Required Fees	**Session**	**Annual**
MLS student activity fee	$40	
Graduate Student Association (annual max $44)	$22	$44
MAT Graduate Program	**Per Course**	
Master of Arts in Teaching	$2,700	
Required Fees	**Semester**	**Annual**
MAT student activity fee	$40	$80
Graduate Student Association	$22	$44
**Health Insurance - student premium only (unless waiver has been approved)	Fall: $951 Spring: $1553	$2504
Jones School MBA	**Semester**	**Annual**
Entering Fall '15	$25,700	$51,400
Required Fees		
Graduate Student Association	$22	$44
Student organization fund	$4	$8
Honor Council	$1	$2
Health and Wellness Support Services Fee (no spouses)	$241	$482
Jones School student activity fee	$100	$200
Jones School material fee	$1,066	$2,132
Jones School admission administrative fee - new students - Fall only	$225	
**Health Insurance - student premium only (unless waiver has been approved)	Fall: $951 Spring: $1553	$2504
Jones School MBA for Professionals (Evening)		**2-Year Rate**
Entered Fall '14		$95,500
Entering Fall '15		$95,500
Required Fees		
Jones School MBA for Professionals Student Activity Fee	$50 per semester	
**Health Insurance - student premium only (unless waiver has been approved)	Fall: $951 Spring: $1553	$2504
Jones School MBA for Professionals (Weekend)		
Entered Fall '14		$98,000
Entering Fall '15		$99,000
Required Fees		
Jones School MBA for Professionals Student Activity Fee	$50 per semester	
**Health Insurance - student premium only (unless waiver has been approved)	Fall: $951 Spring: $1553	$2504
Jones School MBA for Professionals Extended		
Entering Fall '15 (must enroll in 13.5 credits)	$1,769 per credit	
Spring '16 (minimum of 10.5 credits)	$1,769 per credit	
Remaining semesters do not have a minimum credit registration and are charged per credit		
**Health Insurance - student premium only (unless waiver has been approved)	Fall: $951 Spring: $1553	$2504

Jones School MBA for Executives		**2-Year Rate**
Entered Fall '14		$109,000
Entering Fall '15		$111,000
Required Fees		
**Health Insurance - student premium only (unless waiver has been approved)	Fall: $951 Spring: $1553	$2504

Away Status

Graduate students pursuing their studies outside of the Houston area (graduate students on “away” status) must be registered and pay tuition. Humanities students in away status must pay the Humanities GSA fee. Students on away status must carry health insurance. With these exceptions, graduate students in away status are exempt from the other required fees listed above.

* Reduced Tuition

After 10 semesters of full-time study in one doctoral degree program (excluding the summer semesters), continuing students may be eligible for a reduced tuition rate. A semester of full-time study is defined as a fall or spring semester in which at least 9 hours of credit are earned. Students in the Shepherd School of Music and the School of Architecture are eligible for reduced rate tuition after six semesters of full-time study.

** Health Insurance

All students, full time or part time—including those on away status—must carry health insurance. For further information, visit the Health Insurance section.

Late Payment Fees

Late payment fees will be assessed monthly at the rate of 1.5% of the unpaid balance due on the e-bill. Any account with a past due amount will be charged a late payment fee. NO EXCEPTIONS.

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 fees and 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.

Fees and special charges are not refunded for students withdrawing after the second week of classes in a semester. Similarly, students withdrawing or taking leaves of absence in the spring semester do not receive any refund of fees paid for the full year.

Part-Time Students

Students must receive approval from their department to enroll with a course load of fewer than nine hours. Approval must be received and the course schedule must be adjusted within the first two weeks of the semester. Students with part-time approval and a course load of fewer than nine hours will be charged at the per-hour rate plus a part-time registration fee. There are no refunds for part-time enrollment or for students whose course load drops below nine hours after the first two weeks of the semester.

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 may be withdrawn from the university. Accounts not settled by the first day of classes incur a late payment penalty and are subject to a billing hold that prevents those students from dropping or adding classes.

Special Charges

Special Courses—Courses that require additional charges are noted on the Cashier's website . In some cases the associated charges may be in lieu of Rice tuition and/or required fees.

Audit fee: Rice alumni (per course)			$450
Audit fee: All others (per course)			$880
Late registration I (see academic calendar)			$75
Late registration II (see academic calendar)			$125
Part-time registration fee			$140
Visiting Post Baccalaureate application fee			$100
Visiting Post Baccalaureate registration fee			$75
Visiting Post Baccalaureate late registration fee			$125
Late payment fee (charged monthly)			1.5% of balance due
Late application for graduation fee			$75
Returned check fee			$30
Summer Health and Wellness Support Services Fee***			$134
Diploma fee: parchment			$50
Diploma mailing fee: Domestic			$30
Diploma mailing fee: International			$50
Diploma fee: facsimile			$20
Transcript fee			$10
Letter of standing			$10
Intramural fees			$20
Readmission fee: graduate students			$350
Readmission fee: graduate students - after withdrawal for non-payment			$350
Reinstatement fee: graduate students - following leave of absence			$125
Reinstatement fee: graduate students - after exceeding time boundaries to candidacy or defense			$125
Replacement ID: faculty, staff, students, and dependents			$10
Graduate thesis submission fee			$100
Graduate application fee			$85
Jones School application fee–all MBA programs			$125
Jones School application fee–all EMBA programs			$125
Jones School application fee–all PMBA programs			$125
Late course change fee (add/drop)			$75
Recreation Center membership fees	*Spring*	*Summer*	*Annual*
Student only	$49	$32	$130
*** *Applies to early matriculants and summer returns from leave*			

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Last Revised : August 03, 2015

Access to Student Records

Notification of Rights under the Family Educational Rights and Privacy Act (FERPA)

The Family Educational Rights and Privacy Act (FERPA) is a federal law designed to protect the privacy of, and limit access to, student education records. The law affords students the following rights with respect to their education records:

1. the right to inspect and review the student's education records within 45 days after the date Rice University ("Rice") receives a request for access;

2. the right to seek amendment of the student's education records that the student believes are inaccurate, misleading, or otherwise in violation of the student's privacy rights under FERPA;

3. the right to provide written consent to disclosures of personally identifiable information (PII, as defined by law) contained in the student's education records, except to the extent FERPA authorizes disclosure without consent;

4. the right to file a complaint with the U.S. Department of Education concerning alleged failures by Rice to comply with the requirements of FERPA. The name and address of the federal office that administers FERPA is: Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Ave. S.W., Washington, DC 20202-8520.

Inspect and review records: A student should make written request to any offices that maintain student education records, identifying the record(s) the student wishes to inspect. Though not exhaustive, as a guide for students, this is a list of offices that maintain student education records: Office of the Registrar, Office of the Dean of Undergraduates, Office of Graduate and Postdoctoral Studies, Office of Student Judicial Programs, Office of Admissions, Office of Financial Aid, Center for Career Development, Office of Student Activities, Office of Academic Advising, Office of International Students and Scholars, Cashier's Office, and departmental offices. The appropriate Rice official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the Rice official to whom the request is submitted, that Rice official will advise the student of the correct official to whom the request should be addressed.

Amendment of records: Any questions, problems, or written requests for amendment of records should be submitted to the Office of the Registrar. A student requesting to amend a record should clearly identify the part of the record the student wants changed and specify why it should be changed. If Rice decides not to amend the record as requested, Rice will notify the student in writing of the decision and of the student's right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when the student is notified of the right to a hearing.

Disclosure of information: As permitted by FERPA, Rice reserves the right to publish or release the following directory information without prior consent.

1. Name, local and permanent address, telephone and mobile number(s), campus email address(es), and instant messenger address(es)
2. Date and place of birth
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

Students who would like Rice to withhold this directory information may do so by logging in to ESTHER, clicking Personal Information, clicking Release or Withhold Directory Information, and indicating that the information should be

withheld; thereafter, Rice will withhold access to, or release of, the student's directory information until further written instruction is received. For more information regarding FERPA, please visit the U.S. Department of Education's website.

FERPA permits the disclosure of PII from students' education records, without consent of the student, if the disclosure meets certain conditions found in 34 CFR §99.31 of the FERPA regulations. Except for disclosures to school officials, disclosures related to some judicial orders or lawfully issued subpoenas, disclosures of directory information, and disclosures to the student, §99.32 of FERPA regulations requires the institution to record the disclosure. Eligible students have a right to inspect and review the record of disclosures. A postsecondary institution may disclose PII from the education records without obtaining prior written consent of the student –

- To other school officials, within Rice whom Rice has determined have legitimate educational interests and require this information in order to perform instructional, supervisory, advisory, administrative, or other duties for Rice. These school officials include faculty, research personnel, staff (including law enforcement unit personnel and health staff), trustees, or students serving on official committees (such as disciplinary or grievance committees) or assisting another school official. A school official has a legitimate educational interest if the official needs to review an educational record in order to fulfill his or her professional responsibility for Rice. This includes contractors, consultants, auditors, attorneys, collection agents, volunteers, or other parties to whom Rice has outsourced institutional services or functions, provided that the conditions listed in §99.31(a)(1)(i)(B)(*1*) - (a)(1)(i)(B)(*2*) are met. (§99.31(a)(1))

- To officials of another school where the student seeks or intends to enroll, or where the student is already enrolled if the disclosure is for purposes related to the student's enrollment or transfer, subject to the requirements of §99.34. (§99.31(a)(2)) Disclosures may be made and information forwarded by Rice without prior notification to the student.

- To authorized representatives of the U. S. Comptroller General, the U. S. Attorney General, the U.S. Secretary of Education, or State and local educational authorities, such as a State postsecondary authority that is responsible for supervising the university's State-supported education programs. Disclosures under this provision may be made, subject to the requirements of §99.35, in connection with an audit or evaluation of Federal- or State-supported education programs, or for the enforcement of or compliance with Federal legal requirements that relate to those programs. These entities may make further disclosures of PII to outside entities that are designated by them as their authorized representatives to conduct any audit, evaluation, or enforcement or compliance activity on their behalf. (§§99.31(a)(3) and 99.35)

- In connection with financial aid for which the student has applied or which the student has received, if the information is necessary to determine eligibility for the aid, determine the amount of the aid, determine the conditions of the aid, or enforce the terms and conditions of the aid. (§99.31(a)(4))

- To organizations conducting studies for, or on behalf of, the school, in order to: (a) develop, validate, or administer predictive tests; (b) administer student aid programs; or (c) improve instruction. (§99.31(a)(6))

- To accrediting organizations to carry out their accrediting functions. ((§99.31(a)(7))

- To parents of an eligible student if the student is a dependent for IRS tax purposes, though Rice limits such information to financial details of the student's enrollment. (§99.31(a)(8))

- To comply with a judicial order or lawfully issued subpoena. (§99.31(a)(9))

- To appropriate officials in connection with a health or safety emergency, subject to §99.36. (§99.31(a)(10))

- Information the school has designated as "directory information" above and pursuant to §99.37. (§99.31(a)(11))

- To a victim of an alleged perpetrator of a crime of violence or a non-forcible sex offense, subject to the requirements of §99.39. The disclosure may only include the final results of the disciplinary proceeding with respect to that alleged crime or offense, regardless of the finding. (§99.31(a)(13))

- To the general public, the final results of a disciplinary proceeding, subject to the requirements of §99.39, if the school determines the student is an alleged perpetrator of a crime of violence or non-forcible sex offense and the student has committed a violation of the school's rules or policies with respect to the allegation made against him or her. (§99.31(a)(14))

- To parents of a student regarding the student's violation of any Federal, State, or local law, or of any rule or policy of the school, governing the use or possession of alcohol or a controlled substance if the school determines the student committed a disciplinary violation and the student is under the age of 21. (§99.31(a)(15))

For further information regarding Rice's policy on student education records, please contact the Office of the Registrar.

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

Last Revised : August 03, 2015

Code of Student Conduct

The Office of Student Judicial Programs oversees the judicial system and enforces the Code of Student Conduct, which governs the administration of student order and discipline, and participates in Title IX investigations. The Code of Student Conduct applies to all students, including undergraduate, graduate, and transfer students; those enrolled in professional and Continuing Studies programs; and visiting students, Visiting Post Baccalaureates, second degree students, and auditors, from the time they arrive on campus for orientation until their degree is conferred or they have permanently left Rice. Organizations also are subject to this Code. All enrolled students also are subject to Rice University policies, rules, and regulations.

Alleged violations of university or college rules are handled in accordance with the Code of Student Conduct. Students may appeal decisions as described in the Code of Student Conduct. Rice retains ultimate authority in all matters of discipline and over all actions that affect its educational function or the safety and wellbeing of members of the university community. The Code is not intended to–and does not–confer any contractual rights on any individuals involved.

The Code of Student Conduct can be found here.

After Rice's grievance process has been exhausted and documented, students may also pursue an external complaints process.

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Last Revised : August 21, 2015

Dispute Resolution

Jump to:

Petitions and Appeals

Graduate students may petition for exceptions to academic requirements, regulations, and judgments. A course requirement is an example of an academic requirement. Allowed time to degree is an example of an academic regulation. Course grades and dismissals from programs are examples of academic judgments. If a petition is denied, one level of appeal is allowed.

Petitions

In general, petitions will be handled at the lowest appropriate level. A petition regarding requirements, regulations, or judgments of a graduate program will be handled at that level, that is, by the program. Such petitions need to follow procedures established by these programs. A petition regarding University requirements, regulations, or judgment must be submitted to the Office of Graduate and Postdoctoral Studies; such a petition must be accompanied by a recommendation from the program. When the program's recommendation is negative, or when the petition requests a major exception—for example, an extension of allowed time to degree by more than 1/2 semester—the Office of Graduate and Postdoctoral Studies may also obtain the recommendation of the school overseeing the program (when relevant) and the Graduate Council with regard to such petitions.

Petitions for exceptions to academic requirements, regulations, and judgments should be viewed as unusual, rather than typical. Extensions of various time limits, such as time to candidacy or time to defense, will not be granted routinely. See Candidacy, Oral Examinations and Thesis. Students requesting such extensions have to document the unusual circumstances justifying their request, demonstrate their academic progress towards the goal, and provide a concrete plan for meeting the goal within the requested extension.

Petitions regarding academic decisions must be submitted in writing within 15 days from the time that the student knew or should reasonably have known of the decision being petitioned, or within 15 days after an informal effort to resolve the situation has not been successful. Petitions seeking exceptions to academic requirements or regulations should be submitted in writing at least 30 days before the requirement or regulation takes effect. For example, a petition to extend allowed time to degree should be submitted at least 30 days before the deadline in effect. Late petitions may be dismissed, except for unusual situations when a delay is found justifiable by the unit receiving the petition. Petitions must be acknowledged in writing immediately upon their receipt by the receiving unit. Email communication is considered to be "in writing."

Appeals

If a petition is denied, a student (or other parties affected by the decision) is allowed only one level of appeal. In general, the appeal process will be resolved at the lowest level possible. When the petition is decided at the department level, the appeal must be submitted to the school. When the petition is decided at a school level, the appeal must be handled by the Office of Graduate and Postdoctoral Studies. When the petition is decided by the Office of Graduate and Postdoctoral Studies, the appellant may submit an appeal to the Provost. An appeal must be submitted within 15 days from receipt of the decision that is being appealed. Late appeals will be dismissed, except for unusual situations when a delay is justified. Appeals must be acknowledged in writing immediately upon their receipt by the receiving unit. Email communication is considered to be "in writing."

Guidelines Regarding Petitions and Appeals

All petitions and appeals should indicate the requirement, regulation, or judgment that is the subject of the petition/appeal, the specific exception requested, and the grounds for the request. Additionally, an appeal must indicate why the decision involving the earlier petition was incorrectly decided. Grounds for a petition/appeal could be procedural errors by academic or administrative personnel or special circumstances found to be mitigating by the unit receiving the petition/appeal. Disagreement over evaluation of academic quality will not be considered as an appropriate basis for petitions/appeals unless the evaluation is found to be patently unreasonable by the unit receiving the petition/appeal. Petitions involving a violation of University policy or improper conduct by University personnel will be handled as grievances (see Grievances below).

Petitions and appeals should be resolved within 30 days of their submission. When such resolution cannot be achieved within 30 days, students will be informed of the delay before the 30 days are over. A resolution of the petition or appeal must be achieved within 60 days. A lack of resolution of a petition within 60 days is an acceptable cause for an appeal.

An academic program directly managing graduate students must establish a standing Petitions, Appeals, and Grievances Committee. A petition concerning a graduate program regulation by a student will be handled by a committee consisting of at least three faculty members. The committee must be independent of the cause for the petition. Members of a student's thesis committee must not participate in the handling of a petition by the student. (The department chair or dean may appoint ad-hoc members to the committee to ensure independence of the committee.) The committee will conduct an investigation of the circumstances and reach a decision regarding the petition. Their written report to the graduate director, and the chair (or dean) will describe the circumstances, the decision, and the rationale for the decision. The graduate director or chair (or dean) will convey the final decision to the student and include the committee report. (Redaction from the report is allowed to protect the privacy of other students.) In case of decisions by the faculty members of a graduate program acting as a committee of the whole, petitions will also be considered by the Petitions, Appeals, and Grievances Committee, which will reconsider the decision in view of the information provided in the petition. This committee may choose to bring the matter back for consideration by the faculty members of the academic program, acting as a committee of the whole. Petitions regarding University requirements, regulations or judgments submitted to the Office of Graduate and Postdoctoral Studies may be handled by the dean or her or his designee. The dean may, at her or his discretion, handle these in a similar manner by enlisting the assistance of a subcommittee of the Graduate Council, which will submit its report to the chair of the Council and to the dean of graduate and postdoctoral studies.

An appeal handled by a school may be handled by the school dean or by an associate dean. The handling officer may convene an ad-hoc faculty committee or establish a standing committee. An appeal handled by the Office of Graduate and Postdoctoral Studies may be referred to a subcommittee of the Graduate Council, composed of three faculty members (representing diverse disciplines within the university) and a graduate student. Such committees must be independent of the cause for the petition. In general, officers or committees handling the appeal should not try to substitute their judgment for that of the unit handling the petition. Rather, their task is to consider whether the petition was handled appropriately, whether all relevant circumstances have been considered, and whether University policy has been appropriately interpreted and applied. Nevertheless, a petition decision may be overturned if the officer or committee handling the appeal finds the petition decision to be patently unreasonable.

All time frames in this procedure refer to academic calendar days, and exclude mid-term, inter-term and summer recesses. This exclusion does not apply to a student who is enrolled during the summer. All petitions and appeals, as well as responses to petitions and appeals, must be in writing. Email communication is considered to be "in writing." Academic units should archive copies of all email communications pertaining to petitions and appeals.

Grievances

Grievances are different from petitions and appeals. Petitions and appeals involve exceptions to academic requirements, regulations, and judgments. A grievance is a complaint regarding inappropriate conduct by other students, faculty members, or staff. Inappropriate conduct encompasses both inappropriate personal conduct, such as sexual harassment, as well as inappropriate official conduct, such as violation of University policies. Specific policies exist to address grievances based on discrimination or sexual harassment and these policies must be followed in situations involving these issues. Grievances against another student may be raised with the director of student judicial programs and addressed under the Code of Student Conduct. In other cases, a student may present a grievance in writing at the lowest appropriate level, typically the department or school. If a satisfactory resolution is not obtained at that level, the student may appeal the outcome of the grievance by presenting the problem at the next administrative level, such as the school, Office of Graduate and Postdoctoral Studies, provost, or president. Grievances against non-faculty staff members may also be brought to the employee relations director in Rice's Human Resources office.

The procedures for handling grievances are analogous to those for handling petitions and appeals. Students submitting grievances must so indicate in their submissions.

Problem Resolution

During the course of graduate studies, problems that do not fall under the category of grievances, described above, may

arise in the relationship between a graduate student and his/her program or his/her advisor. Students should attempt to resolve such problems by informing the appropriate faculty members and working together to resolve the problem. When attempts to resolve the problem informally are unsuccessful, the following problem-resolution procedure will be used:

1. The student will submit the problem in writing to the graduate program chair, who will then attempt to resolve it.
2. If the student remains unsatisfied, the problem will be presented to a committee of the program for resolution. This committee will be a standing committee and not the student's own thesis/dissertation committee. Both the student and the program chair will submit a written record of their views to this committee.
3. If the student remains unsatisfied, the problem will be referred to a standing subcommittee of the Graduate Council and composed of three faculty members (representing diverse disciplines within the university) and a graduate student, with the dean of graduate and postdoctoral studies as an ex-officio member. A written report of proceedings at stage 2 will be presented to the chair of Graduate Council for forwarding to the subcommittee, along with all other written materials generated during the investigation. The decision of this subcommittee is considered final.

The time frame for handling problem resolution is similar to that for handling petitions, appeals, and grievances. Students may seek guidance on any of these procedures through discussions with the Office of Graduate and Postdoctoral Studies.

After Rice's grievance process has been exhausted and documented, students may also pursue an external complaints process.

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Last Revised : August 03, 2015

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 Office of Student Judicial Programs, which reviews the results of the investigations and hearings, 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://honor.rice.edu/.

Last Revised : July 20, 2011

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 utilizes e-mail as an official form of communication and sends correspondence to a student's Rice email address. Students should frequently check and maintain their Rice email inbox. Failure to do so does not relieve students of the responsibility to act or respond in a timely manner to official notices sent via email.

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.

Last Revised : August 11, 2014

Auditors

Any interested person may audit one or more courses at Rice by securing permission of the instructor and by registering as an auditor with the Office of the Registrar. Detailed instructions to apply as an auditor can be found on the Office of the Registrar's website.

Upon completion, the audited course will appear on the student's transcript with a grade of either "AUD" or "NC" (see Grade Symbols). There are no credit hours associated with audited courses, and auditing a course does not affect a student's GPA.

During the fall and spring semesters, and/or during the summer sessions, an audit fee of $880 per course per semester is charged for the privilege of auditing (see Cashier's website). Rice alumni may audit a course at a reduced rate, $450 per course per semester.

A request to audit a class to change from audit to credit or vice versa must be done by the deadlines as posted in the Academic Calendar for the applicable semester.

Current Rice students will find more information regarding auditing in the undergraduate and graduate sections.

Please note that financial assistance is not available for auditing students.

Last Revised : August 18, 2015

Second Four-Year Bachelor's Degree for Rice Alumni

Rice alumni with a Rice bachelor's degree have the option of earning a *second* four-year bachelor's degree at Rice in a different discipline. In addition to being in a different discipline, the second degree must also 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 alumni with a Rice bachelor's degree desiring 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 (must include two full-time fall and/or spring semesters) upon their return to Rice and beyond their first bachelor's degree (these hours are applied to the second degree)

The entire undergraduate record for these students continues cumulatively. Those seeking admission to this program should complete the Second Four-Year Bachelor's Degree Application available on the Office of the Registrar website. This 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 returning to Rice for a second degree. This letter of application and paperwork should be submitted to the Office of the Registrar no later than August 1 for the fall semester and November 1 for the spring semester.

Eligible students considering this option should note that coursework completed at Rice as visiting students can only be applied to the second degree with the approval of the major department for that degree. Additionally, coursework completed at Rice as Visiting Post Baccalaureates can only be applied to the second degree with the approval of the major department for that degree and the dean of graduate and postdoctoral studies.

Financial Aid

Students seeking information about financial aid available to participants in the second four-year bachelor's degree program should contact the Office of Financial Aid.

Second Four-Year Bachelor's Degree for Current Rice Undergraduates

Currently enrolled undergraduates who have not yet completed their first bachelor's degree and desire to concurrently earn a second four-year bachelor's degree, also known as a *dual degree,* should reference the Dual-Degree Requirements on the undergraduate Graduation Requirements page.

Last Revised : May 05, 2015

Summer Sessions for Visiting Students

Rice's Summer Sessions offers courses for credit to Rice students, visiting undergraduates, and visiting post baccalaureates. Students can choose to take courses in combined summer sessions. Current Rice students follow the same registration policies and procedures that are in place for the fall and spring semesters and can find more information in Registration During the Summer Sessions.

Resources

- For a schedule of summer sessions, please refer to the Academic Calendar.
- For course offerings, please refer to courses.rice.edu.
- For information related to the Summer Sessions, please see http://registrar.rice.edu/students/summersessions/.

Enrollment Process for Visiting Students

To apply, students will need to submit the following materials to the Rice University Office of the Registrar. Applicants will be notified as soon as possible of acceptance or nonacceptance:

- Visiting Student Application
- Dean of Students Recommendation Form (visiting undergraduates from other institutions only)
- Application fee of $100. This must be paid online on the OTR Fees website and may be paid by credit card or electronic check.
- Course deposit of $200/course (payable by check or money order to Rice University)
- Official college transcript from all colleges or universities attended
- Official final high school transcript (waived if attended a college/university in Spring 2015) *All transcripts must be mailed in and will not be accepted by fax or email.*
- Proof of Meningococcal Vaccination Record or Waiver (required if under the age of 22)

Guidelines

- Tuition is due in full at registration before the beginning of classes.
- Enrollment in courses during the summer sessions carries no implications for regular admission to Rice.
- Visiting students wishing to enroll in summer session online courses for Rice credit must be residents of the State of Texas.
- Visiting students may not take courses on a pass/fail basis.

It is essential that students follow the deadlines listed on the summer school website at http://registrar.rice.edu/students/summersessions/ and the Academic Calendar. Students may apply after the deadline (but before the start of classes) by paying a late fee. Courses that do not generate enrollments sufficient to cover their costs may be canceled.

Visiting Auditors

Auditors of summer school courses, who are considered visiting students, are charged the following rates: Rice alumni pay an audit fee of $450 per semester, and all other visiting students are charged $880 per course per semester for the privilege of auditing.

Applicants who wish to audit must follow the enrollment process for non-Rice students as listed at http://registrar.rice.edu/students/summersessions/, and also submit a Visiting Student Audit form, complete with the instructor's signature for each course that you wish to audit. Applicants will be notified as soon as possible of acceptance or nonacceptance.

For more information, including tuition and registration information, students should contact the Office of the Registrar at 713-348-4999, via email at summercredit@rice.edu, or online at http://registrar.rice.edu/students/summersessions/.

Last Revised : August 14, 2015

Visiting Post Baccalaureates

Students with this 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 taking courses not for credit should audit the courses. (See Auditors.)

Applicants must have a 3.00 (B) or better grade average in the previous undergraduate or graduate program. Registration requires the permission of the course instructor or department chair and approval by the dean of graduate and postdoctoral studies. Visiting Post Baccalaureates must register for at least three hours and cannot take courses on a pass/fail basis. Visiting Post Baccalaureates must receive at least a B for all classes taken or they will not be allowed to remain in the 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. Former Visiting Post Baccalaureate students may request that their department allow up to three courses taken as Visiting Post Baccalaureates to count toward their graduate degree. Once approved by the department, the student must also obtain the approval of the dean of graduate and postdoctoral studies.

Applications for Visiting Post Baccalaureate Program

Applications are available from the Office of the Registrar upon request. Official transcripts from all colleges and universities the student has attended should be mailed directly by the institutions to the Office of Graduate and Postdoctoral Studies. Students who were previously Visiting Post Baccalaureates must complete a new application (without transcripts) for each such semester. All application materials are due by the workday nearest to July 15 for fall semester courses and November 15 for spring semester courses. No late applications are accepted.

Individuals applying as Visiting Post Baccalaureates for the summer term should apply to enroll in Rice's Summer Sessions.

Tuition and Fees for Visiting Post Baccalaureate Program

Tuition and fee information can be found on the Cashier's Website. If a class fills with degree students, instructors may drop Visiting Post Baccalaureates up to the end of the second week of class. In that case, the tuition (less the nonrefundable application fee) will be refunded. If a Visiting Post Baccalaureate withdraws, drops, or adds classes, the same rules regarding grades, refunds, and applicable fees apply as for degree seeking graduate students. There is no refund for dropping a class after the second week, as long as the student stays enrolled in at least one other class. Pro-rated refunds for withdrawals are according to the deadlines listed on the academic calendar. Please visit the Summer Sessions for Visiting Students page for information pertaining to summer sessions.

Please note that financial assistance is not available for Visiting Post Baccalaureate students.

Last Revised : August 13, 2015

Visiting Undergraduate 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 $75 application fee, an official high school transcript, an official transcript of college work to date, an SAT or ACT Plus Writing 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 are available on the Admission website and should be submitted by March 15 for the fall 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 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.

Please note that financial assistance is not available for visiting students.

Last Revised : August 11, 2014

Faculty Grading Guidelines

Jump to:
Academic Progress Reviews for Graduate Students

The Committee on Examinations and Standing has drawn up the following guidelines on grading. Additional information is available in both the undergraduate and graduate student sections under the heading of "Grades."

- 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. No course assignments may be due between the last day of classes and the first 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 has been submitted to the Office of 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 Office of 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, incomplete, or other, 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 normally are of three-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.
- First-year undergraduate students receive mid-semester grades around the eighth week of the fall and spring semesters so that they can, if advisable, seek academic assistance 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 advisors.
- 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, the Office of the Dean of Undergraduates, or the Dean of Graduate and Postdoctoral Studies will be glad to advise any faculty member faced with exceptional circumstances that may justify special consideration. Students may petition the committee or, for graduate students, their department chair concerning the application of these guidelines. Suspected or possible violations of the honor system should be submitted to the Honor Council.

Academic Progress Reviews for Graduate Students

Graduate programs must establish mechanisms for tracking, reviewing, and documenting academic progress of graduate students on an ongoing basis and must provide graduate students a written assessment of their academic progress at least annually. In some graduate programs this ongoing progress review is carried out by a student's thesis committee, while in others it is carried out by a standing faculty committee. Although a student's supervisor plays an important role in reviewing the student's academic progress, the responsibility for conducting the review process lies with the program and requires the involvement of additional faculty members in the program. For graduate students who are primarily engaged in coursework, for example, professional master's students, the transcript is an adequate form of written assessment.

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Non-Traditional Coursework

Courses tailored for individual students provide a valuable opportunity for them to pursue an academic or professional interest under the supervision of a Rice faculty member. Such courses are typically titled as independent study or research, directed reading, or internships. Although the organization of these courses is quite variable, they are subject to the same basic requirements as other course offerings. In particular:

- The subject matter and intellectual level of the course must be appropriate for Rice.
- The instructor of record must hold a regular faculty appointment at Rice. This instructor is responsible for submitting the final grade, in consultation with the student's immediate supervisor, if appropriate.
- The course must have a written syllabus that meets published Rice Syllabus Standards. In addition, the syllabus must include a description of anticipated activities and topical content.
- Credit hours assigned are subject to the same amount-of-work considerations as other courses. Credit hours will be awarded in accordance with the Rice credit hour guidelines and fixed at the time of registration.
- All Registrar deadlines for registration, add/drop, completion of course work, and grade submission must be met.

Last Revised : August 03, 2015

Syllabus Standards

Faculty members and course instructors are required to provide a course syllabus to students on or before the first day of class. The syllabus should be uploaded into ESTHER, and may additionally be distributed in hard copy and/or on OWL-Space. For archiving purposes, updated versions of the course syllabus can be uploaded into ESTHER through the end of the semester. Each syllabus must include the following instructions:

1. Instructor's name, office number, and email address
2. Office hours or a statement of either an "open-door" policy or hours by appointment
3. Overall course objectives and expected learning outcomes
4. Grade policies
5. Absence policies
6. List of required texts
7. Special materials required for the class, if any
8. Number of required examinations and papers
9. Statement of expectations regarding course work and the Rice Honor Code
10. A statement encouraging any student with a disability that requires accommodation to contact both the course instructor and Disability Support Services
11. It is permissible to include a statement indicating that the information contained in the course syllabus, other than the absence policies, may be subject to change with reasonable advance notice, as deemed appropriate by the instructor.

The Center for Teaching Excellence provides a syllabus template that aids in meeting the above requirements.

Last Revised : August 03, 2015

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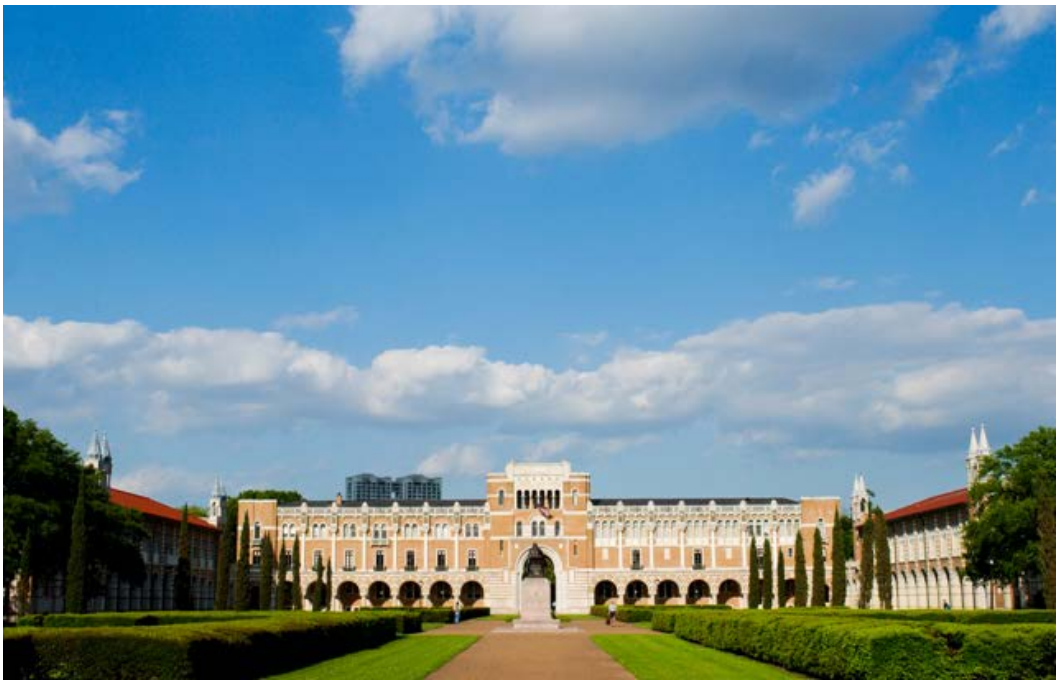
GENERAL ANNOUNCEMENTS 2015-2016



Programs of Study

The contents of Rice's curricular programs are the collective responsibility of the faculty acting through their representatives in the Faculty Senate. There are specific guidelines for the creation, elimination, and modification of undergraduate and graduate programs as well as undergraduate certificates and graduate certificates.

The General Announcements (GA) is the official Rice curriculum. In the event that there is a discrepancy between the GA and any other websites or publications, the GA shall prevail as the authoritative source.

Last Revised : August 04, 2015

RICE

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Previous Editions

GENERAL ANNOUNCEMENTS 2015-2016

Departments and Programs

The General Announcements (GA) is the official Rice curriculum. In the event that there is a discrepancy between the GA and any other websites or publications, the GA shall prevail as the authoritative source.

*Students accepted into PhD program only; MA or MS may be earned by students as they work towards PhD.
**No applications being accepted at this time.

School	Department or Program	UG Degrees	UG Minors	GR Degrees
Architecture	Architecture	BArch, BA	-	MArch, MA, MAUD**, DArch**
Business	Business	-	Minor	MBA, MAcc, MA*, PhD
Continuing Studies	Liberal Studies	-	-	MLS
Continuing Studies	Teacher Education	Certificate	-	MAT
Engineering	Bioengineering	BSBE	-	MBE, MS*, PhD
Engineering	Chemical and Biomolecular Engineering	BSChE, BA	-	MChE, MS*, PhD
Engineering	Civil and Environmental Engineering	BSCE, BA	-	MCEE, MS, PhD
Engineering	Computational and Applied Mathematics	BA	Minor	MCAM, MA, PhD
Engineering	Computational Science and Engineering	-	-	MCSE, MA*, PhD
Engineering	Computer Science	BSCS, BA	-	MCS, MS, PhD
Engineering	Electrical and Computer Engineering	BSEE, BA	-	MEE, MS*, PhD
Engineering	Energy and Water Sustainability	-	Minor	-
Engineering	Engineering Leadership	Certificate		
Engineering	Materials Science and NanoEngineering	BA, BSMSNE	-	MMSNE, MS, PhD
Engineering	Mechanical Engineering	BSME, BA	-	MME, MS, PhD
Engineering	Statistics	BA	Minor	MStat, MA*, PhD
Humanities	African Studies	-	Minor	-
Humanities	Ancient Mediterranean Civilizations	BA	-	-
Humanities	Art History	BA	-	MA*, PhD
Humanities	Asian Studies	BA	-	-
Humanities	Center for Languages and Intercultural Communication	-	-	-
Humanities	Classical and European Studies	BA	-	-
Humanities	English	BA	-	MA*, PhD
Humanities	History	BA	-	MA*, PhD
Humanities	Humanities Research Center	-	-	-
Humanities	Jewish Studies	-	Minor	-
Humanities	Latin American Studies	BA	-	-
Humanities	Medieval and Early Modern Studies	BA	-	-
Humanities	Philosophy	BA	-	MA*, PhD
Humanities	Religion	BA	-	MA*, PhD

Humanities	Spanish, Portuguese and Latin American Studies	BA	-	MA*
Humanities	Study of Women, Gender and Sexuality	BA	-	Certificate
Humanities	Visual and Dramatic Arts	BA	-	-
Music	Music	BMus, BA	-	MMus, Artist Diploma, DMA
Natural Sciences	Bioscience and Health Policy	-	-	MSBHP
Natural Sciences	BioSciences	BS, BA	Minor	MS*, MA, PhD
Natural Sciences	Chemical Physics	BS	-	-
Natural Sciences	Chemistry	BA, BS	-	MA, PhD
Natural Sciences	Earth Science	BS, BA	-	MS, PhD
Natural Sciences	Environmental Analysis and Decision Making	-	-	MSEADM
Natural Sciences	Kinesiology	BA	-	-
Natural Sciences	Mathematics	BA, BS	Minor	MA*, PhD
Natural Sciences	Nanoscale Physics	-	-	MSNP
Natural Sciences	Physics and Astronomy	BS, BA	-	MST, MS*, PhD
Natural Sciences	Space Studies	-	-	MSSpS
Natural Sciences	Subsurface Geoscience	-	-	MSSG
Other/Interdisciplinary	Air Force Science	-	-	-
Other/Interdisciplinary	Applied Physics	-	-	MS*, PhD
Other/Interdisciplinary	Civic Leadership	Certificate	-	-
Other/Interdisciplinary	College Courses	-	-	-
Other/Interdisciplinary	Environmental Studies	BA	Minor	-
Other/Interdisciplinary	Financial Computation and Modeling	-	Minor	-
Other/Interdisciplinary	Global Health Technologies	-	Minor	-
Other/Interdisciplinary	Lifetime Physical Activity Program	-	-	-
Other/Interdisciplinary	Military Science	-	-	-
Other/Interdisciplinary	Naval Science	-	Minor	-
Other/Interdisciplinary	Politics, Law and Social Thought	-	Minor	-
Other/Interdisciplinary	Poverty, Justice and Human Capabilities	-	Minor	-
Other/Interdisciplinary	Program in Writing and Communication	-	-	-
Other/Interdisciplinary	Systems, Synthetic and Physical Biology	-	-	MS*, PhD
Other/Interdisciplinary	Teaching and Learning	-	-	Certificate
Other/Interdisciplinary	University Courses	-	-	-
Social Sciences	Anthropology	BA	Minor	MA*, PhD
Social Sciences	Cognitive Sciences	BA	-	-
Social Sciences	Economics	BA	-	MEEcon, MA*, PhD
Social Sciences	Global Affairs	-	-	MAGA
Social Sciences	Linguistics	BA	-	MA**, PhD**
Social Sciences	Managerial Studies	BA	-	-
Social Sciences	Neuroscience	-	Minor	-
Social Sciences	Policy Studies	BA	-	-
Social Sciences	Political Science	BA	-	MA*, PhD
Social Sciences	Psychology	BA	-	MA*, PhD
Social Sciences	Sociology	BA	Minor	MA*, PhD
Social Sciences	Sport Management	BA	-	-

*Students accepted into PhD program only; MA or MS may be earned by students as they work towards PhD.

**No applications being accepted at this time.

Architecture

The School of Architecture

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Dean and William Ward Watkin Professor
Sarah Whiting

Harry K. and Albert K. Smith Professors
John Casbarian
Lars Lerup

Gus Sessions Wortham Professor
Albert Pope

Professors
William Cannady
Carlos Jimenez
Gordon Wittenberg

Associate Professors
Dawn Finley
Christopher Hight
Ron Witte

Wortham Assistant Professor
Reto Geiser

Assistant Professors
Andrew Colopy
Troy Schaum
Neyran Turan
Jesús Vassallo

Professors in Practice
Nonya Grenader
Douglas Oliver
Danny Samuels
Mark Wamble

Senior Lecturers
Scott Colman
Alan Fleishacker
Stephen Fox
James Furr
Christof Spieler

Lecturers
Tom Lord
Frank White

Technology Fellow
David Costanza

Wortham Fellow
Michelle Chang
Lluís Juan Liñán

Degrees Offered: BA, BArch, MArch, MA, *MArch in Urban Design*, DArch**

The Rice School of Architecture (RSA) focuses on *speculative practice* -- that is, the teaching and research of architecture and urban design as speculations that will advance professional practice as well as the built environment. 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.

Rice's undergraduate architecture programs maintain a balance between a design-focused study of architecture and a broad general education. In addition to formal coursework, students benefit from lectures and presentations from distinguished practitioners and scholars, symposia and other cultural events, and the unique Rice Preceptorship program, which places students in an outstanding professional office for a nine-month internship.

The School of Architecture's graduate programs offer a design education in combination with a thorough grounding in architectural history, theory, and technology. Rice's graduate program culminates in an independent design thesis, on the principle that an architectural education provides a complete exposure to architecture's breadth, from which the student establishes his or her depth, or expertise, through the independent thesis.

**The MArch in Urban Design and DArch programs are currently inactive and are not accepting applications.*

Last Revised : August 03, 2015

Architecture

The School of Architecture

For general university requirements, see Graduation Requirements. The conditions specified here for each major also satisfy the university distribution requirements. Further information on policies and procedures are detailed in the RSA student handbook, which is distributed as a pdf to every incoming student.

Program Learning Outcomes for BA in Architecture

Students graduating from this program will:

1. Formulate architectural projects that integrate design skills with critical thinking, engaging broader theoretical, social, political, economic, cultural, and environmental issues.
2. Explore how technology, issues of the environment, and construction inform innovative design solutions.
3. Strategize the relationship of architectural concepts, communication and representation techniques, and construction technology can innovate practice.

Degree Requirements for BA in Architecture

The BA in Architecture, leading to a BArch degree, is the primary undergraduate architecture program at Rice. Students who apply and are accepted into the University and the School of Architecture enter directly into this program. The required courses for the Major of a BA in Architecture leading to a BArch consist of four integrated sequences in the following areas: Design Studios, History and Theory, Technology, and Practice. Courses in these sequences must be taken in the order and semesters specified by the School of Architecture.

The curriculum for this professional degree program sequence has three two-year long stages. The first stage provides a foundation sequence in design, history and theory, and technology taken in the first and second years. Students are also expected to fulfill the majority of University general distribution requirements during these two years. The curriculum is designed to provide an intensive focus on architecture, while allowing each student to receive a broad education and to pursue other interests.

At the end of the first stage, students apply for the approval of their Major in Architecture by the School of Architecture. Approval is based on academic performance and demonstrated aptitude.

The second intermediate stage occurs in the third and fourth years. Students complete the courses required for the major of a BA in Architecture, remaining university requirements, and take electives through which each student can develop his or her particular interests in the field and in other areas. In their fourth year, students pursue a design research sequence through a seminar in the fall that is linked to the spring studio. At the end of this stage, and with the completion of all major and university requirements, students graduate, receiving the degree of a Bachelor of Arts in Architecture.

The third and final stage consists of the Bachelor of Architecture (BArch) degree (see below) and includes the year of Preceptorship. The BArch is only open to students who have completed the first four years at the Rice School of Architecture and who apply for admission into this stage of the program during their fourth year. As with the approval for Major two years prior, approval is based on academic performance and demonstrated aptitude.

In addition to these formal course requirements, students are expected to contribute to the intellectual culture of the RSA by attending public lectures and symposia and participating in the final reviews at the end of each semester where students across the school publicly present their work.

Required Courses for BA in Architecture:

1st Semester

- ARCH 101 *Principles of Architecture I–Order*
- ARCH 225 *History and Theory I–Introduction*

2nd Semester

- ARCH 102 *Principles of Architecture II–Representation*

3rd Semester

- ARCH 201 *Principles of Architecture III–Organization*
- ARCH 207 *Technology I–The Frame*

4th Semester

- ARCH 202 *Principles of Architecture IV–Effects*
- ARCH 345 *History and Theory II–pre 1890*
- ARCH 309 *Technology II–The Shell*

5th Semester

- ARCH 301 *Intermediate Problems in Architecture I–Situation*
- ARCH 346 *History and Theory III–1890-1968*
- ARCH 314 *Technology III–The Envelope*

6th Semester

- ARCH 302 *Intermediate Problems in Architecture II–Legibility*
- ARCH 352 *History and Theory IV–1968-Present*
- ARCH 316 *Technology IV–The Environment*

7th Semester

- ARCH 401 *Advanced Topics in Architecture–The Metropolis*
- ARCH 403 *Degree Project Seminar–Watkin Research Seminar*

8th Semester

- ARCH 402 *Advanced Topics in Architecture–Watkin Research Seminar*

Notes for the BA in Architecture:

1. All Courses above must be taken in the sequence and semester prescribed above.
2. Students must also fulfill all University Graduation Requirements.
3. Students who matriculated in 2010 or earlier must take one elective that satisfies content in the area of sustainability. A list of such classes is available from the School.
4. In accordance with the National Architectural Accrediting Board requirements and Rice graduation requirements, BA in Architecture majors should successfully complete at least 45 credit hours of course work outside the Major and the School of Architecture (that is, courses that are not listed as an ARCH courses and with non-architectural content). This course work can include courses specified by Rice University as fulfilling Distribution and other general graduation requirements (such as the First-Year Writing Intensive Seminars and Lifetime Physical Activity course requirements), except if such courses are also required for the BA in Architecture major or are listed as Architecture (ARCH) courses.

Total Credit Hours Required for a BA in Architecture: 130

Program Learning Outcomes for Bachelor of Architecture (BArch)

Students graduating from this program will:

1. Innovate the knowledge and practice of architecture through advanced critical thinking, experimentation and research.
2. Explore the practice of architecture though the Preceptorship Program, a year-long supervised internship in an architectural firm that subsequently informs advanced research and design.
3. Project innovative architectural practices and ideas through experimental research and design, synthesizing heterogeneous cultural and technical considerations into a coherent project.

Degree Requirements for Bachelor of Architecture (BArch)

The Bachelor of Architecture program is open to students who have completed the undergraduate preprofessional architecture program (BA in Architecture) at Rice. The BArch degree requires the successful completion of the BA in Architecture, completion of the two-semester preceptorship, and completion of two graduate option studios and approved lecture or seminar courses. 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. Students are assigned to work for a minimum of nine months in the United States or abroad with leading architectural offices designated by the school as Preceptors.

The academic year immediately following preceptorship, students must return for their final year of study to the School of Architecture, taking graduate level studios and courses. In this year, students may apply to Rice School of Architecture in Paris to complete a semester abroad. The autumn studios feature the Totalization studio, in which the student's experience from preceptorship is integrated into academic research through a comprehensive design project. At the end of this final two-year stage, students graduate with a Bachelor of Architecture (professional) degree.

Required Courses for Bachelor of Architecture (BArch):

Practice

- ARCH 500 *Preceptorship* (2 semesters of 15 credit hours each semester)
- ARCH 423/623 *Professionalism and Management in Architectural Practice* (Note 1)

Design

- ARCH 601 *Architectural Problems* (Note 2)
- ARCH 602 *Architectural Problems* (Note 2)
- Electives: 9 Credit Hours of electives at the 300 level or higher. (Note 1)

Notes for the BArch:

1. Students who completed ARCH 423/623 in their first four years of study must take 3 credit hours of electives in the final year of the BArch in its place (in addition to the normal 9 Credit hours of electives listed below, for a total of 12 credit hours of electives).
2. Students enroll in ARCH 620: Architectural Problems as their studio course if attending Rice School of Architecture in Paris.
3. All Courses above must be taken in the sequence and semester prescribed by the School of Architecture and completed with a grade of C or higher.
4. By accepting a place in the BArch and Preceptorship, each student agrees to all the terms specified by Rice and/or the assigned Preceptorship office, including: registration fees, start and end dates, work responsibilities, performance expectations, etc. Failure to meet these expectations will result in an unsatisfactory grade evaluation and may prevent further progress in the program. Students' concerns while on Preceptorship should be brought to the attention of the Director of External programs as soon as possible.
5. While on Preceptorship, a student remains a Rice student and is governed by applicable student codes of conduct, rights and responsibilities.
6. Students are expected to return for their final year of study in the fall semester immediately following the completion of the Preceptorship. Leaves of absence at any time during the BArch must be requested in writing to both the Director of External Programs and the Director of Undergraduate Studies at the School of Architecture, as well as requested to Rice University. Students who take a leave without permission will be considered to have withdrawn from the BArch program. Due to curricular intent and administrative necessity, the School of Architecture will approve a leave from the program only in truly extraordinary circumstances, such as serious health issues.

Total Credit Hours Required for a BArch: 62

Recent Preceptor Offices

BAR	**Pei, Cobb, Freed & Partners**

San Francisco

Bohlin Cywinski Jackson
San Francisco

Diller Scofidio & Renfro
New York

Ennead Architects
New York

Johnston Marklee
Los Angeles

Kieran Timberlake
Philadelphia

KPF
London

KPF
New York

Machado and Silvetti Associates
Boston

NADAAA
Boston

OMA
Hong Kong

New York

Pelli Clarke Pelli
New Haven

PLP
London

Renzo Piano Building Workshop
Genoa

Rogers Partners
New York

SHoP
New York

SOM
San Francisco

Thomas Phifer & Associates
New York

Weiss/Manfredi
New York

Zimmer Gunsul Frasca
Los Angeles

Program Learning Outcomes for BA in Architectural Studies

Students graduating from this program will:

1. Gain knowledge of the history and theory of architecture in relation to broader social, technological and cultural practices and transformations.
2. Understand the design process in architecture through a variety of scales and problems and with an appreciation of design's importance in the quality of our cities and environment.
3. Explore and develop specific interests concerning the discipline and/or its relationship to other fields and endeavors.

Degree Requirements for BA in Architectural Studies

The BA in Architectural Studies degree provides a foundation in architectural ideas and design while allowing a broader pursuit of other fields as an undergraduate. Enrollment is restricted to students admitted into the architecture program who have completed the first two years of required courses.

Required Courses for BA in Architectural Studies:

Design Studios (24 Credit Hours)

- ARCH 101 *Principles of Architecture I–Order*
- ARCH 102 *Principles of Architecture II–Representation*
- ARCH 201 *Principles of Architecture III–Organization*
- ARCH 202 *Principles of Architecture IV–Effect*

History and Theory (6 Credit Hours)

- ARCH 225 *History and Theory I–Introduction*
- ARCH 345 *History and Theory II–pre-1890*

Technology (6 Credit Hours)

- ARCH 207 *Technology I–The Frame*
- ARCH 309 *Technology II–The Shell*

Electives

- A total of 12 credit hours of additional ARCH courses.

Total Credit Hours Required for a BA in Architectural Studies: 120

Last Revised : August 03, 2015

Architecture

The School of Architecture

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for Master of Architecture (MArch)

Students graduating from this program will:

1. Develop or augment design and communication skills to formulate architectural projects that engage broader theoretical, social, political, economic, cultural, and environmental issues at a level commensurate with advanced study.
2. Develop or augment a comprehensive knowledge of the technical aspects of design and construction including an understanding of their impact on design and the environment at a level commensurate with advanced study.
3. Develop or augment the ability to synthesize heterogeneous cultural and technical considerations into a coherent project at a level commensurate with advanced study.
4. Develop or augment a comprehensive understanding of architectural practice and foster the development of innovative forms of practice at a level commensurate with advanced study.

Degree Requirements for Master of Architecture (MArch)

The Master of Architecture program understands architecture to be a generalist practice, while encouraging each student's freedom to forge a specific trajectory within this generalist milieu. We prepare students to engage an ever more ambiguous world—one that can no longer simply be flattened by such binaries as local and global, quantity and quality, mind and nature, form and function, or standards and exceptions. The challenge we pose to our students is to transgress the obsolescence of opposing values and to navigate the tricky waters of a world no longer organized around presupposed notions of solidity, permanence, rootedness, centrality, protection, and identity. Our program is the very place where visions of the future are tested and where students are asked to understand the world's complexity in order to focus on the tangible, the legible, and the relevant.

Individuals who possess a Bachelor's degree in any discipline can apply to the Master of Architecture program. Our curriculum offers a set of core courses (in Design, History and Theory, Technology, and Practice) and many free electives, both in the School of Architecture and across campus. In studio courses, strong emphasis is given to the very means by which architecture is able to change the world through program, form, and technology. Such fundamental aspects to design can, when mobilized, produce a practice of architecture that is as speculative as it is realist. Every fall, advanced "Totalization" studios are conducted in such a way as to have students rigorously weigh all aspects of building design while nonetheless biasing their engagement so as to produce highly specific architectural projects. In their final thesis semester, students are asked to face the world and engage it through architectural speculation and a precise understanding of historical, political, economic, and physical dimensions, which can together define a better future.

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

Programs of Study—There are two program options at the Master of Architecture level: Options 1 and 2. They differ according to the Bachelor's degree received prior to entering the graduate program.

Option 1

Offered to individuals who hold a four-year undergraduate degree with a major in a field other than Architecture or a

major in Architecture with fewer than five semesters of architectural design studio. 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 and one semester of college-level courses in mathematics or physics is recommended. Previous preparation in the visual arts is also desirable, as are courses in philosophy, literature, and economics. In order to graduate, students in this program must complete, in addition to 6 semesters of design studios, a curriculum of 46 credit hours with an additional free electives course load of 27 credit hours.

1st Semester

- ARCH 501 *Core Design Studio I*
- ARCH 525 *History and Theory I–Introduction*
- ARCH 507 *Technology I–The Frame*
- Elective

2nd Semester

- ARCH 502 *Core Design Studio II*
- ARCH 645 *History and Theory II–pre 1890*
- ARCH 509 *Technology II–The Shell*
- Elective

3rd Semester

- ARCH 503 *Core Design Studio III*
- ARCH 514 *Technology III–The Envelope*
- ARCH 646 *History and Theory III–1890-1968*
- Elective

4th Semester

- ARCH 504 *Core Design Studio IV*
- ARCH 652 *History and Theory IV–1968-Present*
- ARCH 516 *Technology IV–The Environment*
- Elective

5th Semester

- ARCH 601 *Architectural Problems I : Totalization*
- ARCH 623 *Professionalism and Management in Architecture*
- Elective
  Elective

6th Semester

- ARCH 602 *Architectural Problems II*
- ARCH 702 *Pre-Thesis Preparation*
- Elective
- Elective

7th Semester

- ARCH 703/706 *Design Thesis Studio/Written Thesis*
- Elective
- Elective

Option 2

Offered to individuals who hold a four-year undergraduate degree with a major in Architecture. Advanced placement into Option 2 is at the discretion of the admissions committee, but generally preference for admission is given to those who have successfully completed five semesters or more 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 and one semester of college-level courses in mathematics or physics is expected. In order to graduate, students in this program must complete, in addition to 4

semesters of design studios, a curriculum of 39 credit hours with an additional free electives course load of 15 hours.

1st Semester

- ARCH 503 *Core Design Studio III*
- ARCH 514 *Technology III–The Envelope*
- ARCH 646 *History and Theory III–1890-1968*
- Elective

2nd Semester

- ARCH 504 *Core Design Studio IV*
- ARCH 652 *History and Theory IV–1968-Present*
- ARCH 516 *Technology IV–The Environment*
- Elective

3rd Semester

- ARCH 601 *Architectural Problems I : Totalization*
- ARCH 623 *Professionalism and Management in Architecture*
- Elective
- Elective

4th Semester

- ARCH 602 *Architectural Problems II*
- ARCH 702 *Pre-Thesis Preparation*
- Elective
- Elective

5th Semester

- ARCH 703/706 *Design Thesis Studio/Written Thesis*
- Elective
- Elective

Notes for the MArch

All courses above (for both Option 1 and 2) must be taken in the sequence and semester prescribed by the School of Architecture and completed with GPA of 2.0 or higher.

MArch Thesis Requirement

Thesis is payback time—it is when students build upward and outward from what they've learned over the years, giving back to the school by providing new disciplinary fodder. More immediate than a crystal ball, some of the common threads underlying a Rice thesis might well reveal tomorrow's future. Despite working in the context of Texas's vast horizon, Rice thesis students do not envision an endless frontier. Rather than turning away from the discipline, our students have found new territories embedded within architectural and urban paradigms, breathing into them new life and vitality. All Master of Architecture candidates are required to propose an independent thesis, articulating an ambition and envisioning its architectural specificity. Students develop their individual thesis proposals during their penultimate semester in a required, pre-thesis seminar. Thesis design evolves from the honing of that proposal and continues through the final semester, under the guidance of an individual advisor. In early January, thesis projects are reviewed publicly by a panel of eminent invited guests. In short, the school starts each new year with a batch of new visions.

RSA Paris

MArch (Option 1 and Option 2) students may apply to RSAP to complete one semester in Paris: Option 1 students may do so in their fifth or sixth semester, Option 2 in their third or fourth semester. BArch students may apply to RSAP in their final year of study.

Program Learning Outcomes for MA in Architecture

Students graduating from this program will:

1. Integrate architecture and advanced research to address the most pressing and complex issues of design, environment and culture.
2. Develop research techniques and knowledge of advanced systems, techniques, and processes.
3. Expand the critical knowledge base in Architecture and Urban Design through advanced research and technique.
4. Innovate the knowledge and practice of architecture through advanced critical thinking and experimentation.

Degree Requirements for MA in Architecture

Present Future is a concentrated undertaking culminating in a Master of Arts in Architecture degree. The program is structured around a two-semester-long exploration of a topic led by a Rice School of Architecture faculty member. A select group of students forms the core: a collective intelligence responsible for developing a discourse that synthesizes theoretical, historical, and design ambitions. Subjects will be of contemporary importance and will be framed by a 3-credit pro-seminar the first term and a 12-credit collective thesis in the second term. In addition to free electives, each semester will include additional required credits that are appropriate to the selected topic, bringing the total credit hours to 30. The program's student body will include those with backgrounds in architecture as well as other fields: individuals with B.A., B.S. equivalent, or more advanced degrees in architecture or other disciplines are invited to apply. Coursework will include offerings from the School of Architecture and other departments across Rice University.

1st Semester

- ARCH 651 *Present Future Seminar*
- Elective
- Elective
- Elective

2nd Semester

- ARCH 602 *Architectural Problems II*
- Elective
- Elective

*Master of Architecture in Urban Design**

*Doctor of Architecture**

*The MArch in Urban Design and DArch programs are currently inactive and are not accepting applications.

Last Revised : August 03, 2015

Architecture

The School of Architecture

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Architecture.

Last Revised : August 03, 2015

Business

The Jesse H. Jones Graduate School of Business

Dean
William H. Glick

Deputy Dean
K. Ramesh

Sr. Associate Dean of Degree Programs
Barbara Ostdiek

Sr. Associate Dean of Executive Education
D. Brent Smith

Associate Dean of Degree Programs
George Andrews

Professors
Kerry Back
Alex Butler
Utpal Dholakia
Jeff Fleming
Jennifer M. George
G. Anthony Gorry
Gustavo Grullon
Thomas Hemmer
Robert E. Hoskisson
Ajay Kalra
Wagner Kamakura
Haiyang Li
Vikas Mittal
H. Albert Napier
Karen K. Nelson
Amit Pazgal
K. Ramesh
Shiva Sivaramakrishnan
Scott Sonenshein
Robert A. Westbrook
James Weston
Duane Windsor
Stephen A. Zeff
Yan "Anthea" Zhang
Jing Zhou

Assistant Professors
Hajo Adam
Brian Akins
Dinah Cohen-Vernik
Alan Crane
Kevin Crotty
David De Angelis
Eric Floyd
Patricia Naranjo
Otilia Obodaru
Anastasiya Zavyalova

Emeritus Professors
Bala G. Dharan
George Kanatas
Ronald N. Taylor
Wilfred Uecker
Edward E. Williams

Professor in the Practice of Management
William Arnold
Jack M. Gill
Vincent Kaminski
Benjamin Lansford

Associate Professor in the Practice of Management
David VanHorn

Senior Lecturers
Jill Foote
John Kimball Kehoe
Elizabeth O'Sullivan
Rick Schell
David Tobin

Full-Time Lecturers
Morgan Grace
Kim Kimmey

Visiting Professors
Arzu Ozoguz

Associate Professors

Randy Batsell
Sharad Borle
Erik Dane
Jefferson Duarte
Yael Hochberg
Prashant Kale
Balaji Koka
Barbara Ostdiek
Brian R. Rountree
Douglas A. Schuler
D. Brent Smith
Yuhang Xing
Constance Porter

Joint Appointments

Linda Driskill
Mikki Hebl
David Lane
Fred Oswald

Degrees Offered: MBA, MAcc, MA, PhD

The Jesse H. Jones Graduate School of Business (JGSB) was established in 1974 through a gift from Houston Endowment, Inc. The JGSB offers a minor in business (BUSI) for undergraduate students, a master's of business administration (MBA) program for graduate students seeking to further their professional careers in business, and a PhD program for graduate students seeking academic careers at research universities. Beginning Fall 2016, JGSB will be offering a one-year master of accounting (MAcc) program for students completing a non-business undergraduate degree.

Last Revised : August 03, 2015

Business

The Jesse H. Jones Graduate School of Business

Business Minor

The business minor consists of six integrated courses designed to provide a strong foundation in the essential disciplines of business and to develop students' critical thinking and communication skills. All courses in the minor are taught by JGSB faculty. Rick Schell (schell@rice.edu) is the program director and advisor.

Program Learning Outcomes for the Undergraduate Minor in Business

Students graduating from this program will:

1. Demonstrate an understanding of financial statements from the perspective of a user of this information.
2. Demonstrate an understanding of the major sociological and social psychological processes that underlie individual and group behavior in organizations.
3. Demonstrate an understanding of the basic concepts of corporate financial management and of the set of analytical tools used to evaluate corporate investment and financing decisions.
4. Demonstrate an understanding of the basic concepts of strategic management and the frameworks necessary to execute competitive and industry analysis and strategy formulation and implementation.
5. Demonstrate a basic understanding of the role of marketing in organizations and the principal marketing decisions facing management.
6. Demonstrate effective written and verbal business communication skills.

Course Requirements for Completing the Business Minor

REQUIRED COURSES

- BUSI 296 *Business Communications*
- BUSI 305 *Financial Accounting*
- BUSI 310 *Leading People in Organizations*
- BUSI 343 *Financial Management*
- BUSI 380 *Marketing*
- BUSI 390 *Strategic Management*

Students may receive transfer credit for at most two of the six courses necessary to complete the minor. Students must earn a grade point average of at least 2.0 in the BUSI courses taken at Rice.

Admission

BUSI courses are open to any undergraduate student who meets enrollment requirements, not just to students who have declared an intention to complete the minor, and to graduate students on a space-available basis, with instructor approval. MBA-level courses (MGMT, MGMP, and MGMW) are not open to undergraduate students.

Prerequisites

Enrollment in several BUSI courses requires completion of instruction in microeconomics and statistics. The statistics requirement can be fulfilled by completing STAT 280 or an approved alternative as listed on the Jones School website. The economics requirement can be fulfilled by completing ECON 100 OR ECON 201 OR ECON 301 ***at Rice***. The program director will not approve requests to waive the prerequisites for BUSI 343 or BUSI 390.

See the course descriptions for details on prerequisites.

Enrollment Lottery

If a given BUSI course is oversubscribed, the JGSB will conduct a weighted lottery to determine which students will be admitted to the course. The lottery will give greater preference to students who have successfully completed a greater number of BUSI courses and who are closer to graduation.

Declaration of the Business Minor

To declare the BUSI minor, students must bring a completed declaration form and unofficial transcript to the program director for review and signature. The form is available on ESTHER.

Last Revised : August 05, 2015

Business

The Jesse H. Jones Graduate School of Business

Degree Requirements for MBA, MAcc, MA, and PhD in Business

MBA Programs

The MBA degree can be obtained via the Full-Time MBA program, the MBA for Professionals program, or the MBA for Executives program. The Executive and Professional MBA programs are designed for executives and working professionals who do not wish to interrupt their careers while they pursue the MBA degree. The MBA for Professionals program has three formats: an evening format, an alternating weekend format, and an extended evening format.

A coordinated MBA/master of engineering program is offered by the JGSB and the George R. Brown School of Engineering, in any of the departments of engineering. This program prepares students to become managers in organizations requiring a high level of technical expertise and management skills. Students must apply separately and be accepted by both the business school and by the appropriate engineering department.

A coordinated MBA/master of science program is offered by the JGSB and the Weiss School of Natural Sciences Professional Science Master's (PSM) Program. This program prepares students to become managers in organizations requiring specialized technical knowledge and general management skills. Students must apply separately and be accepted by both the business school and by the appropriate PSM program.

An MBA/MD dual degree program is offered by the JGSB and Baylor College of Medicine. This program 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 health care firms, and pharmaceutical and medical supply and equipment companies.

Learning Outcomes for the MBA Programs

Students graduating from these programs will:

1. Demonstrate an understanding and application of the foundational frameworks and tools of all business disciplines, including accounting, finance, marketing, organizational behavior and strategic management.
2. Develop, evaluate and implement complex business strategies and operational solutions holistically, integrating management principles across the functional areas.
3. Understand the global economic, social, institutional and ethical context within which business operates.
4. Demonstrate strong critical decision-making skills and business judgment based on robust quantitative and qualitative analysis and an understanding of human behavior.
5. Function effectively in a team setting both as a leader and a contributor and have internalized the framework to support continued development as a leader, decision maker, and communicator.

MBA Admission Requirements

Applicants to the MBA programs must submit scores on the Graduate Management Admission Test (GMAT) or the Graduate Record Examination (GRE). International applicants, who did not earn an undergraduate degree from an institution where the primary language of instruction was English must submit a valid score report from either TOEFL, PTE, or IELTS. Admission to the MBA programs 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 or GRE.

The MBA and MBA for Professionals Programs—The MBA and MBA for Professionals programs do not have specific prerequisite courses required for admission.

MBA for Executives Program—In addition to meeting the standards for admission to the other MBA programs, students admitted to the MBA for Executives program typically have at least 10 years of relevant work experience.

MBA/Master of Engineering Program—To enter this coordinated degree program, applicants must be accepted by both the JGSB and the engineering department in which they wish to pursue graduate study. The program requires the JGSB application, two letters of recommendation and the GMAT or GRE. Some engineering departments require advanced tests as well.

MBA/Master of Science (Natural Sciences—Professional Science Master's Program)—To enter this coordinated degree program, applicants must be accepted by both the JGSB and one of the following Weiss School of Natural Sciences Professional Science Master's (PSM) programs: Environmental Analysis and Decision Making, Nanoscale Physics, Space Studies or, Subsurface Geoscience. The program requires the JGSB application, two letters of recommendation and the GMAT or GRE.

MBA/MD Program—To enter this dual degree program, applicants must first be accepted by Baylor College of Medicine and apply separately to the JGSB. The MCAT is accepted rather than the GMAT or GRE, but the GMAT or GRE is required for scholarship consideration. Two years of medical school are required before starting MBA classes.

Degree Requirements for the Full-Time MBA Program

The Full-Time MBA Program requires the completion of 60 credits of course work over a two-year period. Students must register for 15 credits of course work in all four semesters of residence and are not allowed to take more than 18 credits in any semester. The first year of the program is primarily dedicated to core courses in the basic functional areas of business. Students have the option of taking two elective courses during the spring semester of the first year. During the second semester of the first year, students participate in a team-based Action Learning Project (ALP) in which they work at a company to solve a specific business problem. This project is the first-year capstone learning activity; it allows students to apply and integrate management principles learned throughout the first year of the program in a practical setting. The second year of the program is dedicated to elective course work.

All registration and elective selection via add/drop is completed online through ESTHER, and it is the responsibility of the student to monitor and maintain his or her schedule and academic record.

Waivers and Transfers of Credit—At its sole discretion, the school may allow students to transfer up to a maximum of six credits. This does not necessarily reduce the residence requirement, 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.

Areas of Interest— Students have the option of selecting up to two functional or professional concentration options. Concentrations typically consist of nine to 12 credit hours of course work. If a student completes two concentrations, a maximum of three credits can be shared between the two concentrations. Similarly, a custom core course can be counted toward the completion of a concentration only if the student has taken two other custom core courses which can be counted toward the custom core requirement. Specific concentration requirements for the academic year are available on Campus Groups. Concentrations include:

- accounting
- energy
- entrepreneurship
- finance
- health care
- marketing
- mastering creativity and innovation
- operations management
- real estate
- strategic management

Specific course requirements are available through the Jones Graduate School of Business Office of Student Services.

Degree Requirements for the MBA for Professionals Program

The Jones Graduate School of Business offers the MBA for Professionals program in three formats. These programs cover the same content, but are offered at different times and over different periods. Students choose a program based on life-style preference and professional and personal commitments.

The **MBA for Professionals Evening Program** consists of a 22-month, lock-step curriculum delivered in four consecutive semesters over a two-year period. Required first year classes are offered during the week from 6:15pm to 9:30pm predominantly on Monday and Wednesday evenings. For electives, additional course offerings are available Monday through Thursday evenings. Students in this program take required courses in sequence and must complete a total of 54 credit hours to fulfill graduation requirements.

The **MBA for Professionals Weekend Program** consists of a 22-month, lock-step curriculum delivered in four consecutive semesters over a two-year period. Classes are offered predominately on Friday evenings from 4:00pm – 9:30pm and Saturdays from 7:30am – 6:30pm every other weekend. Students in this program take required courses in sequence and must complete a total of 54 credit hours to fulfill graduation requirements.

The **MBA for Professionals-Evening Extended Program** allows students to complete the same curricular requirements as the other programs (a minimum of 54 credit hours) over a longer period of time (typically 3-5 academic years). There are minimum requirements each semester, but the structure facilitates the alignment of the pace of completion with professional preferences and commitments.

Students will consult with various Jones Graduate School of Business faculty and staff for advice on course selection and degree planning, regardless under which program they matriculate.

Degree Requirements for the MBA for Executives Program

The MBA for Executives program requires the completion of 54 credits of course work over a two-year period. The program is a lock-step progression in which students take required courses in sequence; students must take at least nine credits of elective courses in the second year in order to fulfill their graduation requirements. The program includes four 5-day intensive executive forums that focus on leadership, strategy, critical decision-making and global management.

Degree Requirements for the MBA/Master of Engineering Program

Students may earn this non-thesis 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 engineering degree takes one academic year to complete, whereas the MBA requires two. Coordinated degree candidates, however, can fulfill requirements for both degrees in two academic years.

For the coordinated MBA/master of engineering degree, students must complete:

- At least two academic years in residence at Rice
- 69 semester hours in approved course work:
  — 24 hours in an engineering discipline
  — 45 hours in business
- At least 6 hours of the 45 hours in business must also meet the requirements towards the master of engineering degree and will be counted towards both degrees.

Students plan their course schedules in consultation with the engineering department in which they are enrolled and with the JGSB Office of Student Services.

Degree Requirements for the MBA/Master of Science PSM Program

Students may earn a master of science degree from the Weiss School of Natural Science Professional Science Master's program in the following fields: (1) Environmental Analysis and Decision Making, (2) Nanoscale Physics, (3) Space Studies, and (4) Subsurface Geoscience. Ordinarily, the PSM degree takes two academic years to complete, and the MBA requires two years to complete as well. Coordinated degree candidates, however, can fulfill requirements for both degrees within three academic years.

For the coordinated MBA/master of science degree from the professional master's program, students must fulfill the following requirements:

- 75 credit hours of course work including at least 30 credits in a science discipline and 45 credits of business course work
- Satisfy all MBA core curriculum requirements

- Satisfy all PSM track-specific requirements
- Complete a summer internship

Students plan their course schedules in consultation with the PSM program director and with the JGSB Office of Student Services.

Degree Requirements for the MBA/MD Dual Degree Program

Students can earn both MBA and MD degrees in five years. They divide their time as follows:

- ***Years 1 and 2***—medical training at Baylor College of Medicine
- ***Year 3***—First-year MBA core courses at Rice, plus a three-credit health care management course in the spring semester. MBA/MD dual degree students are required to fulfill only one custom core class requirement.
- ***Year 4***—Second-year MBA elective courses, including a three-credit health care management course at Rice in the fall semester, and medical training at Baylor College of Medicine in the spring semester.

Students use the summer between the third and fourth years to perform health care research programs or externships. Students receive their MBA degree from Rice after they have completed 45 hours of approved business course work and 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 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 JGSB) 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 JGSB. 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. If permitted to return, the student will pay the current rate of tuition, based upon the class of students s/he is joining.

Only grades of C and above are counted for credit toward graduation. If students receive a grade below a C in a course required for graduation, they must repeat the course. If students receive a grade below a C in an elective course, they need not repeat the specific course, but they must make up the credits. If the required course is not offered again prior to graduation, the student will be permitted to take the course the following academic year, but will be charged the current pro-rated rate for the program in which the additional course work is completed.

Students may retake a failed course only once and then only if their cumulative grade point average is 3.00 or higher or if 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 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 coordinated MBA/master of engineering degrees or the coordinated MBA/MD dual 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. Course work completed outside of a semester when full tuition is paid will instead be billed at the current pro-rated rate for the program in which the additional course work is completed.

JGSB students may not take courses pass/fail to count toward their degree requirements. JGSB students may audit courses with professor approval. The courses will not count toward the MBA, but will appear on the transcript.

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 specific charges. (This probationary notice, however, is not required as a precondition for filing specific charges.)

Guidelines for Appealing Academic Dismissal

T**he 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 chair of the Academic Standards Committee. These 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?

Students may include any additional information they deem relevant in the appeal letter.

Timing—The student must inform the senior associate dean of degree programs (by email or written note) immediately of the intention to appeal. The appeal letter to the committee must be filed within one week after receiving a dismissal letter. If a student plans to appeal, he/she should attend classes in the semester 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 Office of Student Services.

Appeals—Appeals beyond the Academic Standards Committee must go to the dean of the JGSB, who may seek guidance from other constituents of the school. All decisions rendered by the dean are final.

C**onfidentiality**—The Family Educational Rights and Privacy Act of 1974 and amendments govern the records of actions related to appeals.

Grade Appeal Process

Once a course grade has been assigned by an instructor, it is generally considered final and is rarely changed for any reason other than calculation or transcription errors. The procedure below outlines the process by which a student may appeal a course grade.

1. The student should first pursue any grading question with the instructor following the formal or informal process the instructor 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 instructor and send a copy to the senior associate dean of degree programs. This written appeal must be filed no later than two weeks after the final grade for a course was assigned.
3. The instructor 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 instructor to the senior associate dean of degree programs.
4. If step 3 does not resolve the issue to the satisfaction of both parties, the student may appeal to the Academic Standards Committee by sending a written notice describing the grounds for the appeal within two weeks of the date of the scheduled meeting in step 3.
5. The Academic Standards Committee will seek out information on the appeal from the instructor and the student and, at its discretion, hold a hearing to further consider the matter. The decision of the Academic Standards Committee will be rendered within six weeks of receiving a written notice of appeal (step 4).
6. Appeals beyond the Academic Standards Committee must go to the dean of the JGSB, who may seek guidance from other constituents of the school. All decisions rendered by the dean 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.

MBA Elective Course Add/Drop Policy and Procedures

Due to the unique term schedule followed by the JGSB's MBA programs, MBA students have special procedures they must follow to make schedule changes. The JGSB associate registrar administers an add/drop policy which

allows students to add/drop elective courses at various times throughout the semester. For all elective courses, student may not add/drop a course after the deadline for the appropriate term.

MBA Course Registration Policy for non-JGSB Rice University Students

Graduate students from outside the JGSB may register for elective courses in the full-time MBA program and the MBA for Professionals program. To be eligible for a specific course, a student must be in good academic standing (3.0 GPA or above), have permission from the student's department advisor, and have satisfied the specified course prerequisites. In order to register for the course, the student should verify eligibility with the JGSB associate registrar and then request approval from the course instructor. Non-JGSB students may not register for elective courses in the MBA for Executives program or core (required) courses in any of the school's MBA programs. Rice undergraduate students are not allowed to register for any MBA-level courses (MGMT, MGMP, or MGMW) offered at the JGSB.

Independent Study

Minimum Hours Requirement—Each credit of independent study should contain approximately as much time content as a one-credit course at JGSB, 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. Independent study projects can be accommodated in increments of 1.0, 1.5, 2.0, or 3.0 credit hours; 3.0 credit independent study projects will rarely be approved. 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 must be determined at the beginning of a project. Increases to the number of project credit hours after the project overview has been filed with the JGSB associate registrar 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 term in which the project begins, except when a student is in their last semester; in this case, such requests must be made before the end of the second week of the semester.

Restrictions—No student may take more than three credit hours of independent study during the course of the MBA program without the approval of the Academic Standards Committee. If an independent study is proposed that would cause a student to exceed the 3.0 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 content to review and approve the study. Independent study exceeding 3.0 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 JGSB 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 work.

Faculty Sponsorship—Independent study projects normally are sponsored only by full-time JGSB faculty; faculty typically sponsor projects only in their area of expertise. Students wanting 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 term 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 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, the JGSB 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 JGSB associate registrar 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 two to three weeks.
3. Prepare a final paper (in the case of directed reading and research projects) or complete a concrete deliverable (for example, 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 JGSB associate registrar.

Applications—Independent study applications are available for interested students on Campus Groups. Completed independent study applications must be approved by the senior associate dean of academic affairs. Completed and approved applications are due to the JGSB associate registrar by the first week of the term in which the project will be completed. The student will be registered for MGMT 700/800 independent study for the appropriate credit amount, only when the appropriate permissions have been obtained.

Class Attendance Policy

Students are expected to be in class on the first day of each term. The instructor reserves the right to exclude a student from their course who is absent on the first day. Students should refer to the specific attendance policy for each program. This information can be found in the JGSB Informational Guide, which is referenced below. For special circumstances, students should see the instructor and/or the Office of Student Services or EMBA program Office immediately.

Withdrawal Policy

A JGSB student may voluntarily withdraw from school at any time. Upon withdrawal, Rice University applies a sliding scale to tuition and fees, which can be found on the Rice Office of the Registrar website.

JGSB Informational Guide

Generally, the JGSB adheres to the academic regulations of Rice University. However, the JGSB's MBA program has unique policies and procedures that vary from the Office of Graduate and Postdoctoral Studies regarding, but not limited to, leave of absence, withdrawals and readmission, add/drop, academic discipline, dismissal, procedures for resolution of problems, and appeal of academic regulations. A copy of the guide is available on Campus Groups.

Financial Aid

JGSB scholarships are awarded at the point of admission and are based on the merit of the application. Financial assistance is generally awarded one academic year at a time. Continuation of assistance depends on Satisfactory Academic Progress (SAP) in accordance with Academic and Professional Standards of performance, professional behavior, and is subject to the availability of funds. Academic or disciplinary probation, suspension, or general failure to maintain academic pace will result in the removal of all forms of financial assistance (i.e. scholarship, employment, Federal/State student loans, etc.). Students have the right to appeal the suspension. All appeals will be reviewed by a committee.

Master of Accounting (MAcc)

The master of accounting (MAcc) program, offered by the Jones Graduate School of Business, is designed to enable students with a top-tier non-accounting undergraduate education to complete the educational requirements for becoming a certified public accountant. Certified public accountants conduct independent audits and provide accounting, tax, and consulting services. The program prepares students to enter careers in public accounting, corporate accounting, management accounting, governmental accounting, financial analysis, and law enforcement. Graduates of the program will excel in analytics, critical thinking, ethics, judgment, and communications, built on outstanding technical accounting skills. An understanding of global capital markets and macroeconomic forces will complement graduates' accounting expertise, along with proficiency in corporate finance, risk and valuation.

Program Learning Outcomes for MAcc

Students graduating from this program will:

1. Demonstrate technical proficiency in the major aspects of public accounting.
2. Demonstrate financial valuation expertise.
3. Demonstrate strong written and verbal business communication skills.
4. Demonstrate a sound knowledge of public policy and corporate governance.
5. Demonstrate a critical and analytical approach to problem solving.

MAcc Admission Requirements

For general university requirements, see Graduate Degrees. Criteria for evaluating applicants include: completion of (or plans for completion of) required undergraduate prerequisite courses, academic and professional accomplishments, and, possibly, GMAT scores, interviews, or examinations. Students who meet the admissions requirements are expected to complete the graduate program in one full year.

Rice undergraduates: Students who are on track to fulfill the requirements of the Rice business minor prior to completing their undergraduate degree are eligible for admission to the program. Non-business minors are also eligible for admission if specific prerequisite courses will be completed before undergraduate graduation; the MAcc program director will consult prospective applicants to determine what prerequisite classes are needed. All MAcc applicants, regardless of being a business minor, need to have completed the first financial accounting course (BUSI 305), the intermediate financial accounting course (BUSI 405), and the auditing course (BUSI 440) prior to beginning the MAcc program. Students potentially interested in the MAcc program are encouraged to take BUSI 305 in the spring of their freshman year. Rice undergraduates can apply and gain conditional admission to the MAcc program as early as the fall semester of their junior year and as late as the fall semester of their senior year. Conditionally admitted students who lack any of the prerequisite accounting courses must take appropriate classes to correct their deficiency.

Non-Rice undergraduates: Students should apply in the fall semester of their senior year. Admitted students who lack the prerequisite accounting course work must take summer pre-term classes.

*The MAcc program will launch in the Fall 2016 semester.

Degree Requirements for the MAcc

The MAcc program requires the completion of at least 36 credit hours of course work over one academic year. This course work is comprised of both accounting and other business classes.

PhD in Business

The Jones Graduate School of Business PhD program is designed for candidates with outstanding intellectual abilities and a strong commitment to research. The goal of the PhD program is to train students for academic careers focused on cutting-edge, rigorous research and teaching in a business school environment. Applicants to the PhD program must hold a four-year bachelor's degree from an accredited institution. A masters degree and work experience are not required for PhD admission.* The JGSB does not have an MA program, although during the course of the PhD program a masters degree (MA) will be awarded after students have achieved doctoral candidacy and are in the process of completing the doctorate.

Learning Outcomes for PhD in Business

Students graduating from this program will:

1. Summarize major themes and current research problems in their area of specialization.
2. Explain and identify open problems and areas needing development in their discipline.
3. Execute and present original research in their discipline.
4. Effectively communicate, orally and in writing, their research and the major tenets of their discipline.

Degree Requirements for PhD in Business—For general university requirements, see Graduate Degrees. For program details, see the PhD Program Guide distributed by the JGSB. Admissions applications should include scores on the Graduate Management Admissions Test (GMAT) or the Graduate Record Examination (GRE). Full financial support will be provided to admitted doctoral students. Candidates for the PhD degree spend at least two years in full-time course work and at least two years writing the dissertation. Four to five years is a reasonable goal for completing the program. For the PhD, students must:

- Complete a program of doctoral-level courses that is approved by the area faculty advisor. Students take courses from departments such as economics, psychology, statistics, and political science in addition to courses from JGSB.
- Complete and defend orally a doctoral dissertation, setting forth in publishable form, the results of original research.

** While advanced degrees (e.g. masters) and prior work experience are taken into account in admission decisions, evidence of strong intellectual ability is of utmost importance.*

Last Revised : August 07, 2015

Business

The Jesse H. Jones Graduate School of Business

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Business.

Last Revised : August 03, 2015

Liberal Studies

The Susanne M. Glasscock School of Continuing Studies

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Dean
Mary B. McIntire

Director
John W. Freeman

Degree Offered: MLS

The part-time Master of Liberal Studies (MLS) is an interdisciplinary program that provides adults in the Houston area a unique opportunity to challenge themselves intellectually. Designed for those who love to learn new ideas and discuss them with others, the MLS program allows students to explore timeless and timely human questions within the humanities, social sciences, and natural sciences. Though exploring the liberal arts at a highly integrated level is not always possible in a career-focused undergraduate curriculum, it is both possible and well suited to a master's level program. Courses in the MLS program are taught by distinguished Rice faculty and invited visiting faculty who appreciate the opportunity to teach 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 one or two 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 late March; spring courses begin in April and end in early June. No classes are held in July or August.

Please refer to the MLS website for program information and academic policies.

Last Revised : August 03, 2015

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Liberal Studies

The Susanne M. Glasscock School of Continuing Studies

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Program Learning Outcomes for MLS in Liberal Studies

Students graduating from this program will:

1. Appreciate major perspectives and methods of the liberal arts by demonstrating a broadened understanding of some basic concepts in the humanities, social sciences, and sciences.
2. Appreciate the connection of the liberal arts to their lives and the larger world.
3. Demonstrate a capacity for analytical thinking.
4. Demonstrate good writing skills.
5. Practice critical listening and good discussion and oral communication skills.
6. Demonstrate academic research methods.

Degree Requirements for MLS in Liberal Studies

For general university requirements for graduate study, see Graduate Degrees. The MLS 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” (natural sciences, social sciences, 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 MLS faculty and students. 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. Students are allowed to take up to seven years to complete the degree.

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.

Last Revised : August 03, 2015

Liberal Studies

The Susanne M. Glasscock School of Continuing Studies

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Course Listings

For the most current course offerings, please click here: Liberal Studies.

Last Revised : August 11, 2014

Teacher Education

The Susanne M. Glasscock School of Continuing Studies

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Associate Dean
Jennifer Gigliotti

Director
Judy Radigan

Professor
Linda M. McNeil

Lecturers
Margie Crawford
Shelah Crear
Scott Hochberg
Shanicca Joshua
Lawrence Kohn
Robert Lundin
Judy Radigan
Angela Rabuck
Thomas Schanding
Sheila Whitford

Adjunct Professor
Roland B. Smith, Jr.

Teacher Education courses are open to Rice students studying for careers in teaching and to Rice students interested in studying the complexities of the educational system and its role in society. Ideas and issues central to courses in education include education and democracy, global education, the organization of knowledge, and the nature of learning. Education, learning, and teaching are considered broadly, but the particular focus is on inquiry learning for diverse student populations.

Degrees Offered: MAT

The teacher education program engages, prepares, and supports its teacher leaders for student-centered classrooms in a diverse society. The program emphasizes the value of equity in education and the political and educational policies that should undergird that equity. Students acquire a strong foundation in assessment, classroom culture, instructional strategies, literacy across the curriculum and human developmental processes. All teachers will use culturally relevant content and pedagogy in working with English language and diverse learners as this program acknowledges the changing face of Houston and the nation.

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) that can be completed concurrently with a Rice bachelor's degree with generally one additional year of study, and
(3) a Master of Arts in Teaching (MAT) for experienced or new teachers.

The Rice teacher education program balances academic integrity with Texas Education Agency compliance. Students seeking additional information about the teacher education program are encouraged to meet with an advisor in Teacher Education.

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, history, Latin, life sciences, mathematics, physical sciences,

physics/mathematics, science, social studies, and Spanish.

After satisfactory completion of the Rice teacher education program, which includes the state-mandated examinations for teachers, students are recommended for a Texas teaching credential. The Texas Education Agency then awards a Texas Standard Teaching Certificate (Grades 7–12).

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 that enrolls students receiving federal assistance under this act to report annually “to the State and the general public” certain information. This information includes the pass rate of their 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 their 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 2013-14 was 100%, compared with 94% for the overall state pass rate. Eighteen students were enrolled in the program in 2013–14. Student teachers spent an average of 40 hours per week in supervised student teaching with a student/faculty ratio of 1.27-to-1. Rice teacher education program graduates are regularly recruited by school districts in Houston and the surrounding areas because of their innovative ideas, content knowledge, expertise, leadership abilities, and dedication to the teaching profession.

Last Revised : August 14, 2015

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Teacher Education

The Susanne M. Glasscock School of Continuing Studies

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Requirements for Secondary Teaching Certificate

Admission—Students may apply to the Rice University Teacher Education program for admission if they show:

- Attainment of sophomore standing at Rice University.
- Grades of C- or better in all semester hours for the teaching field and a grade point average of 2.5 or better, both in courses for the teaching field and overall.
- Evidence of adequate physical vigor and speech to perform as a teacher in a classroom.

A completed plan of study approved by a department advisor and the major field advisor 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 to count for certification.
- Complete the content courses specified by the certification field advisor(s). Lists of courses for each subject are available online and in the Teacher Education office.
- Meet with an Education advisor to develop a course of study for the 30 required hours.
- Begin two-semester work in assigned school with a first semester curriculum development course and a second semester full-day practicum with a cooperating teacher (EDUC 421, EDUC 467).
- Complete three hours in the appropriate seminar(s) in teaching (EDUC 460-466);
- Complete 60 hours of field-based experience in local secondary schools, in conjunction with satisfactory results on background check with participating school districts.
- Complete all university and major requirements for a bachelor's degree.
- Make grades of C- or better in all teaching fields and education courses.
- Pass appropriate TExES exams.
- Apply for Texas State certification when all requirements are completed.

Last Revised : August 14, 2015

Teacher Education

The Susanne M. Glasscock School of Continuing Studies

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Program Learning Outcomes for Master of Arts in Teaching (MAT)

Students graduating from this program will:

1. Create environments where students discover and construct meaning from content (using their unique perceptions, thoughts and feelings).
2. Implement teaching strategies for diverse learners.
3. Assess students' progress and content mastery to guide instruction.
4. Deliver instruction that incorporates digital learning and education technologies.
5. Demonstrate instructional leadership.
6. Contribute to a professional learning community.

Requirements for Master of Arts in Teaching (MAT)

Admission—Applicants must have a bachelor's degree, scholarly ability, and a commitment to teaching, and they must have taken the Graduate Record Examination (GRE) within 5 years. Specific requirements include:

- Completion of a bachelor's degree before admission to the program.
- Completion of 24 credit hours in a specified content area is required.
- Grades of B- or better in all semester hours attempted in the teaching field(s) and a grade point average of 3.0 or better, both in courses for the teaching field(s) and overall.
- Evidence of adequate physical vigor and speech to perform as a teacher in a classroom.

Education team members review each application. Limited tuition assistance is available. See Admission to Graduate Study. Admitted students must pass or be exempted from the Texas Higher Education Assessment (THEA) exam prior to enrolling in any education courses.

Degree Requirements—For general university requirements, see Graduate Degrees. The MAT is a nonthesis degree program for students who want to qualify for secondary school teaching following a bachelor's degree. 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 7–12. To earn the MAT degree, students must complete, with grades of B- or higher, at least 36 semester hours (the need to remove deficiencies may require additional courses for certification) at the graduate level.

- Begin two-semester work in assigned school with a first semester curriculum development course and a second semester full-day practicum with a cooperating teacher (EDUC 521, EDUC 567).
- Complete a two-semester supervised teaching internship by acquiring and fulfilling all professional responsibilities of a teaching position in a local accredited secondary school and completing a seminar course (EDUC 540).
- Complete 60 hours of field-based experience in local secondary schools, in conjunction with satisfactory results on background check with participating school districts.
- Make grades of B- or better in all teaching field and education courses.
- Pass appropriate TExES exams.
- Apply for Texas State certification when all requirements are completed.

The cooperating school districts pay a regular salary for internship teaching.

Requirements for Master of Arts in Teaching (MAT) completed concurrently with a Rice bachelor's degree with one additional year of study

Rice undergraduate students can pursue both their undergraduate and graduate degrees concurrently, completing the MAT with generally one additional year of study beyond the bachelor's degree. Students seeking additional information about the 5-year MAT program are encouraged to meet with an advisor in Teacher Education.

Last Revised : August 03, 2015

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Teacher Education

The Susanne M. Glasscock School of Continuing Studies

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Course Listings

For the most current course offerings, please click here: Education Certification.

Last Revised : August 03, 2015

Bioengineering

The George R. Brown School of Engineering

Chair
Michael Deem

Professors
Gang Bao
Rebekah Drezek
Jane Grande-Allen
Herbert Levine
Jianpeng Ma
Antonios Mikos
Rebecca Richards-Kortum
Ka-Yiu San

Associate Professors
Michael Diehl
Oleg Igoshin
Jeffrey Jacot
Robert Raphael
Junghae Suh
Tomasz Tkaczyk

Assistant Professors
Jordan Miller
Amina Qutub
Jeffrey Tabor
David W. Zhang

Professors in the Practice of Bioengineering
Z. Maria Oden
Ann Saterbak

Lecturers
Bilal Ghosn
Renata Ramos

Professors, Joint Appointments
John Clark
Cindy Farach-Carson
Fathi Ghorbel
Ramon Gonzalez
Naomi Halas

Associate Professors, Joint Appointments
Ching-Hwa Kiang
Jonathan Silberg

Assistant Professors, Joint Appointments
Matthew Bennett
Caleb Kemere
Angel A. Martí
Deepak Nagrath
Jacob Robinson
Laura Segatori
Aryeh Warmflash

Adjunct Professors
Maria Elena Bottazzi
William Brownell
Ill-Min Chung
Mary Dickinson
Rena D'Souza
Mauro Ferrari
Charles Fraser
Ann M. Gillenwater
Peter J. Hotez
Ragha Kalluri
King Li
Anirbam Maitra
John McDevitt
David R. Piwnica-Worms
Eric Richardson
Robert C. Robinson
Rodigo Ruano
Peter Saggau
Jacqueline Shanks
Karen Storthz
Stephen Wong
Samuel Miao-Sin Wu

Adjunct Associate Professors
Catherine Ambrose
Sharmila Anandasabapathy
Elizabeth Cosgriff-Hernandez
Miguel Cruz

Jeffrey Hartgerink
Lydia Kavaraki
Marek Kimmel
Marie Lynn Miranda
Frank Tittel
Mark Wong
Kyriacos Zygourakis

M. Waleed Gaber
Andrew Sikora
Konstantin Sokolov

Adjunct Assistant Professors
Aviva Presser Aiden
Aaron Foster
Michael J. Heffernan
Kurt Kasper
Stephen H. Little
Medhi Razavi

Degrees Offered: BSBE, MBE, MS, PhD

Graduate programs in bioengineering offer concentrations in areas such as biomedical imaging and diagnostics, cellular and biomolecular engineering, computational and theoretical bioengineering, biomaterials and drug delivery and biomaterials, systems and synthetic biology, and tissue engineering 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.

Last Revised : August 03, 2015

Bioengineering

The George R. Brown School of Engineering

Program Learning Outcomes for BS in Bioengineering

Graduates awarded the BS in Bioengineering will be able to demonstrate:

1. An ability to apply knowledge of mathematics, science, and engineering.
2. An ability to design and conduct experiments, as well as to analyze and interpret data.
3. An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
4. An ability to function on multidisciplinary teams.
5. An ability to identify, formulate, and solve engineering problems.
6. An understanding of professional and ethical responsibility.
7. An ability to communicate effectively.
8. The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
9. A recognition of the need for and the ability to engage in life-long learning.
10. A knowledge of contemporary issues.
11. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

The overall goal of the BS degree in Bioengineering (BSBE) is to prepare graduates to succeed in professional careers by equipping them with the conceptual and technical expertise sought after by top graduate and medical schools, as well as by companies seeking technical skills in bioengineering. Recognizing that graduates may embark on a number of different educational and career paths, the Program Educational Objectives (PEO) that graduates are expected to exhibit or achieve with the BSBE from Rice University are:

1. Graduates demonstrate technical and/or professional skills, which may include engineering problem-solving, scientific inquiry, and/or engineering design, to solve challenging problems in bioengineering and related fields.

2. Graduates are accomplished at communicating and working collaboratively in diverse work environments.

3. Graduates seeking further education at graduate, professional or medical school find appropriate levels of success in admission to and progression through these programs. Graduates entering professional careers find appropriate career progression and success.

The BSBE degree is organized around a core of required courses and a selection of three technical elective courses. 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. The curriculum for a BS degree in bioengineering requires 94 credit hours, which count toward the total of 134 hours required to graduate. The program leading to the BSBE is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.

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, BIOC 201 and ELEC 243. BIOE 252 should be taken in the 1st semester of the

sophomore year. BIOE 391, 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 *Fundamentals of Systems Physiology*
- BIOE 330 *Bioreaction Engineering*
- BIOE 332 *Bioengineering Thermodynamics*
- BIOE 342/BIOC 320 *Tissue Culture Laboratory*
- BIOE 370 *Biomaterials*
- BIOE 372 *Biomechanics*
- BIOE 383 *Biomedical Engineering Instrumentation*
- BIOE 385 *Biomedical Instrumentation Laboratory*
- BIOE 391 *Numerical Methods*
- BIOE 420/CHBE 420 *Biosystems Transport and Reaction Processes*
- BIOE 440/STAT 440 *Statistics for Bioengineering*
- BIOE 442* *Tissue Engineering Laboratory Module*
- BIOE 443* *Bioprocessing Laboratory Module*
- BIOE 444* *Mechanical Testing Laboratory Module*
- BIOE 445* *Advanced Instrumentation Laboratory*
- BIOE 446* *Computational Modeling Laboratory*
- BIOE 447* *Digital Design and Visualization Lab Module*
- BIOE 449/GLHT 449* *Troubleshooting Workshop for Clinically-Relevant Biomedical Equipment*
- BIOE 451 *Bioengineering Design I*
- BIOE 452 *Bioengineering Design II*

Biosciences

- BIOC 201 *Introductory Biology*
- BIOC 341 *Cell Biology*

Chemistry

- CHEM 121 *General Chemistry I*
- CHEM 122 *General Chemistry II*
- CHEM 123 *General Chemistry Lab*
- CHEM 124 *General Chemistry Lab*
- CHEM 211 *Organic Chemistry I*
- CHEM 213 *Organic Chemistry Discussion*

Computational and Applied Mathematics

- CAAM 210 *Introduction to Engineering Computation*

Electrical Engineering

- ELEC 243 *Electronic Measurement Systems*

Math

- MATH 101 *Single Variable Calculus I*
- MATH 102 *Single Variable Calculus II*
- MATH 211 *Ordinary Differential Equations and Linear Algebra*
- MATH 212 *Multivariable Calculus*

Mechanical Engineering

- MECH 211/CEVE 211 *Engineering Mechanics*

Physics

- PHYS 101/103 *Mechanics (with Lab) and Mechanics Discussion* **OR** PHYS 111 *Mechanics (with Lab)* **OR** PHYS 125 *General Phyics (with Lab)*
- PHYS 102/104 *Electricity and Magnetism (with Lab) and E & M Discussion* **OR** PHYS 112 *Electricity and Magnetism (with Lab)* **OR** PHYS 126 *General Physics II (with Lab)*

Different advanced laboratory modules will be offered each year. Students must take two of the offered advanced laboratory modules: BIOE 442, 443, 444, 445, 446 BIOE 447 and 449.

Three technical elective courses are required. All three elective courses must be engineering courses. A combination of technical electives must be selected that meets a minimum of six engineering points and nine credit hours. The technical elective courses and their engineering points are announced during registration each semester.

Undergraduate Minor in Global Health Technologies

The Department of Bioengineering collaborates with a number of departments to offer Rice undergraduate students a minor in global health technologies (GLHT) through the Beyond Traditional Borders (BTB) initiative—a unique, multidisciplinary program to educate and train students to reach beyond traditional disciplinary and geographic boundaries to understand, address, and solve global health disparities. With complementary contributions from the humanities, social sciences, policy, bioscience, and engineering programs at Rice, the GLHT minor prepares students to integrate diverse perspectives as they develop solutions to the complex problems of global health, using the formal approach of the engineering design process.

See Global Heath Technologies for minor requirements.

Last Revised : August 03, 2015

Bioengineering

The George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Degree Requirements and Program Learning Outcomes for MBE and MS and PhD in Bioengineering

For general university requirements, see Graduate Degrees.

Admissions—To make sure scores are available when admission decisions are made, applicants need to register to take the GRE and, if an international student, the TOEFL at least three months before the application deadline. Applicants should also request transcripts at least two months in advance to give senders time to get the material to Rice University by the deadline. The application deadline for MBE students for spring admission the following year is October 30. The application deadline for MBE students for fall admission in the same year is April 30th. The application deadline for PhD students for fall admission of the following year is December 20. PhD students are not admitted in the spring semester. Application materials received after the deadline will not be considered. Once admitted, departmental policy requires full-time PhD students to be registered for at least 12 credit hours each semester. MBE students in the Applied Bioengineering track students may register part-time with the permission of the department. MBE students in the Global Medical Innovation track are expected to attend full time.

Graduate Program—To train the next generation of leaders in bioengineering, we have built an innovative teaching program that transcends boundaries between bioengineering, basic science, and clinical medicine, integrating the academic, industrial, and societal perspectives.

Our hands-on approach to education is supported by a long standing tradition of cross-disciplinary research and education. The Rice bioengineering program is a comprehensive training program that provides student with:

- A fundamental understanding of the life and medical sciences
- Advanced analytical and engineering capabilities
- Translational research capability for transferring biotechnical advances from bench to bedside

With this educational background, graduates will be well prepared to participate in independent or collaborative research and development endeavors in industry or academia.

MBE Program

The Master of Bioengineering degree is intended for those having a BA or BS degree in an engineering or science discipline. There are two tracks in the MBE program:

The **Applied Bioengineering** track is designed as a flexible degree for students who will pursue careers in research, medicine, or related fields.

The **Global Medical Innovation (GMI)** track is designed specifically for students who will pursue a career in the global medical technology industry.

Learning Outcomes for the Applied track—Graduates awarded the MBE in Bioengineering in the Applied track will be able to:

1. Apply and integrate advanced knowledge of Bioengineering topics in at least one of the following areas: Biomaterials and Drug Delivery, Biomedical Imaging and Diagnostics, Computational and Theoretical

Bioengineering, Tissue Engineering and Biomechanics, or Systems and Synthetic Biology.
2. Apply knowledge from engineering and other disciplines to identify, formulate, and solve novel and complex problems that require advanced knowledge in bioengineering.
3. Select and apply quantitative analytic techniques to analyze bioengineering data.
4. Gain admission to a graduate or professional program, if students want to pursue further education.

Program Learning Outcomes for the Global Medical Innovation track—Graduates awarded the MBE in Bioengineering in the Global Medical Innovation (GMI) track will be able to:

1. Apply knowledge of Bioengineering topics in at least one of the following areas: Biomaterials and Drug Delivery, Biomedical Imaging and Diagnostics, Computational and Theoretical Bioengineering, Tissue Engineering and Biomechanics, or Systems and Synthetic Biology.
2. Develop effective medical products, from concept to commercialization, within a team environment.
3. Comprehend and navigate the global medical technology industry by leveraging an internship experience.
4. Gain employment or advance professionally in a technical field related to bioengineering.

Both tracks require 30 credit hours of study, and will result in the Master of Bioengineering (MBE) degree. Both tracks have the same prerequisites, though applicants will be evaluated considering the different purposes of each track. More information about each of these tracks can be found below.

Students may enroll for the Applied Bioengineering track on a full-time or part-time basis. Students may only enroll on a full-time basis for the GMI track. Curriculum must be approved by the Graduate Academic Affairs Committee and the Bioengineering Department. This is done on a case-by-case basis.

Applied Bioengineering Track Curriculum Requirements
The applied track requires:

- 15 credit hours of graduate level bioengineering courses,
- 9 credit hours of graduate level professional development electives chosen from a specific list of approved courses.
- 3 credit hours of graduate level general electives,
- 3 credit hours of graduate level course in MATH, CAAM, or STAT (400-level courses may be considered, and BIOE 539 may count toward this requirement).
- If a student is taking a course which is cross-listed with a BIOE course, the course should be taken under the MATH, STAT or CAAM designation, not as a BIOE course.

All studentsmust maintain an average GPA of 3.0 or higher.

Global Medical Innovation Curriculum and Requirements
As the medical technology industry becomes increasingly global with an emphasis in cost-effective health care solutions and clinical outcomes, Rice University seeks to prepare engineers for this new and changing environment.

This track of the MBE degree is designed to prepare engineers for careers in medical technology through education in innovation, emerging-market design projects and internships.

The Rice MBE track in Global Medical Innovation program specifically targets students who have an undergraduate degree in engineering (mechanical, electrical, chemical, or bioengineering/medical) or a related field, and who are interested in pursuing a career in the private, public, or non-profit sectors of medical technology.

The GMI track curriculum of requires:

- Two consecutive semesters of innovation education with integrated emerging-market design projects (18 credits – BIOE 527, 528, 529, 520, 627, 628, 629, and 630)
- An internship, which may be completed during the summer (full-time) or during the fall and winter semesters (part-time). A group of students selected in the first round of applications will travel to an emerging market for a global design internship during summer 2015. Other students may fulfill this requirement with an industry internship in the summer, or during the fall and winter semesters. This will be considered on a case-by-case basis, and the student is responsible for obtaining and selecting an internship that best aligns with their career goals (6 Credits – BIOE 600)
- One graduate-level course in MATH, CAAM, or STAT (3 credits, 400-level courses may be considered, BIOE 539 may count toward this requirement)
- One elective graduate-level BIOE course (3 credits)

All students must maintain an average GPA of 3.20 or higher.

MS Program

Candidates for the MS degree must:

- Show evidence on their undergraduate transcript of completion of fundamentals of systems physiology, cell biology, and statistics. (If courses were not taken for an undergraduate degree, they must be completed at the beginning of the MS program. Only one of these courses may be used as credit toward the 30 hours of required courses.)
- Complete at least 18 approved semester hours of foundation, supporting, and advanced courses while maintaining a grade point average of 3.0
- A total of 30 credit graduate level hours are required. MS students must earn additional credits they need for graduation by
  registering for the master's research course BIOE 500 during the terms
  they are engaged in research.
- Fulfill a teaching requirement
- Submit an original research thesis
- Defend the thesis in a public oral examination

PhD Program

Program Learning Outcomes—Graduates awarded the PhD in Bioengineering will be able to:

1. Work as independent researchers.
2. Acquire a graduate-level understanding of foundations in Bioengineering and apply this material across a variety of sub-disciplines.
3. Integrate knowledge from different sources to solve a defined Bioengineering problem.
4. Acquire deep knowledge in a sub-discipline in which they will pursue their dissertation.
5. Demonstrate professional skills in both oral and written communication.

Degree Requirements—Candidates for the PhD degree must:

- Show evidence on their undergraduate transcript of completion of fundamentals of systems physiology, cell biology, and statistics. (If courses were not taken for an undergraduate degree, they must be completed at the beginning of the PhD program. Only one of these courses may be used as credit for the 30 required courses.)
- Complete at least 30 approved semester hours of foundation, supporting, and advanced courses with high standing while maintaining a grade point average of 3.2.
- A total of 90 credit hours is required. PhD students must earn additional credits they need for graduation by registering for the PhD research course, BIOE 500, during the terms they are engaged in research.
- Fulfill a teaching requirement. After their first semester in residence, students may be asked to spend the equivalent of six 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.
- 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:
  - Systems and Synthetic Biology
  - Biomaterials and Drug Delivery
  - Tissue Engineering and Biomechanics
  - Computational and Theoretical Bioengineering
  - Biomedical Imaging and Diagnostics
  - Cellular and Biomolecular Engineering

MD-PhD Dual Degree—An MD-PhD dual degree program is also offered by the Rice University Bioengineering Department and Baylor College of Medicine. This program prepares students for research careers in medicine. Students must be accepted into the MD/PhD program initially through the Baylor College of Medicine.

Last Revised : August 05, 2015

Bioengineering

The George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Bioengineering.

Last Revised : August 03, 2015

Chemical and Biomolecular Engineering

The George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Chair
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George J. Hirasaki
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Matteo Pasquali
Marc A. Robert
Kyriacos Zygourakis

Associate Professors
Sibani Lisa Biswal
Laura Segatori

Assistant Professors
Deepak Nagrath
Francisco Vargas
Rafael Verduzco

Professors Emeriti
William W. Akers
Constantine Armeniades
Sam H. Davis
Derek C. Dyson
Jesse David Hellums

Professors in the Practice
Kenneth R. Cox

Joint Appointments
Pulickel M. Ajayan
George N. Bennett
Cecilia Clementi
Rob Griffin
Qilin Li
Anatoly B. Kolomeisky
Antonios G. Mikos
Peter J. Rossky
Ka-Yiu San
Edwin L. Thomas

Distinguished Faculty Fellow
Scott L. Wellington

Adjunct Professors
Sivaran Arepalli
Marek Behr
Michael A. Reynolds
Richard B. Strait
Vahid Taghikhani

Adjunct Associate Professors
Rouhollah Farajzadeh

Adjunct Lecturer
John T. Perez

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, product and process design. Course electives may be used to create a focus area in one of the following five disciplines: biotechnology/bioengineering, environmental engineering, materials science/engineering, sustainability and energy 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 coordinated MBA/MChE degree also is available in conjunction with the Jesse H. Jones Graduate School of Business.

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 catalysis and nanotechnology, thermodynamics and phase equilibria, interfacial phenomena, colloids, microemulsions, rheology and fluid mechanics, biosystems engineering, biocatalysis and metabolic engineering, cell population heterogeneity and biological pattern formation, cellular and tissue engineering, energy and sustainability, gas hydrates, enhanced oil recovery, reservoir characterization, and pollution control.

Last Revised : August 03, 2015

Chemical and Biomolecular Engineering

The George R. Brown School of Engineering

Program Learning Outcomes for BSChE in Chemical Engineering

Students graduating from this program will be able to:

1. Solve chemical engineering problems by applying knowledge of mathematics, science and computing and using analytic techniques, computer simulation and modern engineering tools essential to chemical engineering practices.
2. Design and conduct experiments, and analyze and interpret data.
3. Design a system, component, or process to meet desired needs.
4. Function effectively in team environments, including multidisciplinary projects.
5. Communicate engineering and related concepts effectively in writing and orally.
6. Demonstrate understanding of professional and ethical responsibility.
7. Demonstrate understanding of contemporary, global, and societal issues encountered in engineering practices and the impact that engineering has on these issues.
8. Appreciate the need for and be able to engage in life-long learning.

Degree Requirements for BSChE in Chemical Engineering

For general university requirements, see Graduation Requirements. The program leading to the BS degree in Chemical Engineering is accredited by the Engineering Accreditation Commission of ABET. Through careful selection of other engineering and science courses, a student can develop a focus (or concentration) area in any of the following five engineering disciplines: biotechnology/bioengineering, environmental engineering, materials science/engineering, sustainability and energy 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 95–100 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.

Alternatively, students can use their electives to create a focus (or concentration) area in one of the following five disciplines:

- biotechnology/bioengineering
- computational engineering
- environmental engineering
- materials science/engineering
- sustainability and energy 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 BSChE in Chemical Engineering

CHEMISTRY

- CHEM 121/123 *General Chemistry I/General Chemistry Lab I* **and** CHEM 122/124 *General Chemistry II/General Chemistry Lab II* **OR** CHEM 151/153 *Honors Chemistry I/Honors Chemistry Laboratory I* **and** CHEM 152/154 *Honors Chemistry II/Honors Chemistry Laboratory II*
- CHEM 211/213 *Organic Chemistry I/Organic Chemistry Discussion*
- CHEM 217 **OR** CHEM 215 *Organic Chemistry Lab*
- Two of the following:
  i. CHEM 212 *Organic Chemistry II*
  ii. CHEM 311 *Physical Chemistry I*
  iii. CHEM 312 *Physical Chemistry II*

CHEMICAL AND BIOMOLECULAR ENGINEERING

- CHBE 301 *Chemical Engineering Fundamentals*
- CHBE 303 *Computer Programming in Chemical Engineering*
- CHBE 305 *Computational Methods for Chemical Engineers*
- CHBE 310 *Fundamentals of Biomolecular Engineering*
- CHBE 343 *Chemical Engineering Lab I*
- CHBE 350 *Process Safety*
- CHBE 390 *Kinetics and Reactor Design*
- CHBE 401 **and** CHBE 402 *Transport Phenomena I and II*
- CHBE 403 *Design Fundamentals*
- CHBE 404 *Chemical Engineering Design*
- CHBE 411 **and** CHBE 412 *Thermodynamics I and II*
- CHBE 443 *Chemical Engineering Lab II*
- CHBE 470 *Process Dynamics and Control*

MATHEMATICS

- MATH 101 **and** MATH 102 *Single Variable Calculus I and II*
- MATH 211 *Ordinary Differential Equations and Linear Alegbra*
- 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 101/103 *Mechanics (with Lab)/Mechanics Discussion* **OR** PHYS 111 *Mechanics (with Lab)*
- PHYS 102/104 *Electricity and Magnetism/E&M Discussion* **OR** PHYS 112 *Electricity and Magnetism (with Lab)*

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 303

- Corequisite: CHBE 301

For CHBE 305

- CHBE 301 and 303

For CHBE 310

- CHBE 301, MATH 211

For CHBE 343

- CHBE 390, 401, and 411
- Corequisite: CHBE 350

***For* CHBE 350**

- Corequisite CHBE 343

For CHBE 390

- CHBE 301, 305, and 310
- MATH 211/212

For CHBE 401

- CHBE 305
- MATH 211/212
- PHYS 101/102 or PHYS 111/112

For CHBE 402

- CHBE 401, CHBE 411
- Co/Prerequisites: CAAM 336 or MATH 381

For CHBE 403

- CHBE 390, 402, and 412

For CHBE 404

- CHBE 403 and 470

For CHBE 411

- CHBE 301 and 305, MATH 211/212

For CHBE 412

- CHBE 411

For CHBE 443

- CHBE 343, 402, and 412

For CHBE 470

- CHBE 390, 402, and 412

Degree Requirements for BA in Chemical Engineering

The BA in chemical engineering is a flexible program and allows a student to pursue other areas of interest with or without a double major. This degree requires successful completion of at least 132 credit hours.

Students pursuing the BA degree in chemical engineering must meet all of the requirements for the BSChE degree with the following exceptions:

- CHBE 310, CHBE 404, CHBE 443 and CHBE 470 are not required.
- The requirements for engineering breadth or the focus area need not be satisfied

Free electives may be substituted for these requirements to reach at least 132 credit hours for graduation.

Last Revised : August 06, 2015

Chemical and Biomolecular Engineering

The George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Degree Requirements and Program Learning Outcomes for MChE, MS, and PhD in Chemical Engineering

For general university requirements, see Graduate Degrees.

MChE Program

Program Learning Outcomes—Students graduating from this program will:

1. Identify, formulate, and solve complex engineering problems that require synthesis of advanced knowledge in chemical engineering fundamentals.
2. Demonstrate broad advanced knowledge in science and math, and depth in one chemical engineering sub-discipline (energy engineering, biomolecular engineering, materials science).
3. Demonstrate knowledge of business policies and practices in the current business environment in identifying, formulating, and solving engineering challenges in a problem/engineering challenge they undertake to solve as part of independent study.
4. Demonstrate effective oral and written communication skills.

Degree Requirements—Candidates for the MChE degree must:

- Complete at least 30 hours of approved upper level (numbered 500 level or higher) courses beyond those counted for the student's undergraduate degree
- Take at least 24 hours of courses at Rice
- Complete at least six courses in chemical engineering and one approved math course
- Include process design (two semesters) and process control among the chemical engineering courses unless courses in these subjects were taken during the student's undergraduate studies
- Meet any university requirements as listed in the General Announcements

MChE / MBA Program Degree Requirements—Candidates for the MChE degree in the MChE / MBA program must:

- Apply and be accepted by both programs
- Complete at least 30 hours of approved upper level (numbered 500 level or higher) courses beyond those counted for the student's undergraduate degree
- Take at least 24 hours of courses at Rice
- Complete at least six courses in chemical engineering and one approved math course
- Include process design (two semesters) and process control among the chemical engineering courses unless courses in these subjects were taken during the student's undergraduate studies
- Meet any university requirements as listed in the General Announcements

MS Program

Degree Requirements—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

- Complete a teaching requirement

PhD Program

Program Learning Outcomes—Students graduating from this program will:

1. Demonstrate a solid foundation in the fundamentals of chemical engineering in four areas: applied mathematics, kinetics and reaction engineering, thermodynamics and transport phenomena.
2. Apply advanced knowledge from several major areas of modern chemical engineering.
3. Conduct independent research by working on research projects, individually and in interdisciplinary groups.
4. Demonstrate professional written and oral communication skills.

Degree Requirements—Candidates for the PhD degree must:

- Satisfactorily complete 36 semester hours of advanced course work, including both general and specialized topics (students who already have an MS degree in chemical engineering can request departmental approval for a reduction in the number of required courses)
- Pass qualifying examinations demonstrating a general understanding of reaction engineering, thermodynamics, transport phenomena, and applied mathematics
- Prepare and present a thesis proposal
- Complete a publishable thesis representing research that is an original and significant contribution to the field of chemical and biomolecular engineering
- Pass a public oral examination in defense of the thesis
- Fullfill a residency requirement
- Complete a teaching assignment

Last Revised : August 03, 2015

- Undergraduate Students
- Graduate Students
- Non-Traditional Students
- Faculty
- Programs of Study
- Administration and Faculty
- Important Notices

Chemical and Biomolecular Engineering

The George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Chemical and Biomolecular Engineering.

Last Revised : August 03, 2015

Civil and Environmental Engineering

The George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Chair
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Satish Nagarajaiah
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Qilin Li
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Assistant Professors
Rouzbeh Shahsavari
Ilinca Stanciulescu

Professors Emeriti
Ahmad J. Durrani
John E. Merwin
Ronald P. Nordgren
Anestis S. Veletsos
Calvin H. Ward

Professor in the Practice of Environmental Law
James B. Blackburn

Professors in the Practice in Civil Engineering
Joseph M. Cibor
Edmund P. Segner, III

Lecturers
Philip C. deBlanc
David W. Gornet
Moyeen Haque
Charles M. Penland
Nestor Rubiano
Christof Spieler
Steven M. Wilkerson

Joint Appointments
William T. Cannady
Michael S. Wong

Adjunct Professors
Jean-Yves Bottero
Wei Chen
Joseph B. Hughes
Charles J. Newell
Carroll L. Oubre
Javier Rojo
Baxter E. Vieux

Degrees Offered: BA, BS, MCEE, MS, PhD

Civil and Environmental Engineering (CEE) 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 and pursue a Bachelor of Science (BS) that has four areas of specialization or pursue a Bachelor of Arts (BA) that affords more flexibility, or complete a double major with any other Rice University major. One nonthesis graduate degree, the Master of Civil & Environmental Engineering (MCEE), is also available to students who desire additional education and specialization in the practice of civil engineering or environmental sciences and engineering.

Students admitted for graduate study leading to a Master of Science (MS) or Doctor of Philosophy (PhD) degree 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, infrastructure reliability, hydrology, water resources and water quality management, air pollution and its control, and hazardous waste treatment.

Last Revised : August 12, 2013

Civil and Environmental Engineering

The George R. Brown School of Engineering

Program Learning Outcomes for BS in Civil Engineering

Students graduating from this program will be able to demonstrate:

1. An ability to apply knowledge of mathematics, science, and engineering.
2. An ability to design and conduct experiments, as well as to analyze and interpret data.
3. An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
4. An ability to function on multidisciplinary teams.
5. An ability to identify, formulate, and solve engineering problems.
6. An understanding of professional and ethical responsibility.
7. An ability to communicate effectively.
8. The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
9. Recognition of the need for, and ability to engage in life-long learning.
10. Knowledge of contemporary issues.
11. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Degree Requirements for BS in Civil Engineering

Civil and Environmental Engineering (CEVE) offers an innovative and challenging Bachelor of Science (BS) engineering curriculum that is designed to provide significant flexibility to the student. Specific details and typical course layouts by semester can be found at the departmental website. The program leading to the BS in Civil Engineering degree is accredited by the Engineering Accreditation Commission of ABET.

The main features of the BS in Civil Engineering are as follows:

- Nine core courses and laboratories (24 hours) primarily aimed at introduction to civil and environmental engineering, followed by 10 courses (30 hours) that represent the four thrust areas within CEVE, with at least four courses from one thrust area (12 credit hours for the focus area and 6 credit hours from each of the three remaining areas).
- The total required CEVE courses are kept to a minimum level of 54 hours to provide flexibility to the student.
- The thrust areas include:
  i. Environmental Engineering (air and water quality, transport theory, modeling, and energy)
  ii. Hydrology and Water Resources (watershed and aquifer management, flood prediction, data analysis, GIS, and hydrologic modeling)
  iii. Structural Engineering and Mechanics (structural analysis, mechanics, design, dynamics, and matrix method)
  iv. Urban Infrastructure, Reliability and Management (transportation systems, complex urban systems, system reliability, soil mechanics, decision theory, engineering economics, and project management)
- Open/free electives (6 hours), and recommended electives (9 hours) to allow maximum flexibility for students to choose from an approved list of courses
- General science (39 hours) courses cover mathematics, statistics, physics, biology, chemistry, and earth sciences
- Distribution (24 hours) and LPAP (1 hour) courses - as per university requirements. A total of at least 132 hours are required for graduation with a BS in Civil Engineering (see detailed list below).

Additional features of the BS curriculum include:

- Courses that introduce fundamentals of CEVE primarily targeted at students with diverse science, engineering, and humanities backgrounds (CEVE 101, 211, 310, 311, 312)
- Special-topics courses 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 endeavor allows undergraduates to have an experience in a developing country where they are able to design and build a project to help society. Students have been attracted to the program in large numbers. (See the department website for details.)

GENERAL MATH AND SCIENCE REQUIREMENTS *(* or an equivalent approved course)*

- CAAM 210 *Introduction to Engineering Comp*
- CAAM 335* *Matrix Analysis* or MATH 354 or MATH 355
- CHEM 121 *General Chemistry I* with CHEM 123 *General Chemistry Lab 1*
- CHEM 122 *General Chemistry II* with CHEM 124 *General Chemistry Lab II*
- One course from the following:
  i. BIOC 201 *Introductory Biology*
  ii. EBIO 325 *Ecology*
  iii. ESCI 301 *Introductory to the Earth*
- MATH 101 *Single Variable Calculus I*
- MATH 102 *Single Variable Calculus II*
- MATH 211 *Ordinary Differential Equations and Linear Algebra*
- MATH 212 *Multivariable Calculus*
- PHYS 101 *Mechanics (with Lab)* **and** PHYS 103 *Mechanics Discussion*
- PHYS 102 *Electricity and Magnetism (with Lab)* **and** PHYS 104 *E & M Discussion*
- STAT 312 *Probability and Statistics for Engineers*

CIVIL AND ENVIRONMENTAL ENGINEERING CORE REQUIREMENTS *(24 credit hours)*

- CEVE 101 *Fundamentals of Civil and Environmental Engineering*
- CEVE 211/MECH 211 *Engineering Mechanics*
- CEVE 310 *Principles of Environmental Engineering*
- CEVE 311/MECH 311 *Mechanics of Solids and Structures*
- CEVE 312 *Strength of Materials Lab*
- CEVE 363 *Applied Fluid Mechanics*
- CEVE 401 *Chemistry for Environmental Engineering and Science Lab (for Focus Areas I and II)* **OR** CEVE 470 *Principles of Soil Mechanics (for Focus Areas III and IV)*
- CEVE 480 S*enior Design Project*
- CEVE 481 *Introduction to Senior Design*

FOCUS AREAS

Select 12 credit hours from one Focus Area below. Select 6 credit hours from each of the three remaining focus areas.

Area I Environmental Engineering

- CEVE 302/ENGI 302 *Sustainable Design*
- CEVE 307/ENST 307/ESCI 307 *Energy and the Environment*
- CEVE 308 *Introduction to Air Pollution Control**
- CEVE 401 *Chemistry for Environmental Engineering and Science Lab***
- CEVE 404 *Atmospheric Particulate Matter**
- CEVE 406/ENST 406 *Introduction to Environmental Law**
- CEVE 411 *Atmospheric Processes*
- CEVE 434/534 *Fate and Transport of Contaminants in the Environment*
- Or any approved environmental course in CEVE

Area II Hydrology and Water Resources

- CEVE 412 *Hydrology and Water Resources Engineering*
- CEVE 418/ESCI 418 *Quantitative Hydrogeology*
- CEVE 420 *Environmental Remediation Restoration*
- CEVE 512 *Advanced Hydrology and Hydraulics*
- CEVE 518 *Contaminant Hydrogeology*

Or any approved hydrology or water resources course in CEVE

Area III Structural Engineering and Mechanics

- CEVE 304 *Structural Analysis I*
- CEVE 400 *Advanced Mechanics of Materials*
- CEVE 405 *Steel Design*
- CEVE 407 *Reinforced Concrete Design*
- CEVE 408 *Concrete and Steel Structures Lab*
- CEVE 427/MECH 427 *Computational Structural Mechanics and FEM*
- CEVE 476 *Structural Dynamic Systems**
- Or any approved structures/mechanics course in CEVE/MECH

Area IV Urban Infrastructure, Reliability and Management

- CEVE 313/STAT 313 *Uncertainty and Risk in Urban Infrastructures*
- CEVE 424/524 *Time Dependent System Reliability Methods and Applications**
- CEVE 452 *Urban Transportation Systems*
- CEVE 460/560 *Bridge Engineering and Extreme Events**
- CEVE 470 *Principles of Soil Mechanics***
- CEVE 479/505 *Engineering Project Management and Economics*
- CEVE 492 *Modeling and Analysis of Networked Systems**
- Or any approved urban infrastructure, reliability and management course in CEVE/MGMT/ECON/CAAM/STAT

ELECTIVES

List of CEVE Recommended Elective Courses (in addition to 500-Level CEVE courses, and select courses from MECH, CAAM, CHEM, ECON, STAT) and further details are posted on the department website.

Any core courses listed in a CEVE track above can be taken as an elective when completed in addition to the 10 required to fulfill your track (Focus Area Courses (18 hrs) & Focus Area Engineering Electives (12 hrs).

***Offered alternative years**

***CEVE 401 elective in Area I for Areas III and IV, if not required may be taken as an elective*

***CEVE 470 elective in Area IV for Areas I and II, if not required may be taken as an elective*

BS Program Objectives

(See department website for additional information.)

1. Develop/demonstrate strong problem-solving and communication skills
2. Achieve leadership position in technical or managerial areas
3. Demonstrate initiative and innovative thinking in project work
4. Maintain a keen awareness of ethical, social, environmental, and global risk concerns
5. Remain engaged in continuing learning, including advanced degrees
6. Prepare for a Professional Engineering License

Degree Requirements for BA in Civil and Environmental Engineering

The Bachelor of Arts (BA) degree in Civil and Environmental Engineering is designed to provide access to students with interests across different disciplines at Rice University; with an emphasis on either Environmental (Track E) or Civil (Track C) Engineering. Each Track is to be tailored to the specific needs of each student by discussions with, and approval by, the CEVE departmental advisor.

Five core courses in one Track plus seven courses in a focused specialty area of study are required (see below for example areas); total CEVE requirements equal approximately 37-38 hours (depending on the Track) plus the necessary math and science courses, including prerequisites for core courses. In addition, each student is responsible for satisfying the university distribution requirements (24 hours) and additional electives for a total of 120 hours (60 of them outside the major) for graduation with a BA in Civil and Environmental Engineering. **Although not required, students are encouraged to double major when pursuing the BA degree.**

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 (see your advisor or department chair for details). Those students who want to obtain an engineering degree from a program accredited by the Engineering Accreditation Commission (EAC) of ABET must follow one of the BS programs the EAC has accredited at Rice, like the BS in Civil Engineering.

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 through concurrent enrollment with CEVE 101, 307, or 211. Typical requirements on math and science for BA degrees are specified in the departmental website

GENERAL MATH AND SCIENCE REQUIREMENTS

TRACK C: CIVIL CORE CURRICULUM

- CEVE 101 *Fundamentals of Civil and Environmental Engineering*
- CEVE 211/MECH 211 *Engineering Mechanics*
- CEVE 310 *Principles of Environmental Engineering*
- CEVE 311/MECH 311*Mechanics of Solids and Structures* **and** CEVE 312 *Strength of Materials Lab* (pre-reqs for 311: CEVE 211 or MECH 211) (pre-reqs for 312: CEVE 304 and CEVE 311)
- CEVE 363 *Applied Fluid Mechanics*

Total Hours: 16

TRACK E: ENVIRONMENTAL CORE CURRICULUM

- CEVE 101 *Fundamentals of Civil and Environmental Engineering*
- CEVE 307/ENST 307/ESCI 307 *Energy and the Environment*
- CEVE 310 *Principles of Environmental Engineering*
- CEVE 401 *Chemistry for Environmental Engineering and Sciences*
- CEVE 412 *Hydrology and Water Resources Engineering*

Total Hours: 16

Seven (7) courses from approved electives must include 4 courses from 1 specific focus area; 4 of these 7 courses must be 300 level or above, and 2 of these upper-division courses must be from the CEVE curriculum.

Example focus specialty areas are suggested below; however students are encouraged to prepare their own specialty related to their career objectives in consultation with, and approval by, their CEVE faculty advisor.

1. Environmental Science and Engineering
2. Civil Engineering
3. Biology
4. Chemical Engineering
5. Chemistry
6. Economics
7. Management

Engineers Without Borders (EWB) is an important component of the CEVE program, and BA students with their flexible curriculum are also encouraged to participate. This exciting endeavor allows undergraduates to have an experience in a developing country, where they are able to design and build a project to help society. Students have been attracted to the EWB program in large numbers and the local chapter is one of the most successful in the United States. Some CEVE courses are EWB-related, providing the opportunity to also obtain credit hours.

Last Revised : August 06, 2015

Civil and Environmental Engineering

The George R. Brown School of Engineering

Degree Requirements and Program Learning Outcomes for MCEE, MS, and PhD

(Please visit Graduate Degrees and Graduate Academic Regulations for more information in relation to Rice policies.)

Admission—Applicants pursuing graduate education in environmental engineering or hydrology should have a BS or BA in related areas of science and engineering and preparation in mathematics, science, and engineering or related courses. A BS degree in Engineering or a degree in natural science is preferred. Applicants pursuing graduate education in structural engineering, structural mechanics, and geotechnical engineering should have a BS in Civil Engineering with a significant emphasis on structural engineering, but students with other undergraduate degrees may apply if they have adequate preparation in mathematics, mechanics, and structural analysis and design. 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.

MS Program

The Master of Science degree is offered in both civil engineering and environmental engineering. For general university requirements, see Graduate Degrees.

Degree Requirements—To earn a MS degree, students must:

- Complete at least 24 semester hours of approved graduate level courses and 6 semester hours of thesis research. 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, applied mathematics, structural dynamic systems, earthquake engineering and reliability.
- 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.

MCEE Program

The Master of Civil and Environmental Engineering (MCEE) is a professional non-thesis degree requiring 30 semester hours of approved courses (at or above the 500 level) including a final project of 2 semester hours. Students who have a BS or BA degree in any field of engineering or related study may apply. Depending on their background, some students may need to fulfill prerequisites or take remedial engineering courses to earn the MCEE degree. For more information, see the department website.

Program Learning Outcomes—Graduates awarded the MCEE in Civil and Environmental Engineering will be able

to:

1. Demonstrate a solid foundation in civil and environmental engineering at the graduate level.
2. Demonstrate professional written and oral communication skills.

Degree Requirements—To earn a MCEE degree, students must:

- Complete at least 30 semester hours of graduate level courses including one semester of graduate seminar (CEVE 601/602) and a final project (CEVE 590).
- At least 24 semester hours must be at Rice University (no more than 6 hours of transfer credit is allowed)
- All courses must be in the relevant field.
- Fulfill the minimum residency, which is one fall or spring semester in full-time or part-time graduate study.

PhD Program

Program Learning Outcomes—Graduates awarded the PhD in Civil and Environmental Engineering will be able to:

1. Demonstrate a solid foundation in civil and environmental engineering at the graduate level.
2. Acquire advanced knowledge of the principles of civil and environmental engineering and apply them to advanced technical problems.
3. Conduct an independent research program.
4. Demonstrate professional written and oral communication skills.

Degree Requirements—To earn a PhD degree, candidates must spend at least four semesters in full time study at Rice and successfully accomplish the following. (See the candidacy, oral examinations, and thesis section.)

- Complete 90 semester hours of approved credits past BS (60 semester hours past MS) with high standing (see guidelines on the department website)
- Pass a preliminary examination in civil and environmental engineering (see guidelines on the department website)
- Pass a qualifying examination on course work, proposed research, and related topics
- Complete a dissertation indicating an ability to conduct original and scholarly research
- Pass a formal public oral examination on the thesis and related topics. PhD students in the EES track take the preliminary exam, administered by department faculty, after two semesters of course work. Civil engineering graduate students will be required to take their written preliminary exam on Friday before the classes of the spring semester, 1.5 years from the fall semester they enter into the program, and take the oral exam on Friday of the first week of classes. If a student enters in the spring semester, he/she needs to take the exam in the following spring semester along with other students. Students who pass this exam then form a doctoral committee according to department requirements. The qualifying examination is administered by the doctoral committee after students develop a research proposal to demonstrate their preparation for the proposed research and identify any areas requiring additional course work or study. As part of the advanced degree training, we also may require students to assist the faculty in undergraduate courses and laboratory instructions.

Last Revised : August 21, 2015

- Undergraduate Students
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Civil and Environmental Engineering

The George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Civil and Environmental Engineering.

Last Revised : August 03, 2015

Computational and Applied Mathematics

The George R. Brown School of Engineering

Chair
Beatrice Riviere

Professors
Steven J. Cox
Matthias Heinkenschloss
Illya V. Hicks
Maarten V. de Hoop
Andrew D. Schaefer
Danny C. Sorenson
William W. Symes
Richard A. Tapia
Yin Zhang

Assistant Professors
Yuri Dagbaghian
Adrianna Gillman
Paul Hand
Matthew G. Knepley

Professors Emeriti
Robert E. Bixby
John E. Dennis
Henry Rachford

Instructors
Franklin Kenter
Travis Thompson

Professors, Joint Appointments
John Edward Akin

Professors Emeriti, Joint Appointments
Michael M. Carroll
Sam H. Davis
Angelo Miele
Chao-Cheng Wang

Adjunct Professors
J. Bee Bednar
Richard Carter
Elmer Eisner
Amr El-Bakry
Mark Embree
Fabrizio Gabbiani
Roland Glowinski
Donald W. Peaceman
Tim Warburton
Wotao Yin

Adjunct Associate Professors
Joakim O. Blanch
F. Omer Alpak
Scott A. Morton
Harel Z. Shouval
Amik St-Cyr

Adjunct Assistant Professors
Edward Castillo
Erez Liberman-Aiden
Craig Rusin

Degrees Offered: BA, MCAM, 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 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; partial differential equations; operations research and optimization; and mathematical modeling in physical, biological, or behavioral sciences.

A further advanced interdisciplinary degree program in computational science and engineering (CSE) addresses the current need for sophisticated computation in both engineering and the sciences. For more information, see Computational Science and Engineering.

A coordinated MBA/Master of Engineering degree also is available in conjunction with the Jesse H. Jones Graduate School of Management.

Last Revised : August 03, 2015

- Undergraduate Students
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Computational and Applied Mathematics

The George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for BA in Computational and Applied Mathematics

Students graduating from this program will:

1. Use modern numerical methods to analyze and solve typical problems in linear systems.
2. Design and test a mathematical model, following a six-stage process.

Degree Requirements for BA in Computational and Applied Mathematics

For general university requirements, see Graduation Requirements. Students majoring in computational and applied mathematics are required to complete the 49-52 semester hours spelled out in the following program of study.

INTRODUCTORY COURSES
Typically completed during the first two years:

- CAAM 210 *Introduction to Engineering Computation*
- CAAM 335 *Matrix Analysis*
- MATH 101 *Single Variable Calculus I**
- MATH 102 *Single Variable Calculus II*
- MATH 212 *Multivariable Calculus*+

*Students with prior experience with calculus may replace MATH 101 with a 3-credit quantitative elective at the 200-level or above, as approved by a CAAM undergraduate advisor. (This quantitative elective is in addition to the four electives required below.)

+Students may substitute Honors Calculus sequence (MATH 221, 222) for MATH 212.

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 378 *Introduction to Operations Research and Optimization*
- MATH 302 *Elements of Analysis* (or MATH 321 *Introduction to Analysis I*)*
- STAT 310/ECON 307 *Probability and Statistics (or* STAT 331 *Applied Probability)*

*Students who plan to pursue graduate studies in Computational and Applied Mathematics should take MATH 321 and MATH 322

ADVANCED COURSES
Typically completed during the fourth year:

- CAAM 453 *Numerical Analysis I*

- And one of the following two courses:
  i. CAAM 454 *Numerical Analysis II*
  ii. CAAM 471 *Linear and Integer Programming*

DESIGN PROJECT
Typically completed during the fourth year:

- CAAM 495 *Senior Design Project I*
- CAAM 496 *Senior Design Project II*

ELECTIVES
Four courses at 300 level or above; two of which must be at the 400-level or above (chosen in consultation with a CAAM undergraduate advisor).

Highly Recommended Electives:

- MATH 322 *Introduction to Analysis II*
- CAAM 415/NEUR 415/ELEC 488 *Theoretical Neuroscience*
- CAAM 423/MATH 423 *Partial Differential Equations I*
- CAAM 519 *Computational Science I*
- CAAM 536 *Numerical Methods for Partial Differential Equations*
- CAAM 560 *Optimization Theory*
- CAAM 570 *Graph Theory*
- MATH 425 *Integration Theory*
- MATH 427 *Complex Analysis*
- STAT 431 *Overview of Mathematical Statistics*

Course Requirements for a Minor in Computational and Applied Mathematics

A minor in computational and applied mathematics requires the completion of at least six classes (a minimum of 18 credit hours)

REQUIRED COURSES

- CAAM 210 *Introduction to Engineering Computation*
- CAAM 335 *Matrix Analysis*
- One of the following:
  i. CAAM 336 *Differential Equations in Science and Engineering*
  ii. CAAM 378 *Introduction to Operations Research and Optimization*

ELECTIVES
Three electives (3 credits each): CAAM courses at the 300 level or above, including at least two classes at the 400 level or above.

Last Revised : August 03, 2015

Computational and Applied Mathematics

The George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Degree Requirements and Program Learning Outcomes 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 and university requirements, see Graduate Degrees and Admission to Graduate Study.

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.

Program Learning Outcomes—Students graduating from this program will:

1. Acquire broad, advanced knowledge in Computational and Applied Mathematics that is also deep within a major sub-discipline.
2. Apply knowledge from engineering and other disciplines to identify, formulate, and solve advanced technical problems that require advanced knowledge in Computational and Applied Mathematics.
3. Demonstrate an ability to gain employment or advancement in a technical field related to Computational and Applied Mathematics.

Degree Requirements—The MCAM degree requires satisfactory completion of at least 30 semester hours of graduate level course work approved by the department.

MA Program

Program Learning Outcomes—Students graduating from this program will:

1. Formulate problems in Computational and Applied Mathematics.
2. Write literature reviews.
3. Obtain scientific results.
4. Make unique contributions.
5. Communicate professionally and effectively in writing and when speaking.

Degree Requirements—For an MA in computational and applied mathematics, students must:

- Complete at least 30 semester hours at the graduate level, including five 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. Students working toward the PhD, who have completed a master's thesis prior to entering the PhD program, may earn the MA after obtaining approval of their candidacy for the PhD.

PhD Program

Program Learning Outcomes—Students graduating from this program will:

1. Solve problems using advanced foundational knowledge.
2. Conduct an independent research program.
3. Communicate professionally and effectively in writing and when speaking.

Degree Requirements—For a PhD in computational and applied mathematics, students must:

- Complete a course of study approved by the department to establish a broad foundation in applied mathematics.
- Perform satisfactorily on 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.

Last Revised : August 03, 2015

- Undergraduate Students
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Computational and Applied Mathematics

The George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Computational and Applied Mathematics.

Last Revised : August 03, 2015

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Computational Science and Engineering

The George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Director
Beatrice Riviere

Degrees Offered: MCSE, MA*, PhD

The 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 of 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 also is essential to maximizing the power of the new computational tools.

The professional degree (MCSE) is for persons interested in practicing within this field, while the PhD program concentrates on research. For additional information, go to the MCSE website.

*Students generally not admitted to this as a terminal program.

Last Revised : August 22, 2014

Computational Science and Engineering

The George R. Brown School of Engineering

Program Learning Outcomes for the Master's in Computer Science and Engineering (MCSE)

Students graduating from this program will::

1. Acquire broad, advanced knowledge in Computational and Applied Mathematics, Computer Science, or Statistics that is also deep in a major area within one of the three disciplines.
2. Apply knowledge from engineering and other disciplines to identify, formulate, and solve advanced technical problems that require advanced knowledge within one of the three disciplines.
3. Communicate technical ideas effectively.
4. Demonstrate an ability to gain employment or advancement in a technical field related to one of the three disciplines.

Degree Requirements for Master's in Computational Science and Engineering

The Master in Computational Science and Engineering (MCSE) is a non-thesis degree program offered jointly by the Department of Computational and Applied Mathematics, Computer Science and Statistics in the School of Engineering. The program is designed to provide training and expertise in modern computational techniques that will find application in a wide range of industries, and technical and managerial functions within them. The MCSE graduate degree will prepare students interested in positions such as Computational Scientist, Computational Engineer, Big Data Analyst, or who desire to specialize in specific areas of high-performance computing and software development techniques and scientific data analysis and visualization.

Requirements

- BA or BS in an engineering or science discipline, with training in engineering mathematics, statistical foundations, and programming methodology.
- Requirements for Professional Degrees: See here.
- 30 hours of approved advanced study:

CORE COURSES

Students to choose one out of each group (up to 10 credit hours):

Group 1: Computational and Applied Mathematics

- CAAM 519 *Computational Science I*
- CAAM 536/CEVE 555 *Numerical Methods for Partial Differential Equations*
- CAAM 453 *Numerical Analysis I*
- CAAM 471 *Introduction to Linear and Integer Programming*
- CAAM 564 *Numerical Optimization*

Group 2: Computer Science

- COMP 322 *Principles of Parallel Programming*
- COMP 410 *Software Engineering Methodology* – or: new course in the works

COMP 422 *Introduction to Parallel Computing*
- COMP 430 *Databases*

Group 3: Statistics

- STAT 310 *Probability and Statistics*
- STAT 312 *Probability & Statistics for Engineers*
- STAT 331 *Applied Probability*
- STAT 410 *Linear Regression*
- STAT 541 *Multivariate Analysis*

ELECTIVES
7 courses selected from list above or the extended list below. At least one must be from Communication, Leadership, Management and Ethics Group. There are additional courses available in each group. Please see department for further information.

Computational and Applied Math

- CAAM 335 *Matrix Analysis*
- CAAM 519 *Computational Science I*
- CAAM 436 *Partial Differential Equations of Mathematical Physics*
- CAAM 536/CEVE 555 *Numerical Methods for Partial Differential Equations*

Computer Science

- COMP 322/ELEC 323 *Principles of Parallel Programming*
- COMP 360/560 *Computer Graphics*
- COMP 410 *Software Engineering Methodology* - or: new course in the works
- COMP 422 *Introduction to Parallel Computing*

Statistics

- STAT 405 *Statistical Computing and Graphics*
- STAT 410 *Linear Regression*
- STAT 411 *Advanced Statistical Methods*
- STAT 502/COMP 502/ELEC 502 *Neural Machine Learning*

Communication, Leadership, Management and Ethics

- ENGI 610/NSCI 610 *Management for Science and Engineering*
- ENGI 510 *Technical and Managerial Communications*
- ENGI 529/CEVE 529 *Ethics and Engineering Leadership*

Note: Only one of COMP 422 or CAAM 520 can be counted towards a track.

Focus Areas

If a student wants to prepare for the career paths listed below, faculty suggest that at least three of the above electives should be chosen as follows. There are additional courses available in aech area. Please see department for further details.

High Performance Computing focus:

- CAAM 519 *Computational Science I*
- CAAM 520 *Computational Science II*
- COMP 322/ELEC 323 *Principles of Parallel Programming*
- COMP 422 *Introduction to Parallel Computing*

Big-Data focus:

- COMP 410 *Software Engineering Methodology*
- COMP 430 *Databases*
- STAT 405 *Statistical Computing and Graphics*

STAT 410 *Introduction to Regression and Statistical Computing*
- STAT 502/COMP 502/ELEC 502 *Neural Machine Learning I*
- CAAM 471 *Introduction to Linear and Integer Programming*

Application deadlines

Fall admission—April 30
Applications should be submitted directly to the program.

For additional information go to the MCSE website.

Program Learning Outcomes for the PhD in Computational Science and Engineering

Students graduating from this program will:

1. Acquire broad, advanced knowledge in Computational and Applied Mathematics, Computer Science, or Statistics that is also deep in one major area within one of the three disciplines.
2. Conduct independent research that demonstrates advanced mastery of a sub-discipline within one of the three disciplines.
3. Communicate advanced technical ideas effectively.

Degree Requirements for 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 and Biomolecular Engineering, Electrical and Computer Engineering, Civil and Environmental 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. 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 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.

Study at the doctoral level seeks to advance the field through original research. For general university requirements, see Graduate Degrees. For the PhD in computational science and engineering, students must:

- Complete a course of study approved by the CSC, including at least two courses outside the major area
- Perform satisfactorily on preliminary and qualifying examinations and reviews
- Produce an original thesis acceptable to the CSC
- Perform satisfactorily on a final public oral examination on the thesis

Last Revised : August 05, 2015

- Undergraduate Students
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Computational Science and Engineering

The George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Computational Science and Engineering.

Last Revised : January 16, 2015

Computer Science

The George R. Brown School of Engineering

Chair
Vivek Sarkar

Assistant Chair
Linda Torczon

Professors
Robert S. Cartwright, Jr.
Keith Cooper
Alan L. Cox
Ronald N. Goldman
Dave Johnson
Lydia Kavraki
John Mellor-Crummey
Krishna Palem
Scott Rixner
Vivek Sarkar
Devika Subramanian
Moshe Y. Vardi
Dan Wallach
Joe D. Warren

Associate Professors
Swarat Chaudhuri
Chris M. Jermaine
Luay Nakhleh
T. S. Eugene Ng

Assistant Professors
Anshumali Shrivastava

Professors in the Practice
Scott E. Cutler
James McLurkin

Lecturers
John Greiner
Stephen Wong

Professors, Joint Appointments
Michael Byrne
Joseph Cavallaro

Assistant Professors, Joint Appointments
Ashok Veeraraghavan
Wei Wei Zhong

Adjunct Professors
Eric Allen
Faye Briggs
Wah Chiu
Jack Dongarra
Walid Taha
Steve Wallach

Adjunct Associate Professor
Chris Bronk

Adjunct Assistant Professors
Ken Chen
Erez Lieberman Aiden

Postdoctoral Research Associates
Dinler Antunes
Feri Bartha
Tiago Cogumbreiro
Neil Dantam
Didier Devaurs
Dror Fried
Michael Gubanov
Morteza Lahijanian
Jianwen Li
Vijay Murali
Kia Teymourian
Yun Yu

Research Scientists and Programmers
Laksono Adhianto
R. Matt Barnett
Zoran Budimlic
Michael Burke
Vincent Cave
Philippe Charles
Michael Fagan
Akihiro Hayashi

G. Anthony Gorry
Edward Knightly
Marcia K. O'Malley
James Tour
Peter Varman

Associate Professors, Joint Appointments
Lin Zhong

Kathleen Knobe
Mark Krentel
Vivek Kumar
Mark Moll
Carlos Monray
Dung "Zung" Nguyen
Jun Shirako
Jisheng Zhao

Degrees Offered: BA, BSCS, MCS, MS, 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 MS degree is a research degree requiring a thesis in addition to course work. The MS degree is mainly for students pursuing their Ph.D. Typically students are not admitted directly into the MS program. Students wishing to pursue a terminal Masters Degree should apply to the MCS program. Students wishing to pursue a Ph.D. should apply directly to the Ph.D. program, which the department offers.

A coordinated MBA/Master of Engineering degree is available in conjunction with the Jesse H. Jones Graduate School of Business.

Last Revised : August 03, 2015

Computer Science

The George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for BA in Computer Science

Students graduating from this program will:

1. Be knowledgeable about algorithms and their use. Students will analyze new problems, choose appropriate algorithms for their solutions, and develop analytical skills in the manipulation of algorithms.
2. Demonstrate the ability to design and implement complex software systems. Students will demonstrate skill in their design and implementation and function effectively in teams.
3. Be knowledgeable about programming languages and their use. Students will demonstrate an understanding of distinguishing and mapping two different programming languages.

Degree Requirements for BA in Computer Science

For general university requirements, see Graduation Requirements. 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 math and science courses; computer science core courses, including introductory courses and upper-level courses ensuring knowledge in a broad range of areas; and computer science electives, which give students the freedom to explore specific interests. Students earning a BA in computer science must complete at least 60 semester hours of courses in the major and at least 120 semester hours in total.

MATH AND SCIENCE COURSES
Five courses for a total of 15 hours, required for all majors, usually taken in the freshman and sophomore years:

- MATH 101 *Single Variable Calculus I*
- MATH 102 *Single Variable Calculus II*

One course from the following:

- MATH 211 *Ordinary Differential Equations and Linear Algebra*
- MATH 212 *Multivariable Calculus*
- MATH 221 *Honors Calculus III*
- MATH 222 *Honors Calculus IV*

One course from the following:

- STAT 310/ECON 307 *Probability and Statistics*
- STAT 312 *Probability for CEVE*
- STAT 331/ELEC 331 *Applied Probability*

One course from the following:

- MATH 355 *Linear Algebra*

- MATH 354 *Honors Linear Algebra*
- CAAM 335 *Matrix Analysis*

COMPUTER SCIENCE CORE COURSES
Ten courses for a total of 39 hours.

- COMP 140 *Computational Thinking* **OR** COMP 160 *Introduction to Game Programming in Python*
- COMP 182 *Algorithmic Thinking*
- COMP 215 *Introduction to Program Design in Java*
- ELEC 220 *Fundamentals of Computer Engineering*
- COMP 310 *Advanced Object-Oriented Programming*
- COMP 321 *Introduction to Computer Systems*
- COMP 322/ELEC 323 *Principles of Parallel Programming*
- COMP 382 *Reasoning about Algorithms*
- COMP 411 *Programming Languages* **OR** COMP 412 *Compiler Construction*
- COMP 421/ELEC 421 *Operating Systems and Concurrent Programming*

COMPUTER SCIENCE ELECTIVES
Two courses in computer science at the 300 level or higher, each of 3 or more credits. At most one of these may be an independent study project (COMP 390, COMP 490, or COMP 491). Departmental approval is required to use a 600 level course as an elective.

Program Learning Outcomes for BS in Computer Science

Students graduating from this program will:

1. Be knowledgeable about algorithms and their use. Students will analyze new problems, choose appropriate algorithms for their solutions, and develop analytical skills in the manipulation of algorithms.
2. Demonstrate the ability to design and implement complex software systems. Students will demonstrate skill in their design and implementation and function effectively in teams.
3. Be knowledgeable about programming languages and their use. Students will demonstrate an understanding of distinguishing and mapping two different programming languages.
4. Demonstrate a deep knowledge in a subarea of Computer Science. Students will be able to explain issues in the selected subarea and demonstrate a depth of knowledge.
5. Effectively communicate to a client and user.

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, you must complete all the previously described requirements of the BA degree, plus the following additions. Students earning a BS in computer science must complete at least 82 semester hours of courses in the major and at least 128 semester hours in total.

ADDITIONAL MATH AND SCIENCE COURSES

One course from the following:

- PHYS 101/103 *Mechanics (with Lab) and Mechanics Discussion*
- PHYS 111 *Mechanics*
- PHYS 125 *General Physics*

One course from the following:

- PHYS 102/104 *Electricity and Magnetism (with Lab) and E & M Discussion*
- PHYS 112 *Electricity and Magnetism*
- PHYS 126 *General Physics II*

CAPSTONE SEQUENCE
At least four courses for a total of at least 15 hours:. The Capstone sequence represents a coherent set of courses in a computer science specialization chosen by the student. The cap must include one of the following design courses:

- COMP 410 *Software Engineering Methodology*

- COMP 413 *Distributed Program Construction*
- COMP 460/ARTS 460 *Advanced Computer Game Creation*

The remaining courses must provide depth in the selected specialization. All caps must be approved by the Department.

Last Revised : August 06, 2015

Computer Science

The George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Degree Requirements and Program Learning Outcomes for MCS, MS, and PhD in Computer Science

For general university requirements, see Graduate Degrees.

MCS Program

Program Learning Outcomes

Graduates awarded the Master of Computer Science will be able to:

1. Solve advanced Computer Science problems. Students will acquire and apply a graduate-level understanding of material in sub-areas of Computer Science.
2. Design and implement complex software systems. Students will demonstrate skill in their design and implementation and function effectively in teams.
3. Effectively communicate to a client and user.
4. Have improved professional opportunities relative to before entering the program.

Degree Requirements

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 advisor. The courses must be at the 500 level or above. Areas of concentration for the MCS include algorithms and complexity, artificial intelligence, robotics, 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 MCS degree 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.

MCS students are expected to pay full tuition and all fees. No financial assistance will be given to MCS students.

MS Program

Program Learning Outcomes

Graduates awarded the MS in Computer Science will be able to:

1. Acquire a solid foundation in Computer Science at the graduate level.
2. Conduct an independent research program.
3. Demonstrate professional skills in both oral and written communication.

Degree Requirements

The MS degree is a research degree requiring a thesis in addition to course work. A total of 30 credit hours at the 500 level or above (including thesis hours) is required.

PhD Program

Program Learning Outcomes

Graduates awarded the PhD in Computer Science will be able to:

1. Acquire a solid foundation in Computer Science at graduate level. Students will demonstrate a graduate-level understanding of material across a variety of sub-disciplines, be able to synthesize problem solutions by combining knowledge from different sources, and demonstrate a deep knowledge of sub-area in which they will pursue their dissertation.
2. Conduct an independent research program. Students will identify and pose a research problem, place that problem in context within the field's established literature, and conduct an independent investigation that leads to credible scientific results.
3. Demonstrate professional skills in both oral and written communication. Students will write well-organized, coherent technical prose, deliver a professional presentation on par with a solid conference presentation, demonstrate the ability to describe scientific issues and techniques in writing and in presentation, and be able to answer unanticipated technical questions in a public setting.

Degree Requirements

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 as described in the Computer Science Department's graduate student handbook available at: https://www.cs.rice.edu/academics/graduate-studies/phd/.
- 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 - Refer to the CS Graduate studies web page at https://www.cs.rice.edu/academics/graduate-studies/ or contact the department at graddapps@rice.edu.

Last Revised : August 06, 2015

Computer Science

The George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Computer Science.

Last Revised : August 03, 2015

Electrical and Computer Engineering

The George R. Brown School of Engineering

Chair
Edward W. Knightly

Professors
Behnaam Aazhang
Athanasios C. Antoulas
Richard G. Baraniuk
Joseph R. Cavallaro
John W. Clark Jr.
Naomi J. Halas
Junichiro Kono
Michael Orchard
Ashutosh Sabharwal
Frank K. Tittel
Peter J. Varman

Associate Professors
Kevin Kelly
Farinaz Koushanfar
Lin Zhong

Assistant Professors
Aydin Babakhani
Caleb Kemere
Jacob Robinson
Isabell Thomann
Ashok Veeraraghavan

Professors Emeriti
C. Sidney Burrus
Don H. Johnson
James F. Young

Professors in the Practice
Gene Frantz
Ray Simar, Jr.
Gary Woods

Lecturers
Osama Mawlawi
Gary Tim Noe
Deepa Ramachandran

Faculty Fellows
Volkan Cevher
Rajind Mendis

Adjunct Faculty
Dora Angelaki
Mekhail Anwar
Akhil Bidani
Faye Briggs
Michael Brogioli
John Byrne
Thomas Cronin
Anand Dabak
Clifford Dacso
Ronald A. Devore
Christopher Dick
David Eagleman
Henry Everitt
Zheyu Fang
Fabrizio Gabbiani
Omer Gurewitz
Roger Hanlon
Amit Joshi
Markku Juntti
Giridhar Kalamangalam
Arvind Rao Uppore Kukkillaya
Mati Latva-Aho
Jorma Lilleberg
Daniel Mittleman
Robert Nowak
Shivkumar Sabesan
Aswin Sankaranarayanan
Stephan Schwanauer
Steve Sheafor
Harel Z. Shouval
Christoph Studer
Nitin Tandon
Venu Vasudevan
Stephen T. C. Wong

James B. Sinclair

Degrees Offered: BA, BSEE, MEE, MS, PhD

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 students for roles of leadership in their chosen careers. Undergraduate and graduate programs in ECE offer concentrations in the areas of Computer Engineering, Neuroengineering, Photonics, Electronics, and Nano-devices. Computer Engineering topics include: computer architecture, high performance application specific systems, mobile and embedded systems, integrated circuits and antennas for medical imaging and bio-sensing, and parallel I/O for large-scale network storage systems. Neuroengineering topics include: neural signal processing, brain-computer interfaces at the device, circuit, and systems levels. Photonics, Electronics, and Nano-devices topics include: nanophotonics/nanospectroscopy, molecular electronics, biophotonics, ultrafast optics and optoelectronics, materials for energy, semiconductor optics and devices, multispectral imaging and terahertz imaging, and condensed matter physics/materials science. Systems topics include: communications systems, dynamical systems and computation, networks, signal and image processing, wireless networking, pattern recognition, scalable personal healthcare, and computational neuroscience and neuroengineering. The latest information on the department's faculty, research areas, and degree programs and requirements can be found on the ECE website.

Last Revised : August 03, 2015

Electrical and Computer Engineering

The George R. Brown School of Engineering

Program Learning Outcomes

Graduates awarded the BS in Electrical Engineering will be able to demonstrate:

1. An ability to apply knowledge of mathematics, science, and engineering.
2. An ability to design and conduct experiments, as well as to analyze and interpret data.
3. An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
4. An ability to function on multi-disciplinary teams.
5. An ability to identify, formulate, and solve engineering problems.
6. An understanding of professional and ethical responsibility.
7. An ability to communicate effectively.
8. The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
9. A recognition of the need for, and an ability to engage in life-long learning.
10. A knowledge of contemporary issues.
11. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

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 program leading to the BA Degree is not accredited by the Engineering Accreditation Commission (EAC) of ABET.

The program leading to the BSEE degree is accredited by the EAC of ABET, (ABET, Inc. 415 North Charles Street, Baltimore, MD 21202-4012, Phone: 410-347-7700, Email: eac@abet.org, Website: www.abet.org). The BSEE degree is the usual degree taken by those students planning a career in engineering practice. The program for the BSEE requires more hours and greater depth than the BA degree; however, it still provides considerable flexibility and can reduce the time required to become a licensed professional engineer. In the final year, BSEE students undertake a capstone design project. Both degrees are organized around a core of required courses and a selection of elective courses from four specialization areas: Computer Engineering; Neuroengineering; Photonics Electronics, and Nano-devices; and Systems: Control, Communication and Signal Processing. Each student's program must contain a course sequence that provides depth in one area and courses from at least two areas to provide breadth. The specialization electives provide the flexibility to create a focus that crosses traditional areas. Because of the number of options, students should consult early with departmental advisors to plan a program that meets their needs.

Students considering a major in Electrical and Computer Engineering should take physics (PHYS 101, 102) and calculus (MATH 101, 102) in their freshman year, and also CHEM 121 or COMP 140 depending on their area of interest. The first core courses in the department, ELEC 220, ELEC 241, and ELEC 261 are usually taken during the sophomore year, along with more math and science. Students entering with advanced placement have more scheduling options and may take some of these core courses in freshman year. Students should consult with one of the department's undergraduate advisors.

Degree Requirements for BS in Electrical Engineering

A BSEE program must have a total of at least 134 semester hours and include the courses below. A course can satisfy only one program requirement. Students who place out of required courses without transcript credit must substitute other approved courses in the same area. See Undergraduate Degrees and Graduation Requirements for general degree requirements. Current degree requirements and planning sheets can be found on the ECE website.

MATHEMATICS AND SCIENCE COURSES

- CHEM 121 and CHEM 123 *General Chemistry I and General Chemistry Laboratory I*
- ELEC 261 *Electronic Materials and Quantum Devices* ***OR*** PHYS 202 *Modern Physics*
- ELEC 303 *Random Signals*
- MATH 101 *Single Variable Calculus I*
- MATH 102 *Single Variable Calculus II*
- MATH 212 *Multivariable Calculus or* MATH 221 *Honors Calculus III*
- MATH 355 *Linear Algebra* or CAAM 335 *Matrix Analysis*
- PHYS 101/PHYS 103 *Mechanics* (*with Lab)/Mechanics Discussion* **OR** PHYS 111 *Mechanics* (*with Lab)*
- PHYS 102/PHYS 104 *Electricity and Magnetism/E & M Discussion* **OR** PHYS 112 *Electricity and Magnetism (with Lab)*

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/COMP 326 *Digital Logic Design*

COMPUTATION COURSE

- COMP 140 *Computational Thinking*

DESIGN

- ELEC 494 *Senior Design*

DESIGN LABORATORY

Students choose one of the approved design laboratory courses typically based on their specialization area:

- ELEC 327 *Implementation of Digital Systems*
- ELEC 332 *Electronic Systems: Principles and Practice*
- ELEC 364 *Photonic Measurements: Principles and Practice*

Note: The required design laboratory does not count as a specialization course.

Design Requirements for BS in Electrical Engineering

All BSEE degree candidates must complete a design sequence of courses taken during the junior and senior years.

There are several related components to the BSEE Senior Design sequence: a design laboratory course, and the actual design project. In the junior year, students choose one of the approved Design Laboratory courses based on their specialization area:

a) ELEC 327: *Implementation of Digital Systems for Computer Engineering* area
b) ELEC 332: *Electronic Systems Principles and Practice for Systems* area
c) ELEC 327 or ELEC 332 *for Neuroengineering* area
d) ELEC 364: *Photonic Measurements: Principles and Practice for Photonics, Electronics, and Nano-devices* area

Within the senior design sequence, professional issues and project management for electrical engineers provides instruction in professional engineering topics and the nontechnical aspects of the design process, including ethics,

design methodology, project planning, technical presentations, and documentation.

Both semesters of the senior year are devoted to the team design project using the resources of the Oshman Engineering Design Kitchen (OEDK) through the ELEC 494 Senior Design course. In the fall semester of the senior year, students finalize their project topics in coordination with the faculty and begin the design project. In the spring semester, students continue in the laboratory to complete their design project. Several presentations and design contests within the ECE department and the School of Engineering occur in the spring in which to showcase the projects.

Specialization Area Courses for BS in Electrical Engineering

ECE undergraduate degrees are organized around a core of required courses and a selection of elective courses from four specialization areas:

1. Computer Engineering
2. Neuroengineering
3. Photonics, Electronics, and Nano-devices
4. Systems: Control, Communication, and Signal Processing.

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. Neuroengineering or is an emerging discipline that exploits engineering techniques to understand, repair, manipulate, or treat the diseases of human neural systems and networks. The Photonics, Electronics and Nano-devices area encompasses studies of electronic materials, including nanomaterials, semiconductor and optoelectronic devices, lasers and their applications. The Systems area focuses on wireless communication systems, digital signal processing, image processing and networking. The specialization electives provide the flexibility to create a focus that crosses traditional areas.

In addition to the Design Lab choice of ELEC 327, 332, or 364, the BSEE requires six specialization courses from at least two areas, including at least three courses in one area. Also, ELEC graduate courses in the 500 level series and equivalent courses from other departments may be used to satisfy specialization area requirements with permission. Consult departmental advisors and the ECE website for the latest information.

Note:

- *ELEC 301 is a required course for the BSEE degree; however, ELEC 301 can count as a specialization course for the BA degree.*
- *If the Design Laboratory requirement (ELEC 327, 332, or 364) is satisfied with the lab in the student's chosen Major specialization area, then the student takes 3 of 6 courses in his/her chosen major area; however, if the Design Laboratory requirement is satisfied with the lab in the student's minor area, then it is recommended that the student take 4 of 6 courses in his/her chosen major specialization area. It is important to consult a departmental advisor in this situation or if interested in taking a second Design Laboratory course.*

Computer Engineering:

- ELEC 323/COMP 322 *Principles of Parallel Programming*
- ELEC 342 *Analog Electronic Circuits*
- ELEC 345 *Introduction to Computer Vision*
- ELEC 419 *Innovation Lab for Mobile Health*
- ELEC 421/COMP 421 *Operating Systems and Concurrent Programming*
- ELEC 424/COMP 424 *Mobile and Embedded System Design and Application*
- ELEC 425/COMP 425 *Computer Systems Architecture*
- ELEC 427 *Advanced Digital Hardware Design, Implementation, and Optimization*
- ELEC 429/COMP 429 *Introduction to Computer Networks*
- ELEC 446/COMP 446 *Mobile Device Applications Project*
- COMP 321 *Introduction to Computer Systems*
- COMP 382 *Reasoning about Algorithms*
- COMP 430 *Introduction to Database Systems*

The sequence of COMP 140 , COMP 182, and COMP 215 is recommended in addition for the Computer Engineering area as these courses are prerequisites for the cross-listed Computer Science courses.

Neuroengineering:

- ELEC 342 *Analog Electronic Circuits*

- ELEC 345 *Introduction to Computer Vision*
- ELEC 381/BIOE 381 *Fundamentals of Nerve and Muscle Electrophysiology*
- ELEC 431 *Digital Signal Processing*
- ELEC 480/BIOE 480 *Introduction to Neuroengineering: Measuring and Manipulating Neural Activity*
- ELEC 481/BIOE 481/NEUR 481 *Computational Neuroscience and Neural Engineering*
- ELEC 482/BIOE 482 *Physiological Control Systems*
- ELEC 485/BIOE 485/COMP 485 *Fundamentals of Medical Imaging I*
- ELEC 486/BIOE 486/COMP 486 *Fundamentals of Medical Imaging II*
- ELEC 488/CAAM 415/NEUR 415 *Theoretical Neuroscience I: Biophysical Modeling of Cells and Circuits*
- ELEC 489/CAAM 416/NEUR 416 *Theoretical Neuroscience II: Learning, Perception, and Cognition*

Photonics, Electronics, and Nano-devices:

- ELEC 262 *Introduction to Waves and Photonics*
- ELEC 306 *Applied Electromagnetics* ***OR*** *(*PHYS 302 *Intermediate Electrodynamics)*
- ELEC 342 *Analog Electronic Circuits*
- ELEC 361 *Quantum Mechanics for Engineers (****OR*** PHYS 311 *Introduction to Quantum Physics I*)
- ELEC 365/MSNE 365 *Nanomaterials for Energy*
- ELEC 462 *Optoelectronic Devices*
- PHYS 302 *Intermediate Electrodynamics*
- PHYS 412 *Solid State Physics*
- PHYS 416 *Computational Physics*

Systems: Communications, Control, Networks, and Signal Processing:

- ELEC 302 *Introduction to Systems*
- ELEC 306 *Applied Electromagnetics*
- ELEC 345 *Introduction to Computer Vision*
- ELEC 430 *Digital Communication*
- ELEC 431 *Digital Signal Processing*
- ELEC 433 *Architecture for Wireless Communications*
- ELEC 434 *Digital Signal Processing Lab*
- ELEC 435/MECH 435 *Electromechanical Devices and Systems*
- ELEC 436/MECH 420 *Fundamentals of Control Systems*
- ELEC 437 *Introduction to Communication Networks*
- ELEC 438 *Wireless Networking for Under-Resourced Urban Communities*
- ELEC 439 *Digital Image Processing*
- ELEC 498/COMP 498/MECH 498 *Introduction to Robotics*

BSEE UNRESTRICTED ELECTIVES

Additional courses to provide the BSEE minimum requirement of at least 134 semester hours.

Degree Requirements for BA in Electrical Engineering

The BA degree provides a basic foundation in Electrical and Computer Engineering that is highly flexible, permitting a student to tailor the program to his or her interests, be they broad or highly focused. Because of its flexibility and large number of 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 Program leading to the BA Degree is not accredited by the EAC of ABET. A BA program must have a total of at least 121 semester hours and include the courses below. A course can satisfy only one program requirement. Students who place out of required courses without transcript credit must substitute other approved courses in the same area. See Undergraduate Degrees and Graduation Requirements for the general degree requirements. Current degree requirements and planning sheets may be found on the ECE website.

MATHEMATICS AND SCIENCE COURSES

- ELEC 261 *Electronic Materials and Quantum Devices* ***OR*** PHYS 202 *Modern Physics*
- ELEC 303 *Random Signals in (Note*: ELEC 303 *is required for the BA and must have instructor's approval)*
- MATH 101 *Single Variable Calculus I*
- MATH 102 *Single Variable Calculus II*
- MATH 212 *Multivariable Calculus* ***OR*** MATH 221 *Honors Calculus III*
- MATH 355 *Linear Algebra* or CAAM 335 *Matrix Analysis*
- PHYS 101/PHYS 103 *Mechanics* (*with Lab)/Mechanics Discussion* **OR** PHYS 111 *Mechanics* (*with Lab)*
- PHYS 102/PHYS 104 *Electricity and Magnetism/E & M Discussion* **OR** PHYS 112 *Electricity and Magnetism (with Lab)*

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/COMP 326 *Digital Logic Design*

COMPUTATION COURSE

- COMP 140 *Computational Thinking*

DESIGN LABORATORY

Students choose one of the approved design laboratory courses typically based on their Specialization Area:

- ELEC 327 *Implementation of Digital Systems* for Computer Engineering area
- ELEC 332 *Electronic Systems: Principles and Practice* for Systems area
- ELEC 327 or ELEC 332 for Neuroengineering area
- ELEC 364 *Photonic Measurements: Principles and Practice* for Photonics, Electronics, and Nano-devices area

Note: The required Design Laboratory does not count as a specialization course.

Specialization Area Courses for BA in Electrical Engineering

The BA program requires four courses, including at least two courses in one area, and courses from at least two areas. In addition, ELEC graduate courses in the 500-level series and equivalent courses from other departments may be used to satisfy specialization area requirements with permission. Consult departmental advisors and the ECE website for the latest information.

Note:

- *ELEC 301 is a required course for the BSEE degree; however, ELEC 301 can count as a specialization course for the BA degree*.
- *See Note under BSEE above.*

Computer Engineering:

- ELEC 323/COMP 322 *Principles of Parallel Programming*
- ELEC 342 *Analog Electronic Circuits*
- ELEC 345 *Introduction to Computer Vision*
- ELEC 419 *Innovation Lab for Mobile Health*
- ELEC 421/COMP 421 *Operating Systems and Concurrent Programming*
- ELEC 424/COMP 424 *Mobile and Embedded System Design and Application*
- ELEC 425/COMP 425 *Computer Systems Architecture*
- ELEC 427 *Advanced Digital Hardware Design, Implementation, and Optimization*
- ELEC 429/COMP 429 *Introduction to Computer Networks*
- ELEC 446/COMP 446 *Mobile Device Applications Project*
- COMP 321 *Introduction to Computer Systems*
- COMP 382 *Reasoning about Algorithms*
- COMP 430 *Introduction to Database Systems*

The sequence of COMP 140, COMP 182, and COMP 215 is recommended in addition for the Computer Engineering area as these courses are prerequisites for the cross-listed Computer Science courses.

Neuroengineering:

- ELEC 342 *Analog Electronic Circuits*
- ELEC 345 *Introduction to Computer Vision*
- ELEC 381/BIOE 381 *Fundamentals of Nerve and Muscle Electrophysiology*
- ELEC 431 *Digital Communication*
- ELEC 480/BIOE 480 *Introduction to Neuroengineering: Measuring and Manipulating Neural Activity*
- ELEC 481/BIOE 481/NEUR 481 *Computational Neuroscience and Neural Engineering*
- ELEC 482/BIOE 482 *Physiological Control Systems*
- ELEC 485/BIOE 485/COMP 485 *Fundamentals of Medical Imaging I*

ELEC 486/BIOE 486/COMP 486 *Fundamentals of Medical Imaging II*

- ELEC 488/CAAM 415/NEUR 415 *Theoretical Neuroscience I: Biophysical Modeling of Cells and Circuits*
- ELEC 489/CAAM 416/NEUR 416 *Theoretical Neuroscience II: Learning, Perception, and Cognition*

Photonics, Electronics, and Nano-devices:

- ELEC 262 *Introduction to Waves and Photonics*
- ELEC 306 *Applied Electromagnetics (**OR** PHYS 302 Intermediate Electrodynamics)*
- ELEC 342 *Analog Electronic Circuits*
- ELEC 361 *Quantum Mechanics for Engineers (**OR** PHYS 311 Introduction to Quantum Physics I)*
- ELEC 365/MSNE 365 *Nanomaterials for Energy*
- ELEC 462 *Optoelectronic Devices*
- PHYS 412 *Solid State Physics*
- PHYS 416 *Computational Physics*

Systems: Communications, Control, Networks, and Signal Processing:

- ELEC 302 *Introduction to Systems*
- ELEC 306 *Applied Electromagnetics*
- ELEC 345 *Introduction to Computer Vision*
- ELEC 430 *Digital Communication*
- ELEC 431 *Digital Signal Processing*
- ELEC 433 *Architecture for Wireless Communications*
- ELEC 434 *Digital Signal Processing Lab*
- ELEC 435/MECH 435 *Electromechanical Devices and Systems*
- ELEC 436/MECH 420 *Fundamentals of Control Systems*
- ELEC 437 *Introduction to Communication Networks*
- ELEC 438 *Wireless Networking for Under-Resourced Urban Communities*
- ELEC 439 *Digital Image Processing*
- ELEC 498/COMP 498/MECH 498 *Introduction to Robotics*

BA UNRESTRICTED ELECTIVES

Additional courses to provide the BA minimum requirement of at least 121 semester hours.

Last Revised : August 06, 2015

Electrical and Computer Engineering

The George R. Brown School of Engineering

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 coordinated MBA/MEE degree is offered in conjunction with the Jesse H. Jones Graduate School of Business.
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. Students must achieve at least a B (3.0) average in the courses counted toward a graduate degree.

Program Learning Outcomes for Master of Electrical Engineering (MEE)

Students graduating from this program will:

1. Apply the principles of mathematics and science necessary to solve advanced electrical engineering problems.
2. Practice at an advanced level in at least one of the major sub-fields of electrical engineering.

Degree Requirements for Master of Electrical Engineering (MEE)

Students are admitted to the MEE program in both fall and spring semesters. MEE students must prepare a degree plan and have it approved by their ECE faculty advisor. The plan must include at least 30 semester hours comprised of 10 courses of at least 3 credit hours each. All courses towards the MEE degree must be at the 500 level or higher. The program should include a major area of specialization (18 semester hours), a minor area (six semester hours), plus free electives. ELEC 590 or ELEC 599 may not count as major area courses; no more than three semester hours can be transfer credit from another university, and at most one 1-hour seminar course may be included in the plan. No course in which the student earned a grade lower than a C may count toward an MEE. A MEE degree planning form and current requirements may be found on the ECE website.

Program Learning Outcomes for PhD in Electrical and Computer Engineering

Students graduating from this program will:

1. Identify and define relevant research topics in Electrical and Computer Engineering and conduct independent research with results that advance the state of the art in the field.
2. Lead research and design groups by communicating innovative ideas effectively.
3. Solve real-world problems by integrating knowledge gained in courses and through independent study.

Degree Requirements for PhD in Electrical and Computer Engineering

Students are admitted to the PhD program only in 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 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 must also complete the ELEC 599 project, after which acceptance of their previous master's degree will be determined by the graduate committee. No course in which the student earned a grade lower than a B- may count toward an MS or PhD.

A candidate for the PhD degree must demonstrate independent, original research in electrical and computer engineering. After successful completion of all coursework, a student is eligible for PhD candidacy. The student then engages in full-time research, culminating in presentation of the PhD research proposal and then 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.

Last Revised : August 04, 2015

- Undergraduate Students
- Graduate Students
- Non-Traditional Students
- Faculty
- Programs of Study
- Administration and Faculty
- Important Notices

Electrical and Computer Engineering

The George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Electrical and Computer Engineering.

Last Revised : August 03, 2015

- Undergraduate Students
- Graduate Students
- Non-Traditional Students
- Faculty
- Programs of Study
- Administration and Faculty
- Important Notices

Energy and Water Sustainability

The George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Director
Jim Blackburn

Undergraduate Advisors
Pedro Alvarez
Jim Blackburn

Steering Committee
Phil Bedient
Walter Chapman
Dan Cohan
Ken Cox
Leonardo Duenas-Osorio
Peter Hartley
George Hirasaki
Qilin Li
Carrie Masiello
Ka-Yiu San
Ed Segner
Robert Stein
William Symes
Mason Tomson
Rick Wilson
Kyriacos Zygourakis

Degrees Offered: None

The Civil and Environmental Engineering Department in collaboration with several other Rice University departments offers undergraduate students the opportunity to select a minor in energy and water sustainability (EWSU). Sustainable development is a societal goal that challenges traditional ways of thinking and requires alternative approaches and solutions to balance environmental, economic, and social interests. Carbon management strategies and renewable resources will be key elements of energy policy for the coming decades. Similarly, the long-term viability of existing water use and human settlement patterns must be reconsidered given the effect of climate change in freshwater availability, as well as increasing competing demands for this limited resource. More generally, the dedication of materials, energy, and ecological resources will become more important in economic decision-making, while more and more members of society will demand equity in decision-making processes.

Students choosing this minor will gain knowledge of both the science and policy issues associated with the evaluation of sustainable energy and water strategies that will form a cornerstone of 21st century social systems. Students completing this minor will be better prepared for a global society that is attempting to understand and address the challenge of meeting basic human needs today and in the future while maintaining a functional natural system and social order.

Last Revised : August 03, 2015

- Undergraduate Students
- Graduate Students
- Non-Traditional Students
- Faculty
- Programs of Study
- Administration and Faculty
- Important Notices

Energy and Water Sustainability

The George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for the Interdisciplinary Minor in Energy and Water Sustainability

Students graduating from this program will:

1. Apply basic economic concepts applicable to energy and water sustainability including applicable aspects of environmental economics and project-scale economic issues.
2. Understand basic environmental issues applicable to energy and water sustainability.
3. Conduct evaluations of social aspects from a sustainability prospective.
4. Evaluate projects and political systems from the standpoint of energy and water issues as well as more general sustainability issues.
5. Apply sustainability concepts at varying scales and viewpoints, including project level, corporate level, and municipal, state, national, and international levels.
6. Understand the role of climate change on projects and societies in the future.

Course Requirements for the Interdisciplinary Minor in Energy and Water Sustainability

Students must complete seven courses, comprising three required core courses, a design practicum and three elective courses that focus on energy, water, or sustainability. To promote educational breadth, no more than two of these electives should be used to meet a student's major requirements.

REQUIRED COURSES

- CEVE 302/ENGI 302 *Sustainable Design*
- CEVE 307/ENST 307/ESCI307 *Energy and the Environment*
- CEVE 322/ENGI 303 *Engineering Economics* or ECON 480/ENST 480 *Environmental Economics*
- CEVE 499 *1 Hour Practicum*

ELECTIVE COURSES

Students must choose three electives (at least three credits each), with no more than two drawn from any one of three different defined areas of specialization. No more than two of these electives can be used also to fulfill major requirements, and at least one elective course must be taken from a different school than the one hosting the student's major. Should students wish to substitute a course for the sustainability area that is not listed, please consult with the EWSU advisor.

Directed Elective: Energy

Three credit hours from the following:

- ECON 437/ENST 437 *Energy Economics*
- ESCI 415 *Economic Geology – Petroleum*
- ESCI 417 *Petroleum Industry Economics and Management*
- ESCI 550 *Modern Exploration Technology*
- SOCI 367/ENST 367 *Environmental Sociology*

Directed Elective: Water

Three credit hours from the following:

- CEVE 314/BIOE 365 *Sustainable Water Purification for the Developing World*
- CEVE 412 *Hydrology and Water Resources Engineering*
- CEVE 418/ESCI 418 *Quantitative Hydrogeology*

Directed Elective: Sustainability
Three credit hours from the following:

- ARCH 313/ENST 313 *Case Studies in Sustainable Design*
- CEVE 406/ENST 406 *Introduction to Environmental Law*
- CEVE 492 *Modeling and Analysis of Networked Systems*
- CHBE 281/ENST 281 *Engineering Sustainable Communities*
- ENST 302/SOCI 304 *Environmental Issues: Rice into the Future*
- ESCI 513 *Seminar: Topics Related to the Earth's Deep Interior*
- POLI 331 *Environmental Politics and Poilcy*
- POLI 432 *Urban Politics*
- POLI 441/ENST 441 *Common Property Resources*
- STAT 485 *Environmental Statistics and Decision Making*

DESIGN PRACTICUM
Students are required to enroll in a 1-credit (integrative) independent study for one semester, typically fall of the senior year. Students in engineering and architecture who must take a senior design course will typically fulfill this requirement by preparing a report that describes the incorporation of sustainability concepts into their design effort, in consultation with the senior (capstone) design course instructor. Students not engaged in a suitable design project will either consult with an extant design group or pursue a project related to their own area of study in consultation with the advisors for this interdisciplinary minor.

Last Revised : August 03, 2015

Undergraduate Students
Graduate Students
Non-Traditional Students
Faculty
Programs of Study
Administration and Faculty
Important Notices

Energy and Water Sustainability

The George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Course Schedule.

Last Revised : August 03, 2015

Engineering Leadership

The George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Executive Director
Kazimir Karwowski

Faculty Director
TBA

Degrees Offered: None

The mission of the Rice Center for Engineering Leadership (RCEL) is to educate and develop Rice Engineers to become inspiring leaders, exceptional team members, effective communicators, and bold entrepreneurs. RCEL programming enhances traditional undergraduate education by developing skills that are not expressly covered by the traditional curricula from the School of Engineering. Ultimately, the goal of the RCEL Certificate Program in Engineering Leadership is to equip engineering students with the critical technical, communication, and leadership skills necessary succeed and excel professionally.

The Certificate Program is designed to familiarize undergraduate students with key leadership concepts and allow them to practice the skills necessary to function effectively in a variety of leadership roles – research, academia, executive management, policy-making, and entrepreneurship. Through coursework, extra-curricular activities, internship support, and community events, the Certificate Program lays a foundation for leadership advancement within 3-5 years of graduation. RCEL programming covers a range of important competency domains, including such topics as creative problem solving, conflict resolution, developing self-awareness, setting goals, project management, oral/written communication, and teamwork.

The Certificate Program culminates in the creation of a comprehensive Leadership Portfolio, which documents the personal, academic, and professional growth of the student over the course of his or her time in the program. As a requirement for the Certificate, each student must deliver a final Senior Leadership Presentation that synthesizes and expands upon the information included in the Leadership Portfolio.

In order to fulfill the requirements for the Certificate in Engineering Leadership, undergraduate students must successfully complete 10 credit hours of progressive coursework, in addition to several designated non-course requirements, including a Leadership Development Plan, Senior Leadership Presentation, and professional internship. Upon satisfactory completion of ALL requirements, the Certificate in Engineering Leadership will be formally recognized on the official transcript of the student. Only Engineering majors (declared or anticipated) are eligible to receive the Certificate.

Last Revised : August 03, 2015

- Undergraduate Students
- Graduate Students
- Non-Traditional Students
- Faculty
- Programs of Study
- Administration and Faculty
- Important Notices

Engineering Leadership

The George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for the Certificate in Engineering Leadership

Students graduating from this program will:

1. Develop and articulate a personal point of view about what leadership means and how it is effectively practiced in engineering environments.
2. Learn how to be valuable team members in engineering environments.
3. Learn how to be capable team leaders in engineering environments.
4. Communicate strategically in engineering and other interpersonal contexts.
5. Increase their self-awareness and confidence about who they are and what they are able to achieve in their professional careers.
6. Position themselves for first jobs that align with their unique strengths and self-directed career ambitions.

Requirements for the Certificate in Engineering Leadership

10 credit hours; timing is flexible; students must earn a "C" or better in each course

- ENGI 140 *Engineering Leadership Development* (2 credit hours)
- ENGI 218/219 *Leadership Lab I & II* (2 credits hours total)
- ENGI 315 *Leading Teams & Innovation* (3 credit hours)
- ENGI 241 *Professional Excellence for Engineers* (1 credit hours)
- ENGI 317 *Leadership Action Learning* (2 credit hours) **OR** ENGI 318/319 *Advanced Leadership Labs I & II* (2 credit hours total)

Recommended Electives

- ENGI 120 *Introduction to Engineering Design*
- ENGI 128 *Introduction to Engineering Systems*
- ENGI 242 *Communication for Engineers*
- ENGI 303 *Engineering Economics*
- ENGI 320 *Ethics and Engineering Leadership*
- ENGI 428 *Entrepreneurship Independent Study*
- ENGI 505 *Engineering Project Management and Ethics*
- BUSI 310 *Leading People in Organizations*

Last Revised : August 06, 2015

Engineering Leadership

The George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

For the most current course offerings, please click here: Engineering Leadership.

Last Revised : May 20, 2015

Materials Science and NanoEngineering

The George R. Brown School of Engineering

Chair
Pulickel Ajayan

Associate Chair
Jun Lou

Professors
Enrique V. Barrera
Edwin L. Thomas
Boris I. Yakobson

Assistant Professors
Emilie Ringe
Ming Tang

Professors Emeriti
Rex B. McLellan

Professor in the Practice
Peter Loos

Joint Appointments
Pedro Alvarez
Andrew Barron
Yildiz Bayazitoglu
Lisa Biswal
Naomi Halas
Junichiro Kono
Qilin Li
Angel Marti-Arbona
John T. McDevitt
Antonios G. Mikos
Emilia Morosan
Satish Nagarajaiah
Doug Natelson
Peter Nordlander
Matteo Pasquali
Gus Scuseria
Rouzbeh Shahsavari
Pol Spanos
Isabell Thomann
James M. Tour
Rafael Verduzco
Bruce Weisman
Peter G. Wolynes
Michael S. Wong
Eugene Zubarev

Faculty Fellows
Wade Adams
Robert Hauge
Alberto Pimpinelli
Robert Vajtai

Adjunct Professors
Ghaithan Al-Muntasheri
Lijie Ci
Feng Ding
Brent Houchens
Ahmad Kabbani
Valery Khabashesku
Sendurai Mani
Abhishek Singh

Degrees Offered: BA, BSMSNE, MMSNE, MS, PhD

Studies in Materials Science and NanoEngineering may lead to specialization in one of several areas, including Biomaterials, Carbon Nanomaterials Composites, Computational Materials Science and Material Theories, Electron Microscopy and in situ Methods, Electronic Materials, Energy Conversion and Storage, Low Dimensional Materials, Mechanical Properties and Nanomechanics, Nanotechnology, Optical Materials, Photonics and Nanoplasmonics, Surfaces, Interfaces, Coatings and Thin Films, and Ultralight-Weight Ultrahigh-Strength Multifunctional Materials.

The graduate program offers a professional degree in Materials Science and NanoEngineering. Graduate students also may pursue research degrees. Faculty research areas please go to MSNE website. The graduate program, in its comprehensive educational and research activities, collaborates with other departments at Rice and other institutions and industry in Houston, including those in the Texas Medical Center. Collaborations are also extended to universities in the United States, Europe, China, Japan, Mexico, and South America. International collaborations include joint research activities and faculty and student visitor exchanges.

Last Revised : August 03, 2015

Materials Science and NanoEngineering

The George R. Brown School of Engineering

Program Learning Outcomes for BS in Materials Science and NanoEngineering (BSMSNE)

Students graduating from this program will able to demonstrate:

1. An ability to apply knowledge of mathematics, science, and engineering.
2. An ability to design and conduct experiments, as well as to analyze and interpret data.
3. An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
4. An ability to function on multidisciplinary teams.
5. An ability to identify, formulate, and solve engineering problems.
6. An understanding of professional and ethical responsibility.
7. An ability to communicate effectively.
8. The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
9. A recognition of the need for, and an ability to engage in life-long learning.
10. A knowledge of contemporary issues.
11. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Degree Requirements for BA, BS in Materials Science and NanoEngineering

For general university requirements, see Graduation Requirements. The BA program in materials science and nanoengineering is highly flexible, involves less technical content than the BS, and allows students greater freedom to pursue areas of interest outside of engineering.

BA with a Major in Materials Science and NanoEngineering Program

Students seeking the BA degree with a major in materials science and nanoengineering must complete at least 51 hours in courses specified by the department plus additional hours for a total of 121 hours at graduation.

REQUIRED PREREQUISITES IN MATERIALS SCIENCE & NANOENGINEERING

- MATH 101 **and** 102 *Single Variable Calculus I and II*
- PHYS 101 *Mechanics (with Lab)* **and** PHYS 103 *Mechanics Discussion* **or** PHYS 111 *Mechanics (with Lab)*
- PHYS 102 *Electricity and Magnetism (with Lab)* **and** PHYS 104 *E & M Discussion* **or** PHYS 112 *Electricity and Magnetism (with Lab)*
- MATH 211 *Ordinary Differential Equations and Linear Algebra*
- MATH 212 *Multivariable Calculus*
- CHEM 121/122 *General Chemistry I and II* **or** CHEM 123/124 *General Chemistry I and II (with Lab)*

CORE COURSES MATERIALS SCIENCE AND NANOENGINEERING

- MSNE 201 *Introduction to NanoEngineering*
- MSNE 301 *Introduction to Materials Science*
- MSNE 303 *Materials Science Junior Lab*
- MSNE 311 *Materials Selection and Design*
- MSNE 401 *Thermodynamics and Transport Phenomena in Materials Science*

- MSNE 402 *Mechanical Properties of Materials*
- MSNE 406 *Physical Properties of Solids*
- MSNE 435 *Crystallography and Diffraction*

Bachelor of Science in Materials Science and NanoEngineering

Students seeking the BSMSNE must complete at least 87 semester hours in general math and science, core, and specialization elective courses within the total requirements of 130 hours.

REQUIRED PREREQUISITES IN MATERIALS SCIENCE & NANOENGINEERING

- MATH 101 **and** 102 *Single Variable Calculus I and II*
- PHYS 101 *Mechanics (with Lab)* **and** PHYS 103 *Mechanics Discussion* **or** PHYS 111 *Mechanics (with Lab)*
- PHYS 102 *Electricity and Magnetism* ***and*** *PHYS 104 E & M Discussion (with Lab)* **or** PHYS 112 *Electricity and Magnetism (with Lab)*
- MATH 211 *Ordinary Differential Equations and Linear Algebra*
- MATH 212 *Multivariable Calculus*
- CHEM 121/122 *General Chemistry I and II* **and** CHEM 123/124 *General Chemistry I and II (with Lab)*
- CAAM 210 *Introduction to Engineering Computation*
- CAAM 335 *Matrix Analysis*
- PHYS 201 *Waves and Optics* **or** CHEM 211/213 *Organic Chemistry I/Organic Chemistry Discussion* **or** CHEM 311 *Physical Chemistry I*

CORE COURSES MATERIALS SCIENCE AND NANOENGINEERING

- MSNE 201 *Introduction to NanoEngineering*
- MSNE 301 *Introduction to Materials Science*
- MSNE 303 *Materials Science Junior Lab*
- MSNE 311 *Materials Selection and Design*
- MSNE 401 *Thermodynamics and Transport Phenomena in Materials Science*
- MSNE 402 *Mechanical Properties of Materials*
- MSNE 406 *Physical Properties of Solids*
- MSNE 407 *Capstone Design Project I*
- MSNE 408 *Capstone Design Project II*
- MSNE 411 *Metallography and Phase Relations*
- MSNE 415 *Ceramics and Glasses*
- MSNE 435 *Crystallography and Diffraction*
- MSNE 437 *Crystallography & Diffrac Lab*
- MSNE 450 and 451 *Materials Science Seminar*

ELECTIVES

For additional information regarding elective offerings, please see the Materials Science and NanoEngineering website.

SPECIALIZATION CLUSTER ELECTIVE: ENGINEERING

Choose one course from the following:

- BIOE 370 *Biomechanics*
- CAAM 336 *Differential Equations in Science and Engineering*
- CAAM 378 *Introduction to Operations and Research and Optimization*
- CAAM 501 *Analysis I*
- CAAM 519 *Computational Science I*
- CEVE 310 *Principles of Environmental Engineering*
- CEVE 311/MECH 311 *Mechanics of Solids and Structures*
- CEVE 427/MECH 427 *Computational Structural Mechanics and FEM*
- CEVE 434 *Fate and Transport of Containments in the Environment*
- CHBE 390 *Chemical Kinetics and Reactor Design*
- CHBE 401 *Transport Phenomena I*
- ELEC 241 *Fundamentals of Electrical Engineering I*
- ELEC 243 *Electronic Measurement Systems*
- ELEC 261 *Electronic Materials and Quantum Devices*
- ELEC 361 *Quantum Mechanics for Engineers*
- ELEC 462 *Optoelectronic Devices*
- ENGI 302 *Sustainable Design*
- ENGI 303 *Engineering Economics*

- MECH 211/CEVE 211 *Engineering Mechanics*
- MECH 403 *Computer Aided Design*
- MECH 417/CEVE 417 *Finite Element Analysis*
- MECH 481 *Heat Transfer*
- STAT 280 *Elementary Applied Statistics*
- STAT 305 *Introduction to Statistics for Biosciences*

SPECIALIZATION CLUSTER ELECTIVE: SCIENCE
Choose one course from the following:

- ASTR 201 *Stars, Galaxies, and the Universe*
- ASTR 202 *Exploration of the Solar System*
- BIOC 201 *Introductory Biology*
- BIOC 301 *Biochemistry I*
- BIOC 313 *Introductory Synthetic Biology*
- BIOC 385/NEUR 385 *Fundamentals of Cellular and Molecular Neuroscience*
- CHEM 211/CHEM 213 *Organic Chemistry I/Organic Chemistry Discussion*
- CHEM 212 *Organic Chemistry II*
- CHEM 311 *Physical Chemistry I*
- CHEM 330 *Analytical Chemistry*
- CHEM 360 *Inorganic Chemistry*
- ESCI 307/CEVE 307/ENST 307 *Energy and the Environment*
- ESCI 321 *Earth System Evolution and Cycles*
- MATH 302 *Elements of Analysis*
- MATH 355 *Linear Algebra*
- PHYS 201 *Waves and Optics*
- PHYS 202 *Modern Physics*
- PHYS 301 *Intermediate Mechanics*
- PHYS 302 *Intermediate Electrodynamics*
- PHYS 355 *Introduction to Biological Physics*

SPECIALIZATION CLUSTER ELECTIVE: TECHNICAL COURSE
Choose two courses from the following:

- MECH 211/CEVE 211 *Engineering Mechanics*
- MSNE 365/ELEC 365 *Nanomaterials for Energy*
- MSNE 433 *Computational Materials Modeling*
- MSNE 523 *Properties, Synthesis, and Design of Composite Materials*
- MSNE 538/CEVE 538 *Computational Nanoscience for Green Infrastructure*
- MSNE 545 *Thin Films*
- MSNE 555 *Materials in Nature and Bio-Mimetic Strategies*
- MSNE 560 *Colloidal and Interfacial Phenomena*
- MSNE 569 *Science and Applications of Corrosion Science and Engineering*
- MSNE 580 *Microscopy Methods in Materials Science*
- MSNE 581 *Micro and Nano Heat Transport Methodologies and Design*
- MSNE 593 *Introduction to Polymer Physics and Engineering*
- MSNE 594 *Properties of Polymers*
- MSNE 650 *Nanomaterials and Nanomechanics*
- MSNE 661 *Nanophotonics, Spectroscopy, and Materials for Sustainability*

Last Revised : August 14, 2015

- Undergraduate Students
- Graduate Students
- Non-Traditional Students
- Faculty
- Programs of Study
- Administration and Faculty
- Important Notices

Materials Science and NanoEngineering

The George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Degree Requirements for MMSNE, MS, and PhD in Materials Science and NanoEngineering

Professional Degree Programs—The Professional Master's of Material Science and NanoEngineering (MMSNE) program is open to students who have shown academic excellence in their undergraduate studies. This non-thesis degree option is designed for engineers who have attained a bachelor's degree and are looking to further their careers in industry. They combine engineering coursework with professional development and communications. For general university requirements, see Graduate Degrees. For the MMSNE degree, students must complete 30 semester credit hours of course work, at least 24 must be taken at Rice. A list of required and suggested courses are available on the MSNE website . Students should develop a specific plan of study based on their particular interests and discussions with their advisor.

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. 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.

Each graduate student is expected to render research and/or instructional assistance to the department not to exceed 10 hours per week. Graduate student work assignments will be made by the advisor at the beginning of each semester.

All graduate students (except professional master's students) must attend at least 75 percent of the MSNE seminars. For details, please see the degree requirements on the MSNE website.

Program Learning Outcomes for the Professional Master's Degree (MMSNE)

Graduates awarded the MMSNE degree will be able to:

1. Acquire broad, advanced knowledge within either Materials Science or NanoEngineering, whic is also in-depth in one major sub-discipline of the field.
2. Conduct research at an advanced level in at least one area of Materials Science and Nanoengineering.
3. Communicate scientific ideas effectively in writing and when speaking.
4. Demonstrate the ability to gain admission to a graduate or professional program, if interested in pursuing further education careers.
5. Demonstrate the ability to gain employment or advancement in a technical field related to Materials Science and NanoEngineering, if pursuing non-academic careers.

Degree Requirements for the Professional Master's Degree (MMSNE)

Students are expected to complete 30 semester credit hours of courses approved by the department (a one-semester course is usually awarded three semester credit hours), at least 24 must be taken at Rice. All courses must be at or above the 500 level. Requirements and specific courses to be taken depend on each student's field of study. Students must discuss their individual degree plans and programs of study with their advisors. For details,

please see the degree requirements on the MSNE website.

See Graduation Requirements, for total semester hours required by Rice University.

Program Learning Outcomes for the Master of Science (MS) Degree

Graduates awarded the terminal MS degree in Materials Science and NanoEngineering will be able to:

1. Demonstrate an advanced command of Materials Science and NanoEngineering field work.
2. Conduct independent research that demonstrates advanced mastery of a subfield within Materials Science or NanoEngineering.
3. Communicate scientific ideas effectively in writing and when speaking.

Degree Requirements for the MS Degree

Full-time students seeking the MS degree are expected to complete all the requirements for the degree within two calendar years into the program. Continuation in the program beyond this time limit will require special approval of the department.

All entering graduate students pursuing a thesis degree program will be subject to a preliminary evaluation of their candidacy for the highest degree program they intend to pursue. The evaluation will be conducted by the end of the second semester of enrollment in the graduate program in the MSNE department.

Each candidate for the MS degree must complete a thesis demonstrating ability in research of a fundamental nature (analytical or experimental). It is expected that the research will be of sufficient importance and quality that positive results would lead to publication. The examination will be conducted by a committee consisting of at least three members. Two, including the advisor, must be MSNE faculty members, and one must be a faculty member from another department.

The minimum course work requirement is 18 semester credit hours (a one-semester course is usually awarded three semester credit hours)

For details, please see the degree requirements on the MSNE website.

Program Learning Outcomes for the Doctor of Philosophy (PhD) Degree

Graduates awarded the PhD degree in Materials Science and NanoEngineering will be able to:

1. Demonstrate an advanced command of Materials Science and NanoEngineering field work.
2. Conduct independent research that demonstrates advanced mastery of a subfield within Materials Science or NanoEngineering.
3. Communicate scientific ideas effectively in writing and when speaking.

Degree Requirements for the PhD Degree

Full-time students seeking the PhD degree are expected to complete all the requirements for the degree within five calendar years following entrance into the program. Continuation in the program beyond this time limit will require special approval of the department.

All entering graduate students pursuing a thesis degree program will be subject to a preliminary evaluation of their candidacy for the highest degree program they intend to pursue. The evaluation will be conducted by the end of the second semester of enrollment in the graduate program in the MSNE department.

By the end of the sixth semester of enrollment in the graduate program in the MSNE department, the student must pass an oral qualifying examination.

Each candidate for the PhD degree must complete a thesis that constitutes an original contribution to scientific knowledge (analytical or experimental). It is expected that the research will be of sufficient importance and quality that positive results would lead to publication. On completion of the thesis, each candidate for the PhD degree must pass a final public oral examination. The examination will be conducted by a committee consisting of at least three members. Two, including the advisor, must be MSNE faculty members, and one must be a faculty member from another department.

The minimum course work requirement is 18 semester credit hours (a one-semester course is usually awarded three semester credit hours)

For details, please see the degree requirements on the MSNE website.

Last Revised : August 03, 2015

Materials Science and NanoEngineering

The George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Materials Science and NanoEngineering.

Last Revised : August 03, 2015

Mechanical Engineering

The George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Chair
Laura Schaefer

Professors
John E. Akin
Yildiz Bayazitoglu
Fathi Ghorbel
Andrew J. Meade
Marcia K. O'Malley
Pol D. Spanos
Tayfun E. Tezduyar

Assistant Professors
Andrew Dick

Professors Emeriti
Michael M. Carroll
Angelo Miele
Chao-Cheng Wang

Lecturers
Leroy Chiao
Nancy Currie
Mark Jackson
Lisa Moore

Professors, Joint Appointments
Satish Nagarajaiah

Assistant Professors, Joint Appointments
Ilinca Stanciulescu

Adjunct Professors
Sarmed Adnan
Aladin Boriek
James Dabney
Thomas J. R. Hughes
Michael Massimino
William Miller
Steven Rickman

Adjunct Associate Professors
Kenji Takizawa
David Woffinden

Degrees Offered: BA, BSME, MME, MS, and PhD

Undergraduate studies in mechanical engineering can lead to specialization in one or more of a diverse set of areas, including aerospace engineering, biomedical systems, computational fluid dynamics, computational mechanics, fluids-thermal science, mechanical design, mechanics, robotics, systems dynamics and controls.

The graduate program offers professional degrees in mechanical engineering, which permits specialization in the areas previously mentioned. Graduate students also may pursue research degrees. Faculty research areas are indicated in the previous paragraph. A coordinated MBA/Master of Mechanical Engineering degree is available in conjunction with the Jesse H. Jones Graduate School of Business.

The graduate program, in its comprehensive educational and research activities, collaborates with other departments at Rice and other institutions in Houston, including those in the Texas Medical Center. Collaborations also are extended to universities in the United States, Europe, Japan, Mexico, and South America. International collaborations include joint research activities and faculty and student visitor exchanges.

Last Revised : August 03, 2015

Mechanical Engineering

The George R. Brown School of Engineering

Program Learning Outcomes for BS in Mechanical Engineering

Graduates awarded the BS in Mechanical Engineering will be able to demonstrate:

1. An ability to apply knowledge of mathematics, science, and engineering.
2. An ability to design and conduct experiments, as well as to analyze and interpret data.
3. An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
4. An ability to function on multidisciplinary teams.
5. An ability to identify, formulate, and solve engineering problems.
6. An understanding of professional and ethical responsibility.
7. An ability to communicate effectively.
8. The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
9. Recognition of the need for, and an ability to engage in life-long learning.
10. A knowledge of contemporary issues.
11. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Degree Requirements for BA and BS in Mechanical Engineering

The BS program prepares students for the 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. The program's goals and objectives are available on the departmental website. For general university requirements, see Graduation Requirements.

The BA program in mechanical 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 BA degree is not accredited by the Engineering Accreditation Commission of ABET. For general university requirements, see Graduate Requirements.

BS in Mechanical Engineering Program

The Bachelor of Science in Mechanical Engineering (BSME) program is accredited by the Engineering Accreditation Commission (EAC) of ABET, www.abet.org. Lists of representative undergraduate courses and the usual order in which they are taken are available from the department. The BSME degree contains a core of required courses and selected electives from one of five specialization areas. The requirements (for a total of 132 hours) are:

BASIC MATH AND SCIENCE COURSES (30 credit hours)

- CHEM 121 *General Chemistry I*
- CHEM 122 *General Chemistry II*
- CHEM 123 *General Chemistry Lab I*
- CHEM 124 *General Chemistry Lab II*
- MATH 101 *Single Variable Calculus I*
- MATH 102 *Single Variable Calculus II*
- MATH 211 *Ordinary Differential Equations and Linear Algebra*
- MATH 212 *Multivariable Calculus*
- MSNE 301 *Materials Science*

PHYS 101 *Mechanics (with Lab)*
- PHYS 102 *Electricity and Magnetism (with Lab)*
- PHYS 103 *Mechanics Discussion*
- PHYS 104 *E & M Discussion*

COMPUTATIONAL AND APPLIED MATHEMATICS (nine credit hours)

- CAAM 210 *Engineering Computation*
- CAAM 335 *Matrix Analysis*
- CAAM 336 *Differential Equations in Science and Engineering*

SENIOR DESIGN (seven credit hours)

- MECH 407 *Mechanical Design Project I*
- MECH 408 *Mechanical Design Project II*

LABS (four credit hours)

- MECH 331 *Junior Laboratory I*
- MECH 332 *Junior Laboratory II*
- MECH 340 *Industrial Process Lab*
- MECH 431 *Senior Laboratory I*

MECHANICAL ENGINEERING (31 credit hours)

- MECH 200 *Classical Thermodynamics*
- MECH 211/CEVE 211 *Engineering Mechanics*
- MECH 311/CEVE 311 *Mechanics-Deformable Solids*
- MECH 343 *Modeling of Dynamic Systems*
- MECH 371 *Fluid Mechanics I*
- MECH 401 *Machine Design*
- MECH 412 *Vibrations*
- MECH 420/ELEC 436 *Fundamentals of Control Systems*
- MECH 472 *Thermal Systems Design*
- MECH 481 *Heat Transfer*

LIMITED ELECTIVES
Choose three credit hours from the following:

- STAT 305 *Introduction to Statistics for Biosciences*
- STAT 310/ECON 307 *Probability and Statistics*
- STAT 331 *Applied Probability*

TECHNICAL ELECTIVES (nine credit hours)

DISTRIBUTION ELECTIVES (24 credit hours)

FREE ELECTIVES (15 credit hours)

Technical Electives
Students are required to take a total of three technical electives. A minimum of two of these courses must come from Group A. The remaining course can come from Group A or B. Group A courses are fundamental courses in the following focus areas: aerospace engineering (AE), computational engineering (CompE), fluid mechanics and thermal science (FT), solid mechanics and materials (SMM), and system dynamics and control (SDC). Group B courses are additional technical electives that complement the focus areas listed above.

Group A

- MECH 400/CEVE 400 *Advanced Mechanics of Materials* (SMM)
- MECH 403 *Computer Aided Design* (CompE, SMM)
- MECH 411 *Dynamics and Control of Mechanical Systems* (SDC)
- MECH 417/CEVE 417 *Finite Element Analysis* (CompE)
- MECH 454/BIOE 454/CEVE 454 *Computational Fluid Mechanics* (AE, CompE, FT)
- MECH 474 *Advanced Computational Mechanics* or

- MECH 555 *Computational Fluid-Structure Interaction* (AE, FT, CompE)
- MECH 488 *Design of Mechatronic Systems* (SDC)
- MECH 498/COMP 498/ELEC 498 *Introduction to Robotics* (SDC)
- MECH 594 *Introduction to Aerodynamics* (AE,FT)
- MSNE 402 *Mech Properties of Materials* (SMM)

Group B

Any 300+ course offered by any department within the School of Engineering, or any 300+ course offered by the School of Engineering (ENGI courses)

BA with a Major in Mechanical Engineering Program

Students seeking the BA degree with a major in mechanical engineering must complete 120 hours with at least 67 semester hours in courses specified by the department, along with 24 hours of university distribution electives and 29 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 331 and MECH 340 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 24 major and nine elective hours for 33 hours.

SOPHOMORE YEAR

Same as BS (except MECH 331 and 340 are not required), with 18 major and 15 elective hours for 33 hours.

JUNIOR AND SENIOR YEARS

25 major and 29 electives for 54 hours. The following courses are required in junior and senior years:

- CAAM 335 *Matrix Analysis*
- CAAM 336 *Differential Equations in Science and Engineering*
- MECH 343 *Modeling of Dynamic Systems*
- MECH 371 *Fluid Mechanics I*
- MECH 401 *Machine Design Applications*
- MECH 412 *Vibrations*
- MECH 420/ELEC 436 *Fundamentals of Control Systems*
- MECH 481 *Heat Transfer*

Last Revised : August 21, 2015

Mechanical Engineering

The George R. Brown School of Engineering

Degree Requirements and Program Learning Outcomes for MME, MS, and PhD in Mechanical Engineering

Professional Degree Program—The professional master's degree in Mechanical Engineering (MME) is a non-thesis degree program intended for students who have completed a 4-year bachelor's program in engineering and wish to join the workforce as practicing professionals, rather than pursuing a research oriented or academic career. It offers preparation in advanced engineering topics in order to enhance an engineer's technical qualifications and increases competitiveness in the job market. The MME program is open to students who have shown academic excellence in their undergraduate studies. Students who have a BS or BA degree in any field of engineering or related study may apply, although some may need to fulfill prerequisites or take remedial courses to earn the MME degree. Students may enroll on a full or part-time basis.

For the MME, degree students must complete 30 semester hours of course work at the 500 level or higher. Lists of required and suggested courses are available from the department. Students should develop a specific plan of study based on their particular interests and discussions with their advisor.

For general university requirements, see Graduate Degrees.

Research Degree Programs—The programs leading to the Master of Science (MS) and Doctor of Philosophy (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.

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.

For general university requirements, see Graduate Degrees.

As part of their degree requirements, graduate students are expected to provide instructional assistance to the department not to exceed 10 hours per week. The department chair will assign graduate student work at the beginning of each semester.

All graduate students (except professional master's students, MME) must attend at least 75 percent of the Mechanical Engineering seminars. For details, please see the degree requirements on the mech.rice.edu.

Program Learning Outcomes for the Professional Master's Degree (MME)

Graduates awarded the MME in Mechanical Engineering will be able to:

1. Demonstrate an advanced command of Mechanical Engineering fieldwork.
2. Apply professional standards and exercise ethical judgment.
3. Communicate scientific ideas effectively in writing and when speaking.
4. Recognize the need for, and ability to engage in life-long learning.

Degree Requirements for the Professional Master's Degree (MME)

Students must complete 30 semester hours of approved coursework at the 500 level or higher. Of these courses at least 24 hours must be taken at Rice University.

A minimum of 18 credit hours from the "MME Course Set" established by the department:

- MECH 501 *Dynamics and Control of Mechanical Systems* **OR** MECH 508 *Nonlinear Systems: Analysis and Control*
- MECH 502 *Vibrations*
- MECH 517 *Finite Element Analysis*
- MECH 554/BIOE 554/CEVE 554 *Computational Fluid Mechanics*
- MECH 582 *Convective Heat Transfer*
- MECH 588 *Design of Mechatronic Systems* **OR** MECH 598 *Introduction to Robotics*
- MECH 594 *Introduction to Aeronautics*
- MECH 665 *Analysis of Vibrations in Nonlinear Systems* **OR** MECH 667 *Nonlinear Dynamic Behavior in Mechanic Systems and Structures*

The remaining credit hours will be elective 500+ level courses approved by the advisor and the department, some of which could be from outside the department. None of the remaining required 12 credit hours can be Independent-Study (MECH 611 or MECH 612) or MME Research Project (MECH 621 or MECH 622) classes.

Degree at Entrance	4-year BS	4-year BA
Minimum graduate level semester hours required (course work)	30	30

See Graduation Requirements, for total semester hours required by Rice University. Students must complete their degree within 5 years of beginning the program. Most full time students complete the program in three semesters.

Program Learning Outcomes for the MS and PhD Degree

Graduates awarded the PhD in Mechanical Engineering will be able to:

1. Apply the technical skills required by industrial and governmental organizations to solve mechanical engineering problems at an advanced level.
2. Conduct research that demonstrates advanced mastery of a subfield within Mechanical Engineering.
3. Communicate scientific ideas effectively in writing and when speaking.
4. Understand and exhibit professional and ethical responsibility.
5. Recognize the need to engage in life-long learning.
6. Recognize and understand the role of leadership.

Degree Requirements for MS in Mechanical Engineering

Students seeking the MS degree are expected to complete all the requirements for the degree within two calendar years following entrance into the program. Continuation in the program beyond this time limit will require special approval of the department.

All entering graduate students pursuing a thesis degree program will be subject to a preliminary candidacy evaluation for the highest degree program they intend to pursue. The evaluation will be conducted by the end of the second semester of enrollment in the graduate program in the Mechanical Engineering department.

Each candidate for the MS degree must complete a thesis demonstrating ability in research of a fundamental nature (analytical, numerical, or experimental). It is expected that the research will be of sufficient importance and quality that positive results would lead to publications. A committee consisting of at least three members will conduct the examination. Two, including the committee chair, must be members of the department.

The minimum semester hours of course work (a one-semester course is usually three semester hours credit) required for the MS degree is tabulated below as a function of the degree held on entrance into the program. Research and thesis hours, as well as seminar hours, do not count towards these course requirements but do count toward the minimum requirement that a student complete 30 credit hours at the 500 level or above. In all cases, a student's specific course of study is formulated in consultation with the departmental advisor (thesis director) and must be approved by the department.

Degree at Entrance	5-year	4-year BS	4-year BA

Minimum graduate level semester hours required (course work)	12	18	24

For details, please see the degree requirements on the Mechanical Engineering website.

Degree Requirements for PhD in Mechanical Engineering

Students seeking the PhD degree are expected to complete all the requirements for the degree within five calendar years following entrance into the program. Continuation in the program beyond this time limit will require special approval of the department.

All entering graduate students pursuing a thesis degree program will be subject to a preliminary evaluation of their candidacy for the highest degree program they intend to pursue. The evaluation will be conducted by the end of the second semester of enrollment in the graduate program in the Mechanical Engineering department.

By the end of the third year of enrollment in the graduate program in the Mechanical Engineering department, the student must pass an oral qualifying examination.

Each candidate for the PhD must complete a thesis that constitutes an original contribution to scientific knowledge (analytical, numerical or experimental). It is expected that the research will be of sufficient importance and quality that positive results would lead to publications. On completion of the thesis, each candidate for the PhD degree must pass a final public oral examination. The examination will be conducted by a committee consisting of at least four members. Three, including the committee chair, must be members of the department. One member must be from another department within the university.

The minimum semester hours of course work (a one-semester course is usually three semester hours credit) required are tabulated below as a function of the degree held on entrance into the program. In all cases, a student's course of study is formulated in consultation with the thesis director and must be approved by the department.

Degree at Entrance	MS	5-year	BS	BA
Minimum graduate level semester hours required (course work)	18	30	36	42

For details, please see the degree requirements on the Mechanical Engineering website.

Last Revised : August 06, 2015

- Undergraduate Students
- Graduate Students
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Mechanical Engineering

The George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Mechanical Engineering.

Last Revised : August 03, 2015

Statistics

The George R. Brown School of Engineering

Chair
Marina Vannucci

Professors
Dennis Cox
Katherine B. Ensor
Rudy Guerra
Mark Kimmel
David Scott
James R. Thompson

Assistant Professors
Genevera Allen
Philip Ernst
Michael Schweinberger

Professor in the Practice
John A. Dobelman

Senior Lecturer
E. Neely Atkinson

Professors, Joint Appointments
Bryan W. Brown
Mahmoud El-Gamal
Don H. Johnson
Krishna Palem
Robin Sickles
Edward E. Williams
Rick K. Wilson

Associate Professors, Joint Appointments
David M. Lane
Barbara Ostdiek

Research Professor
Erzsébet Merényi

Senior Faculty Fellow
Janet Siefert

Faculty Fellow
Loren Raun

Adjunct Professors
Donald A. Berry
Barry Brown
Scott Cantor
Kim-Anh Do
Richard Heydorn
Sallie Keller
Suzanne Leal
J. Jack Lee
Jeff Morris
Yu Shen
Peter Thall

Adjunct Associate Professors
Veera Baladandayuthapani
Xuelin Huang
Bonnie Ray
Ying Yuan

Adjunct Assistant Professors
Michele Guindani
Chad A. Shaw
Francesco Stingo
Hadley Wickam

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 application 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. Graduate study has concentrations in applied probability, Bayesian methodology, bioinformatics, biomathematics, biostatistics, computational finance, epidemiology, large and complex data, machine and statistical learning, quality control, statistical computing, spatial and, stochastic processes, and time series analysis. A coordinated MBA/professional master of statistics degree also is available in conjunction with the Jesse H. Jones Graduate School of Business.

Last Revised : August 03, 2015

Statistics

The George R. Brown School of Engineering

Program Learning Outcomes for BA in Statistics

Graduates awarded the BA in Statistics will be able to demonstrate:

1. Ability to make informed decisions in a professional or research setting from data sets containing pertinent information.
2. Preparation in mathematical and computational statistics for advanced study in statistics.
3. Awareness of interdisciplinary statistical research and application methodologies.

Degree Requirements for BA in Statistics

For general university requirements, see Graduation Requirements. The degree requirements in statistics are:

CORE COURSES

- MATH 101 *Single Variable Calculus I*
- MATH 102 *Single Variable Calculus II*
- MATH 212 *Multivariable Calculus*
- One class from the following:
  i. CAAM 335 *Matrix Analysis*
  ii. MATH 355 *Linear Algebra*
  iii. CAAM 336 *Differential Equations for Science and Engineering*
- STAT 310/ECON 307 *Probability and Statistics* **OR** STAT 312 *Probability and Statistics for Engineers*
- STAT 405 *Statistical Computing and Graphics*
- STAT 410 *Linear Regression*
- STAT 450 *Senior Capstone Project*

ELECTIVES

Six courses are required at the 300-level or higher:

- Group S, statistics: At least 4 of the 6 electives must be from the statistics department (STAT) or cross-listed with statistics
- Group O, other: no more than 2 of the 6 electives may be from departments other than statistics
  NOTE: They must have a significant statistical, mathematical and/or computer science component and advisor approval is required
- A 3-hour Group O elective may be constructed by combining three 1-hour courses, such as STAT 490 (Independent Study) and STAT 601 (Statistics Colloquium). Only one such course may be applied toward the degree
- STAT 305 and STAT 385 do not count as electives

The department offers a minor in statistics and a collaborative minor in computational finance jointly with the economics department (see Financial Computation and Modeling minor)

Course Requirements for a Minor in Statistics

There are two options available to those wishing to minor in statistics. Track A is designed for mathematically sophisticated students who wish to understand not only how statistical methods are used, but also how they are

developed. Track B is designed to help students develop a working knowledge of statistics and the wide range of possibilities for the use and misuse of statistical methods.

Students must complete at least six courses (a minimum of 18 credit hours).

REQUIRED COURSES

Track A

CORE COURSES

- STAT 310/ECON 307 *Probability and Statistics*
- STAT 405 *Statistical Computing and Graphics*
- STAT 410 *Linear Regression*

ELECTIVES
Suggested electives include the following:

- STAT 313 *Uncertainty and Risk in Urban Infrastructures*
- STAT 411 *Advanced Statistical Methods*
- STAT 418 *Probability*
- STAT 421 *Applied Time Series and Forecasting*
- STAT 422 *Bayesian Data Analysis*
- STAT 423 *Probability in Bioinformatics and Genetics*
- STAT 449 *Quantitative Financial Risk Management*
- STAT 453 *Biostatistics*

Note: STAT 305 and 385 do not count as electives for Track A.

Track B

CORE COURSES .

- STAT 280 *Elementary Applied Statistics* **OR** STAT 305 *Intro to Statistics for the Biosciences*
- STAT 385 *Methods for Data Analysis and System Optimization*

ELECTIVES
Three electives at the 300 level or higher with at least two in Statistics. With advisor approval one elective may be from departments other than Statistics. Suggested electives include the following:

- STAT 405 *Statistical Computing and Graphics*
- STAT 482 *Quantitative Financial Analytics*
- STAT 484/CEVE 484 *Environmental Risk Assessment & Human Health*
- STAT 485 *Environmental Statistics and Decision Making*
- STAT 486 *Market Models*

Note: STAT 280 and STAT 305 do not count as electives for Track B.

No more than three courses can apply from study abroad or transfer credits.

Last Revised : August 05, 2015

Statistics

The George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Degree Requirements and Program Learning Outcomes for MSTAT, MA, and PhD in Statistics

For general university requirements, see Graduate Degrees. Admission 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.

MSTAT, MA in Statistics

Program Learning Outcomes for MSTAT - Students awarded the MSTAT will be able to:

1. Make informed decisions in a professional or research setting from data sets containing pertinent information and effectively communicate these decisions.
2. Understand new statistical methodologies and their impact.
3. Identify interdisciplinary statistical research and application methodologies.

Program Learning Outcomes for MA - Students awarded the MA will be able to:

1. Make informed decisions in a professional or research setting from data sets containing pertinent information and effectively communicate these decisions.
2. Understand new statistical methodologies and their impact.
3. Identify interdisciplinary statistical research and application methodologies.
4. Demonstrate preparation in mathematical and computational statistics for advanced study in statistics.

Degree Requirements for Master's Programs - Candidates for the non-thesis MStat degree must complete 30 semester hours of approved course work. Courses comprising the 30 base hour requirement shall not be taken pass/fail. To comply with University requirements, all 30 hours of course work must be at or above the 500 level. 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 PhD comprehensive examinations, and complete a major project.

- A candidacy MA is awarded to statistics PhD students through option (2) where the major project corresponds to the doctoral thesis proposal.
- An MA is available to PhD students in the Departments of Economics and Political Science through option (1) where the original doctoral thesis and defense was related to the MA in statistics. The degree awarded in statistics is a non-thesis master's.

PhD in Statistics

Program Learning Outcomes for PhD - Students awarded the PhD will be able to:

1. Master statistical theory, computation and application.
2. Make informed decisions in a professional or research setting from data sets containing pertinent information and communicate these decisions effectively.
3. Understand and develop new statistical methodologies and understand their impact. Identify pertinent directions in the field.
4. Participate in interdisciplinary statistical research and application methodologies, and develop leadership skills

in interdisciplinary research.
5. Understand stewardship responsibilities as a professional statistician.
6. Demonstrate leadership potential in statistical science through teaching, technical or managerial ability, and communication skills.
7. Develop the professorial, technical, managerial, and communication skills needed to become leaders in statistical science.

Degree Requirements for 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. All STAT graduate students are assigned a limited amount of teaching and other departmental service as part of their graduate education. The assignment usually entails less than 10 hours per week, averaged over the semester. Students completing the PhD degree in four years will be assigned no more than six semesters of service.

Last Revised : June 26, 2015

Statistics

The George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Statistics.

Last Revised : August 03, 2015

African Studies

The School of Humanities and Social Sciences

Director and Advisor
Kerry Ward

Undergraduate Advisor
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Professors
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Susan McIntosh

Steering Committee
Elias Bongmba
Alexander Byrd
Jeffrey Fleisher
Susan McIntosh
Kerry Ward

Associate Professors
Kerry Ward
Jeffrey Fleisher

Lecturers
Jared Staller

Degrees Offered: None

African Studies is a broad-ranging field that is committed to an interdisciplinary approach to the study of African peoples and their complex histories, cultures, and languages. Drawn from the Schools of Social Science and Humanities, African Studies at Rice University has strengths in archaeological and anthropological research, historical studies, African religions and theology, African arts, and global health technologies. These foci provide a unique opportunity for students broadly interested in historical, cultural, African diaspora studies, and contemporary issues and will attract students preparing for career fields related to their interest in Africa, including academia (potential applicants to graduate school, Fulbright, or other competitive scholarships), development, diplomacy, business and finance, governance, global health, law, and others.

The African Studies minor at Rice will benefit undergraduate students by providing a course of study to explore the richness and complexity of the continent and its place in issues of wider global concern and import. The interdisciplinary course will allow students to traverse departments and schools, creating links between diverse intellectual trajectories. Through study in the African Studies minor, students also can begin to appreciate the relationship contemporary Africa has with the large African Diaspora. Finally, the minor will help students to understand not only the place of Africa in global histories and networks, but the crucial role that it has played in them.

Last Revised : August 03, 2015

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African Studies

The School of Humanities and Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for the Interdisciplinary Minor in African Studies

Students graduating from this program will:

1. Demonstrate the ability to complicate and challenge their understanding of African history, culture, and politics by critically examining the diversity of Africans' own historical and contemporary perspectives.
2. Understand topics in African Studies in their interdisciplinary contexts, including being able to make connections between African religions, cultures, and politics as well as understand reasons for changes to these relationships across historical time.
3. Identify and explain key theoretical developments in African Studies, in addition to being able to identify and apply interdisciplinary methodologies to topics in African Studies.
4. Demonstrate the ability to critically read and evaluate a variety of sources on African religious thought, customs, and spirituality and critically apply their insights from these sources.

Course Requirements for the Interdisciplinary Minor in African Studies

The following requirements apply to the minor in African Studies:

- Students must complete at least six courses (18 credit hours).
- Students must take at least one the following core courses:
  i. RELI 111 *Introduction to African Religions*
  ii. HIST 231 *Introduction to African History: North, West, and Central Africa, Early Times to the Present*
  iii. HIST 232 *Introduction to African History: East, Central and Southern Africa, Early Times to the Present*
  iv. ANTH 312/MDEM 311 *African Prehistory.*
- A list of noncore courses is available from AFST undergraduate advisors.
- At least three courses must be at the 300-level or higher.
- Students must take at least four courses with 100% African content; the remaining two courses must have at least 25% African content.
- No more than three courses can apply from transfer credits.
- Up to two courses of transfer credit in African languages may be applied to the minor; this may include courses on African languages or other individualized study in African languages with advisor approval. 'African languages' does not include the languages of European colonial powers or Arabic. Other languages spoken on the continent, including Afrikaans, will be accepted.
- Together, all African language courses count toward one of the three required departments for the minor. They are considered to have 100% African content.
- Courses must be taken over at least three different departments.

Last Revised : August 03, 2015

African Studies

The School of Humanities and Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Course Schedule.

Last Revised : August 03, 2015

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Ancient Mediterranean Civilizations

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Director and Advisor
Susan Keech McIntosh

Professors
April De Conick
James D. Faubion
Matthias Henze
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Scott McGill
Susan Keech McIntosh
Donald Ray Morrison
Paula Sanders
Charles Siewert
Harvey E. Yunis

Associate Professors
David Cook
Jeff Fleisher
Hilary S. Mackie

Assistant Professors
John Hopkins
Maya Irish

Lecturer
Ted Somerville

Postdoctoral Fellow
David R. Riesbeck

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, the American Research Center in Sofia, 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.

Last Revised : August 03, 2015

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Ancient Mediterranean Civilizations

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for BA in Ancient Mediterranean Civilizations

Students graduating from this program will:

1. Explain the historical trajectory of at least two of these Ancient Mediterranean Civilizations: Graeco-Roman, Islamic, Jewish, Christian.
2. Identify and explain how cultural, political, intellectual, religious, and other aspects of Ancient Mediterranean Civilizations have affected aspects of contemporary societies.
3. Create convincing arguments about one or more aspects of Ancient Mediterranean Civilizations through the evaluation and critical analysis of textual and material evidence.

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 also must 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 Graduation Requirements. Majors in Ancient Mediterranean Civilizations must complete at least 30 semester hours (10 courses). Students 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, please visit the AMC website at amc.rice.edu.

GRAECO-ROMAN CIVILIZATION

- ANTH 325/SWGS 332 *Sex, Self, and Society in Ancient Greece*
- ANTH 363 *Early Civilizations*
- ARCH 383/HIST 383/HART 384 *Sacred Spaces in the Ancient Mediterranean*
- CLAS 101/FSEM 101 *Socrates: The Man and His Philosophy*
- CLAS 107/HUMA 107 *Greek Civilization and Its Legacy*
- CLAS 108/HUMA 111 *Roman Civilization and Its Legacy*
- CLAS 209 *Greek and Roman Drama*
- CLAS 225/SWGS 225 *Women in Greece and Rome*
- CLAS 235 *Classical Mythology: Interpretation, Origins, and Influence*
- CLAS 312 *Greek Art and Architecture*
- CLAS 315 *Roman Art and Architecture*
- CLAS 316 *Democracy and Political Theory in Ancient Greece*
- CLAS 318/HIST 316 *The Invention of Paganism in the Roman Empire*
- CLAS 320 *The Age of Augustus*
- CLAS 336/LING 336 *Intro to Indo-European*

- CLAS 337 *Epic and Novel*
- FSEM 151/HIST 151 *The Hero and His Companion from Gilgamesh to Sam Spade*
- GREE 101 *Elementary Greek I*
- GREE 102 *Elementary Greek II*
- GREE 201 *Intermediate Greek I: Prose*
- GREE 202 *Intermediate Greek: Euripides Medea/Biblical Koine*
- HART 320 *Eighteenth Century European Art*
- HART 384 *Sacred Spaces*
- HIST 200 *Origins of Western Civilizations: Ancient Empires*
- HIST 307 *Imperial Rome from Caesar to Diocletian*
- HIST 308/MDEM 308 *The World of Late Antiquity*
- HIST 357/MDEM 357 *Jews and Christians in Medieval Europe*
- HIST 358 *European Intellectual History from Augustine to Descartes*
- HIST 381/RELI 385 *God, Time, and History*
- HIST 382 *Cultural Trends in Medieval Islam 750-1400*
- HIST 437 *Christians and Jews in the Medieval Islamic World*
- HIST 460 *Advanced Seminar in Ancient History*
- LATI 101/MDEM 101 *Elementary Latin I*
- LATI 102/MDEM 102 *Elementary Latin II*
- LATI 201/MDEM 211 *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 *Ovid: Amores*
- LATI 313 *Cicero and Catullus: Literature and Society in the Roman Republic*
- MDEM 212 *Intermediate Latin II*
- MDEM 308 *The World of Late Antiquity*
- MDEM 357 *Jews and Christians in Medieval Europe*
- RELI 316 *The Invention of Paganism in the Roman Empire*

ISLAMIC CIVILIZATION

- ASIA 221 *The Life of the Prophet Muhammad*
- ASIA 441 *Magic and Popular Religion*
- HIST 382 *Cultural Trends in Medieval Islam 750-1400*
- 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 221 *The Life of the Prophet Muhammad*
- RELI 223 *Qur'an and Commentary*
- RELI 350 *Sacred Scriptures in Monotheistic Faiths*

JEWISH CIVILIZATION

- HIST 381/RELI 385 *God, Time, and History*
- RELI 108 *Introduction to Judaism*
- 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/HEBR 128 *Intermediate Biblical Hebrew II*
- 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/HEBR 128 *Intermediate Biblical Hebrew II*

- RELI 223 *Qur'an and Commentary*
- RELI 243 *The Book of Genesis*
- RELI 282 *Introduction to Christianity*
- RELI 304 *Jesus and the Gospels*
- RELI 306 *Sexuality and Early Christianity*
- RELI 316 *The Ancient New Age*
- RELI 350 *Sacred Scriptures in Monotheistic Faiths*
- RELI 365 *New Testament and Christian Origins*
- RELI 381 *The Messiah*
- RELI 383 *The Dead Sea Scrolls*

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 363 *Early Civilizations*
- FSEM 151/HIST 151 *The Hero and His Companion from Gilgamesh to Sam Spade*
- HART 101 *Introduction to the History of Western Art: Prehistoric to Gothic*
- HIST 200 *Ancient Empires: Origins of Western Civilizations*
- HIST 308 *The World of Late Antiquity*
- HIST 381/RELI 385 *God, Time, and History*
- HIST 358 *European Intellectual History from Augustine to Descartes*
- MDEM 308 *The World of Late Antiquity*
- MDEM 358 *European Intellectual History from Augustine to Descartes*
- PHIL 201/CLAS 201/MDEM 201 *History of Philosophy I*
- PHIL 301/CLAS 301/MDEM 301 *Ancient and Medieval Philosophy*
- PHIL 307 *Social and Political Philosophy*
- PHIL 327 *History of Social and Political Philosophy*

COMPARATIVE

- CLAS 209 *Greek and Roman Drama*
- CLAS 225/SWGS 225 *Women in Greece and Rome*
- CLAS 336/LING 336 *The Origin of the Languages of Europe*
- CLAS 337 *Epic and Novel*
- HIST 357/MDEM 357 *Jews and Christians in Medieval Europe*
- HIST 437 *Christians and Jews in the Medieval Islamic World*
- PHIL 501 *Ancient and Medieval Philosophy*
- SWGS 225 *Women in Greece and Rome*

Last Revised : August 03, 2015

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Ancient Mediterranean Civilizations

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Course Schedule.

Last Revised : August 11, 2014

Art History

The School of Humanities

Chair
Linda Neagley

Professors
Joseph Manca
Diane Wolfthal

Associate Professors
Graham Bader
Robert Leo Costello
Shirine T. Hamadeh
Shih-Shan Susan Huang
Gordon Hughes
Linda E. Neagley

Assistant Professors
John Hopkins
Fabiola Lopez-Duran
Lida Oukaderova

Degrees Offered: BA, MA, PhD

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

Last Revised : August 03, 2015

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Art History

The School of Humanities

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Program Learning Outcomes for BA in Art History

Students graduating from this program will:

1. Understand the historical, social, cultural and political contexts and traditions of art. Students will develop an understanding of the multiple contexts of art, including its relationship to religion, politics, gender and sexuality, urbanism, history, culture and other domains of human social experience.
2. Demonstrate effective use of specialized disciplinary vocabulary and appropriate methodologies to analyze works of art and communicate their form, function, and meaning verbally and in writing.
3. Demonstrate ability to perform comparative analyses of art works based on differences or similarities in cultural context, form, content, artist, materials, and time and place of production.
4. Demonstrate specialized knowledge about, and be able to identify, art from specific geographical locations, periods, artists, and/or artistic movements.
5. Evaluate and use primary and secondary sources to generate and answer original research questions and produce independent research.
6. Understand major artistic movements, common themes, trends, and the styles of major artists. They will demonstrate generalized knowledge of major figures in art history, major art movements and traditions, and major artistic styles.

Degree Requirements for BA in Art History

For general university requirements, see Graduation Requirements.

The Department of Art History offers three tracks within the major.

The tracks are as follows:

Regular Art History Major
Ten courses required for both double and single majors

- at least one course (200–400 level) ancient–medieval (pre-modern)
- at least one course (200–400 level) Renaissance–18th century (early modern)
- at least one course (200–400 level) 19th century to the present (modern through contemporary)
- of the ten courses, at least two must be seminars
- of the courses listed above, at least two must be outside the European and American traditions

Art History Major—History of Architecture Track
Ten courses required for both double and single majors

- at least six of the courses must focus on the history of architecture
- of the ten courses, at least one course (200–400 level) must fall in two of the following three areas: ancient–medieval (pre-modern); Renaissance–18th century (early modern); or 19th century to the present (modern through contemporary)
- of the 10 courses, at least two must be seminars
- of the courses listed above, at least one must be outside the European and American traditions

Honors Program in Art History

This track is reserved for those accepted into the Art History Honors Program. Students apply (via the undergraduate art history advisor) no earlier than spring of the sophomore year and no later than spring of the junior year, and once accepted, they will be assigned to a faculty mentor. Financial assistance is available for honors students to conduct research between their junior and senior years.

To remain in the Honors Program, students must maintain an overall grade point average of 3.3 or higher and receive an A or A- in both semesters of the Senior Thesis. Students who maintain a grade point average of 3.7 or higher and who receive an A in both semesters of the Senior Thesis may be awarded high honors by vote of the department. If students are not able to maintain the requirements of the honors track, they can still graduate with the regular art history major or the track in architectural history.

Twelve courses required whether single or double major

- at least two courses (200–400 level) ancient-medieval (pre-modern)
- at least two courses (200–400 level) Renaissance–18th century (early modern)
- at least two courses (200–400 level) 19th century–present (modern to contemporary)
- at least six courses must be at the 300–400 level
- of the twelve courses, at least three courses must be seminars
- two-semester senior thesis (six credits total)
- of the courses listed above, at least two must be outside the European and American traditions

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 advisor, 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.

Last Revised : August 04, 2015

Art History

The School of Humanities

Program Learning Outcomes for PhD in Art History

Students graduating from this program will:

1. Apply disciplinary methods for the visual interpretation and critique of art to produce scholarship and communicate about art using appropriate disciplinary vocabularies and primary and secondary texts where appropriate.
2. Understand art not as an isolated incident but in relation to the contexts which not only shape art, but are shaped by art--including: history, society, culture, geography, and politics.
3. Understand art as a multicultural issue.
4. Develop and apply understanding of major artistic movements, artists, and art pieces by identifying and situating individual artists and works of art (like Michelangelo's statue of David) within major movements.

Degree Requirements for MA and PhD in Art History

For general university requirements, see Graduate Degrees.

Only applicants who intend to receive a PhD will be accepted into the program. The Department of Art History does not have an MA program, although during the course of the program a master's degree (MA) will be awarded after students have achieved candidacy and are in the process of completing the doctorate (see Schedule, below).

Entering students will each be assigned a faculty advisor, as appropriate for the intended field of study. (That faculty member will remain the advisor unless the student later chooses someone else as the principal dissertation advisor.)

The advisor will play the key role in working with the student from beginning to end on course selection, master's essay topic, topics for qualifying exams, and the dissertation subject and will be in charge of monitoring the student's progress before and after advancement to candidacy. The director of graduate studies also will be available to offer advice to students in the program.

Beyond the courses to be offered by these regular and affiliated faculty of the Department of Art History, students will be encouraged, when appropriate, to take other graduate courses at Rice that are important for their field of research. Of the courses listed in the year-by-year schedule below, up to three may be taken in graduate courses outside the department, as approved by the student's advisor.

A summary of the program requirements:

Courses—Satisfactory completion of at least 30 hours of graduate coursework (500 level). One of the courses will include HART 590 Methods in Art History, to be taken in the fall of the first year. At least two of the courses taken must be in areas judged by the faculty advisor to be outside the student's main field of interest, and at least half of the classes taken must be seminars. Because jobs in the field often call for teaching expertise in more than one area, students are encouraged to acquire breadth of knowledge in both their coursework and the topics covered in the qualifying exams.

Substantial research paper—In the second year, one course each semester is required (HART 690 and HART 691) towards a substantial research paper. This paper may be an exploration of a possible dissertation topic or area.

Reading knowledge of foreign languages—Reading knowledge of one foreign language must be demonstrated

before the beginning of the second term, and a second demonstrated before the beginning of the third year. For those studying American or European topics, French and German are required, or a language necessary for the student's doctoral work (e.g., Spanish or Italian) and then knowledge of French or German. For those studying a non-Western topic, knowledge of a language in the primary area of study is necessary, plus French or German. Reading knowledge of one language must be demonstrated by the end of the first semester, and knowledge of the second language must be demonstrated by the end of the second year. Students will be able to take advantage of the regular foreign language courses at Rice, and we will work with the director of the Center for the Study of Languages to ensure that students are aware of the language courses at Rice offered specifically for graduate students. The two language examinations will be administered as follows. The student's advisor will select a book or set of articles in the target language that is close to the student's interest. The student will have one hour with a dictionary to complete the translation. The exam will be graded by the appropriate language department.

Teaching and research opportunities—In order to strengthen the job prospects of our students, there will be an opportunity to serve as teaching assistant or tutorial instructor, or for team-teaching or teaching classes. For those not engaged in classroom teaching, there also will be a chance to serve as research assistants for professors. As part of the program, all students will be expected to be a teaching assistant, tutorial leader, teacher, or research assistant for at least two semesters, and for as many as four semesters as an option. This will typically happen during the third or fourth year.

Qualifying exams, with a written and oral component—The qualifying exams will be taken at the end of the fall semester of the third year and cover topics in student's major field of study and secondary fields, as agreed upon with the student's advisor and based on the student's interests and intended area of study for the doctoral dissertation. Passing the qualifying exams is necessary for continuation in the program into the dissertation phase. The exams will consist of two three-hour written exams and two one-hour oral exams to follow up on the material tested on the written part. The examining committee will consist of three persons: the principal field examiner and two other field examiners.

Doctoral thesis and defense—After a student has passed the qualifying examination, the student will work with a dissertation thesis committee composed of three members, approved by the department's graduate committee; the chair of this committee will be the student's departmental advisor, who must be part of the art history faculty; the second reader also comes from within the department; and the third reader must be from outside the department. As soon as the thesis committee approves the student's dissertation prospectus, the student must file a petition for approval of candidacy for the PhD with the Graduate Office. The term "PhD candidate" refers only to persons so certified by the Graduate Office. The university requires that students pursuing the PhD must be approved for candidacy before the beginning of the ninth semester of their residency at Rice.

PhD candidates must present an original piece of scholarly work in the form of a dissertation, equivalent to a publishable book, as the final step in completing the degree. Dissertations may be written on any subject that falls within the supervisory competence of a permanent member of the department, and the prospectus is approved by the student's advisor and a vote of the student's committee. After such a vote, the advisor will sign the student's application for admission to candidacy.

Schedule—The program is designed to be completed in five years. However, certain fields in which the acquisition of foreign languages typically presents a hurdle (e.g., the study of non-Western art) might necessitate the expectation of a sixth year in the program.

Schedule for a student in the program would be:

Year 1: Six courses (three each semester), one to include the theory and methods seminar in the fall of the first year. The student must pass one language exam in the fall semester.

Year 2: Four courses (two in the fall semester, two in the spring) and an independent study course each semester for preparing a substantial research paper, to be completed by the end the spring semester and read by the student's advisor and one other faculty member or affiliated faculty, chosen by the advisor. Students must pass the second language exam by the end of the spring semester.

Year 3: Independent study in the fall in preparation for the written and oral qualifying exams, taken in December.

In the spring semester, the student will prepare a prospectus for the doctoral dissertation; the advisor and the rest of the thesis committee will review the prospectus and approve the topic by mid-April. At that point, the student will advance to candidacy. The MA will be awarded at that time.

During the third year, students will have the option of serving as teaching assistant, tutorial instructor, teacher, or research assistant.

Students in the third and fourth years are encouraged to apply for outside funding that will assist them with travel costs and other aspects of their thesis research.

Year 4: Dissertation research and writing. During the fourth year, students will have the option of serving as teaching assistant, tutorial instructor, teacher, or research assistant, unless this has happened in the third year.

Year 5: Dissertation research and writing. There will be a public thesis defense at the end of the fifth year (or later, if necessary).

For updated information, please go to www.arthistory.rice.edu.

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

Houston is fortunate to have some of the best art collections in the United States. The department enjoys a strong and ongoing relationship with the local museums, in particular the Menil Collection and the Museum of Fine Arts, Houston. The department offers opportunities for students to 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 focus of class lectures and research papers in art history.

The department sponsors the Katherine Brown Distinguished Lectures in Art History, which bring leading scholars to Rice to speak on a wide variety of topics. The department also hosts occasional symposia and lectures in collaboration with other departments, presenting the ideas of top scholars, critics, and artists.

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

Exhibitions and related activities organized by the Rice University Art Gallery enrich the university and the Houston community. The Department of Visual and Dramatic Arts mounts several art and photography exhibitions each year and sponsors Rice Cinema, a public alternative film program.

Last Revised : August 03, 2015

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Art History

The School of Humanities

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Course Listings

For the most current course offerings, please click here: Art History.

Last Revised : August 03, 2015

Asian Studies

The School of Humanities and The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Director
Sonia Ryang

Associate Directors
Haejin E. Koh
Steven W. Lewis

Advisors
Haejin E. Koh
Steven W. Lewis

Professors
Tani E. Barlow
Mahmoud El-Gamal
Sayuri Guthrie-Shimizu
Anne C. Klein
Jeffrey Kripal
William Parsons
Nanxiu Qian
Richard J. Smith

Associate Professors
Lisa Balabanlilar
David Cook
Shih-Shan Susan Huang
Betty Joseph
Elora Shehabuddin
Kerry Ward

Professors Emeriti
Stephen A. Tyler
Fred R. von der Mehden

Professors in the Practice
Steven W. Lewis
Diana L. Strassmann

Lecturer
Michael McCarty

Visiting Scholar
Anne Chao

Degree Offered: BA

The Bachelor of Arts degree in Asian Studies offers a comprehensive overview of the geography, history, people and their movements, and culture of Asia. Students earning a B.A. in Asian Studies receive strong foundational training in the languages and cultures of the region with a variety of opportunities for specialized study.

Last Revised : August 13, 2015

Asian Studies

The School of Humanities and The School of Social Sciences

Program Learning Outcomes for BA in Asian Studies

Students graduating from this program will:

1. Develop a broad historical and geographic knowledge about Asia as a transnational region.
2. Demonstrate a focused knowledge on a specific topic and/or area in and about Asia.
3. Design and execute independent research on Asia by using either social scientific or humanistic method.
4. Demonstrate language proficiency (in speaking, listening, reading, and writing) on the intermediate level in at least one Asian language.
5. Critically evaluate global issues and international relations involving Asia (both historically and contemporaneously).

Degree Requirements for BA in Asian Studies

For general university requirements, see Graduation Requirements in this publication. The undergraduate Asian Studies major consists of 30 hours or more of course work. There are three basic requirements:

1. One foundational course from the following:

- ASIA 211/HART 211/HIST 206 *Introduction to Asian Civilizations*
- ASIA 212/ANTH 212 *Perspectives on Modern Asia*

2. Nine additional courses are drawn from offerings 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.

3. Asian Studies majors must have the equivalent proficiency of at least five semesters of coursework in a single Asian language. This may include an Asian language other than those currently offered by Rice (Arabic, Chinese, Hindi, Japanese, Korean, and Russian). Students who have placed into the second semester of third year or higher of an Asian language will have satisfied this proficiency requirement.

4. One or more independent reading courses (ASIA 401 for the fall, ASIA 402 for the spring) taught by Asian Studies faculty may be counted towards the major, subject to approval by the director of Asian Studies.

All ASIA courses, many of which are cross-listed, may be used to satisfy the major requirements. Please note that (1) not all ASIA courses are offered every year, and (2) language courses are not listed here.

Anthropology

- ANTH 212/ASIA 212 *Perspectives on Modern Asia*
- ANTH 280 *Anthropology of the Middle East*
- ANTH 307/ASIA 312 *Crime and the City*
- ANTH 310 *Contemporary Chinese Culture*
- ANTH 353 *Cultures of India*
- ANTH 372 *Cultures of Capitalism*
- ANTH 387/ASIA 387 *Asian American Contemporary Communities*
- ANTH 413 *Culture after Communism*

Architecture

- ARCH 331/HART 321 *Imperial City: Istanbul*
- ARCH 383/HART 384/HIST 383 *Sacred Spaces in the Ancient Mediterranean*

Asian Studies

- ASIA 211/HART 211/HIST 206 *Introduction to Asian Civilizations*
- ASIA 212/ANTH 212 *Perspectives on Modern Asia*
- ASIA 218/HIST 218/FILM 218 *History Through Film in East and Northeast Asia*
- ASIA 219 *Modern Japan*
- ASIA 221/RELI 221 *The Life of the Prophet Muhammad*
- ASIA 222/ENGL 222 *The World and South Asia*
- ASIA 230/RELI 230 *Asian Religions in America*
- ASIA 231/RELI 231 *American Metaphysical Tradition*
- ASIA 232/RELI 232 *Religions from India*
- ASIA 251/POLI 250/SWGS 250 *Political Economy of Gender*
- ASIA 299 *Discover Asia in Houston*
- ASIA 312/ANTH 307 *Crime and the City*
- ASIA 315/CHIN 315 *Taiwan's Films Since 1980: Art, Culture, Society and Language*
- ASIA 319 *War and Modern East Asia*
- ASIA 321/HIST 322 *China's Cultural Revolutions*
- ASIA 322/RELI 322 *Introduction to Buddhism: Arts for Life*
- ASIA 328/HIST 384/SWGS 284 *Modern Girl & Asia in the World*
- ASIA 329/SWGS 322/SOCI 372 *Human Development in Global and Local Communities*
- ASIA 330/CHIN 330/MDEM 370 *Introduction to Traditional Chinese Poetry*
- ASIA 332/CHIN 332 *Chinese Literature and its Movie Adaptations*
- ASIA 334/CHIN 334 *Traditional Chinese Tales*
- ASIA 335/CHIN 335/MDEM 375 *Introduction to Classical Chinese Novels*
- ASIA 344/HUMA 344/KORE 344 *Korean Literature and Culture*
- ASIA 346/KORE 346 *Korean Culture and Society through Multimedia*
- ASIA 347/POLI 347 *Urban Lab: Shanghai*
- ASIA 349/POLI 349 *Urban Lab: Istanbul*
- ASIA 350 *History and Politics of Central Asia*
- ASIA 351 *Family Dynamics in East Asia*
- ASIA 353/POLI 353 *East Asian Democracies*
- ASIA 355/FILM 336/HART 366 *Cinema and the City*
- ASIA 360 *Transnational China: China and the Chinese Diaspora*
- ASIA 371/HART 371 *Chinese Painting*
- ASIA 372/HART 372/MDEM 373 *Chinese Art and Visual Culture*
- ASIA 376/HART 376/MDEM 376 *East and West: Medieval Visual Culture in China and Northern Europe*
- ASIA 380/HIST 380 *Asian American Experiences*
- ASIA 385/SOCI 341 *Qualitative Research Methods*
- ASIA 387/ANTH 387 *Asian American Contemporary Communities*
- ASIA 388/FOTO 388 *Photography in China*
- ASIA 389/HIST 389 *Migrations and Diasporas in the Indian Ocean World*
- ASIA 390/LING 390 *The Languages of Asia*
- ASIA 399/SWGS 399/MDEM 379 *Women in Chinese Literature*
- ASIA 401/402 *Independent Study*
- ASIA 412/FILM 412 *Cinema in India: Transnational Trajectories of Modernity*
- ASIA 422/CHIN 422 *The Original Beauty of Chinese Literature*
- ASIA 441/RELI 441 *Magic and Popular Religion*
- ASIA 451 *East Asian Families in Social Contexts: Global, Economic, and Cultural Issues*
- ASIA 452/ANTH 452 *Gender, Affect, Transnational Asia: Thinking of the Body in a Transnational Perspective*
- ASIA 488 *Asia and Energy*
- ASIA 489/POLI 489 *Chinese Politics in Comparative Perspective*
- ASIA 490/HIST 490 *Colonial Modernity in East Asia*
- ASIA 492/HIST 492/SWGS 492 *Gender Histories of Modern China*
- ASIA 494 *Special Topics in Asian Studies*
- ASIA 495 *Asian Studies Research Seminar*

English

- ENGL 222/ASIA 222 *The World and South Asia*

Film

- FILM 218/ASIA 218/HIST 218 *History through Film in East and Northeast Asia*
- FILM 412/ASIA 412 *Cinema in India: Transnational Trajectories of Modernity*

History

- HIST 206/ASIA 211/HART 211 *Introduction to Asian Civilizations*
- HIST 218/ASIA 218/FILM 218 *History through Film in East and Northeast Asia*
- HIST 268 *Modern Slavery*
- HIST 270 *South Africa and Indonesia: Empire to Nation*
- HIST 271 *History of South Asia*
- HIST 281/MDEM 281 *The Middle East from the Prophet Muhammad to Sulayman The Magnificent*
- HIST 302 *Traditional Chinese Culture*
- HIST 310 *Contemporary China*
- HIST 319 *Fortune-Tellers and Philosophers: The Role of Divination in Chinese History*
- HIST 320 *Imperial Gardens: A Cultural Comparison*
- HIST 322/ASIA 321 *China's Cultural Revolutions*
- HIST 341 *Premodern China*
- HIST 342 *Modern China*
- HIST 364/MDEM 364 *Central Asian Conquest Empires*
- HIST 367 *America and the Middle East*
- HIST 368/MDEM 369 *Medieval Frontiers*
- HIST 377 *History of the Ottoman Empire, 1453–1918*
- HIST 378 *Modern Arab History*
- HIST 380/ASIA 380 *Asian American Experiences*
- HIST 382 *Cultural Trends in Medieval Islam, 750-1400*
- HIST 383/ARCH 383/HART 384 *Sacred Spaces in the Ancient Mediterranean*
- HIST 384/SWGS 384/ASIA 328 *Modern Girl & Asia in the World*
- HIST 389/ASIA 389 *Migrations and Diasporas in the Indian Ocean World*
- HIST 424 *Raj and Resistance*
- HIST 433 *The Arab-Israeli Conflict*
- HIST 434 *Islam and the West*
- HIST 435 *Colonialism and Nationalism in the Modern Middle East*
- HIST 436 *America in the Middle East*
- HIST 439 *Comparative Slavery from Antiquity to the Present: Africa, Asia, and Europe*
- HIST 472 *Clubs, Associations and Guanxi Networks in Chinese Society*
- HIST 490/ASIA 490 *Colonial Modernity in East Asia*
- HIST 492/ASIA 492/SWGS 492 *Gender Histories of Modern China*
- HIST 493 *Great Islamic Empires of the Early Modern Age*
- HIST 494 *Mughal History*
- HIST 495 *Comparative Modernization of China and Japan*

History of Art

- HART 211/ASIA 211/ HIST 206 *Introduction to Asian Civilizations*
- HART 321/ARCH 331 *Imperial City: Istanbul*
- HART 371/ASIA 371 *Chinese Painting*
- HART 372/ASIA 372/MDEM 373 *Chinese Art and Visual Culture*
- HART 376/ASIA 376/MDEM 376 *East and West: Medieval Visual Culture in China and Northern Europe*
- HART 384/HIST 383/ARCH 383 *Sacred Spaces in the Ancient Mediterranean*

Linguistics

- LING 321/CHIN 321 *Structure of Chinese: Syntax and Semantics*
- LING 370/JAPA 370 *Structure of Japanese*
- LING 390/ASIA 390 *The Languages of Asia*

Medieval and Early Modern Studies

- MDEM 370/ASIA 330/CHIN 330 *Introduction to Traditional Chinese Poetry*
- MDEM 373/ASIA 372/HART 372 *Chinese Art and Visual Culture*
- MDEM 375/ASIA 335/CHIN 335 *Introduction to Classical Chinese Novels*
- MDEM 376/HART 376/ASIA 376 *East and West: Medieval Visual Culture in China and Northern Europe*

- MDEM 379/ASIA 399/SWGS 399 *Women in Chinese Literature*

Political Science

- POLI 250/SWGS 250/ASIA 251 *Political Economy of Gender*
- POLI 353/ASIA 353 *East Asian Democracies*
- POLI 460 *Seminar in Comparative Government*
- POLI 478 *US-China: Conflict and Cooperation* [not cross-listed]
- POLI 489/ASIA 489 *Chinese Politics in Comparative Perspective*

Policy Studies

- POST 455 *United States Middle East Policy*

Religion

- RELI 221/ASIA 221 *Life of the Prophet Muhammad*
- RELI 223 *Qur'an and Commentary*
- RELI 225 *Revolutionary Islam: Shi'ism*
- RELI 230/ASIA 230 *Asian Religion in America*
- RELI 231/ASIA 231 *American Metaphysical Religion*
- RELI 232/ASIA 232 *Religions from India*
- RELI 315/SWGS 315 *Gender and Islam*
- RELI 322/ASIA 322 *Introduction to Buddhism*
- RELI 333 *Knowing Body/Glowing Mind: Buddhist Arts of Contemplation and Analysis*
- RELI 356 *Major Issues in Contemporary Islam*
- RELI 433 *Tibetan Language and Culture*
- RELI 440 *Islam's Mystical and Esoteric Tradition*
- RELI 441/ASIA 441 *Magic and Popular Religion*
- RELI 442 *Classical and Contemporary Arabic Texts*
- RELI 470 *Buddhist Wisdom Texts*

Studies in Women, Gender, and Sexuality

- SWGS 250/POLI 250/ASIA 251 *International Political Economy of Gender*
- SWGS 315/RELI 315 *Gender and Islam*
- SWGS 322/ASIA 329/SOCI 372 *Human Development in Global and Local Communities*
- SWGS 384/HIST 384/ASIA 328 *Modern Girl & Asia in the World*
- SWGS 399/ASIA 399/MDEM 379 *Women in Chinese Literature*
- SWGS 492/ASIA 492/HIST 492 *Gender Histories of Modern China*

Visual and Dramatic Arts

- FOTO 388/ASIA 388 *Photography in China*

For general university requirements, see Graduation Requirements. In addition, students also must 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.

Last Revised : August 13, 2015

Asian Studies

The School of Humanities and The School of Social Sciences

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Course Listings

For the most current course offerings, please click here: Asian Studies.

Last Revised : August 03, 2015

Center for Languages and Intercultural Communication

The School of Humanities

Director
M. Rafael Salaberry

Associate Directors
Luziris Turi
Meng Yeh

Lecturer in Arabic
Maher Awad

Lecturers in Chinese
Liang Fu
Chao-Mei Shen
Peiting Tsai
Meng Yeh

Lecturers in French
Maryam Emami
Gheorghe Socaciu

Lecturer in German
Katharina Kley

Lecturer in Hebrew
TBA

Lecturer in Hindi
TBA

Lecturer in Italian
Cristina Giliberti

Lecturer in Japanese
Naoko Ozaki

Lecturer in Korean
Hee-Jeong Jeong

Lecturer in Portuguese
Susana M. Campos Pinto Bloem

Lecturer in Russian
Jonathan Z. Ludwig

Lecturers in Spanish
Victoria Abad
Victoria Arbizu-Sabater
Aymara Boggiano
Kevin García Cruz
Raquel Gaytán
Paul Leeman
Jose Narbona
Hélade Santos
Luziris Turi

Postdoctoral Fellows
Silvia Kunitz
Alicia Kate White
Xian Zhang

The Center for Languages and Intercultural Communication (CLIC) was founded in 1997 to promote and enhance the study of languages at Rice University and is responsible for teaching 12 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.

Degrees Offered: None

The Center for Languages and Intercultural Communication 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 French Studies (French Studies); BA in German Studies (German Studies); and BA in Spanish (Spanish and Portuguese). See each department for degree requirements.

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Center for Languages and Intercultural Communication

The School of Humanities

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Placement Testing

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 are administered online prior to O-Week and for one week in the spring semester. Detailed information regarding language placement exams can be found on the CLIC website.

Transfer Credits

The Center for Languages and Intercultural Communication will determine equivalency for foreign language classes taken at other colleges or universities and approve them for transfer credit. University transfer credit guidelines (see Transfer Credit) as well as requirements of the degree-granting department still apply. Students who study abroad should have their transfer credits approved, when possible, before they commit to a study-abroad program. When requesting Rice equivalent credit for foreign language acquisition courses, students must submit no less than the following to CLIC for approval: 1) the appropriate transfer request form from the Office of the Registrar, 2) a program description for courses taken abroad or catalog description for courses taken in the United States, and 3) a syllabus for the course they wish to take or have taken, or a web address to the program if one is available. Students should be aware that the approval process takes about one week and should plan accordingly.

Scholarships

The Center for Languages and Intercultural Communication invests in students participating in CLIC-sponsored study abroad programs by offering scholarships to off-set the cost of tuition, fees, and in some cases, airfare. The scholarships are offered in the spring semester for study abroad programs taking place the following summer. Detailed information on the scholarship and the CLIC-sponsored programs can be found on the CLIC website.

Certificate of Language and Cultural Competency

In Fall 2015, the Center for Languages and Intercultural Communication will work with the Committee on Undergraduate Curriculum and the Faculty Senate to seek approval for the center's "Language and Cultural Competency" certificate to be formally added to Rice's undergraduate curriculum. Upon approval, students will be able to declare this certificate as part of their academic program and it will be listed on their transcript after graduation. The Certificate of Language and Cultural Competency will be offered in each of the twelve languages taught through the Center.

Requirements

At a minimum, students will have completed two semesters of third-year language study and devoted four weeks to study, volunteering, or work abroad in the second language and culture. Upon successful completion, students will receive a certificate preceding graduation. All Rice University students are eligible to earn this certificate. Detailed information on the certificate and requirements can be found on the CLIC website.

Last Revised : August 03, 2015

- Undergraduate Students
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- Faculty
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Center for Languages and Intercultural Communication

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click: ARAB, CHIN, FREN, GERM, HIND, HEBR, ITAL, JAPA, KORE, PORT, RUSS, and SPAN.

Last Revised : August 03, 2015

Classical and European Studies

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Chair
Scott McGill

Professors
Bernard Aresu (French)
Christian Emden (German)
Scott McGill (Classics)
Deborah Nelson-Campbell (French)
Uwe Steiner (German)
Klaus Weissenberger (German)
Harvey Yunis (Classics)

Associate Professors
Julie Fette (French)
Deborah A. Harter (French)
Hilary Mackie (Classics)
Astrid Oesmann (German)
Philip R. Wood (French)

Assistant Professors
Martin Blumenthal-Barby (German)

Lecturers
Ted Somerville (Classics)

Postdoctoral Fellow
David R. Riesbeck (Classics)

Research Professor
Ewa M. Thompson

Professors Emeriti
Madeleine Alcover (French)
Jean Joseph Goux (French)

Degrees Offered: BA

The department houses the programs of Classical Studies, French Studies, and German Studies and the minor in Politics, Law, and Social Thought. (See PLST for more info.) The programs that comprise the department offer instruction in the literatures, cultures, and languages in the European tradition. Each program offers its own major.

Last Revised : August 03, 2015

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Classical and European Studies

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Classical Studies

The program in Classical Studies 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. The program provides maximum flexibility without sacrifice of focus. We cater to students who wish to prepare for graduate school in classics and also to students who are interested in Greek and Roman culture for other reasons and 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. For more information, please see the Classical Studies website.

Program Learning Outcomes for BA in Classical Studies

Students graduating from this program will:

1. If they pursue the language track, will be proficient at reading Greek and Latin, and have articulate knowledge of the grammar and style of both languages.

2. Be familiar with texts, artifacts, institutions, events, personalities, and places that are integral to ancient Greek and Roman culture from the Greek Bronze Age to the seventh century C. E.

3. Be able to analyze and interpret those texts (in the original languages, in the case of students who pursue the language track), artifacts, institutions, events, personalities, and places in their historical and cultural context.

4. Be able to relate classical civilization to the world around them, and to appreciate the profound influence classical civilization had on later Western civilization.

Degree Requirements for BA in Classical Studies

For general university requirements, see Graduation Requirements. Students majoring in classical studies may complete either of two tracks: Classical Languages or Classical Civilizations.

Classical Languages Track
30 hours listed under Greek, Latin, or Classics, including at least two of the three following courses:

- CLAS 107/HUMA 107 *Greek Civilization and Its Legacy*
- CLAS 108/HUMA 111 *Roman Civilization and Its Legacy*
- CLAS 235 *Classical Mythology: Interpretation, Origins, and Influence*

Additionally:

a) one course in Greek at the 200 level or higher
b) one course in Latin at the 200 level or higher
c) two courses in Greek or Latin at the 300 level or higher
NOTE: Any course that satisfies c) also satisfies a) or b).

Classical Civilizations Track

30 hours listed under Greek, Latin, or Classics, including at least two of the three following courses:

- CLAS 107/HUMA 107 *Greek Civilization and Its Legacy*
- CLAS 108/HUMA 111 *Roman Civilization and Its Legacy*
- CLAS 235 *Classical Mythology: Interpretation, Origins, and Influence*

Some courses in ancient philosophy, history, art history, and religion offered by the departments of Philosophy, History, Art History, and Religion also satisfy requirements for either track of the classical studies major. For advice about which courses do this, consult the program director.

French Studies

The program in French Studies offers a wide range of courses in literatures and cultures from France, Africa north and south of the Sahara, the Caribbean, and Québec. It covers major chronological periods while simultaneously anchoring the study of French cultures in a broad spectrum of disciplines that include literary, film, art, and historical studies. The program also offers advanced French language instruction focusing on writing, translation, and literary analysis.

An Honors track in French Studies provides seniors with the opportunity to develop individual research projects culminating in the Honors thesis.

We strongly encourage students to spend time studying in a francophone country, and to that end the faculty and the Office of Academic Advising will help them select an appropriate program.

For more information, please see the French Studies website.

Program Learning Outcomes for BA in French Studies

Students graduating from this program will:

1. Communicate fluently in spoken and written French at an advanced level, as indicated by the ability to: understand spoken French, converse in French, critically read and translate French texts, and write in multiple genres in French.

2. Achieve the cultural literacy necessary for studying abroad or practicing internationally-based professions by demonstrating an understanding of the major social, cultural, and political stakes of the French and Francophone world, past and present.

3. Demonstrate an interdisciplinary understanding of French studies through critical investigations of French literature, art, film, and other cultural forms.

4. Understand French language and culture not as isolated geographic phenomena, but in the wider context of multicultural exchange and globalization.

5. Learn and apply various research skills, including critical thinking and reading skills, theory, and criticism, to French texts (broadly construed) in order to produce new critical insights verbally or in writing.

Degree Requirements for BA in French Studies

For general university requirements, see Graduation Requirements.

Single Major
30 semester hours in 300 or 400 level courses (at the 300 or 400 level), which must include FREN 302 Writing Workshop, seven electives (at least three at the 400 level), and two of the three following 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 313 *Major Literary Works and Artifacts of the Francophone World*.

Double Major
24 semester hours in 300 or 400 level courses (at the 300 or 400 level), which must include FREN 302 Writing Workshop, seven electives (at least two at the 400 level), and two of the three following 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 313 *Major Literary Works and Artifacts of the Francophone World*

As many as two 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. More than 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, 313, and 302) be taken at Rice. It is strongly suggested that these courses be taken as early as possible. Students are required, with rare exception, to take two of their 400-level courses in the department.

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 advisor. Students wishing to complete the honors program in French studies also should consult one of the advisors.

Honors Program—The Honors Program in French Studies is meant to recognize outstanding French majors and to offer an opportunity to complete a senior thesis in close collaboration with a French Studies faculty member. Students who have successfully completed the Honors Program will receive an Honors distinction on their transcript.

German Studies

German Studies at Rice is a research-centered and undergraduate-focused program with internationally renowned faculty. Courses are offered in both German and English. The program covers German history, literature, and culture, from the seventeenth century to the present, with a strong emphasis on Germany's role in a wider European and transatlantic context. Particular departmental strengths are in the areas of modern intellectual history, 18th- to 20th-century literature and philosophy, film and media studies, as well as political theory. The close connection between research and teaching lies at the core of the curriculum. For more information please see the German Studies website.

Program Learning Outcomes for BA in German Studies

Students graduating from this program will:

1. Develop an understanding of the main lines of cultural, political, and social thought in German history from early modern times to the present in the European context based on original sources.

2. Acquire skills in analyzing and evaluating key texts and documents of German cultural and political history such as literature, philosophy, art, and electronic media by way of close reading, critical interpretation and an awareness of the document's rhetorical and media–specific features.

3. Be able to identify and compare different authors and texts within the different traditions they form part of as well as their impact and legacy within both the national and international context.

4. Be able to conduct research in the field of German Studies on topics chosen independently and to represent and communicate their findings clearly and coherently both in writing and oral presentation.

Degree Requirements for BA in German Studies

For general university requirements, see Graduation Requirements. For single majors, a maximum of four transfer courses can count toward the major. For double majors, a maximum of three transfer courses can count toward the major. Request for exceptions to these rules will be considered by the Program Director.

Single Major
30 hours at or above 300 level, as follows:

- GERM 301 Advanced German I
- GERM 302 Advanced German II
- GERM 305 Enlightenment and Romanticism, 1750-1850
- GERM 306 Realism to Modernity, 1850-Present
- Three additional GERM 300-level courses (up to two may be from the program's offerings in English)
- Three GERM 400-level courses

NOTE: Both GERM 301 and 302 may be replaced by an eight-week intensive summer language course at the University of Leipzig, Germany

Double Major
24 hours at or above the 300 level, as follows:

- GERM 301 Advanced German I
- GERM 302 Advanced German II
- GERM 305 Enlightenment and Romanticism, 1750-1850
- GERM 306 Realism to Modernity, 1850-Present
- Two additional GERM 300-level courses (one may be from the program's offerings in English)
- Two GERM 400-level courses

NOTE: Both GERM 301 and 302 may be replaced by an eight-week intensive summer language course at the University of Leipzig, Germany

Honors—The program offers an honors program for majors excelling in their studies. Honors work consists of independent research under faculty supervision on a topic proposed by the student leading to a substantial essay (GERM 493 in fall, GERM 494 in spring). Outstanding students are presented annually with the Max Freund Prize.

Last Revised : August 05, 2015

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Classical and European Studies

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please choose: Classical Studies, French Studies, or German Studies.

Last Revised : August 03, 2015

English

The School of Humanities

Chair
Rosemary Hennessy

Professors
Terrence Arthur Doody
Rosemary Hennessy
J. Dennis Huston
Caroline Levander
Helena Michie
Wesley Abram Morris
Timothy Morton
Kirsten Ostherr
Judith Roof
Meredith Skura
Edward A. Snow
Cary E. Wolfe

Associate Professors
José F. Aranda Jr.
Joseph A. Campana
Krista Comer
Amber Dermont
Scott S. Derrick
Sarah Ellenzweig
Betty Joseph
Colleen Lamos
Susan Lurie
Alexander Regier
Nicole Waligora-Davis

Assistant Professors
Emily Houlik-Ritchey
Paul Otremba

Professors Emeriti
Jane Chance
Linda P. Driskill
Lucille P. Fultz
David Lee Minter
Robert Patten
Susan Wood

Professor in the Practice
Logan Delano Browning

Senior Lecturers
Jill "Thad" Logan

Visiting Lecturers
Ian Schimmel

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 gaining a critical appreciation of literature, students also will sharpen their written communication and analytical skills. The graduate program in English offers concentrations in all fields of British and American literature and literary theory. Although students are not normally admitted for an MA, graduate students may earn the MA after obtaining approval of their candidacy for the PhD.

Courses

Detailed information on requirements for the major and 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.

Last Revised : July 31, 2012

English

The School of Humanities

Program Learning Outcomes for BA in English

Students graduating from this program will:

1. Develop sensitivity to the capacities and achievements of English literary language.
2. Demonstrate an understanding the depth and breadth of English literary history.
3. Develop skills in making eloquent sentences, paragraphs and essays in English.
4. Be reflective. They will understand the potential gaps in their own viewpoints and arguments, and appreciate viewpoints and arguments different from their own in English literary theory and criticism.

Degree Requirements for BA in English

For general university requirements, see Graduation Requirements. 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. All courses with the ENGL prefix and HUMA 101 and 102 may be counted toward the English major. AP credit does not count toward the major.

All English majors must take the following:

- ENGL 200 *Critical Reading and Writing*
- ENGL 300 *Practices in Literary Study*
- A 400-level departmental capstone seminar which is not a creative writing course
- Nine hours at the 300 level or above in periods before 1900; six of the nine hours must be in periods before 1800; but only one may be a Shakespearean course
- Three hours at the 200 level or above in a course that focuses on noncanonical traditions, such as courses in gender and sexuality studies, 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 six hours of upper-level courses in a foreign language.

Last Revised : August 03, 2015

English

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for MA and PhD in English

Students graduating from this program will:

1. Apply advanced abilities in literary, cultural, and critical studies, including: critical reading, thinking, and writing; professional methodologies; literary and cultural histories and theoretical and interdisciplinary perspectives.
2. Demonstrate breadth and depth of knowledge in fields of specialization for research and teaching.
3. Demonstrate pedagogical ability to teach literature and culture at the university level.
4. Demonstrate professional level skills in public and oral presentation through participation in symposia, WIP groups, conferences and in-course presentations.
5. Demonstrate capacity to create professional-level and ultimately publishable research that makes original contributions to scholarly debates.

Degree Requirements for MA and PhD in English

For general university requirements, see Graduate Degrees. 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 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.

PhD Program—To gain admission to PhD candidacy, students must satisfy the first six 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 also must complete the last two requirements. Students must:

1. Satisfactorily complete a minimum of 12 graduate courses, of which at least 10 must be graduate seminars. With the approval of the PAC, students may enroll in ENGL 621 *Directed Reading*, either as a traditional directed reading course or as a 400-level English course to which a graduate component has been added. ENGL 621 counts toward the 12 required graduate courses but does not count as a graduate seminar. Students also are encouraged to take graduate courses in other departments related to their areas of interest. These will count toward the 12-course requirement but not usually for distribution.
2. Satisfactorily complete the following two required courses: ENGL 600 *Topics in Literary Theory* and ENGL 605 *Third-Year Writing Workshop*. These count toward the 12-course requirement.
3. Satisfactorily complete the distribution requirement, which consists of two courses before 1800 and two after 1800. These count toward the 12-course requirement.
4. Satisfactorily complete the teaching requirement by serving twice as a teaching assistant, completing ENGL 510/511 *Pedagogy*, and teaching at least one lower-level course designed in conjunction with the instructor of ENGL 510. ENGL 510 does count toward the 12-course requirement.
5. Pass a qualifying exam that consists of two qualifying papers, and pass an oral exam. Refer to english.rice.edu for further details.
6. Complete a dissertation prospectus that defines the topic of the dissertation, the particular thesis that the dissertation hopes to develop about the topic, and the relevance and importance of the dissertation's thesis for the contribution it will make to the student's chosen field. The dissertation prospectus and a satisfactory draft of a chapter must be approved for the student to advance to candidacy. Refer to english.rice.edu for further details.
7. Complete a dissertation that demonstrates a capacity for independent and original work of high quality.
8. Pass an oral exam on the dissertation and related fields of study.

MA Degree—The English department does not have a terminal MA program, but offers the MA degree to those PhD students who have achieved candidacy and are in the process of completing the doctorate and to qualified PhD students who leave the program before completing the 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. Students must satisfactorily complete ENGL 600 and distribution requirements for the PhD (see above).
- Satisfactorily complete two teaching assistantships (ENGL 601/602) and two research assistantships. These do not count toward the 30-hour requirement.

Financial Support—Financial support depends upon satisfactory progress towards the degree.

Last Revised : August 03, 2015

English

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: English.

Last Revised : August 03, 2015

History

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Chair
Alida Metcalf

Professors
Tani E. Barlow
John B. Boles
Douglas B. Brinkley
Peter C. Caldwell
Sayuri Guthrie Shimizu
Michael Maas
Ussama Makdisi
Alida C. Metcalf
Paula A. Sanders
James Sidbury
Richard J. Smith
Martin J. Wiener
Lora Wildenthal
John H. Zammito

Associate Professors
Lisa A. Balabanlilar
Alexander X. Byrd
Nathan Citino
G. Daniel Cohen
Edward L. Cox
Randal Hall
Moramay Lopez-Alonso
W. Caleb McDaniel
Kerry R. Ward
Fay Yarbrough

Assistant Professors
Maya Soifer Irish

Professors Emeriti
Katherine Fischer Drew
Thomas L. Haskell
Ira D. Gruber
Harold Hyman
Patricia Seed
Albert Van Helden

Research Professor
Allen J. Matusow

Rorschach Visiting Professor
David R. Dow

Degrees Offered: BA, MA, PhD

The undergraduate program offers courses in U.S. history; ancient and medieval history; intellectual history; and the history of science; and the early modern and modern history of Europe, Latin America, the Middle East, East and South Asia, Africa, and the Caribbean. Faculty interests range from the Byzantine Empire to colonial Brazil and modern Mexico, from Qing and 20th-century China to colonial Indonesia, and from Kant to human rights. Within U.S. history, the department's particular strengths are Atlantic migrations, slavery, the Old and New South, religion, race, and the Presidency. Within European history, Germany, Britain, and France are strengths. The department has a strong overall emphasis on colonialism across regions and time periods. The department encourages its majors to acquaint themselves with other disciplines in the humanities and social sciences, especially literature, philosophy, fine arts, anthropology, sociology, and political science. Foreign language study is also important for students of history.

The graduate program, which trains a limited number of carefully selected students, offers these fields: United States (including colonial America, the U.S. South, and United States and the World), Latin America and the Caribbean, the Atlantic World, transnational Asia and the Middle East. PhD students may concurrently pursue a graduate certificate through the Center for the Study of Women, Gender and Sexuality, or the Center for Critical and Cultural Theory.

Through a reciprocal agreement with the Universidade Estadual de Campinas (UNICAMP) the department offers qualified students the opportunity to earn a second PhD at a top-ranked university in Brazil. Students in the dual degree program study in Brazil and write a dissertation that is co-supervised by faculty at Rice and UNICAMP.

Last Revised : August 03, 2015

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History

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for BA in History

Students graduating from this program will:

1. Identify and connect the ways that people, ideas, and technologies have circulated across the range of geographic regions and historical periods.
2. Apply historical questions to concrete cases and demonstrate analytical skills through the use of historical evidence, rigorous logic, and persuasive argument.
3. Exhibit a solid understanding of historical methodologies and research skills, including the careful and creative use of primary and secondary sources that are read critically and weighed carefully as historical evidence.
4. Demonstrate an awareness of the scholarly literature on a given research topic and identify the position of their research within that literature.
5. Exhibit mastery in writing persuasive and analytical prose following the conventions of the discipline.

Degree Requirements for BA in History

For general university requirements, see Graduation Requirements. Students majoring in history must complete a minimum of 30 semester credit hours (10 courses) in history. Majors must distribute their 10 courses over at least four of the following five fields:

- Premodern—one course minimum
- Europe—one course minimum
- United States—one course minimum
- Africa, Asia, Latin America, Middle East—one course minimum
- Transnational, Comparative, World—one course minimum

Additionally, requirements for completing the History major include:

- At least 18 credit hours (six courses) must be taken at Rice.
- Transfer credit, foreign or domestic, cannot count for more than 12 credit hours (four courses). AP/IB credit may not be used to satisfy any requirements for the history major (even though a student may be able to use AP/IB credit toward general university requirements). Please see the transfer credit guidelines listed below.
- At least 18 credit hours (six courses) are required at the 300 or 400 level.
- Two courses must be chosen from a departmental list of 400-level seminars.

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 Office of 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. Regarding content, however, there does not have to be an equivalent course in the Rice history offerings. For the current procedures and to request transfer credit, see the department website. Rice students planning to study at a foreign university must also obtain approval from the Study Abroad Office.

Honors Program—Qualified undergraduates may enroll for six semester hours of directed honors research and writing, completing an honors thesis in their senior year (these six hours are in addition to the 30 hours required for

the major). Application to the program is required. For current procedures, see the department website. 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.

Department of History International Concentration - To guide and recognize the work of history majors who choose to devote a part of their studies to international historical issues and questions, the History department has established an international studies concentration. In addition to the standard degree requirements, students following this concentration are required to:

- Complete a significant study abroad experience (such as those regularly recommended by the university's Office of International Programs), to be pre-approved by the Director of Undergraduate Studies in the Department of History.
- Demonstrate research competence in a language other than English. Students may demonstrate language competency in two ways. Students who pass a departmental language exam will be certified as having met the language requirement. Students who complete a history honors thesis or a 400-level seminar paper that draws on a significant number of non-English secondary or primary sources will also be certified as having met the requirement.

Upon graduation, students who complete the requirements of the international concentration will have the accomplishment noted on their final transcript. For more information, see the department website.

Last Revised : August 03, 2015

History

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

The Rice University graduate program in history is primarily a PhD program. Students who have a BA in history (or its equivalent) 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 these fields: United States (including colonial America, the U.S. South, and the United States and the World), Latin America and the Caribbean, the Atlantic World, transnational Asia and the Middle East. Further information is available at the department website. For general university requirements, see Graduate Degrees.

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 master's 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 serving as research assistants or teaching assistants for department members. As far as possible, these assignments are kept consistent with the areas of interests of the students.

Program Learning Outcomes for MA and PhD in History

Students graduating from this program will:

1. Develop analytic skills in critical thinking and writing that are of value both inside and outside the academy.
2. Conduct original research that makes a contribution to the field.
3. Write a dissertation that makes an original contribution to their field.
4. Enter the historical profession as academics who can teach, present work to peers, and communicate effectively with the public.
5. Acquire expertise in their major field of historical inquiry and will learn the skills necessary to write historical monographs.

Degree Requirements for MA and PhD in History

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 three 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; (2) completion of two years of course work (48 credit hours), normally including at least two seminar research papers, and (3) for students continuing to the PhD, completion of all requirements for candidacy, including written and oral examinations.

PhD Program—Doctoral candidates must prepare themselves in three fields of history: two in their major area of concentration, whether U.S. or other history, and a third in an area not included in the first two fields. 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 degree will be awarded after successful completion of at least 90 semester hours of advanced study and an original investigation reported in an approved thesis. The student may apply for formal admission to candidacy for the PhD degree after passing the qualifying exam.

For the PhD, candidates must:

- Prepare themselves thoroughly in three examination fields.
- Take eight graduate seminars, including Introduction to Doctoral Studies.
- Pass an examination in the principal language of research and in one additional language. If the principal language of research is English, candidates must pass an examination in one other language.
- Perform satisfactorily on written and oral examinations.
- Complete a dissertation presenting the results of original research.
- Defend the thesis in a public oral examination.

Dual PhD with Universidade Estadual de Campinas (UNICAMP) in Brazil - Rice will award a PhD to UNICAMP students who have successfully completed the following requirements:

1. Passed their comprehensive examinations and been admitted to candidacy at UNICAMP.
2. Completed 6 graduate-level courses at Rice, of which one must be HIST 575, “Introduction to Doctoral Studies,” one must be a History research seminar, and one must be a History reading seminar. Students must be enrolled in at least 9 credit hours per semester while at Rice University.
3. Written a dissertation in the language of their home institution and a summary in English that is equivalent in style, scholarship and length to an academic journal article.
4. Successfully presented the dissertation and the summary in English to a faculty panel at Rice.
5. Successfully defended the dissertation at UNICAMP.

UNICAMP will award the Doutor em História to Rice students who have successfully completed the following requirements:

1. Passed their comprehensive examinations and been admitted to candidacy at Rice.
2. Completed 6 graduate-level courses at UNICAMP, of which must include HH172, “Tópicos em Teoria da História,” two research seminars, two topical seminars and one elective seminar.
3. Written a dissertation in the language of their home institution and a summary in Portuguese that is equivalent in style, scholarship and length to an academic journal article.
4. Successfully presented the dissertation, and the summary, in Portuguese to a faculty panel at UNICAMP.
5. Successfully defended the dissertation at Rice.

Last Revised : August 03, 2015

History

The School of Humanities

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Course Listings

For the most current course offerings, please click here: History.

Last Revised : August 03, 2015

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Humanities Research Center

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Director
Farès El-Dahdah

Associate Director
Melissa Bailar

Autrey Visiting Scholar in the Rice Seminar
Gregory Flaxman
Maria Whiteman

Mellon Postdoctoral Fellow in the Rice Seminar
Ted Geier
Ryan White

Mellon Postdoctoral Fellow in Spatial Humanities
Alex Tarr

Sawyer Seminar Postdoctoral Fellow
Rex Troumbley

Degrees Offered: None

The Humanities Research Center (HRC) identifies, encourages, and funds innovative research projects by faculty, visiting scholars, graduate, and undergraduate students in the School of Humanities and beyond. This involves fostering scholarly work, facilitating research between the School of Humanities and other areas of Rice University, as well as leading institutional change by partnering with other foundations, centers, research institutions, and universities. Independent initiatives are also taken by the HRC in order to incubate ideas and detect disciplinary changes that shape the future of the university. The HRC has recently launched initiatives in Computational Humanities and in Public Humanities with focus areas in Cultural Heritage and Medical Humanities. Other on-going programs include research project funding, visiting scholarships, seminars, courses, conferences, workshops, lecture series, practicums, exhibitions, performances, and film series.

Last Revised : August 12, 2015

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Humanities Research Center

The School of Humanities

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Course Listings

For the most current course offerings, please click here: Humanities Research Center.

Last Revised : August 03, 2015

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Jewish Studies

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Director
Matthias Henze

Professors
Matthias Henze
Michael Maas
Paula Sanders
Klaus Weissenberger
Diane Wolfthal

Associate Professors
Daniel Cohen
Susan Lurie

Assistant Professors
Maya Soifer Irish
Brian Ogren

Lecturers
Melissa Weininger

Postdoctoral Fellow
Joshua Furman

Degrees Offered: None

Jewish Studies is an interdisciplinary field that crosses traditional boundaries between academic fields and departments. Courses in Jewish Studies allow students to study Judaism as it has evolved from an ancient set of shared religious practices into the pluralistic religion and culture that it is today. In both the humanities and social sciences, Jewish Studies broadly examines the texts, history, languages, philosophy, literature, and culture of the Jewish people from the ancient to the modern. The study of Jewish life and culture provides an opportunity to explore the continuities and diversity of Judaism as it has been lived and practiced for over three millennia all over the world.

Diversity of thought is a hallmark of Jewish culture dating back to the earliest Jewish texts, and we strive to follow this model in our courses. The diverse and interdisciplinary nature of the Program in Jewish Studies allows undergraduates the opportunity to enrich their major fields of study with a specific focus on Judaism and Jewish culture. The Program in Jewish Studies at Rice also forms an important bridge to the community, making use of the rich resources available in Houston, engaging with local institutions, and participating in timely public discussions.

Last Revised : August 03, 2015

Jewish Studies

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for the Interdisciplinary Minor in Jewish Studies

Students graduating from this program will:

1. Demonstrate knowledge of key Jewish religious traditions, texts, and figures throughout history, from the ancient to the contemporary, as well as the place of those traditions, texts, and figures within specific historical, geographical, or sociopolitical contexts.
2. Demonstrate knowledge of Jewish history and culture during different time periods and in different geographical locations.
3. Demonstrate the ability to understand and apply theories and methods from multiple disciplines—including religious studies, literature, history, film, and sociology—to address key issues or undertake research in the field of Jewish studies; synthesize theories and methods from multiple disciplines to address questions within the field of Jewish studies.
4. Demonstrate the ability to read and interpret primary and secondary texts critically, including ancient as well as modern literature, religious texts, film, and modern scholarship; demonstrate the ability to use these texts to develop and support evidence-based research questions and arguments in discussions, verbal presentations, and in research papers.
5. Demonstrate the ability to effectively communicate in writing and orally at the college level; this includes demonstrating the ability to communicate in a critical, scholarly manner by developing evidence-based research questions and arguments, using and citing evidence to support argumentation, and writing and speaking clearly and correctly.

Course Requirements for the Interdisciplinary Minor in Jewish Studies

JWST minor courses are open to all students at Rice from all backgrounds. Our classes meet student interests in Jewish experience and its importance for history, literature, art, politics, law, and philosophy. The following requirements apply to the JWST minor.

- Students must complete at least six courses (18 credit hours).
- Students must take at least one of the following core courses:
  - i. HIST 186 *Historical Survey of Jewish Civilization From Its Origins to the Present*
  - ii. HIST 374 *Jewish History, 1500-1948*
  - iii. RELI 122 *The Bible and Its Interpreters*
  - iv. RELI 108 *Introduction to Judaism*
- Students must take at least one course in each of the following categories (If a course is listed in more than one category, students can elect a category for which the course counts, yet each course can apply to only one category. For a list of approved elective courses, please review the Jewish Studies website and/or speak with the minor advisors):
  - i. language and literature
  - ii. history and culture
  - iii. thought, philosophy, and ethics.
- No more than two Hebrew (HEBR) and two Religion (RELI) courses will count towards the JWST minor.
- At least three courses must be at the 300-level or higher.
- No more than three courses can apply from study abroad or transfer credits.

Last Revised : August 03, 2015

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Jewish Studies

The School of Humanities

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Course Listings

For the most current course offerings please click here: Jewish Studies.

Last Revised : August 11, 2014

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Latin American Studies

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Director
José F. Aranda, Jr.

Associate Director
David Vassar

Professors
Bernard Aresu
Farés el-Dahdah
Beatriz González-Stephan
Rosemary Hennessy
Carlos Jiménez
Mark P. Jones
Alida C. Metcalf
M. Rafael Salaberry
Nicolas Shumway

Associate Professors
José F. Aranda, Jr.
Alexander X. Byrd
Krista Comer
Edward L. Cox
Luis Duno-Gottberg
Gisela Heffes
Cymene Howe
Moramay López-Alonso
Leslie Schwindt-Bayer

Assistant Professors
Fabiola López-Durán
Manuel Gutiérrez
Leonora Souza Paula

Degrees Offered: BA

Latin American Studies is an interdisciplinary major designed to further understanding of the cultures, histories, and politics of Latin America as viewed from regional and global perspectives. The major draws from courses and faculty from a wide range of departments, including Anthropology, Architecture, Art History, English, French Studies, History, Spanish and Portuguese, and Political Science. This major provides a challenging context for students to develop core skills in interdisciplinarity, language, communication (written and oral), theory, research methodologies, and geography.

The BA in Latin American Studies is part of the department of Spanish, Portuguese and Latin American Studies.

Last Revised : August 03, 2015

Latin American Studies

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for BA in Latin American Studies

Students graduating from this program will:

1. Demonstrate the ability to speak and read fluently, and conduct research in a foreign language.
2. Be able to interpret the historic, cultural, and political dynamics that comprise a specific region selected by the student for in-depth study.
3. Be able to apply critical perspectives on legacies and ongoing forces that are local and global in scope from the field of Latin American Studies.
4. Be able to define a research problem and analyze it from several different disciplinary fields, including appropriate theory, methodology, and concepts for the topic.

Degree Requirements for BA in Latin American Studies

For general university requirements, see Graduation Requirements. For the BA degree, students majoring in Latin American Studies will take courses with appropriate Latin American content at Rice or at an approved program abroad for a total of 10 courses (30 semester hours). No fewer than 6 courses (18 semester hours) should be taken at Rice. Rice LASR Majors will also be required to spend at least one semester studying at a Rice-approved, semester-abroad program in which the primary language of instruction is Spanish, Portuguese, or under special circumstances French. Additionally, students will be required to demonstrate language competence at three different stages of the major. See additional requirements for the major in Latin American Studies below for more information regarding study abroad, the capstone requirement and the language competency requirement.

Course requirements for the major in Latin American Studies include:

CORE REQUIREMENT

One foundation course is required of all majors. This course will both introduce and structure the major. This course will be taught in English, with discussion sections available in Spanish or Portuguese pending student interest. The course could also be team-taught by professors from different departments or even different schools.

- LASR 158 *Introduction to Latin American Studies*

CAPSTONE

After completing the semester abroad, students will enroll in a research colloquium directed by a faculty member from either Humanities or Social Sciences. See Capstone description below course requirements for additional information.

- LASR 491 *Latin American Studies Capstone*

ELECTIVES

Students must choose 8 classes from the following list which will focus on a specific region, area, or country in Latin America. This area focus will shape each student's proposed course of study. Each course of study and an area focus must be approved by the advisor to the major. At least two of the courses must be in the humanities and two in the social sciences.

- ANTH 290 *History and Ethnography*
- ANTH 361 *Latin American Topics*

- ARCH 323 *Seminar in Architecture*
- ARCH 366/HIST 366 *Rio de Janeiro: A Social and Architectural History*
- ARCH 452/HART 463 *Practicing Utopia: Architecture, Eugenics and the Modern Latin City*
- ARCH 462/HART 467 *Nature In-Vitro: Bodies, Gardens and Built Forms*
- ARCH 469 *Case Study in Urban Design: Brasilia*
- ARCR 154/FSEM 154 *Latin American Confessions: Autobiographical Fiction in Modern Latin America*
- ARCR 478/FREN 478 *The Caribbean in French*
- ENGL 268 *Introduction to Native American Literature*
- ENGL 367/SWGS 367 *Literature and Culture of the US-Mexico Borderlands*
- ENGL 369/SWGS 329 *The American West and its Others*
- ENGL 372 *The American West/Americas*
- ENGL 378/SWGS 378 *Literature of the Americas*
- ENGL 471/SPAN 471 *Studies in Chicano/a Literature*
- ENGL 472 *Native American Literature*
- ENGL 486 *Studies in Critical Regionalism*
- HART 265 *A Visual Culture Travelogue: Art and Politics in Modern Latin America*
- HIST 188/388 *The Atlantic World: Origins to the Age of Revolution*
- HIST 214/314 *Caribbean Nation Building*
- HIST 215/315 *Blacks in the Americas*
- HIST 227 *Latin American Cultural Traditions*
- HIST 228 *Modern Latin America*
- HIST 251/LASR 251 *Continuities and Changes in Brazilian History*
- HIST 279/379 *The Caribbean in the Age of the Revolution, 1770-1820*
- HIST 313/LASR 313 *Modern Mexico*
- HIST 328 *Poverty and Social Justice in Latin America*
- HIST 330 *Atlantic Slave Trade and the Origins of Afro America*
- HIST 335 *Caribbean History to 1838*
- HIST 336 *Caribbean History 1838 to Present*
- HIST 337 *Latin American Perspectives*
- HIST 376 *Natural Disasters in the Caribbean*
- HIST 397 *Economic History in the Americas*
- HIST 421 *Race, Education and Society in the Urban South*
- HIST 426 *Slavery & Race Relations*
- HIST 478 *Topics in Latin American History*
- HIST 482 *Dictators, Populists and Rebels*
- POLI 328 *Latino Politics in the United States*
- POLI 354 *Latin American Politics*
- POLI 450 *Elections in the Americas*
- POLI 483 *U.S.: Mexico Border Issues in Comparative Perspective*
- SPAN 156 *Modern Latin American Art: Mexico in the Modern Age*
- SPAN 345 *Mapping Latin American Culture*
- SPAN 346 *Brazilian Literature and Culture*
- SPAN 348 *The Mexican Renaissance: Art, Literature and the Revolution of 1910*
- SPAN 373 *Twentieth Century Mexican Novel*
- SPAN 383 *Spanish Creative Writing*
- SPAN 384 *Literatures from the Southern Cone*
- SPAN 385 *Foundations of Spanish American Literature*
- SPAN 386 *Culture and Power in Latin America*
- SPAN 387 *Her Short Story: Culture of Latino-American Women*
- SPAN 388 *The Latin American Short Story*
- SPAN 389 *Contemporary Mexican Short Fiction*
- SPAN 390 *Hispanic Cinema*
- SPAN 391 *Caribbean Literature*
- SPAN 392/FILM 339.HART 304 *A Revolution from Within: Trends in Contemporary Cuban Culture*
- SPAN 393 *Colonialism and Revolution in the Caribbean*
- SPAN 394 *Transnational Caribbean Cultures*
- SPAN 395 *Dialogue of the Americas*
- SPAN 396/ENGL 371/SWGS 354 *Chicano/a Literature*
- SPAN 401 *Critical Readings in Latin American Literature*
- SPAN 402 *The City in Latin America*
- SPAN 403 *Literature and the Environment in Latin America*
- SPAN 405 *Latin American Literature in the Movies*
- SPAN 406 *Latin American Cinema*
- SPAN 424 *1898 in Transatlantic Perspective*
- SPAN 450 *Civilization and Barbarism*
  (Un) Disciplined Bodies

SPAN 452
- SPAN 453 *Border Narratives*
- SPAN 454 *Macho Culture in Latin America*
- SPAN 456 *Latin American Women's Culture*
- SPAN 458 *Mexico & United States: Literary and Cultural Relations*
- SPAN 460 *Europe and Latin America*
- SPAN 462 *Boom-Boom-Crack: Latin American Novel*
- SPAN 465 *Trends in Latin American Thought*
- SPAN 466 *20th Century Mexican Narrative*
- SPAN 468 *Octavio Paz*
- SPAN 470 *Latin American Cultural Theory*
- SPAN 474 *Spanish American Poetry and the Experience of the Limit*
- LING 419 *Multilingualism*

Additional requirements for the major in Latin American Studies include:

STUDY ABROAD

Rice LASR Majors will be required to spend at least one semester studying at a Rice-approved, semester-abroad program in which the primary language of instruction is Spanish, Portuguese, or under special circumstances French. Courses taken abroad may count toward completing the LASR major and toward meeting the distribution requirements in the major. Study abroad courses cannot count for more than 4 courses (12 semester hours) toward the major. While the semester abroad is ideal, under very special circumstances, the advisor to the major can approve a 12-week summer program as the equivalent of a semester, provided the program allows students to complete at least 3 three-credit courses.

LATIN AMERICAN STUDIES CAPSTONE

As directed by this faculty member, the colloquium director, students will write a research paper on a Latin American topic of their choice. During the course, students will be exposed to different research methodologies, theories appropriate to their field of study, and instruction on how best to incorporate research and sources that emerged from their study abroad. Interdisciplinary modes of research and writing will be a major feature of this colloquium. Students will be expected to highlight the interdisciplinary nature of their research in their completed paper. In addition, students in the colloquium will be expected to workshop their writing at different times during the semester. The completed research paper will be evaluated by the colloquium director and one other professor appropriate to the topic. With the approval of the colloquium director, this research paper may be written in English.

REQUIRED LANGUAGE COMPETENCE

Rice LASR majors will be expected to demonstrate language competence at three different stages of the major:

- Prior to going abroad, students will be examined by Center for Languages & Intercultural Communication (CLIC) faculty trained in proficiency testing to ensure that the students have adequate language competence for studying abroad—adequate at this stage meaning at least Intermediate-High according to proficiency standards set by the American Council on the Teaching of Foreign Languages (ACTFL).
- After returning from the semester abroad, students will be tested for proficiency at the Advanced-Low level, according to ACTFL Guidelines. Proficiency at the Advanced-Low level is desirable, but not required.
- In writing the research paper mentioned above, students must demonstrate to the satisfaction of the colloquium director their ability to do research in a foreign language.

Last Revised : August 06, 2015

Latin American Studies

The School of Humanities

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Course Listings

For the most current course offerings, please click here: Latin American Studies.

Last Revised : August 03, 2015

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Medieval and Early Modern Studies

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Director and Advisor
Diane Wolfthal

Professors
John Huston
Michael Maas
Joseph Manca
Scott McGill
Alida Metcalf
Donald Ray Morrison
Deborah Nelson-Campbell
Nanxiu Qian
Paula Sanders
Meredith Skura
Richard Smith
Edward Snow
John Stroup
Diane Wolfthal
John Zammito

Associate Professors
Lisa Balabanlilar
Greg Barnett
Joseph Campana
David Cook
Sarah Ellenzweig
Jeffrey Fleisher
Shih-Shan Susan Huang
Peter Loewen
Linda E. Neagley

Assistant Professors
Niki Clements
Claire Fanger
Emily Houlik-Ritchey
Maya Soifer Irish
Brian Ogren

Lecturers
Ted Somerville
Jared Staller

Degree Offered: BA

This interdisciplinary major enables students to study medieval and early modern cultures in the period between 500 and 1700 A.D.. The program combines a broad background in various aspects of medieval and early modern culture with more specialized study in a selected field. These fields of emphasis include medieval and early modern art history, history, literature (Arabic, Chinese, English, French, or Latin), music, philosophy, or religion.

Last Revised : August 11, 2014

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Medieval and Early Modern Studies

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for BA in Medieval and Early Modern Studies

Students graduating from this program will:

1. Be able to situate Medieval and Early Modern studies more broadly within several interdisciplinary fields—including history, art, philosophy, music, literature, and religion.
2. Be able to define and apply appropriate disciplinary and/or interdisciplinary methodologies, vocabularies, concepts, and theories to critically respond to questions within the field of Medieval and Modern Studies.
3. Demonstrate the ability to define and respond to research questions and scholarly debates within the field, including the ability to analyze primary and secondary sources, draw conclusions from the analysis of these sources, and cite evidence in support of conclusions.
4. Demonstrate a firm grasp of written, visual, and oral communication, including critical writing principles such as appropriate citation, use of evidence, clarity, and grammatical correctness.

Degree Requirements for BA in Medieval and Early Modern Studies

For general university requirements, see Graduation Requirements. Students majoring in medieval and early modern studies must complete at least 30 semester hours (10 courses); the minimum for double majors is 24 hours. All majors must complete five 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.

Frequently taught courses (i.e., at least every two years):

Literature

- MDEM 316/ENGL 316/SWGS 305 *Chaucer*
- MDEM 370/ASIA 330/CHIN 330 *Introduction to Traditional Chinese Poetry*
- MDEM 375/ASIA 335/CHIN 335 *Introduction to Classical Chinese Novels*
- MDEM 379/ASIA 399/SWGS 399 *Women in Chinese Literature*
- MDEM 404/FREN 404 *Beginnings in the Language and Literature of France*
- MDEM 425/FREN 415 *Courtly Love in Medieval France*

Anthropology

- MDEM 311/ANTH 312 *African Prehistory*

Art History

- MDEM 111/CLAS 102/HART 101 *Introduction to the History of Western Art I: Prehistoric to Gothic*
- MDEM 330/HART 330 *Early Medieval Art*
- MDEM 331/HART 331 *Gothic Art and Architecture in Northern Europe, 1140–1300*
- MDEM 332/HART 332 *Art of the Courts*

Humanities

- MDEM 478 *Medieval Studies*

Music

- MDEM 222/MUSI 222 *Medieval and Renaissance Eras*
- MDEM 429/MUSI 429 *Music of the Middle Ages*

History

- MDEM 281/HIST 281 *The Middle East from the Prophet Mohammand to Sulayman the Magnificent*

Philosophy

- MDEM 201/CLAS 201/PHIL 201 *History of Philosophy I*

Religion

- MDEM 105/RELI 105 *Medieval Christian Thought*

It is *recommended,* but not required, that students take two semesters at the college level in an appropriate language (or languages). 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.

For single majors, three additional courses in the medieval or early modern periods, one of which may be a senior thesis (one semester) on a topic in the student's field of emphasis; for double majors, one additional course in the medieval and early modern periods.

Students work out their programs of study in consultation with the program director. Those contemplating graduate work in medieval and early modern studies should study at least one foreign language in some depth (as most graduate schools require a reading knowledge of French and German for the PhD).

Students may select from among the following to fulfill the course requirements for the major in medieval and early modern 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, please visit the Medieval and Early Modern Studies website at medieval.rice.edu.

Anthropology

- MDEM 311/ANTH 312 *African Prehistory*

Asian Studies

- MDEM 370/ASIA 330/CHIN 330 *Introduction to Traditional Chinese Poetry*
- MDEM 375/ASIA 335/CHIN 335 *Introduction to Chinese Literature*
- MDEM 379/ASIA 399/SWGS 399 *Women in Chinese Literature*
- MDEM 395 *Classical Chinese Novels*

Classical Studies

- MDEM 101/LATI 101 *Elementary Latin I*
- MDEM 102/LATI 102 *Elementary Latin II*
- MDEM 211/LATI 201 *Intermediate Latin I*
- MDEM 212/LATI 202 *Intermediate Latin II*

English

- MDEM 310 *Dante*
- MDEM 312/ENGL 312 *Topics in Old English*
- MDEM 313/ENGL 313 *Beowulf*
- MDEM 315/ENGL 315 *Medieval Cultures Through Film*
- MDEM 316/ENGL 316 *Chaucer*

- MDEM 317/ENGL 317/SWGS 301 *Arthurian Literature*
- MDEM 318/ENGL 318 *JRR Tolkien and the Middle Ages*
- MDEM 319/ENGL 314 *Medieval Romance*
- MDEM 368/ENGL 309/SWGS 368 *Mythologies*
- MDEM 412/ENGL 412 *Introduction to Old English Language*
- MDEM 413/ENGL 413 *Beowolf in Old English*

French Studies

- MDEM 404/FREN 404 *Beginnings of Language and Literature of France*
- MDEM 411 *The Literary and Historical Image of the Medieval Woman*
- MDEM 425/FREN 415 *Courtly Love in Medieval France*
- MDEM 433/FREN 433/HART 433 *Bayeux Tapestry*
- MDEM 436/FREN 416 *Literature and Culture of the Middle Ages*

German Studies

- MDEM 126/FSEM 126/GERM 126 *Freshman Seminar: The Legend of King Arthur in the Middle Ages*
- MDEM 402 *Middle High German*

History of Art

- MDEM 108/HUMA 108/HART 240 *Art in Context: Late Medieval and Renaissance Culture*
- MDEM 111/CLAS 102/HART 101 *Introduction to the History of Western Art I: Prehistoric to Gothic*
- MDEM 330/HART 330 *Early Medieval Art*
- MDEM 331/HART 331 *Gothic Art and Architecture in Northern Europe, 1140–1300*
- MDEM 332/HART 332 *Art of the Courts*
- MDEM 340/HART 340 *Northern Renaissance Art*
- MDEM 343/HART 343 *Masters of the Baroque Era*
- MDEM 363/HART 364 *Capitalism and Art, 1300-1700*
- MDEM 373/ASIA 372/HART 372 *Chinese Art and Visual Culture*
- MDEM 376/ASIA 376/HART 376 *East & West: Medieval Visual Culture in China & Northern Europe*
- MDEM 378/HART 378 *Age of Rembrant*
- MDEM 431/HART 431 *Architecture of the Gothic Cathedral from the Middle Ages to the 20th Century*
- MDEM 433/FREN 433/HART 433 *Bayeux Tapestry*
- MDEM 434/HART 434/SWGS 434 *Seeing Sex in European Art 1400-1700*
- MDEM 4353HART 435/HIST 443 *Multicultural Europe, 1400-1700*

History

- MDEM 281/HIST 281 *The Middle East from the Prophet Muhammad to Sulayman the Magnificent*
- MDEM 308/HIST 308 *The World of Late Antiquity*
- MDEM 324/HIST 324 *Coexistence in Medieval Spain*
- MDEM 327/HIST 327 *European Frontier Societies*
- MDEM 345/HIST 345 *Renaissance Europe*
- MDEM 357/HIST 357 *Jews and Christians in Medieval Europe*
- MDEM 364/HIST 364 *Central Asian Conquest Empires*
- MDEM 369/HIST 368 *Medieval Frontiers*

Humanities

- MDEM 478 *Medieval Studies*

Medieval and Early Modern Studies

- MDEM 320 *Directed Readings*

Music

- MDEM 222/MUSI 222 *Medieval and Renaissance Eras*
- MDEM 427 *Topics in Early Music*
- MDEM 429/MUSI 429 *Music of the Middle Ages*
- MDEM 456/MUSI 436 *Collegium*

Philosophy

- MDEM 201/CLAS 201/PHIL 201 *History of Philosophy I*
- MDEM 301/CLAS 301/PHIL 301 *Ancient and Medieval Philosophy*
- MDEM 481 *Seminar in Ancient and Medieval Philosophy*

Religion

- MDEM 100/FSEM 100/RELI 100 *Romancing Religion: Narratives of the Sacred*
- MDEM 103/RELI 104 *Introduction to Jewish Mysticism*
- MDEM 254/RELI 254/LATI 205 *Medieval Latin Saints Lives*
- MDEM 271/RELI 271 *Medieval Popular Christianity*
- MDEM 305/RELI 305 *Ecstasy and Embodiment in Religious Experience*
- MDEM 314/RELI 314/SWGS 314 *Divine Sex: Gender and Divinity in the Middle Ages*
- MDEM 391/RELI 391 *The Reformation*
- MDEM 462/RELI 462 *English Spirituality after Henry VIII*

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Medieval and Early Modern Studies

The School of Humanities

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For a list of current course offerings, please click here: Medieval and Early Modern Studies.

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Philosophy

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Chair
Steven Crowell

Professors
Baruch Brody
Hugo Tristram Engelhardt, Jr.
Richard Grandy
Donald Ray Morrison
George Sher
Timothy Schroeder
Charles Siewert

Assistant Professors
Gwendolyn Bradford
Sophie Horowitz
Alexander Morgan

Adjunct Professors
Laurence McCullough

Degrees Offered: BA, MA, PhD

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, core portions of analytic philosophy (especially philosophy of mind), history of philosophy, and continental philosophy.

Last Revised : August 03, 2015

Philosophy

The School of Humanities

Program Learning Outcomes for BA in Philosophy

Students graduating from this program will:

1. Demonstrate an understanding of the general historical development of philosophy and develop and in depth understanding of at least one historical period or movement.
2. Demonstrate an understanding of some of the main contemporary issues and arguments in value theory.
3. Demonstrate an understanding of some of the main contemporary issues and arguments in epistemology and metaphysics broadly construed.
4. Demonstrate the ability to read philosophical texts critically and with understanding of the problems and contexts.
5. Demonstrate the cognitive and formal abilities to critically evaluate the arguments of others as well as their own.
6. Demonstrate the abilities to communicate clearly and logically their own views on a range of important philosophical problems.

Degree Requirements for BA in Philosophy

For general university requirements, see Graduation Requirements. Students majoring in philosophy must complete 30 semester hours (10 three-hour departmental courses); at least 18 hours (six courses) must be at the 300 level or above. A double major must complete 27 hours (nine three-hour departmental courses) with all other requirements remaining the same.

REQUIRED COURSES

- PHIL 201/CLAS 201/MDEM 201 *History of Philosophy I*
- PHIL 202 *History of Philosophy II*
- PHIL 106 *Logic* **OR** PHIL 305 *Mathematical Logic*

AREAS

In addition to the required courses, majors must take at least one course from each of the following area lists:

History

- PHIL 301/CLAS 301/MDEM 301 *Ancient and Medieval Philosophy*
- PHIL 302 *Modern Philosophy*
- PHIL 308 *Continental Philosophy*
- PHIL 321 *Kant and 19th Century Philosophy*

Core Analytic

- PHIL 303 *Theory of Knowledge*
- PHIL 304 *Metaphysics*
- PHIL 312 *Philosophy of Mind*
- PHIL 313 *Philosophy of Science*
- PHIL 353 *Philosophy of Language*

Value Theory

- PHIL 306 *Ethics*
- PHIL 307 *Social and Political Philosophy*
- PHIL 316 *Philosophy of Law*
- PHIL 326 *History of Ethics*
- PHIL 327 *History of Social and Political Philosophy*

Senior Thesis and Honors in Philosophy:

Qualified majors may apply before their senior year for directed research leading to a senior thesis, carried out during both semesters of the senior year. Each semester will require three credit hours; these six hours are in addition to the course hours required for the major.

To qualify for the program, students must have an approved research proposal and the agreement of a faculty member to serve as advisor for that project. Applicants will normally be required to have a GPA of 3.75 in philosophy courses and to have completed at least two upper-level courses in the distribution area of the proposed research. (See the major requirements for the definition of the distribution areas.) Applications should be submitted to the undergraduate advisor (UGA) and will be evaluated by the department.

Students who are considering applying to write a senior thesis should consult the UGA and potential advisors as early as possible. Normally students will apply before preregistration in the second semester of their junior year and will spend time during the following summer reading from a list they have developed with their advisor. The thesis normally will be between 7,500 and 15,000 words (approximately 30–60 pages) in length. Students will enroll in PHIL 411 and 412. Students accepted into the Rice University Scholars Program should enroll in HONS 470 and 471 and will be awarded departmental honors for their work in that program if they meet the requirements in this statement. Note that acceptance into the departmental honors program is a separate process from acceptance in RUSP, as is the evaluation for departmental honors.

To be considered for honors, the senior thesis must be completed by April 1. The thesis will be read and evaluated by the advisor and a second reader chosen by the department, and the final decision on honors will be made by the entire faculty. A student will receive honors if he or she receives a grade of A+, A, or A- in PHIL 412. Completion of the major with at least a 3.5 GPA in all philosophy courses is required for departmental honors. Students who miss the April 1 deadline for thesis submission but meet the university deadline for the semester will receive a grade and credit for completed work but will not be considered for honors. Students whose thesis is not awarded honors will receive a grade and credit for completed work.

Last Revised : August 03, 2015

Philosophy

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for PhD in Philosophy

Students graduating from this program will:

1. Demonstrate advanced skills of reading philosophical texts critically and with understanding of the problems and contexts.
2. Demonstrate the cognitive and formal abilities to critically evaluate the arguments of others as well as their own. Demonstrate knowledge of the strengths and limitations of formal methods.
3. Demonstrate the ability to communicate clearly and logically their own views on a range of important philosophical problems at an advanced level.
4. Demonstrate an understanding in depth of the content and context of one of the main areas of departmental focus: history of philosophy, value theory, epistemology, and metaphysics broadly construed.
5. Propose, evaluate, and defend original views in at least one of the main areas of departmental focus.

Degree Requirements for MA and PhD in Philosophy

For general university requirements, see Graduate Degrees.

For the non-thesis MA, candidates must satisfy the following requirements:

- Complete at least two semesters in residence at Rice University
- Complete 42 hours of courses approved for graduate credit in philosophy at Rice University with B- or better
- Accumulate an overall GPA of at least 3.0
- Complete at least 30 hours in philosophy at the 500 level
- Satisfy the departmental logic requirement (Philosophy 505 or examination)
- Complete at least 5 courses in an area of concentration
- Satisfactorily complete departmental duties
- File a petition for certification of the non-thesis master's degree. This petition can be obtained from the graduate program coordinator and must be approved and signed by the department chair and submitted to the Office of Graduate and Postdoctoral Studies according to the deadlines posted in the Academic Calendar.

For the thesis 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)

Last Revised : August 03, 2015

Philosophy

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Philosophy.

Last Revised : August 03, 2015

Religion

The School of Humanities

Chair
April D. DeConick

Professors
Elias K. Bongmba
Marcia Brennan
Matthias Henze
Anne C. Klein
Jeffrey J. Kripal
William B. Parsons
Anthony B. Pinn
John M. Stroup

Associate Professors
David Cook

Assistant Professors
Niki Clements
Claire Fanger
Brian Ogren

Professors Emeriti
Werner H. Kelber
Niels C. Nielsen, Jr.

Degrees Offered: BA, MA, and PhD

The undergraduate major is built to be as flexible as possible so that students may pursue individual interests and interdisciplinary goals. The major provides students with the opportunity to explore mainline religious traditions and marginal/repressed religious currents within multicultural and transnational contexts. Students will gain religious literacy while studying the historical, social, cultural, psychological, philosophical, and cognitive dynamics of religion and religious experience. For research degrees in the graduate program, see the Graduate Requirements tab.

Last Revised : August 11, 2014

- Undergraduate Students
- Graduate Students
- Non-Traditional Students
- Faculty
- Programs of Study
- Administration and Faculty
- Important Notices

Religion

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for BA in Religion

Students graduating from the program will:

1. Develop Critical Skills for the Study of Religion: Theory, Method and (Inter)Disciplinary. They will develop and apply a critical toolkit to the study of religion and religious traditions, including (inter)disciplinary methodologies and theories.
2. Understand Historical, Social and Cultural Dimensions of Religion. They will understand and interpret religious traditions by examining religion(s) as historical, social, and cultural phenomena.
3. Understand Psychological, Philosophical and Cognitive Dimensions of Religion. They will understand and interpret the subjective dimensions of religion(s) through analyses that explore the psychological, philosophical, and cognitive dynamics of religion and religious experience.
4. Understand Religious Plurality/Marginal Currents. They will understand and interpret religious traditions by examining the plurality of religious voices and expressions, including currents that have been marginalized, neglected, repressed, and censored in a variety of sociological, psychological, philosophical, and political ways.
5. Interpret Multicultural/Transnational Currents. They will understand and interpret religious traditions as multicultural and transnational in nature through attention to the impact of globalism, immigration, colonialism, and other forms of multi-cultural (non)religious exchange.
6. Demonstrate Religious Literacy. They will demonstrate a basic objective knowledge of the beliefs, practices, and institutional histories of the world's religions.
7. Develop Communication: Pedagogy and Professionalism. They will develop the ability to effectively communicate (inter)disciplinary knowledge and critical research in the classroom, at professional conferences, and in academic publications.
8. Demonstrate Foreign Language Skills: Primary Text Translation. They will develop the ability to read religious texts in their original languages and perform translations of texts where appropriate.

Degree Requirements for BA in Religion

For general university requirements, see Graduation Requirements. In addition, students also must 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 and Majors.

Students majoring or double-majoring in religion must complete:

- 30 hours for majors
- 24 hours for double majors
- 18 hours must be selected at 300-level or above
- No more than two courses (six hours) may be transferred from outside the department

The 30 hours for majors or 24 hours for double majors must include the following requirements:

- RELI 101 *Introduction to Religion*
- 2 courses in religious traditions
  - i. 1 course- Judaism/Christianity/Islam/African-American Religions
  - ii. 1 course- Indigenous African Religions/American Religions/Buddhism/Hinduism
- Senior Project- 1 400-level course, either seminar or independent study with required research paper

Election of courses should be worked out programmatically with a faculty member advisor so that at least 3 courses form a concentrated area of study.

Honors Program

Qualified undergraduates may choose the option of writing a senior thesis and submitting it to the department for consideration to receive Distinction in Research and Creative Works. For details about the submission process and this honors award, visit the department's website. To complete the thesis, the student elects RELI 400 "Senior Thesis." Students must have a minimum 3.2 GPA in Religion courses prior to enrolling in RELI 400, a Religion faculty supervisor, and the permission of the Undergraduate Director. Further details are available upon consultation with the Undergraduate Director.

Last Revised : August 03, 2015

Religion

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for PhD in Religion

Students graduating from the program will:

1. Develop Critical Skills for the Study of Religion: Theory, Method and (Inter)Disciplinarity. They will develop and apply critical toolkit to the study of religion and religious traditions, including (inter)disciplinary methodologies and theories.
2. Understand Historical, Social and Cultural Dimensions of Religion. They will understand and interpret religious traditions by examining religion(s) as historical, social, and cultural phenomena.
3. Understand Psychological, Philosophical and Cognitive Dimensions of Religion. They will understand and interpret the subjective dimensions of religion(s) through analyses that explore the psychological, philosophical, and cognitive dynamics of religion and religious experience.
4. Understand Religious Plurality/Marginal Currents. Understand and interpret religious traditions by examining the plurality of religious voices and expressions, including currents that have been marginalized, neglected, repressed, and censored in a variety of sociological, psychological, philosophical, and political ways.
5. Interpret Multicultural/Transnational Currents. They will understand and interpret religious traditions as multicultural and transnational in nature through attention to the impact of globalism, immigration, colonialism, and other forms of multi-cultural (non)religious exchange.
6. Demonstrate Religious Literacy. They will demonstrate a basic objective knowledge of the beliefs, practices, and institutional histories of the world's religions.
7. Demonstrate Communication: Pedagogy and Professionalism. They will develop ability to effectively communicate (inter)disciplinary knowledge and critical research in the classroom, at professional conferences, and in academic publications.
8. Demonstrate Foreign Language Skills: Primary Text Translation. They will develop ability to read religious texts in their original languages and perform translations of texts where appropriate.
9. Demonstrate Foreign Language Skills: Secondary Research Translation. They will develop ability to read and understand relevant scholarly research/literature that has been published in foreign languages.

Degree Requirements for MA and PhD in Religion

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. Students admitted into the program normally will 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 are expected to perform a minimum amount of services in return for their stipend by assisting the department as needed.

Although students are not normally admitted to study for an MA, graduate students may earn the MA after obtaining approval of their candidacy for the PhD.

The PhD in religion is a 5-8 year program. Course requirements for students without a relevant MA or MDiv (based on three courses per semester):

- 18 courses (54 hours required); 36 hours for students with a relevant MA or MDiv
- Two department seminars to be taken in each of the first two years
- Successful completion of the second-year review
- Passing grades on reading examinations in two secondary research languages approved by the faculty before

taking qualifying exams.
- Passing grades in four qualifying examinations
- Oral discussion of dissertation proposal
- Satisfactory completion of dissertation and oral defense

Reading Lists—Reading lists are available for all Qualifying Exams. 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.

Professional Development

Opportunities are available to teach undergraduate courses in the department. Students are encouraged to pursue teaching opportunities at colleges and universities. Limited funds also are available for students to attend conferences to present their research. The department encourages these and other efforts to prepare students for academic careers.

Last Revised : August 03, 2015

- Undergraduate Students
- Graduate Students
- Non-Traditional Students
- Faculty
- Programs of Study
- Administration and Faculty
- Important Notices

Religion

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Religion.

Last Revised : August 03, 2015

Spanish, Portuguese and Latin American Studies

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Chair
José F. Aranda, Jr.

Professors
Beatriz González-Stephan
M. Rafael Salaberry
Nicolas Shumway

Associate Professors
José F. Aranda, Jr.
Luis Duno-Gottberg
Gisela Heffes

Assistant Professors
Esther Fernández
Manuel Gutiérrez
Leonora Souza Paula

Degrees Offered: BA

The department offers courses on the literatures and cultures of the Portuguese and Spanish-speaking nations of the world and on Spanish and Portuguese linguistics. The department stresses linguistic competence, interdisciplinary study, and a transnational perspective on Spanish, Latin America and Brazilian 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. Qualified students may undertake independent work.

Latin American Studies is an interdisciplinary major designed to further understanding of the cultures, histories, and politics of Latin America as viewed from regional and global perspectives. For more information, see Latin American Studies.

Last Revised : August 03, 2015

Spanish, Portuguese and Latin American Studies

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for BA in Spanish and Portuguese

Students graduating from this program will:

1. Demonstrate an advanced level of communicative proficiency when writing, speaking, listening to, reading and translating Spanish or Portuguese, including a high degree of ability in interacting with native Spanish or Portuguese speakers and text.
2. Demonstrate analytical competence and independent and critical thinking skills by analyzing and responding to Spanish or Portuguese communications, including: identifying and evaluating arguments, ideas, and evidence, constructing critical responses to Spanish or Portuguese texts, and pursuing independent study or research in some facet of Spanish or Portuguese language or culture.
3. Demonstrate advanced knowledge of the social, historical, political, and cultural aspects of the Spanish-speaking world and Spanish-speaking communities and apply this knowledge to reading and analyzing authentic cultural products, including literature, art and film. They will understand how these cultural products reflect or construct facets of the Spanish-speaking world's history, culture, and identity.

Degree Requirements for BA in Spanish and Portuguese

For general university requirements, see Graduation Requirements. No more than two courses taught in English may count toward the major in Spanish and Portuguese, and more than half of the course for the major must be taken at Rice University.

SINGLE MAJORS

In addition to the requirements listed above, students majoring in Spanish and Portuguese must complete at least 30 semester hours in upper-level courses (SPAN 330 and above) as follows:

ADVANCED COURSEWORK IN SPANISH

- One course between SPAN 330 and SPAN 359
- Four courses between SPAN 360 and SPAN 399
- Four courses at the 400-level and above

ELECTIVES IN SPANISH

- One course from Hispanic linguistics (see below for list of courses)
- One course from Spanish literature and/or culture (see below for list of courses)
- One course Latin American literature and/or culture. (see below for list of courses)
- One Additional Elective course (see below for list of courses)

Note: Courses used towards the Hispanic linguistics, Spanish literature and/or culture, and Latin American literature and/or culture requirements, can be used toward the Advanced Coursework requirements.

DOUBLE MAJORS

In addition to the requirements listed above, students double majoring in Spanish and Portuguese must complete at least 24 semester hours in upper-level courses (SPAN 330 and above) as follows:

ADVANCED COURSEWORK IN SPANISH

- One course between SPAN 330 and SPAN 359
- Three courses between SPAN 360 and SPAN 399
- Three courses at the 400-level and above

ELECTIVES IN SPANISH

- One course from Hispanic Lingustics (see below for list of courses)
- One course from Spanish literature and/or culture (see below for list of courses)
- One course Latin American literature and/or culture. (see below for list of courses)
- One Additional Elective course (see below for list of courses)

Note: Courses used towards the Hispanic linguistics, Spanish literature and/or culture, and Latin American literature and/or culture requirements, can be used toward the Advanced Coursework requirements.

Hispanic Literature

- SPAN 350 *Dialects in Contact: Searching for the "International" Form of Spanish*
- SPAN 379 *Literary Translation*
- SPAN 380 *Second Language Acquisition: Linguistic, Cognitive, and Social Dimensions*

Spanish Literature and/or Culture

- SPAN 340 *Spanish Culture and Civilization*
- SPAN 341 *Master Works of Spanish Art and Literature*
- SPAN 365 *Spain's Golden Age*
- SPAN 366 *Golden Age Drama*
- SPAN 370 *Survey of Spanish Literature*
- SPAN 375 *The Spanish Civil War*
- SPAN 376 *Poetry and Culture*
- SPAN 377 *The Spanish Avant - Garde*
- SPAN 378 *Current Issues in Spain*
- SPAN 410 *The Picaresque Novel*
- SPAN 412 *Don Quijote*
- SPAN 420 *The Disputed Generation of 1898*
- SPAN 422 *Unamuno and Ortega*
- SPAN 424 *1898 in Transatlantic Perspective*
- SPAN 428 *Contemporary Spanish Literature*
- SPAN 430 *20th Century Spanish Novel*
- SPAN 435 *The Modern Spanish Essay*

Latin American Literature and/or Culture

- SPAN 343 *Art in Latin American Literature*
- SPAN 345 *Mapping Latin American Culture*
- SPAN 346 *Brazilian Literature and Culture*
- SPAN 348 *The Mexican Renaissance: Art, Literature and the Revolution of 1910*
- SPAN 371 *Survey of Mexican Literature*
- SPAN 373 *Twentieth Century Mexican Novel*
- SPAN 374 *Brazilian Music and Social Movements*
- SPAN 384 *Literatures from the Southern Cone*
- SPAN 385 *Foundations of Spanish American Literature*
- SPAN 386 *Culture and Power in Latin America*
- SPAN 387 *Her Short Story: Culture of Latin-American Women*
- SPAN 388 *The Latin American Short Story*
- SPAN 389 *Contemporary Mexican Short Fiction*
- SPAN 390 *Hispanic Cinema*
- SPAN 391 *Caribbean Literature*
- SPAN 392 *A Revolution from Within: Trends in Contemporary Cuban Culture*
- SPAN 393 *Colonialism and Revolution in the Caribbean*
- SPAN 395 *Dialogue of the Americas*
- SPAN 397 *Exploring Latin American Autobiographical Fiction*
- SPAN 401 *Critical Readings in Latin American Literature*
- SPAN 402 *The City in Latin America*

SPAN 403 *Literature and the Environment in Latin America*
- SPAN 405 *Latin American Literature in the Movies*
- SPAN 406 *Latin American Cinema*
- SPAN 408 *Brazilian Visual Culture: Film and Art*
- SPAN 424 *1898 in Transatlantic Perspective*
- SPAN 436 *The Mexican Spanish Essay*
- SPAN 450 *Civilization and Barbarism*
- SPAN 452 *(Un) Disciplined Bodies*
- SPAN 453 *Border Narratives*
- SPAN 454 *Macho Culture in Latin America*
- SPAN 456 *Latin American Women's Culture*
- SPAN 460 *Europe and Latin America*
- SPAN 462 *Boom-Boom-Crack: Latin American Novel*
- SPAN 465 *Trends in American Thought*
- SPAN 466 *20th Century Mexican Narrative*
- SPAN 468 *Octavio Paz*
- SPAN 470 *Latin American Cultural Theory*

Additional Electives

- ANTH 361 *Latin American Topics*
- CLAS 235 *Classical Mythology: Interpretations, Origins, and Influence*
- ECON 451 *Economy of Latin America*
- ENGL 371/SPAN 396/SWGS 354 *Chicano/a Literature*
- HART 375/ARCH 375 *Latin-Europe/Latin-America: The Aesthetics and Politics of Modern Cities*
- HIST 227 *Latin American Cultural Traditions*
- LING 300/ANTH 300 *Linguistic Analysis*
- LING 393 *Structure of English*
- LING 415/SWGS 415 *Sociolinguistics*
- PHIL 354 *Philosophical Topics in Advanced Logic*
- POLI 362 *Comparative Urban Politics and Policy*
- SPAN courses between SPAN 330 and SPAN 499

Honors—Every year, the department presents the Cervantes Award for Outstanding Seniors to its top students. The department also offers to outstanding majors the opportunity to do honors work during their final year of study. Honors work consists of an independent research project leading to a thesis and is undertaken under the direction of a departmental faculty member. Students wishing to do honors work must submit a thesis proposal to be approved by the department before the end of the semester prior to the semester in which they will register for the honors thesis (SPAN 495).

Degree Requirements for BA in Latin American Studies

For more information about the interdisciplinary BA in Latin American Studies, please visit the Latin American Studies page.

Last Revised : August 06, 2015

- Undergraduate Students
- Graduate Students
- Non-Traditional Students
- Faculty
- Programs of Study
- Administration and Faculty
- Important Notices

Spanish, Portuguese and Latin American Studies

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please choose: Spanish, Portuguese or Latin American Studies.

Last Revised : August 03, 2015

- Undergraduate Students
- Graduate Students
- Non-Traditional Students
- Faculty
- Programs of Study
- Administration and Faculty
- Important Notices

Study of Women, Gender and Sexuality

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Director
Susan Lurie

Associate Director and Advisor
Krista Comer

Professors
Tani Barlow
Elias K. Bongmba
Marcia Brennan
Marcia J. Citron
April D. DeConick
James D. Faubion
Eugenia Georges
Beatriz Gonzàlez-Stephan
Bridget K. Gorman
Michelle R. Hebl
Rosemary Hennessy
Anne C. Klein
Jeffrey J. Kripal
Caroline R. Levander
Susan Keech McIntosh
Helena Michie
Deborah Nelson-Campbell
Kirsten Ostherr
Nanxiu Qian
Sonia Ryang
Paula Sanders
Meredith Skura
Ewa M. Thompson
Lora Wildenthal
Diane Wolfthal

Associate Professors
José F. Aranda, Jr.
Jenifer Bratter
Joseph Campana
Krista Comer
Scott S. Derrick
Sarah Ellenzweig
Julie Fette
Deborah A. Harter
Cymene Howe
Betty Joseph
Rachel Kimbro
Colleen R. Lamos
Susan Lurie
Nancy A. Niedzielski
Leslie Schwindt-Bayer
Elora Shehabuddin
Nicole A. Waligora-Davis
Kerry Ward
Fay Yarbrough

Assistant Professors
Erin Cech
Sergio Chávez
Leonora Souza Paula

Professors in the Practice
Brian Scott Riedel
Diana L. Strassmann

Lecturers
Thad Logan
Marwa Shalaby

Degrees Offered: BA

The undergraduate major, honors track undergraduate major, and the graduate certificate program take an interdisciplinary approach in their exploration of women's lives and histories and the role that ideas about sexual differences and sexual identities have played in human societies. Areas of inquiry include women's participation in social and cultural production; the construction of heteronormative gender and sexuality as well as lesbian, gay, bisexual, and transgender identities; the relationship between ideas about gender and concepts inherent in other

social, political, and legal structures; and the implications of feminist and sexuality studies for philosophical and epistemological traditions. Students acquire an understanding of how adopting gender as a significant category of analysis challenges existing disciplines. They 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, gender, and sexuality studies.

Last Revised : August 18, 2015

- Undergraduate Students
- Graduate Students
- Non-Traditional Students
- Faculty
- Programs of Study
- Administration and Faculty
- Important Notices

Study of Women, Gender and Sexuality

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for BA in the Study of Women, Gender, and Sexuality

Upon completion of the SWGS undergraduate major students will:

1. Demonstrate an awareness of the diversity of feminist thought in the past and present.
2. Demonstrate familiarity with key issues in the study of women's lives and histories.
3. Demonstrate knowledge of social, political, and cultural features of gender and sexuality in the US and globally.
4. Understand diverse global feminist perspectives, including critical race studies and feminist contributions to social and critical theory.
5. Demonstrate knowledge of the feminist concept of engaged research based upon cumulative practice as engaged researchers in extra-classroom activities.
6. Develop skill in analytical writing as well as oral and visual presentation.

Degree Requirements for BA in the Study of Women, Gender, and Sexuality

For general university requirements, see Graduation Requirements. Students majoring in the study of women, gender, and sexuality must complete:

- 36 semester hours of departmental course work (30 hours if this is a second major)
- One of the following:
  - i. SWGS 101 *Introduction to the Study of Women, Gender, and Sexuality*
  - ii. SWGS 201 *Introduction to Lesbian, Gay, Bisexual, and Transgender Studies*
- SWGS 494 *Pre-Seminar in Engaged Research*
- SWGS 496 *Engaged Research Practicum*
- SWGS 497 *Engaged Research Seminar*
- At least one approved non-Western studies course (see SWGS courses below)
- At least one approved critical race studies course (see SWGS courses below)
- SWGS 345/HIST 340 *History of Feminism* or at least one approved theory course

For students who pursue the Honors Program, the following two courses must be taken in place of SWGS 494, SWGS 496 and SWGS 497, in addition to all other requirements listed above:

- SWGS 498 *Honors Research in the Study of Women, Gender, and Sexuality*
- SWGS 499 *Honors Research in the Study of Women, Gender, and Sexuality*

Of the remaining required courses, no more than four courses may be from a single department. All students must work out their individual courses of study with their faculty advisors. Each student's course of study must be approved by the SWGS advisor. Course requirement tracking forms are available in the SWGS office for declared SWGS majors.

The *Engaged Research Practicum* and *Seminar* are open to non-majors. Permission of the instructor is required as well as some background in the study of women, gender or sexuality.

The SWGS Honors Track

Students wishing to pursue the Honors Program will complete a thesis. The process of preparing the thesis begins in

the late spring of the junior year.

In that spring semester, the student chooses an advisor from the SWGS faculty and with that advisor produces a proposal for a research project. The proposal must be approved by the SWGS major advisor by the last day of the exam period in the spring of the junior year.

In the fall of the senior year, students enroll in SWGS 498 for directed research supervised by a CSWGS faculty affiliate and are in regular consultation with their advisors.

In the spring of the senior year, students enroll in SWGS 499 and work closely with their advisors as they complete the thesis. Honors students present their projects in a public event at the end of the semester.

SWGS Courses

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 advisors or with the director at the beginning of each semester. Please note that not all courses listed below will be offered every academic year. For a current list of courses, please visit the CSWGS website at cswgs.rice.edu.

COURSES THAT SATISFY THE CORE REQUIREMENTS

- SWGS 101 *Introduction to the Study of Women, Gender, and Sexuality*
- SWGS 201 *Introduction to Lesbian, Gay, Bisexual, and Transgender Studies*
- SWGS 494 *Pre-Seminar in Engaged Research*
- SWGS 496 *Engaged Research Practicum*
- SWGS 497 *Engaged Research Seminar*
- SWGS 498 *Honors Research in the Study of Women, Gender, and Sexuality* (F)
- SWGS 499 *Honors Research in the Study of Women, Gender, and Sexuality* (S)

COURSES THAT SATISFY THE NON-WESTERN STUDIES REQUIREMENT

- SWGS 240/ASIA 240/RELI 285 *Gender and Politicized Religion*
- SWGS 250/POLI 250/ASIA 251 *International Political Economy of Gender*
- SWGS 315/RELI 315 *Gender and Islam*
- SWGS 322/ASIA 329/SOCI 372 *Human Development in Global and Local Communities*
- SWGS 340/ASIA 340/RELI 341 *Gender and Politicized Religion (enriched version)*
- SWGS 384/ASIA 384/ASIA 328 *Modern Girl and Asia in the World*
- SWGS 399/ASIA 399/MDEM 379 *Women in Chinese Literature*
- SWGS 422 *Gender and Global Economic Justice*
- SWGS 449/ANTH 449 *Cultures of Sexuality*
- SWGS 492/ASIA 492/HIST 492 *Gender Histories of Modern China*

COURSES THAT SATISFY THE CRITICAL RACE STUDIES REQUIREMENT

- SWGS 234/HIST 241 *U.S. Women's History I: Colonial Beginnings to the Civil War*
- SWGS 235/HIST 242 *U.S. Women's History II: Civil War to the Present*
- SWGS 329/ENGL 369 *The American West and Its Others*
- SWGS 338/HIST 338 *19th Century Women's Narratives*
- SWGS 354/ENGL 371/SPAN 396 *Chicano/a Literature*
- SWGS 370/ENGL 370 *Survey of African American Literature*
- SWGS 387/ENGL 389 *Youth Studies*
- SWGS 415/LING 415 *Sociolinguistics*
- SWGS 453/ENGL 470 *Topics in African American Literature*
- SWGS 466/SPAN 456 *Latin American Women's Culture*

COURSES THAT SATISFY THE THEORY REQUIREMENT

- SWGS 345/HIST 340 *History of Feminism*
- SWGS 380/ENGL 382 *Feminist Theory*
- SWGS 383/SOCI 383 *Feminist Social Thought*
- SWGS 391/HART 391 *Producing Feminist Knowledge: Methodology and Visual Culture*
- SWGS 395 *Feminist Knowledges*
- SWGS 407/ENGL 481 *Studies in Feminist Literary Theory*
- SWGS 430/ENGL 498 *Queer Theory*

- SWGS 480 *Feminist Literary Theory*

OTHER COURSES

- SWGS 105/FSEM 105/LING 105 *Language, Gender, and Sexuality*
- SWGS 111 *Introduction to Feminist Philosophy*
- SWGS 130/FSEM 130/GERM 130 *Women and Nazi Germany*
- SWGS 205/LING 205 *Language and Society*
- SWGS 225/CLAS 225 *Women in Greece & Rome*
- SWGS 273/ENGL 273 *Medicine and Media*
- SWGS 301/ENGL 317/MDEM 317 *Arthurian Literature*
- SWGS 303 *Gender and Science*
- SWGS 305/ENGL 316/MDEM 316 *Chaucer*
- SWGS 306/HEAL 306 *Human Sexuality*
- SWGS 308 *The Future of Food: Feminist, Queer, and Critical Approaches*
- SWGS 314/MDEM 314/RELI 314 *Divine Sex: Gender and Divinity in the Middle Ages*
- SWGS 323/ASIA 323/RELI 323 *The Knowing Body: Buddhism, Gender and the Social World*
- SWGS 324/SOCI 306 *Sociology of Gender*
- SWGS 325/SOCI 334 *Sociology of the Family*
- SWGS 327/ENGL 381 *Topics in Women Writers*
- SWGS 331/PSYC 331 *Psychology of Gender*
- SWGS 332/ANTH 325 *Sex, Self, and Society in Ancient Greece*
- SWGS 333/ANTH 311 *Masculinities*
- SWGS 334/ITAL 330 *Madonnas and Divas: Images of and from Italian Women*
- SWGS 335/ANTH 388 *The Lifecycle: A Biocultural View*
- SWGS 336/ANTH 308 *The Anthropology of the Historical Imagination*
- SWGS 343/ENGL 343 *Jane Austen's Worlds*
- SWGS 344/GERM 343 *Mothers/Daughters in Film and Literature*
- SWGS 346/HART 346 *Making Love in Modern Art*
- SWGS 349/ENGL 329 *Women Writers: 1400-1900*
- SWGS 350/ANTH 327 *Gender and Symbolism*
- SWGS 358/GERM 321/HUMA 321/HART 385 *Mapping German Culture: European Women Filmmakers*
- SWGS 361/GERM 338/HUMA 373 *New German Film: Hitler's Cinematic Children*
- SWGS 364/ENGL 354 *Queer Literary Cultures*
- SWGS 367/ENGL 367 *Literature and Culture of the U.S.-Mexico Borderlands*
- SWGS 368/MDEM 368/ENGL 309 *Mythologies*
- SWGS 370/ENGL 370 *African American Literature*
- SWGS 372/ENGL 342 *Survey of Victorian Fiction*
- SWGS 378/ENGL 378 *Literature of the Americas*
- SWGS 385 *Sexual Debates in the US: Social and Cultural Contexts of Supreme Court Decisions*
- SWGS 389/ENGL 389 *Youth Studies*
- SWGS 390/SPAN 390 *Hispanic Cinema*
- SWGS 391/HART 391 *Producing Feminist Knowledge: Methodology and Visual Culture*
- SWGS 393 *Science, Feminism, and Christianity in the American 20th Century*
- SWGS 398/HIST 398 *The Ten Most Important Supreme Court Decisions in US History*
- SWGS 400 *Constructing Identities in Modern Fiction*
- SWGS 405/ENGL 443 *Austen Only: Novels and Film*
- SWGS 412 *Women and Women's Voices in French Literature*
- SWGS 424/FREN 424 *Women in France*
- SWGS 434/HART 434/MDEM 434 *Seeing Sex in European Art, 1400–1700*
- SWGS 440/MUSI 526 *Women in Music*
- SWGS 444/SOCI 440 *Family Inequality*
- SWGS 453/ENGL 470 *African American Studies*
- SWGS 462/ENGL 462 *20th–21st-Century American Studies*
- SWGS 465/SOCI 465 *Gender and Health*
- SWGS 470 *Advanced Seminar in Poverty, Justice, and Capabilities*
- SWGS 472/ENGL 432 *Topics in Richardson's Clarissa*
- SWGS 485/HART 485 *Gender and Hollywood Cinema in the 1950s*
- SWGS 495 *Independent Study*

Specialization in Poverty, Justice, and Human Capabilities in the SWGS Major

Within the major in the Study of Women, Gender, and Sexuality, students can pursue a specialization or area of emphasis in Poverty, Social Justice, and Human Capabilities (PJHC). The specialization allows students to focus

their course of study on the relation of gender and sexuality to poverty and human well-being and to develop an analytic framework for addressing these issues.

The specialization consists of three courses (of the 10 or 12 required in the SWGS major):

- HUMA/SOCI 280 *Introduction to Poverty, Justice, Capabilities*
- and two approved electives with substantive gender focus chosen from the PJHC undergraduate requirements. These elective courses also may be approved to fulfill SWGS requirements for critical race and non-Western studies.

Last Revised : August 13, 2015

Study of Women, Gender and Sexuality

The School of Humanities

Program Learning Outcomes for the Graduate Certificate in the Study of Women, Gender, and Sexuality

Upon completion of the SWGS Graduate Certificate, students will:

1. Demonstrate knowledge of historical and contemporary approaches to the study of women, gender, and sexuality across diverse disciplines.
2. Engage through their intellectual production feminist concepts and methodologies and features of women's studies, gender studies, and/or sexuality studies as academic fields.
3. Incorporate critical debates in the study of women, gender, and sexuality in their oral presentations and written analyses, including work for publication and/or use in a dissertation.

Requirements for the Graduate Certificate in the Study of Women, Gender, and Sexuality

The graduate certificate program in the study of women, gender, and sexuality is designed to provide interdisciplinary training in women, gender, and sexuality 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 SWGS graduate certificate program. The SWGS graduate certificate is not a free-standing degree program; in addition to fulfilling the SWGS requirements outlined below, candidates will be required to successfully complete the PhD program in which they have been admitted in order to receive the graduate certificate in SWGS. Further information is available on request from the SWGS office. 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 enrolled 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 all required coursework (within the student's home department as well as CSWGS) and after achieving candidacy in the PhD. program. Graduate students who enroll in the certificate program in fall 2008 and in subsequent semesters will be asked to submit a dissertation proposal (or a 500-word statement with a proposal to follow later) that includes some indication of the ways women, gender, and/or sexuality feature in their project in order for a stipend to be disbursed during the "prospectus semester." CSWGS will ask for this proposal or statement after the student completes qualifying exams. Graduate certificate students are eligible to work as teaching assistants for an SWGS 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 SWGS, candidates must:

- Complete nine credit hours of courses in SWGS, including two core courses (SWGS 501 and SWGS 502) and one cross-listed elective course (see list of approved courses below)
- Complete three noncredit hours for participation in SWGS annual colloquium by attending six colloquium seminars and associated public lectures, generally within two years
- Complete a dissertation that in some way features the study of women, gender, and/or sexuality

SWGS certificate students are strongly encouraged to include a member of the CSWGS 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 programs. All students must work out their individual courses of study with the CSWGS director and the graduate advisor in their home departments. Each student's course of study must be pre-approved by the CSWGS director. Please note that not all courses listed below will be offered every academic year. For a current list of courses, please visit the CSWGS website at cswgs.rice.edu. For the current course schedule, please visit courses.rice.edu.

COURSES THAT SATISFY THE CORE REQUIREMENTS

- SWGS 501 *Feminist Debates*
- SWGS 502 *Gender, the Disciplines, and Interdisciplinarity*

COURSES THAT SATISFY THE CROSS-LISTED ELECTIVE COURSE REQUIREMENT

- SWGS 503 *Directed Reading*
- SWGS 517 *Medieval Women Writers*
- SWGS 520 *Shakespeare and Difference*
- SWGS 522 *Feminist Economics*
- SWGS 525 *Self, Sex, and Society in Ancient Greece*
- SWGS 534 *Seeing Sex in European Art, 1400–1700*
- SWGS 542 *Victorian Fiction*
- SWGS 545 *Women and Gender: Europe and Beyond*
- SWGS 546 *20th-Century British Literature*
- SWGS 556 *Seminar in Language Variation*
- SWGS 577 *Buddhism, Gender, Society*
- SWGS 580 *Sex, Sanctity, and Psychoanalysis*
- SWGS 581 *Cultural Studies*
- SWGS 583 *Affect Theory*
- SWGS 585 *Postcolonialism and Beyond*

ANNUAL COLLOQUIUM REQUIREMENT

Graduate certificate students will participate in a colloquium consisting of a series of seminars and public lectures over the course of a year, to be offered annually at Rice and organized by the Center for the Study of Women, Gender, and Sexuality (CSWGS). Colloquium attendance by graduate certificate students constitutes an official requirement for the certificate. Normally, students are expected to attend colloquia events over a minimum of four semesters, (amounting to six seminars and six lectures). Attendance beyond that is highly encouraged. Colloquium topics will be determined by the CSWGS steering committee with a view to highlighting emerging knowledge in gender, sexuality, and women's studies. The colloquium provides graduate students with the opportunity to engage in sustained intellectual exchange with leading scholars and to participate in producing cutting-edge work in the field.

Last Revised : August 06, 2015

- Undergraduate Students
- Graduate Students
- Non-Traditional Students
- Faculty
- Programs of Study
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Study of Women, Gender and Sexuality

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Study of Women, Gender, and Sexuality.

Last Revised : August 03, 2015

- Undergraduate Students
- Graduate Students
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Visual and Dramatic Arts

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Chair
John Sparagana

Acting Chair
Geoff Winningham

Professors
Karin Broker
John Sparagana
Geoff Winningham

Associate Professors
Brian Huberman
Christopher Sperandio

Assistant Professors
Natasha Bowdoin
Lisa Lapinski

Professor in the Practice of Film & Media Studies
Charles Dove

Professor in the Practice of Theatre
Christina Keefe

Lecturer of Photography
Paul Hester

Lecturer of Theatre
Mark Krouskop

Lecturer of Film & Media Studies
Tish Stringer

Artist in Residence
Allison Hunter

Undergraduate Advisors
Natasha Bowdoin (Studio Art)
Charles Dove (Film, Photography)
Christina Keefe (Theater)

Degrees Offered: BA

Department of Visual and Dramatic Arts majors are students who concentrate their focus of study in the visual and dramatic arts, with emphasis in the studio arts, film and photography, or theatre tracks. Each student should discuss with their 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.

Last Revised : May 18, 2012

Undergraduate Students
Graduate Students
Non-Traditional Students
Faculty
Programs of Study
Administration and Faculty
Important Notices

Visual and Dramatic Arts

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes and Degree Requirements for BA in Visual and Dramatic Arts

For general university requirements, see Graduation Requirements.

Program Learning Outcomes for the Studio Art Track

Students graduating from this program will:

1. Demonstrate knowledge and understanding of materials and processes in a range of two and three-dimensional media as well as the ability to apply these acquired skills to other materials and ways of working.
2. Develop an understanding of how to make work from observation and invention, developing the ability to visually articulate content and meaning through form.
3. Demonstrate the ability to explore and hone a variety of techniques and materials while developing their own artistic vocabularies and creative vision. This involves gaining a familiarity with a wide range of skills, concepts, and approaches essential to artistic development.
4. Develop critical and analytical thinking skills including the skill to uniquely problem-solve. Students gain proficiency navigating the group critique context, with exposure to different critical discussion formats. They will exit with the capability to critique their own work in addition to the work of their peers and other artists.
5. Demonstrate an understanding of the meaning and potential purpose of the arts, a knowledge of art history, arts role and varied guises in contemporary society, and arts relationship and engagement with other disciplines including literature, music, philosophy, and the sciences.
6. Develop an understanding of self in the larger context of the practice of arts.

Degree Requirements for the Studio Art Track

Single Major
13 courses are required

REQUIRED COURSES

- ARTS 165 *Introduction to Sculpture* (ARTS 166 *Sculpture* accepted as equivalent)
- ARTS 225 *Drawing I* (ARTS 101 *Drawing for the Non-Art Major* **and** ARTS 103 *Creative 2-D Design* accepted as equivalent)
- ARTS 301 *Painting Studio*
- ARTS 311 *Printmaking Studio*
- ARTS 325 *Life Drawing* **OR** ARTS 323 *Drawing Studio*
- ARTS 388 *Critical Studies for Studio Practice*
- Two history of art (HART) electives
- Two studio arts (ARTS), photography (FOTO), film (FILM) or theatre (THEA) electives
- ARTS 294 *Special Problems: Junior Field Trip*
- ARTS 499 *Senior Studio*
- One advanced studio arts (ARTS) 400 level elective from the following:
  i. ARTS 465 *Advanced Sculpture*
  ii. ARTS 475 *Advanced Painting*
  iii. ARTS 449 *Printmaking Studio*
  iv. ARTS 425 *Advanced Drawing*

NOTE: Students must enroll in ARTS 499 in both the fall and spring semesters of their senior year.

Double Major
12 courses are required

REQUIRED COURSES

- ARTS 165 *Introduction to Sculpture* (ARTS 166 *Sculpture* accepted as equivalent)
- ARTS 225 *Drawing I* (ARTS 101 *Drawing for the Non-Art Major* and ARTS 103 *Creative 2-D Design* accepted as equivalent)
- ARTS 301 Painting Studio
- ARTS 311 Printmaking Studio
- ARTS 325 *Life Drawing* **OR** ARTS 323 *Drawing Studio*
- ARTS 388 *Critical Studies for Studio Practice*
- Two history of art (HART) electives
- One studio arts (ARTS), photography (FOTO), film (FILM), or theatre (THEA) electives
- ARTS 294 *Special Problems: Junior Field Trip* (spring semester)
- ARTS 499 *Senior Studio*
- One advanced studio arts (ARTS) 400 level elective from the following:
    i. ARTS 465 *Advanced Sculpture*
    ii. ARTS 475 *Advanced Painting*
    iii. ARTS 449 *Printmaking Studio*
    iv. ARTS 425 *Advanced Drawing*

NOTE: Students must enroll in ARTS 499 in both the fall and spring semesters of their senior year.

Visual and Dramatic Arts majors are strongly encouraged to explore arts-related courses offered in other departments that may enrich the studio major such as: philosophy, anthropology, science, history, cultural studies, language, writing, comparative studies, etc. Students should speak with their faculty advisor prior to enrolling.

The junior year field trip will be designed to help visual arts majors focus on the upcoming senior year of intensive studio work, and to get to know the Visual and Dramatic Arts faculty and staff. These are trips to cultural centers nationally and internationally, including visits to museums, galleries, artist studios, theaters, and meetings with creative professionals in the fields of film/photo, theater, and studio arts.

Program Learning Outcomes for the Film and Photography Track

Students graduating from this program will:

1. Understand the social, aesthetic, and technological history of film and photography.
2. Become fluent in both older forms of filmmaking and photography and newer ones.
3. Grasp the relationship between the tools and the art.
4. Utilize the understanding and the fluency to create works of art.

Degree Requirements for the Film and Photography Track

Single Major
12 courses are required

REQUIRED COURSES

- One course from the following:
    i. FILM 225 *Introduction to Filmmaking and Editing*
    ii. FOTO 205 *Introduction to Black & White Photography*
- FOTO 210/HART 209 *Beginning Digital Photography*
- FILM 327/ANTH 324/ARTS 327 *Documentary Production* & FILM 328/ARTS 328 *Filmmaking I* **OR** any two courses from the following:
    i. FOTO 295 *Special Problems in Photography*
    ii. FOTO 310 *Intermediate Digital Photography*
    iii. FOTO 383 *Photography Bookmaking*
    iv. FOTO 385 *Photography Seminar*
    v. FOTO 390/ESCI 380 *Visualizing Nature*
- One course from the following:
    i. FILM 420 *Film Studio*

ii. FOTO 410 *Advanced Digital Photography*

- One course from the following:
  i. FILM 280/ARTS 280/HART 280 *History and Aesthetics of Film*
  ii. FILM 284/HART 284 *Non-Fiction Film*
  iii. FILM 383/HART 383 *Global Cinema*
  iv. FILM 432/ARTS 432 *Film Genre: The Western*
  v. FILM 435/ARTS 435/HART 480 *Film Authorship*
  vi. ARTS 388 *Critical Studies for Studio Practice*
- Four (4) elective courses in studio arts (ARTS), film (FILM), theater (THEA), or photography (FOTO)
- Two (2) elective courses in theory/criticism of studio arts (ARTS), theatre (THEA), or film/media studies (offered in the departments of Anthropology, English, French Studies, History, etc.). NOTE: Open selections may be qualified by course prerequisites. Elective courses should be selected in consultation with a Visual and Dramatic Arts faculty advisor.
- ARTS 294 *Special Problems: Junior Field Trip* (recommended)

Double Major
10 courses are required

REQUIRED COURSES

- One course from the following:
  i. FILM 225 *Introduction to Fim Art & Editing*
  ii. FOTO 205 *Introduction to Black & White Photography*
  iii. FOTO 210 *Beginning Digital Photography*
- FILM 327 *Documentary Production* & FILM 328 *Filmmaking I* **OR** any two courses from the following:
  i. FOTO 295 *Special Problems in Photography*
  ii. FOTO 310 *Intermediate Digital Photography*
  iii. FOTO 383 *Photography Bookmaking*
  iv. FOTO 385 *Photography Seminar*
  v. FOTO 390 *Visualizing Nature*
- One course from the following:
  i. FILM 420 *Film Studio*
  ii. FOTO 410 *Advanced Digital Photography*
- One course from the following:
  i. FILM 280 *History and Aesthetics of Film*
  ii. FILM 284 *Non-Fiction Film*
  iii. FILM 383 *Global Cinema*
  iv. FILM 432 *Film Genre: The Western*
  v. FILM 435 *Film Authorship*
  vi. ARTS 388 *Critical Studies for Studio Practice*
- Three (3) elective courses in studio arts (ARTS), film (FILM), theater (THEA), or photography (FOTO)
- Two (2) elective courses in theory/criticism of studio arts (ARTS), theatre (THEA), or film/media studies (offered in the departments of Anthropology, English, French Studies, History, etc.). NOTE: Open selections may be qualified by course prerequisites. Elective courses should be selected in consultation with a Visual and Dramatic Arts faculty advisor.
- ARTS 294 *Special Problems: Junior Field Trip* (recommended)

Film and photography track majors are strongly encouraged to explore film-related courses offered in other departments that may enrich the Film and Photography major, such as philosophy, anthropology, science, history, cultural studies, language, writing, comparative studies, etc. Students should speak with their faculty advisor prior to enrolling.

The junior year field trip will be designed to help visual arts majors focus on the upcoming senior year of intensive studio work, and to get to know the Visual and Dramatic Arts faculty and staff. These are trips to cultural centers nationally and internationally, including visits to museums, galleries, artist studios, theaters, and meetings with creative professionals in the fields of film/photo, theater, and studio arts.

Program Learning Outcomes for the Theatre Track

Students graduating from this program will:

1. Demonstrate the ability to adapt and apply their foundational skills and knowledge in theater design, direction, performance, sound etc. to professionally and effectively fulfill a range of roles in an actual, hands-on theatrical production.
2. Demonstrate the ability to use critical thinking and analytical skills to analyze and evaluate a theatrical text,

including being able to identify its structure and form, and to understand characters and specific scenes with the depth necessary for effective performance, scene study and design.

3. Demonstrate the ability to effectively communicate themselves verbally and in writing in situations of performance, play analysis, and performance direction, which necessitates collaboration and communication amongst many contributing individuals.
4. Understand theater and performance broadly, and specific theatrical works or performances, within their historical, social, cultural, and political contexts.

Degree Requirements for the Theatre Track

Single Major
13 courses are required.

REQUIRED COURSES

- One course from the following:
  i. THEA 100 *Stage Craft*
  ii. THEA 101 *Costume Construction*
  iii. THEA 103 *Theatre Technology*
- THEA 300 *Introduction to Theatre Design* **OR** THEA 301 *Acting I*
- THEA 315 *Theatre in Western Culture: A Historical Introduction*
- THEA 331 *Theatre Production*
- Six (6) elective courses in theatre (THEA), studio arts practice (ARTS), theory, or criticism, photography (FOTO), or film (FILM). May not include more than three (3) studio arts practice (ARTS) or film (FILM).
- Three (3) elective courses in dramatic or film theory or criticism, dramatic literature, or art history. NOTE: Open selections qualified by course prerequisites. Elective courses should be selected in consultation with the theatre faculty advisor.

Double Major
11 courses are required.

REQUIRED COURSES

- One course from the following:
  i. THEA 100 *Stage Craft*
  ii. THEA 101 *Costume Construction*
  iii. THEA 103 *Theatre Technology*
- THEA 300 *Introduction to Theatre Design* **OR** THEA 301 *Acting I*
- THEA 315 *Theatre in Western Culture: A Historical Introduction*
- THEA 331 *Theatre Production*
- Four (4) elective courses in theatre (THEA), studio arts practice (ARTS), theory, or criticism. May not include more than two (2) studio arts practice (ARTS) or film (FILM).
- Three (3) elective courses in dramatic or film theory or criticism, dramatic literature, or art history. NOTE: Open selections qualified by course prerequisites. Elective courses should be selected in consultation with the theatre faculty advisor.

ARTS 294, *Special Problems: Junior Field Trip*, is recommended for all THEA track majors

Theatre track majors are strongly encouraged to explore theatre-related courses offered in other departments that may enrich the theatre major, such as: philosophy, anthropology, science, history, cultural studies, language, writing, comparative studies, etc. Students should speak with their faculty advisor prior to enrolling.

Theatre track majors are encouraged to take Lifetime Physical Activity Program (LPAP) courses to supplement and enhance their studies in theatre. Courses include (but not limited to): LPAP 148, *Dance Choreography;* LPAP 130, *Contact Improvisation;* LPAP 155, *Introduction to Ballet;* LPAP 133, *Capoeira;* and LPAP 157 *Jazz Dance/Hip Hop.* Students should receive departmental approval and have already satisfied the LPAP graduation requirements before enrolling. Students may not take more than four LPAP courses for credit.

The junior year field trip will be designed to help all visual and dramatic arts majors focus on the upcoming senior year of intensive work, and to get to know the Visual and Dramatic Arts faculty and staff. These are trips to cultural centers nationally and internationally, including visits to museums, galleries, artist studios, theaters, and meetings with creative professionals in the fields of film/photo, theater, and studio arts.

Distinction in Research and Creative Works

Distinction in Research and Creative Works is a university award for select undergraduates, granted at commencement, which appears on the transcript and diploma. Students must apply within their department or program to be considered for the award and a letter from a faculty member must support the application.

Eligibility for the award extends widely to include a variety of research, design, and other creative projects, as well as persistent dedication to research. Projects completed in part or entirely at other institutions or with community partners will be eligible for consideration.

Applicants must be in good academic standing and have a cumulative GPA of at least 3.30 in courses completed at Rice.

Also, of further note: The award will be granted only to projects that produce a concrete outcome – e.g. an essay, invention, design, art exhibition, project or performance, or musical composition – and demonstrate commitment and/or achievement above and beyond the norm. Students who complete senior theses, senior design projects or other required senior capstone projects shall not qualify automatically for consideration for this university distinction.

Department of Visual and Dramatic Arts Application must include: 1) application form; including portfolio; 2) overall GPA of 3.30; 3) a written artist statement; 4) letter of support from a Visual and Dramatic Arts faculty member; 5) public exhibition, screening, publication or performance that includes a lecture or artist talk component by applicant; 6) two-page description of how the project meets the requirements of Distinction.

The department requires exceptional evidence of success, as defined by completion of a project (body of artwork, film, theatrical design work, etc.). Support through the application process will be available through the department--e.g. workshops, seminars and individual meetings with faculty mentors.

Contact the department or look online for deadline dates. No electronic submissions accepted. Please note that your project does not have to be completed to apply for Distinction (all final materials will be due on April 17, 2015). The department will select a very limited number of students for Distinction.

Transfer Credit

No more than two courses may be transferred for the single or double major to satisfy degree requirements for BA in Visual and Dramatic Arts degree. The two transfer credit courses must be studio, film, photography, or theatre practice courses required for all majors. Advanced placement credit may not be used by Visual and Dramatic Arts majors to fulfill department degree requirements.

Entering transfer students who are transferring coursework from another accredited college or university will be allowed to transfer their undergraduate art courses. Students must speak with the department chairman immediately upon transferring to Rice.

The Department of Visual and Dramatic Arts will accept academic work completed in the Spring at NYU program as well as the National Theater Institute program, Eugene O'Neill Theater Center, as transfer credit to fulfill major requirements (following university transfer credit guidelines).

See also Transfer Credit.

Rice Theatre Program

Rice Theatre Program curriculum offers a solid foundation in all aspects of theatrical production from acting and directing to technology and design for students who wish to pursue a professional career in theatre or continue on to a graduate program. Theatre courses also are open to nonmajors who want to gain a greater appreciation for the art of theatre.

There are two main-stage productions (one fall and one spring) and the possibility of two student showcases offered each year in Hamman Hall—a 500-seat proscenium theatre facility. The department invites distinguished guest artists each semester to direct and produce the two main-stage productions. Participation in productions is open to all students.

Theatre Program faculty are actively involved in professional theatre and film locally, nationally, and internationally and actively pursue opportunities to involve advanced students in that work. In addition, advanced students are encouraged to apply for internship positions whenever possible. Rice students have been accepted in competitive internships such as The Alley Theatre, Berkeley Repertory Theatre, Williamstown Theatre Festival, and The Peter Hall Company. In addition, students are encouraged to study theatre abroad and transfer course credit back to Rice. Approval for transfer credit must be sought prior to enrollment in a study-abroad program by contacting the director

of the Theatre Program.

In even number years, the Theatre Program, sponsored by the Alan and Shirley Grob Endowment for Shakespeare in Performance, hosts the Actors From the London Stage—one of the oldest established touring Shakespeare theater companies in the world—for a week-long residency of workshops, performances, and lectures. Each tour presents a full-length play by Shakespeare performed by five classically trained actors who come from such prestigious companies as the Royal Shakespeare Company, the Royal National Theatre of Great Britain, and Shakespeare's Globe Theatre.

National Theater Institute

The National Theater Institute is the educational arm of the renowned Eugene O'Neill Theater Center. The program is designed to complement a liberal arts education with three distinct study-away programs, all offering rigorous, risk-taking theater exploration. The semester long program at the O'Neill Center in Connecticut, the NTI Moscow Art Theater semester, and the seven-week Theatermakers summer program confront the serious theater student with opportunities to discover new creative possibilities.

The National Theater Institute offers an extensive conservatory-based training program for the dedicated student. Distinguished master teaching artists guide the classes in courses in acting, directing, design, playwriting, stage combat, voice, and movement. The Department of Visual and Dramatic Arts will accept academic work completed at the National Theater Institute as transfer credit to fulfill major requirements (following university transfer credit guidelines).

Rice Film Program

Our film program works in concert with the Department of Visual and Dramatic Arts' academic mission 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 celluloid and 4K Digital Cinema Projection with Dolby Digital Sound. Film production students can showcase their work during the academic year on our silver screen in recently renovated projection facilities.

During the academic year, Rice Cinema screens films from around the world—foreign features, shorts, documentaries, and animation—as part of our ongoing partnership with the diverse cultural communities of the City of Houston. Film at Rice reaches beyond the university's hedges to create, engage, and encourage scholarly thought and dialog on the many issues that impact our world. Among the internationally known filmmakers who have appeared on our campus over the years include Werner Herzog, Rakhshan Banietemad, Atom Egoyan, Shirin Neshat, Martin Scorsese, Andy Warhol, George Lucas, and Dennis Hopper.

Exhibitions, Lectures, and Arts Programs at Rice

The Department of Visual and Dramatic Arts mounts several art and photography exhibitions and stage productions each year. In addition, 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 communities.

The department enjoys an ongoing close relationship with local theatres, museums, and galleries. The department offers opportunities for students to work and study with local art venues and alternative art spaces by way collaborative events and programs. The collections and 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, actors, directors, critics, and studio artists to campus to speak on a broad range of topics and current interests.

Museum of Fine Arts, Houston Glassell School of Art Core Fellows

The Department of Visual and Dramatic Arts, in partnership with the Museum of Fine Arts, Houston Glassell School of Art, supports Glassell Core Fellowship recipients to teach studio practice and critical theory courses. These Core Fellowship recipients, selected by the MFAH from the highly competitive and prestigious Glassell School of Art Core Fellowship Residency Program, are post-graduate artists and art educators.

Last Revised : August 06, 2015

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Visual and Dramatic Arts

The School of Humanities

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Course Listings

For the most current course offerings, please click here: Visual Arts, Film, History of Art, and Theatre.

Last Revised : August 03, 2015

Music

The Shepherd School of Music

Dean
Robert Yekovich

Professors
Robert Atherholt
Richard Bado
Richard Brown
Barbara Butler
Leone Buyse
Shih-Hui Chen
James Dunham
Paul V. H. Ellison
Norman Fischer
Charles Geyer
Kenneth Goldsmith
Arthur Gottschalk
Richard Hawley
Desmond Hoebig
Thomas I. Jaber
Pierre Jalbert
Benjamin C. Kamins
Paul Kantor
Stephen King
Richard Lavenda
Cho-Liang Lin
Jon Kimura Parker
Timothy Pitts
Larry Rachleff
Robert Roux
Julie Simson
Ivo-Jan van der Werff
William VerMeulen
Michael Webster
Kathleen Winkler

Associate Professors
Karim Al-Zand
Walter B. Bailey
Gregory Barnett
Allen Barnhill
Anthony K. Brandt
Kenneth Cowan
David Ferris
David E. Kirk
Thomas LeGrand
Peter V. Loewen
Paula Page
Barbara Paver
Janet Rarick
Brinton Averil Smith
Matthew Strauss
Kurt Stallmann

Assistant Professors
Damian Blättler
Alexandra Kieffer

Artist Teachers
Brian Connelly
Joan DerHovsepian
Debra Dickinson
Susan Dunn
Jeanne Kierman Fischer
Christopher French
Eric Halen
Jerry Hou
Joseph Li
Sohyoung Park
Bethany Self
C. Dean Shank Jr.
Virginia Weckstrom

Lecturers
George C. Baker
Rachel Buchman
Mary Greitzer
Robert Simpson
Cornelia Watkins
Chapman Welch

Adjunct Professors
C. Richard Stasney

Degrees Offered: BA, BMus, BMus/MMus, MMus, AD, 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 in 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 post-master's Artist Diploma (AD) in instrumental conducting and performance; and a DMA degree in composition and selected areas of performance.

Last Revised : August 13, 2015

Music

The Shepherd School of Music

Program Learning Outcomes for BA in Music and BMus

BA in Music—Students graduating from this program will:

1. Demonstrate an intermediate level of technical and musical competence in performance.
2. Possess rudimentary skills in music theory and an understanding of how those skills are related to music performance.
3. Acquire a fundamental understanding and appreciation of the various historical periods of music literature.

BMus—Students graduating from this program will:

1. Demonstrate technical and musical competence in solo performance, composition, or music-historical research appropriate to the standards of a four-year undergraduate program.
2. Possess intermediate analytical skills in music theory and an understanding of how those skills inform music performance.
3. Acquire a fundamental understanding of the relationship between music history and music performance.
4. Develop superior technical collaborative skills in the student's major area through a combination of practice, coaching, and rehearsal in large and small ensembles.

For MMus program learning outcomes, please see Graduate Requirements tab.

Degree Requirements for BA in Music, BMus, and BMus/MMus

Requirements for All Music Majors

For general university requirements, see Graduation Requirements. 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 may be given over the material studied during the semester. All degree candidates except BA students must demonstrate keyboard proficiency by 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 two 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.

Admission—An audition, either in person or recorded, 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 on successful academic achievement and other standards of college admission. Transfer applicants from other colleges, conservatories, and universities also must provide an audition, personal or recorded, 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.

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 on the Shepherd School website 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 *Theory I*
- MUSI 212 *Theory II*
- MUSI 311 *Theoretical Studies III*
- MUSI 312 *Theoretical Studies IV*
- Theory Elective in one of the following:
  i. MUSI 416 *Orchestration*
  ii. MUSI 512 *Analytical Systems*
  iii. MUSI 513 *Modal Counterpoint*
  iv. MUSI 613 *Tonal Counterpoint*

MUSIC HISTORY

- MUSI 222 /MDEM 222 *Medieval and Renaissance Eras*
- MUSI 321 *Baroque and Early Classical Eras*
- MUSI 322 *Classical and Romantic Eras*
- MUSI 421 *The Modern Era*

AURAL SKILLS AND PERFORMANCE TECHNIQUES

- MUSI 231 *Aural Skills and Performance Technique I*
- MUSI 232 *Aural Skills and Performance Technique II*
- MUSI 331 *Aural Skills and Performance Techniques III*
- MUSI 332 *Aural Skills and Performance Techniques IV*
- MUSI 431 *Aural Skills and Performance Techniques V*

BMus/MMus Honors Program—The same general university requirements apply, but students seeking the coordinated BMus/MMus degrees 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*.

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—A minimum grade of "B-" is expected of all music students in their major applied area. A grade of "C+" or lower is considered unsatisfactory and will be evaluated in the following manner:

A music major who receives a grade of "C+" or lower in their major applied area will be placed on music probation. Music probation signifies that the student's work has been sufficiently unsatisfactory to preclude graduation unless marked improvement is achieved promptly. A student on music probation may be absent from class only for extraordinary reasons and may not represent the school in any public function not directly a part of a degree program.

If a student receives a second semester of "C+" or lower in their major applied area, whether for consecutive semesters or not, the student will be discontinued as a music performance major and merit scholarship from the Shepherd School will be discontinued.

NOTE: For music history and musicology majors a grade of "C+" or lower in any music history course is considered

unsatisfactory and will be evaluated as above.

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 117/118 *Fundamentals of Music I and II*
- MUSI 141–197 for individual instruction in all instruments
- 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 340 *Rice Symphonic Band*
- MUSI 342 *Rice Jazz Ensemble*
- MUSI 345 *Applied Studies in Jazz*
- 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 Masterworks Chorus, Da Camera, Context, and Chamber Music Houston, 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.

Last Revised : August 13, 2015

Music

The Shepherd School of Music

Program Learning Outcomes for MMus, AD, and DMA in Music

MMus—Students graduating from this program will:

1. Demonstrate technical and musical competence in performance, composition, or historical scholarship at a professional level.
2. Develop advanced analytical skills in music theory and a deep understanding of how those skills inform music performance.
3. Demonstrate a thorough understanding of the relationship between music history and music performance.
4. Develop career development skills that complement their professional-level performance skills.

AD—Students graduating from the program will:

1. Demonstrate the technical mastery and musical expertise requisite to having a significant professional career in their chosen area of performance.
2. Intellectually master the stylistic differences when performing music of the Baroque, Classical, Romantic, modern and contemporary eras and be able to apply them in performance.
3. Accumulate a significantly expanded and diverse list of repertoire.
4. Be equipped with multiple extra-musical career skills.

DMA—Students graduating from this program will:

1. Demonstrate technical and musical competence in performance or composition at a professional level.
2. Develop highly developed analytical skills in advanced music theory and a profound understanding of how those skills inform music performance.
3. Demonstrate a thorough understanding of the relationship between music history and music performance with greater familiarity of a wide variety of historical and contemporary performance practices.
4. Develop career development skills that complement their professional-level performance skills.
5. Develop working knowledge of and have experience with both classroom teaching and studio teaching methods at the conservatory and university levels.

Degree Requirements for MMus, AD 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 also must complete the advanced music tests.

Requirements—For general university requirements, see Graduate Degrees. For the MMus degree, candidates must complete at least four semesters of full–time study at Rice. Semester hour minimums for the MMus degree vary according to major area. For the post-master's Artist Diploma, students must complete a two-year residency at Rice and a minimum of 41 semester hours. 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.

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—A minimum grade of "B-" is expected of all music students in their major applied area. A grade of "C+" or lower is considered unsatisfactory and will be evaluated in the following manner:

A music major who receives a grade of "C+" or lower in their major applied area will be placed on music probation. Music probation signifies that the student's work has been sufficiently unsatisfactory to preclude graduation unless marked improvement is achieved promptly. A student on music probation may be absent from class only for extraordinary reasons and may not represent the school in any public function not directly a part of a degree program.

If a student receives a second semester of "C+" or lower in their major applied area, whether for consecutive semesters or not, the student will be discontinued as a music performance major and merit scholarship from the Shepherd School will be discontinued.

NOTE: For music history and musicology majors a grade of "C+" or lower in any music history course is considered unsatisfactory and will be evaluated as above.

Graduate degree requirement: a grade point average of 2.67 is necessary for graduation.

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).

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- MUSI 327/328 *Music Literature for Nonmajors I and II*
- MUSI 334/335 *Campanile Orchestra and Rice Chorale*
- 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 Masterworks Chorus, Da Camera, Context, and Chamber Music Houston, 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.

Last Revised : August 13, 2015

Music

The Shepherd School of Music

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For the most current course offerings, please click here: Music.

Last Revised : August 03, 2015

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Bioscience and Health Policy

The Wiess of School of Natural Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Director
Janet Braam

Professors
Andrew R. Barron
George N. Bennett
Katherine B. Ensor
Peter R. Hartley
Kathleen S. Matthews

Associate Professors
Daniel S. Wagner

Lecturers
Susan Cates
Kirstin R. W. Matthews

Degrees Offered: MSBHP

Rice University offered this degree for the first time in 2011. This degree is geared to train students in bioscience and health policy with the intent of creating new options for science students interested in working in government as well as governmental relations positions in non-profit organizations, industry and academic institutions. As an interdisciplinary program it aims to equip students with advanced bioscience skills; to teach quantitative skills and data analysis; to equip students with communication and research skills to conduct independent studies enabling them to understand, and formulate public policy recommendations; and to train students how to integrate their science knowledge into creating better policies and practices.

This degree is one of five tracks in the 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 and government. This program will give students an advanced background in science complemented by courses in sociology, economics and policy studies to foster their understanding of the role of science in policy making and the role of public policy in science. Their coursework will provide them with research and study skills enabling them to develop specific policy recommendations, and they will also receive the tool-set to become knowledgeable in the formulation and execution of public policy. Their direct access to the Baker Institute will allow them to work closely with policy scholars as well as meet with many of the leaders in science and technology policy.

Students receiving the MS in Bioscience and Health Policy degree will be able to enter into governmental positions, work in non-governmental agencies, medical and pharmaceutical companies, and serve as governmental relations officers for companies or universities with a vested science interest.

A coordinated MBA/MSBHP degree is offered in conjunction with the Jesse H. Jones Graduate School of Business.

Last Revised : August 03, 2015

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Bioscience and Health Policy

The Wiess of School of Natural Sciences

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Program Learning Outcomes for MS in Bioscience and Health Policy

Students graduating from this program will:

1. Develop advanced Bioscience skills.
2. Be able to integrate science knowledge into better policies and practices.
3. Be able to apply quantitative skills and data analysis.
4. Demonstrate leadership, communication, and research skills necessary to conduct independent studies enabling graduates to understand and formulate public policy recommendations.
5. Gain exposure and real life experience in student's interest area by participating in an internship.

Degree Requirements for MS in Bioscience and Health Policy

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, management, ethics, policy, and communication. At the conclusion of their 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 Academic Regulation, and also see Professional Degrees.

Admission

Admission to graduate study in Bioscience and Health Policy is open to qualified students holding a bachelor's degree in biology or a related field that includes completed course work in biology, chemistry, calculus and statistics. Scores from the general Graduate Record Examination (GRE), good critical thinking and communication skills and completed course work in introductory economics is preferred. Department faculty evaluate the previous academic record and credentials of each applicant individually and make admission decisions.

REQUIRED COURSES

SCIENCE CORE COURSES

Four Bioscience Courses

These courses give in-depth instruction in specialized areas of Bioscience and are required to obtain a broad understanding of diverse areas of cutting edge Bioscience research. *Courses marked with asterisks are offered as 300-level courses that will include graduate level writing and analysis to qualify as a 500-level graduate course.

- BIOC 550 *Viruses and Infectious Diseases*
- BIOC 524* *Microbiology and Biotechnology*
- BIOC 525 *Plant Molecular Genetics and Development*
- BIOC 540 *Metabolic Engineering*
- BIOC 544 *Development Biology*
- BIOC 545 *Advanced Molecular Biology and Genetics*
- BIOC 547 *Biology and Medicine*
- BIOC 560 *Cancer Biology*

- BIOC 563* *Endocrinology*
- BIOC 564 *Pediatric Global Health*
- BIOC 573* *Immunology*
- BIOC 580/BIOE 580/CHBE 580 *Protein Engineering*
- BIOC 585* *Fundamentals of Cellular, Molecular, and Integrative Neuroscience*
- BIOC 598 *BioMEMS and Biomedical Microdevices*

Other Science Course options accepted as marked * in electives below

COHORT COURSES

- NSCI 501 *Professional Master's Seminar* (F,S) (required for two semesters, 1 credit hour each)
- NSCI 511 *Science Policy and Ethics* (S) (3 credit hours)
- NSCI 512 *Internship Project* (1 credit hour)
- NSCI 610 *Management in Science and Engineering* (F, S) (3 credit hours)

FOUR STATISTICS, ECONOMICS, AND POLICY COURSES

The analytical competency requirement provides career-enhancing, marketable skills in policy analysis, economics and statistics. Students will take courses from groups A, B and C as indicated below:

A–One Course related to Statistics or Data Analytics

- STAT 305 *Intro to Statistics in Biosciences*
- STAT 385 *Methods of Data Analysis*
- STAT 553 *Biostatistics*
- STAT 684/CEVE 684 *Environmental Risk Assessment and Human Health*
- MGMT 750 *Strategic Considerations in Health Informatics*

B–One Course related to Finance or Economics

- ECON 446 *Applied Econometrics (requires pre-requisites)*
- ECON 450 *World Economy and Social Development (requires pre-requisites)*
- ECON 481 *Health Economics*
- MGMT 679 *Cost and Quality in Health Care*
- PH 3910* *Introduction to Health Economics*

C–Two Policy Courses

- POST 530 *Shaping of Health Policy*
- HEAL 407 *Epidemiology*
- HEAL 498 *Disparities in Health in America*
- MGMT 690 *Healthcare Strategy*

THREE TO SIX MONTH INTERNSHIP

Practical experience is offered via a three to six month work immersion. The internship will be under the guidance of a host company, government agency, or non-profit organization. A summary of the internship project is required in both oral and written form as part of the Professional Master's Seminar.

TWO ELECTIVE COURSES

The electives reflect individual academic interests and career goals. Any course from the above list of Bioscience courses can be taken as an elective, provided it was not taken as a required course. In addition, the following classes qualify as elective classes:

- ANTH 381 *Medical Anthropology*
- ANTH 443 *Race Ethnicity and Health*
- ECON 450 *World Economy and Social Development*
- GLHT 462 *Global Health Design Challenges*
- HEAL 407 *Epidemiology*
- HEAL 460 *Planning, Evaluation of Health Promotion and Education*
- MGMT 631 *Health Insurance in U. S.*
- MGMT 678 *U.S. Healthcare Management*
- MGMT 961 *Business Law*
- STAT 684 *Environmental Risk Assessment and Human Health*

- GS 120254* *Cell and Systems Physiology*
- GS 120043* *Principles of Pathology*

**There are other courses that may satisfy the Two Elective Courses requirement. For example, Students can choose up to two electives from UT Graduate School of Biomedical Science (GS), Informatics (HI) and/or Health Science Center (PH). See department for more details.*

Note: *Some of the listed courses are not offered every year, and some may also have prerequisites or require instructor permission. If student needs to take more than two 300/400 courses as part of the degree program, permission of advising faculty is required.*

Professional Science Master's 5th Year Degree Option for Rice Undergraduates

Rice students have an option to achieve the MS in bioscience and health policy by adding an additional fifth 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 bioscience and health policy 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 director.

Last Revised : August 05, 2015

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The Wiess of School of Natural Sciences

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Course Listings

For the most current course offerings, please click here: Bioscience and Health Policy.

Last Revised : August 11, 2014

BioSciences

The Wiess School of Natural Sciences

Chair
Janet Braam

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George M. Bennett
Daniel D. Carson
Mary C. Farach-Carson
Michael C. Gustin
Herbert Levine
Seiichi P. T. Matsuda
Kathleen S. Matthews
George McLendon
John S. Olson
Jose Onuchic
George N. Phillips
Yousif Shamoo
Evan Siemann
Michael Stern
Charles R. Stewart
Peter Wolynes

Associate Professors
Oleg Igoshin
Michael Kohn
Peter Lwigale
James A. McNew
Luay K. Nakleh
Edward P. Nikonowicz
Volker Rudolf
Laura Segatori
Jonathan Silberg
Yizhi Jane Tao
Daniel Wagner

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Amy Dunham
Scott Egan
Natalia Kirienko
Tom Miller

Teaching Faculty
Beth Beason Abmayr
David R. Caprette
Adrienna M.S. Correa
Elizabeth Eich
Cassidy Johnson
Lindsey Minter
Alma Novotny
Dereth Phillips
Scott Solomon

Faculty Fellows
Meenakshi Bhattacharjie
Wassim Chehab
Pamela Constantinou
Daniel Harrington
Dmitri Lapotko
Kirstin Matthews

Huxley Fellows
Emily Jones
Kelly Weinersmith

Adjunct Faculty
Richard Behringer
Sarah Bondos
Robert O. Fox
Haichun Gao
Jeff Glassberg
Richard H. Gomer
Nancy Greig
Maria Hartley
Kendal Hirschi
Olivier Lichtarge
Jianpeng Ma
Paolo Moretti
Jordan Orange
Timothy Palzkill
Dabananda Pati
Neal Pellis
Florante A. Quiocho
Susan Rosenberg

Julia Saltz
Jeffrey J. Tabor
Aryeh Warmflash
Weiwei Zhong

Professors Emeriti
Frank Fisher, Jr.
Raymon M. Glantz
Paul Harcombe
Jordan Konisky
Graham Palmer
David Queller
Ronald Sass
Stephen Subtelny
Joan Strassman
Calvin Ward

Clarence Sams
Shelley Sazer
Yigong Shi
Ah-Lim Tsai
Theodore G. Wensel
Peggy Whitson
Huda Y. Zoghbi

Degrees Offered: BA, BS, MA, MS, PhD

The BioSciences department unites faculty engaged in research and teaching in a wide range of disciplines within the life sciences, creating a vibrant and diverse community of scholars. The department offers undergraduate degrees in Biochemistry and Cell Biology (BA, BS), Biological Sciences (BA), and Ecology and Evolutionary Biology (BA, BS). The BA degrees offer a rigorous biological curriculum suitable for a large number of career paths yet allow the flexibility for extended academic exploration outside of biology. The BS degrees offer greater depth in upper-level coursework and are often chosen for students pursuing advanced degrees in the future. Most BioSciences students, regardless of major, participate in undergraduate research, availing themselves of the numerous research opportunities at Rice and in the Houston community.

Graduate degrees are offered in Biochemistry and Cell Biology (PhD, MA) and in Ecology and Evolutionary Biology (PhD, MA, MS). Graduate studies include a combination of advanced coursework and individual research with faculty mentors.

Last Revised : August 03, 2015

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BioSciences

The Wiess School of Natural Sciences

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The Department of BioSciences offers a broad range of introductory and advanced courses. Students may pursue a BA or BS in Biochemistry and Cell Biology or Ecology and Evolutionary Biology, a BA in Biological Sciences, or a Minor in Biochemistry and Cell Biology or Ecology and Evolutionary Biology. All five major degree paths will prepare students for graduate, medical, or other professional schools and a wide range of careers in the life sciences. In addition, qualified students may apply to the Biochemistry and Cell Biology BA-MA-PhD program track. Additional information on departmental programs, courses and advising is available at the BioSciences website.

Advising

Students pursuing BCB or EEB degree paths (BA, BS or minor) should contact one of the BCB or EEB program advisors. Those electing a BA in Biological Sciences may opt for advising within the program (BCB or EEB) that most closely corresponds to their interests; students are welcome to switch the program through which they are advised at any time. A current list of advisors in both programs is found in the Undergraduate section of the BioSciences website. BCB program advisors are assigned by first letter of the student's last name.

Program Learning Outcomes for BS and BA in Biochemistry and Cell Biology

Students graduating from this program will:

1. Demonstrate a comprehensive knowledge of biology with particular emphasis on biochemistry, genetics, and cell biology.
2. Demonstrate the ability to apply the modern scientific method, including designing experiments and/or building mathematical models, and collecting, analyzing, and interpreting data using common statistical methods and software programs.
3. Demonstrate effective oral and written communication skills, including an ability to effectively communicate and work with diverse groups and the ability to interpret and communicate the results of original research.
4. Locate primary scientific literature and demonstrate the ability to use critical thinking and problem solving skills to evaluate published and proposed research in the biological sciences and to apply these skills.
5. Demonstrate understanding of the practice and culture of science, scientific ethics, and the relationship between science and society.
6. Develop quantitative reasoning via the construction of models and/or the analysis of data.

Degree Requirements for BS and BA in Biochemistry and Cell Biology

These paths emphasize a broad understanding of cell biology and biochemistry, provide room for exploration anywhere in the Natural Sciences or Engineering, and culminate in one (BA) or two (BS) required 400-level capstone courses incorporating primary scientific literature, presentations, and writing. Students in Biochemistry and Cell Biology are strongly encouraged to pursue their research interests through independent research experiences. The BS offers greater coverage and depth while the BA offers greater flexibility with two fewer required courses as detailed below.

All of the following requirements must be completed for a BS in Biochemistry & Cell Biology. Students pursuing a BA may omit one of the following courses: BIOC 302, BIOC 344 or BIOC 352, and are required to take only one BIOC 400 level course.

Permissible substitutions: MATH 111/112 may be substituted for MATH 101; CHEM 151 and 152 and corresponding labs may be substituted for CHEM 121 and 122 and corresponding labs; CHEM 320 may be substituted for Chem 212; CHEM 365 may be substituted for CHEM 215; PHYS 101 and 102 or PHYS 111 and 112 may be substituted for PHYS 125 and 126; CHEM 310 or CHEM 311/312 may substitute for BIOC 352.

NON-BIOLOGY COURSES

- MATH 101/102 *Single Variable Calculus I and II*
- MATH 211 *Ordinary Differential Equations*
- PHYS 125/126 *General Physics I and II*
- CHEM 121/123 *General Chemistry I/General Chemistry Lab I* **and** CHEM 122/124 *General Chemistry II/General Chemistry Labs II*
- CHEM 211/212/215 *Organic Chemistry I and II with Organic Chemistry Lab*

CORE LECTURE COURSES

- BIOC 201 *Introductory Biology*
- BIOC 301 *Biochemistry I*
- BIOC 302 *Biochemistry II*
- BIOC 341 *Cell Biology*
- BIOC 344 *Molecular Biology and Genetics*
- BIOC 352 *Physical Chemistry for the Biosciences*

CORE LABORATORY COURSES

- BIOC 211 *Intermediate Experimental Biosciences*
- BIOC 311 *Advanced Experimental Biosciences*

ADVANCED LABORATORY COURSES

Two additional advanced labs (300 level or higher), chosen from the following list:

- BIOC 313 *Introductory Synthetic Biology*
- BIOC 318 *Lab in Applied Microbiology*
- BIOC 320/BIOE 342 *Lab in Tissue Culture*
- BIOC 413 *Experimental Molecular Biology*
- BIOC 415 *Experimental Physiology*
- BIOC 530 NMR *Spectroscopy and Molecular Modeling*
- BIOC 532 *Laboratory Module In Optical Spectroscopy And Kinetics*
- BIOC 533 *Bioinformatics & Computational Biology*
- BIOC 535 *Practical X-Ray Crystallography*
- One independent research experience (described below) *

*All Biochemistry and Cell Biology (BCB) majors must take at least one of the listed additional advanced laboratory courses. If desired, the second additional advanced laboratory requirement may be satisfied by completing: (i) BIOC 310 if taken for at least 3 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 major advisor; or (iii) honors research (BIOC 401/402/412). This substitution may be used only once regardless of the number of semesters of independent research taken.

CAPSTONE COURSES

- Two BIOC 400 level courses (3 credit hours or more per course)

Only BIOC 400 level courses, which are literature based and explicitly designed for the BCB major, can be used to satisfy this requirement. The combined courses BIOC 401/402/412 are considered a single BIOC 400 level course and, provided the independent research substitution has not been used previously, a single lab at 300 level or higher. To count toward the major all three courses must be completed.

NATURAL SCIENCES/ENGINEERING ELECTIVES

- Two Natural Sciences or Engineering 300-level or higher courses (3 credit hours or more)

Courses in Natural Sciences/Engineering include any 300-level or greater course of at least 3 credit hours from any department in the Wiess School of Natural Sciences (including BioSciences) or George R. Brown School of Engineering, except independent research courses such as BIOC 310 or BIOE 400/401, which cannot be used to fulfill this requirement. A maximum of 3 credits of BIOC 390 (transfer credit in Biochemistry and Cell Biology) may be applied to this requirement.

Course Requirements for Minor in Biochemistry and Cell Biology

The Minor in Biochemistry and Cell Biology is intended for those with an interest in the life sciences but who may be majoring in other areas. This minor incorporates many of the life science core courses required for the health professions.

- MATH 101/102 *Single Variable Calculus I and II*
- PHYS 125/126 *General Physics I and II*
- CHEM 121/123 *General Chemistry I/General Chemistry Lab I* **and** CHEM 122/124 *General Chemistry II/General Chemistry Labs II*
- CHEM 211/212/215 *Organic Chemistry I* and *II with Organic Chemistry Lab*
- BIOC 201 *Introductory Biology*
- BIOC 211 *Intermediate Experimental Biosciences*
- BIOC 301 *Biochemistry*
- BIOC 341 *Cell Biology*
- One BIOC ≥ 300-level lecture course (≥ 3 credit hours)

Permissible Substitutions: MATH 111/112 may be substituted for MATH 101; CHEM 151 and 152 and corresponding labs may be substituted for CHEM 121 and 122 and corresponding labs; CHEM 320 may be substituted for Chem 212; CHEM 365 may be substituted for CHEM 215; PHYS 101 and 102 or PHYS 111 and 112 may be substituted for PHYS 125 and 126.

Degree Requirements for BA-MA-PhD Track in Biochemistry & Cell Biology

Qualified Rice University undergraduate students can apply to enroll in the Biochemistry and Cell Biology BA-MA-PhD program track in the spring of their sophomore year. Course requirements for graduate studies are pursued at the same time as the upper-level undergraduate degree requirements. Laboratory research performed in 300, 400, and 800-level research courses is presented as the MA thesis in the summer following graduation and can serve as the initial phases of the PhD thesis work. As a result, the graduate careers of these students will be accelerated by an anticipated 1-2 years, and such students may be able to obtain their PhD degrees approximately 3 years after obtaining their BA and MA degrees. Criteria for selection include academic performance (GPA ≥ 3.5), motivation, previous research experience, and personal qualities. Detailed information on this track may be found in the Graduate section of these General Announcements.

Program Learning Outcomes for BS and BA in Ecology and Evolutionary Biology

BS in Ecology and Evolutionary Biology
Students graduating from this program will:

1. Locate primary scientific literature and demonstrate the ability to use critical thinking and problem solving skills to evaluate published and proposed research in the biological sciences and to apply these skills to develop an independent research project.
2. Demonstrate the ability to apply the modern scientific method, including designing experiments and/or building mathematical models, collecting, analyzing, and interpreting data using common statistical methods and software programs.
3. Demonstrate effective oral and written communication skills, including an ability to effectively communicate and work with diverse groups and the ability to interpret and communicate the results of original research.
4. Demonstrate familiarity with the diversity of life and an in-depth understanding of at least one level of biological

organization (i.e. genetic, genomic, cellular, organismal, population, community, or ecosystem).
5. Demonstrate a comprehensive knowledge of biology and an in-depth understanding of ecology and evolutionary biology.
6. Demonstrate understanding of the practice and culture of science, scientific ethics, and the relationship between science and society.

BA in Ecology and Evolutionary Biology
Students graduating from this program will:

1. Locate primary scientific literature and demonstrate the ability to apply critical thinking and problem solving skills to evaluate published and proposed research in the biological sciences.
2. Demonstrate an understanding of the modern scientific method, including a familiarity with current methods for designing experiments and/or mathematical models, and the ability to analyze and interpret data.
3. Demonstrate effective oral and written communication skills, including an ability to effectively communicate and work with diverse groups.
4. Demonstrate familiarity with the diversity of life.
5. Demonstrate a comprehensive knowledge of biology and an in-depth understanding of ecology and evolutionary biology.
6. Demonstrate understanding of the practice and culture of science, scientific ethics, and the relationship between science and society.

Degree Requirements for BS and BA in Ecology and Evolutionary Biology

These paths are intended for students pursuing a wide range of careers in the life sciences. Students graduating from either degree path typically go on to graduate or professional school or enter the workforce with the BS as their terminal degree. Course work emphasizes a broad understanding of basic biology together with in-depth knowledge of ecology and evolutionary biology that culminates in a required capstone 400-level course incorporating primary scientific literature, presentations, and writing in an advanced topic. The BA degree is well suited for students with an additional major outside of the sciences. Students pursuing a BS in Ecology and Evolutionary Biology are required to conduct independent research under the supervision or co-supervision of an EEB faculty member (though the research can take place in other locations or institutions such as the Texas Medical Center or at field sites throughout the world). Students in both degree paths are strongly encouraged to take advantage of study abroad opportunities.

NON-BIOLOGY COURSES

- MATH 101/102 *Single Variable Calculus I* and *II*
- STAT course (at least 3 credits) or EBIO 338 *Design and Analysis of Biological Experiments*
- CHEM 121/123 *General Chemistry I/General Chemistry Lab I*
- PHYS 125 *General Physics I*
- One natural sciences or engineering course at the 300 level or above (cannot be EBIO or BIOC)

Permissible substitutions: MATH 111/112 may be substituted for MATH 101; CHEM 151 and 152 and corresponding labs may be substituted for CHEM 121 and 122 and corresponding labs; PHYS 101/103 and PHYS 102/104 or PHYS 111 and PHYS 112 may be substituted for PHYS 125 and PHYS 126.

BIOLOGY LECTURE COURSES

- BIOC 201 and EBIO 202 *Introductory Biology I* and *II*
- EBIO 325 *Ecology*
- EBIO 334/BIOC 334 *Evolution*
- Two 300 or 400 level EBIO lecture courses
- One 300 or 400 level BIOC lecture course (cannot be cross-listed with EBIO)

BIOLOGY LECTURE COURSES

- BIOC 211 *Intermediate Experimental Biosciences*
- EBIO 213 *Introductory Lab in Ecology and Evolutionary Biology*
- One 300 or 400 level lab in EBIO
- One 300 or 400 level lab in EBIO or BIOC

BA ONLY: One of the advanced laboratory course requirements may be satisfied by taking EBIO 306 if taken for at least two credit hours.

SENIOR SCIENTIFIC COMMUNICATION COURSE

- EBIO 412 Advanced Communication in the Biosciences

In addition to the requirements for the BA in Ecology and Evolutionary Biology, the BS degree path requires the following courses:

INDEPENDENT RESEARCH COURSES (BS ONLY)

- EBIO 306 *Independent Research* (for at least 2 credits, participation in RURS)
- EBIO 403/404 *Senior Research*

Course Requirements for Minor in Ecology and Evolutionary Biology

The Ecology and Evolutionary Biology minor is intended for the numerous Rice students with an avid interest in ecology and evolutionary biology but whose major interests are in other departments.

- BIOC 201 and EBIO 202 *Introductory Biology I* and *II*
- EBIO 213 *Introductory Lab in Ecology and Evolutionary Biology*
- Four EBIO lecture courses at the 300 or 400 level

Program Learning Outcomes for BA in Biological Sciences

Students graduating from this program will:

1. Demonstrate a comprehensive knowledge of the field of biology, illustrated by the ability to describe the breadth of the discipline and to synthesize a range of biological concepts and ideas.
2. Demonstrate an understanding of the modern scientific method, including a familiarity with current methods for designing experiments and/or mathematical models, and the ability to analyze and interpret data.
3. Demonstrate effective oral and written communication skills, including an ability to effectively communicate and work with diverse groups.
4. Locate primary scientific literature and demonstrate the ability to apply critical thinking and problem solving skills to evaluate published and proposed research in the biological sciences.
5. Demonstrate understanding of the practice and culture of science, scientific ethics, and the relationship between science and society.
6. Develop quantitative reasoning via the construction of models and/or the analysis of data.

Degree Requirements for BA in Biological Sciences

This degree incorporates elements of the Ecology and Evolutionary Biology and the Biochemistry and Cell Biology Programs.

NON-BIOLOGY COURSES

- MATH 101/102 Single Variable Calculus I and II
- MATH 211, STAT 305, or EBIO 338 Differential Equations, Biological Statistics, or Design and Analysis of Biological Experiments
- CHEM 121/123 General Chemistry I/General Chemistry Lab I and CHEM 122/124 General Chemistry II/General Chemistry Lab II
- CHEM 211/212/215 Organic Chemistry I and II with Organic Chemistry Lab
- PHYS 125/126 General Physics I and II

Permissible substitutions: MATH 111/112 may be substituted for MATH 101; CHEM 151 and 152 and corresponding labs may be substituted for CHEM 121 and 122 and corresponding labs; CHEM 320 may be substituted for Chem 212; CHEM 365 may be substituted for CHEM 215; PHYS 101 and 102 or PHYS 111 and 112 may be substituted for PHYS 125 and 126.

INTRODUCTORY BIOLOGY

- BIOC 201 Introductory Biology
- EBIO 202 Introductory Biology II

INTRODUCTORY BIOLOGY LABS

- BIOC 211 Intermediate Experimental Biosciences
- EBIO 213 Introductory Lab in Ecology and Evolutionary Biology

ADVANCED BIOLOGY LABS
Three biology labs from the following list:

- BIOC 311 Advanced Experimental Biosciences
- BIOC 313 Introductory Synthetic Biology
- BIOC 318 Lab in Applied Microbiology
- BIOC 320/BIOE 342 Lab in Tissue Culture
- BIOC 413 Experimental Molecular Biology
- BIOC 415 Experimental Physiology
- BIOC 530 NMR Spectroscopy and Molecular Modeling
- BIOC 532 Lab in Optical Spectroscopy and Kinetics
- BIOC 533 Bioinformatics and Computational Biology
- BIOC 535 Practical X-Ray Crystallography
- EBIO 316 Lab in Ecology
- EBIO 317 Lab in Behavior
- EBIO 319 Tropical Field Biology
- EBIO 324 Conservation Biology Lab
- EBIO 327 Biological Diversity Lab
- EBIO 330 Insect Biology Lab
- EBIO 335 Evolutionary Bioinformatics Lab
- EBIO 337 Field Bird Biology Lab
- EBIO 379 Lab Module in Aquatic Ecology With Scuba
- One independent research experience (described below) *

* Only one of the advanced laboratory course requirements can be satisfied by taking any of the following: (i) BIOC 310 or EBIO 306 if taken for at least 2 credits; or (ii) HONS 470/471, if the research supervisor is from the BioSciences department or if the research is biological in nature and pre-approved by the student's major advisor; (iii) BIOC 401/402/412 or EBIO 403/404 (iv) BIOC/EBIO 393 (laboratory transfer credit). This substitution may be used only once regardless of the number of semesters of independent research or transfer credit.

UPPER-LEVEL BIOLOGY COURSES

- BIOC 301 Biochemistry I
- Three EBIO 300 or 400-level lecture courses
- One of the following:
  i. BIOC 302 Biochemistry II
  ii. BIOC 341 Cell Biology
  iii. BIOC 344 Molecular Biology and Genetics
  iv. BIOC 352 Physical Chemistry for the Biosciences
- One additional BIOC 300 or 400-level lecture course
- One additional BIOC or EBIO 300 or 400-level lecture course

A maximum of 3 credits of BIOC 390 and 3 credits of EBIO 391 can apply to this major. CHEM 310 or CHEM 311/312 may substitute for BIOC 352.

Research in the BioSciences

Research is highly encouraged for all students at Rice University and is an essential job skill for those planning to continue in graduate programs in the sciences or seeking employment in research fields. Rice students in the biosciences have the opportunity to participate in a wide variety of research projects both on- and off-campus. Students may receive BioSciences credit for such research through the courses EBIO 306 or BIOC 310 and the advanced research series BIOC 401/402/412 or EBIO 403/404. Please consult the Department of Biosciences Undergraduate web pages for more information on finding a research project and participating in research for credit. Those interested in receiving regular biosciences research opportunity postings should join the BioSciences Opportunities group on Owl-Space.

Last Revised : August 05, 2015

BioSciences

The Wiess School of Natural Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Jump to:

MA and PhD in Biochemistry and Cell Biology
BA-MA-PhD track in Biochemistry and Cell Biology
MA and PhD in Ecology and Evolutionary Biology

The Department of BioSciences at Rice University administers graduate programs in Biochemistry and Cell Biology (BCB) and in Ecology and Evolutionary Biology (EEB), described below. In addition, some BioSciences faculty members participate in the Systems, Synthetic, and Physical Biology (SSPB) PhD program administered by the Institute of Biosciences and Bioengineering (ibb.rice.edu).

Program Learning Outcomes for MA and PhD in Biochemistry and Cell Biology

MA in Biochemistry and Cell Biology
Students graduating from this program will:

1. Develop a knowledge of past and current research accomplishments and techniques in biochemistry and cell biology.
2. Demonstrate technical proficiency in some biochemistry and cell biology research methods.
3. Demonstrate problem solving and critical thinking skills.
4. Demonstrate contributions to publishable research.
5. Demonstrate the effective written communication skills required for a thesis describing independent research.
6. Demonstrate the effective oral and visual communication skills necessary for articulating scientific findings and significance to diverse audiences.
7. Understand pedagogical methods appropriate for teaching undergraduate students in biology.
8. Understand scientific ethics and the responsible conduct of research.

PhD in Biochemistry and Cell Biology
Students graduating from this program will:

1. Develop a comprehensive knowledge of current and past research accomplishments and techniques in biochemistry and cell biology.
2. Be able to identify unanswered research questions in biochemistry and cell biology and synthesize credible paths towards answering them.
3. Demonstrate technical proficiency in a range of biochemistry and cell biology research methods.
4. Demonstrate independent problem solving and critical thinking skills.
5. Demonstrate substantial contributions to publishable research.
6. Demonstrate the effective written communication skills required for scientific publications, grant proposal submissions, and a thesis describing independent research.
7. Demonstrate the effective oral and visual communication skills necessary for articulating scientific findings and significance to diverse audiences.
8. Understand pedagogical methods appropriate for teaching undergraduate students in biology.
9. Understand scientific ethics and the responsible conduct of research.

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 or BS degree in biochemistry, biology, chemistry, chemical engineering, physics, or some equivalent
- High levels of intellectual strength 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, the department admits students who intend to pursue the Ph.D. program. The department provides a program guide titled “Biochemistry and Cell Biology Graduate Program Handbook” that is updated annually. For general university requirements, see Graduate Degrees.

Course Requirements:

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, the BCB Graduate Advisory Committee will advise all graduate students. 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 and cell biology; training in genetics and physical chemistry or biophysics is also beneficial. Students lacking formal training in biochemistry or cell biology are required to take the equivalent background courses during their first year.

The following Rice Courses must be taken if students lack these prerequisites in their undergraduate transcript:

- BIOC 301 *Biochemistry*
- BIOC 341 *Cell Biology*

All PhD students are required to take the following graduate-level courses:

- BIOC 575 *Introduction to Research*
- BIOC 581/582 *Graduate Research Seminar (required in all years of residency)*
- BIOC 583 *Molecular Interactions*
- BIOC 587 *Research Design, Proposal Writing, and Professional Development*
- BIOC 588 *Cellular Interactions*
- UNIV 594 *Training in the Responsible Conduct of Research*
- BIOC 599 *Graduate Teaching (two semesters)*
- BIOC 701/702 *Graduate Research Rotations (first year research course)*
- BIOC 800 *Graduate Research (theses lab research after rotations are complete)*

Students also must take six credit hours from the following set of advanced courses:

- BIOC 524 *Microbiology & Biotechnology (3 hr)*
- BIOC 525 *Plant Molecular Genetics and Development (3 hr)*
- BIOC 530/535 *Graduate Laboratory Modules in Molecular Biophysics (2 hr each)*
- BIOC 540 *Metabolic Engineering (3 hr)*
- BIOC 544 *Developmental Biology (3 hr)*
- BIOC 545 *Advanced Molecular Biology and Genetics (3 hr)*
- BIOC 547 *Experimental Biology and the Future of Medicine (3 hr)*
- BIOC 550 *Viruses and Infectious Diseases (3 hr)*
- BIOC 551 *Molecular Biophysics (3 hr)*
- BIOC 552 *Structural Biology (3 hr)*
- BIOC 555 *Computational Synthetic Biology (3 hr)*
- BIOC 560 *Cancer Biology (3 hr)*
- BIOC 563 *Endocrinology (3 hr)*
- BIOC 571 *Bioinformatics: Sequence Analysis (3 hr)*
- BIOC 572 *Bioinformatics: Network Analysis (3 hr)*
- BIOC 580 *Protein Engineering (3 hr)*

Graduate students are required to attend BIOC 581 and 582 during all years of residency. Students generally complete BIOC 583, BIOC 587, and BIOC 588 in their first year, and will be responsible for the content of these courses in their admission to candidacy examination. Students gain teaching experience by serving as discussion leaders and graders in two undergraduate courses during their second year (BIOC 599); additional teaching experiences are available on an optional basis.

Evaluation of Progress in Graduate Study:

The BCB Graduate Advising Committee evaluates each student's undergraduate record and recommends course work based on the requirements. Thesis advisors may require additional courses.

At the end of each semester, the department chair, in consultation with the faculty, reviews student performance in the formal course work. Students must maintain at least a B average (GPA ≥ 3.0), perform satisfactorily in BIOC 701/702, and demonstrate outstanding motivation and potential for research. Thesis lab assignments are made based on student and faculty preferences following research rotations.

Evaluation after the first year includes:

- Ongoing review of research progress by the thesis advisor; satisfactory research progress will be indicated by a grade of "S" in BIOC 800 each semester
- A yearly research progress assessment by the student's Research Progress Review Committee
- Presentation of research progress at least once a year in seminar format (BIOC 581/582) starting in the fourth semester and continuing until submission of the doctoral thesis
- Completion of a written and oral admission to candidacy examination before the start of the fifth 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 year replaces the admission to candidacy examination; no other preliminary examination is required before the final oral defense of the master's thesis. MA students do not have to complete two semesters of BIOC 599 Graduate Teaching and do not require an outside committee member on their Thesis Committee. MA candidates must maintain a GPA ≥ 2.67, complete a thesis, and successfully complete a public oral defense of their research work to their Thesis Committee and other interested parties.

Degree Requirements for BA-MA-PhD Degree Track in Biochemistry and Cell Biology

Admission:

Qualified Rice University undergraduates can apply to enroll in the Biochemistry and Cell Biology BA-MA-PhD program track in the spring of their sophomore year. Some course requirements for graduate studies are completed at the same time as the upper-level undergraduate degree requirements. Laboratory research performed in undergraduate and graduate research courses is presented as the MA thesis in the summer following graduation and can serve as the initial phase of the PhD thesis work. As a result, the graduate careers of these students will be accelerated by an anticipated 1-2 years, and such students may be able to obtain their PhD degrees approximately 3 years after obtaining their BA-MA degree. If circumstances require, students may stop at the BA or MA level if they meet all the requirements for the respective degrees.

Criteria for selection include academic performance (GPA ≥ 3.5), motivation, previous research experience, and personal qualities. Enrollment is limited, and the BCB BA-MA-PhD Track Committee will select applicants for admission.

BA in Biochemistry and Cell Biology Requirements:

All of the requirements for a BA in Biochemistry & Cell Biology are required for the BA-MA-PhD track.

MA in Biochemistry and Cell Biology Requirements:

The BA-MA-PhD Track Committee will advise students pursuing the BA-MA completion and will approve the formal course program of students during their final two years in the BA-MA program.
Students who wish to pursue the BA-MA track must select the MA thesis advisor by the end of the sophomore year when they declare their major to provide the opportunity to begin a project that will form the basis of the MA thesis.

For the MA, the following courses must be completed or evidence provided of successful completion of courses that covered the same material with a B- average (GPA ≥ 2.67):

- BIOC 581/582 *Graduate Research Seminar (4 semesters attendance, 1 presentation)*
- BIOC 583 *Molecular Interactions*
- BIOC 587 *Research Design, Proposal Writing, and Professional Development*
- BIOC 588 *Cellular Interactions*
- UNIV 594 *Training in the Responsible Conduct of Research*
- BIOC 800 *Graduate Research*

In addition, students must take 6 credit hours from the following set of advanced courses:

- BIOC 524 *Microbiology & Biotechnology (3 hr)*
- BIOC 525 *Plant Molecular Genetics and Development (3 hr)*
- BIOC 530/535 *Graduate Laboratory Modules in Molecular Biophysics (2 hr each)*
- BIOC 540 *Metabolic Engineering (3 hr)*
- BIOC 544 *Developmental Biology (3 hr)*
- BIOC 545 *Advanced Molecular Biology and Genetics (3 hr)*
- BIOC 547 *Experimental Biology and the Future of Medicine (3 hr)*
- BIOC 550 *Viruses and Infectious Diseases (3 hr)*
- BIOC 551 *Molecular Biophysics (3 hr)*
- BIOC 552 *Structural Biology (3 hr)*
- BIOC 555 *Computational Synthetic Biology (3 hr)*
- BIOC 560 *Cancer Biology (3 hr)*
- BIOC 563 *Endocrinology (3 hr)*
- BIOC 571 *Bioinformatics: Sequence Analysis (3 hr)*
- BIOC 572 *Bioinformatics: Network Analysis (3 hr)*
- BIOC 580 *Protein Engineering (3 hr)*

Students in the BA-MA track are required to register for and participate in BIOC 581/582 both semesters during their junior and senior years and present their research at least once. Students generally enroll in BIOC 800 during the summer between the sophomore and junior year, BIOC 587 and BIOC 800 during the summer between the junior and senior years, and BIOC 583 and BIOC 588 in their senior year.

Students will be responsible for the content of these courses in their MA defense (which also serves as the Admission to PhD Candidacy examination).

Progress reviews with the MA thesis committee occur at the end of the junior year and the early spring of the senior year. The MA thesis will be submitted and public oral defense will occur in the summer following graduation at the end of the senior year with completion of the BA requirements. MA candidates continuing to the PhD must maintain a GPA ≥ 3.0, complete a thesis, and make a public oral defense that includes a private examination by their MA thesis committee. Students who complete the MA requirements with a GPA ≥ 2.67 but less than 3.0 must defend their thesis to complete the MA degree, but will not be admitted to the PhD program.

PhD in Biochemistry and Cell Biology:

The following are required for admission to the PhD portion of the BA-MA-PhD track: Successful completion of the MA thesis and oral defense, which will serve as the admission to candidacy exam for all PhD candidates, a cumulative GPA ≥ 3.0 for the BA-MA degree courses, and a GRE Quantitative test score ≥ 80th percentile. Students who are in good standing in the BA-MA track and have passed their MA final oral exam may begin their doctoral studies the summer following graduation with the approval of their PhD mentor and the Department Chair.

Course requirements for the first year of PhD study include:

- BIOC 581/582 *Graduate Research Seminar (required in all years of residency)*
- BIOC 599 *Graduate Teaching (two semesters)*
- BIOC 800 *Graduate Research*

Evaluation of Progress in the PhD Phase of the BA-MA-PhD Program:

The Graduate Advisory Committee evaluates each student's record and recommends any further course work based on the requirements and on the interests of the student. Thesis advisors may require additional courses. At the end of each semester, the department chair, in consultation with the faculty, reviews student performance in the formal course work. Students must maintain at least a B average (GPA ≥ 3.0), perform satisfactorily in their research

efforts, and demonstrate outstanding motivation and potential for research. Evaluation during the PhD phase of the program includes:

- The MA thesis and its oral defense constitute the admission to candidacy examination
- Ongoing review of research progress by the thesis advisor; satisfactory research progress will be indicated by a grade of "S" in BIOC 800 each semester
- A yearly research progress assessment by the student's Research Progress Review Committee
- Presentation of research progress at least once a year in seminar format (BIOC 581/582) starting in the first year of PhD study and continuing until submission of the doctoral thesis
- Defense of the PhD thesis research and text in a final public seminar presentation and oral examination attended by the student's Thesis Committee

Program Learning Outcomes for MA and PhD in Ecology and Evolutionary Biology

MA in Ecology and Evolutionary Biology
Students graduating from this program will:

1. Demonstrate comprehensive knowledge of current and past research accomplishments and techniques in ecology and evolutionary biology.
2. Synthesize and critically evaluate scientific literature and concepts in ecology and evolutionary biology.
3. Demonstrate technical proficiency in a range of ecology and evolutionary biology research methods.
4. Demonstrate the effective oral and visual communication skills necessary for articulating scientific findings and significance to diverse audiences.
5. Understand pedagogical methods appropriate for teaching undergraduate students in biology.
6. Have an operational understanding of scientific ethics and the responsible conduct of research in biology.

PhD in Ecology and Evolutionary Biology
Students graduating from this program will:

1. Demonstrate comprehensive knowledge of current and past research accomplishments and techniques in ecology and evolutionary biology.
2. Synthesize and critically evaluate scientific literature and concepts in ecology and evolutionary biology.
3. Identify novel and potentially transformative research questions in ecology and evolutionary biology and synthesize credible paths towards answering them.
4. Demonstrate technical proficiency in a range of ecology and evolutionary biology research methods.
5. Develop leadership skills and organizational skills.
6. Demonstrate the effective written communication skills required for scientific publications, grant proposal submissions, and a thesis describing independent research.
7. Demonstrate the effective oral and visual communication skills necessary for articulating scientific findings and significance to diverse audiences.
8. Understand pedagogical methods appropriate for teaching undergraduate students in biology.
9. Have an operational understanding of scientific ethics and the responsible conduct of research in biology.

Degree Requirements for MA, MS (at candidacy) and PhD in Ecology and Evolutionary Biology

Admission:

Applicants for graduate study in the Ecology and Evolutionary Biology (EEB) Program must have:

- BA or BS degree or equivalent that provides a strong background in biology
- Strong ability and motivation, as indicated by academic record, Graduate Record Examination (GRE) scores, and recommendations
- Scores from the GRE biology subject exam are optional but can be helpful, particularly for student with nontraditional backgrounds in biology

These requirements do not preclude admission of qualified applicants who have majored in areas other than biology. Although the department offers MA and MS degrees, only on rare occasions are students who do not intend to pursue the PhD admitted to the graduate program. The department provides an "Ecology and Evolutionary Biology Graduate Program Handbook" that is updated annually. For general university requirements, see Graduate Degrees.

Course Requirements:

Most of the formal course studies will be completed in the first year of residence to allow the students to begin thesis research at the end of their second semester at Rice. Entering students will meet with a faculty advisor to form a course of study of the first year. Students should have completed coursework in ecology, evolution (or equivalent), mathematics (including calculus), and statistics prior to admission. Deficiencies in these subject areas should be made up during the first year of residence; some may be waived at the discretion of the EEB Graduate Advising Committee and the EEB Graduate Program Director.

The following Rice courses must be taken if students lack course work in ecology or evolution in their undergraduate transcript:

- EBIO 325 *Ecology*
- EBIO 334 *Evolution*

All PhD students are required to take the following graduate-level courses:

- EBIO 569 *Core course in Ecology and Evolutionary Biology (required in first year)*
- EBIO 561/562/563/568 *Topics in Evolution/Behavioral Biology/Ecology/Biological Diversity (two semesters of any combination of EBIO "Topics" courses)*
- EBIO 585/586 *Graduate Research Seminar in Ecology and Evolutionary Biology (required in all years of residency)*
- EBIO 591 *Graduate Teaching (two semesters)*
- EBIO 800 *Graduate Research (required after the first year of residency)*

All students are required to take EBIO 569 in their first semester. Students must enroll in EBIO 585/586 during all years of residency. Students must complete at least six credit hours in a "Topics" course of their choice (EBIO 561/562/563/668) before defending their proposal, and students are strongly encouraged to take at least one topics course per semester during all years of residency. Students must complete two semesters of EBIO 591 during their first four semesters to gain teaching experience; additional teaching experiences are available on an optional basis.

Evaluation of Progress in Graduate Study:

Students must maintain a minimum grade average of B in courses taken in the department and satisfactory grades in courses taken outside the department. Students must demonstrate satisfactory progress in their degree program in annual reviews by the EEB Graduate Advising Committee. The review process requires that each student:

• presents a public seminar on their research on Graduate Science Day

• prepares a written report on their progress

First-year students must also participate in an interview with the EEB Graduate Advising Committee.

MS Program:

Although students are not normally admitted to study for an MS, graduate students may earn the MS after obtaining approval of their candidacy for the PhD. In addition to the general university requirements and those listed above, the Master of Science in ecology and evolutionary biology requires at least 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, the PhD degree in ecology and evolutionary biology requires:

- Passing the admission to candidacy examination given by the Graduate Thesis Committee. (The committee will be composed of at least four members. At least three must be members of the EEB graduate program faculty and one member has to be outside the EEB graduate program.)
- Complete an original investigation and a doctoral thesis with at least three chapters with the potential to produce publications in reputable, peer-reviewed scientific journals

- Present a departmental seminar on the research
- Publicly defend the doctoral thesis

Last Revised : August 03, 2015

BioSciences

The Wiess School of Natural Sciences

Course Listings

For the most current course offerings, please click here: Biochemistry and Cell Biology and/or Ecology and Evolutionary Biology.

Last Revised : August 03, 2015

Chemical Physics

The Wiess School of Natural Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Co-directors

Philip R. Brooks, CHEM

Stanley A. Dodds, PHYS

Degrees Offered: BS

The BS degree in Chemical Physics is jointly managed by the Department of Chemistry and the Department of Physics and Astronomy. Students take upper-level courses in both chemistry and physics, focusing on the applications of physics and chemical systems. See Undergraduate Requirements tab for information regarding degree requirements.

Last Revised : August 05, 2015

- Undergraduate Students
- Graduate Students
- Non-Traditional Students
- Faculty
- Programs of Study
- Administration and Faculty
- Important Notices

Chemical Physics

The Wiess School of Natural Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for BS in Chemical Physics

Students graduating from this program will:

1. Acquire and demonstrate a solid foundation of knowledge in chemical physics and deeper knowledge of subdivisions of the field related to their interests.
2. Build the theoretical, computational, and laboratory skills necessary to succeed in graduate school or the workplace and become leaders in their chosen discipline.
3. Develop the ability to identify, formulate, and solve challenging scientific and technical problems as encountered in chemical physics.
4. Learn to read scientific literature and communicate scientific results orally and in writing for scientists and the general public.

Degree Requirements for BS in Chemical Physics

The chemical physics major leading to a BS degree is offered jointly by the Chemistry Department and 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 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.

REQUIRED COURSES

- CHEM 121/123 *General Chemistry I/General Chemistry Lab I* **and** CHEM 122/124 *General Chemistry II/General Chemistry Lab II* **OR** CHEM 151/153 *Honors Chemistry I/Honors Chemistry Laboratory I* **and** CHEM 152/154 *Honors Chemistry II/Honors Chemistry Laboratory II*
- CHEM 211/213 *Organic Chemistry I* and *Organic Chemistry Discussion*
- CHEM 215 *Organic Chemistry Lab*
- CHEM 311 *Physical Chemistry I*
- CHEM 312 *Physical Chemistry II*
- PHYS 101/103 *Mechanics (with lab) and Mechanics Discussion* **OR** PHYS 111 *Mechanics (with lab)*
- PHYS 102/104 *Electricity and Magnetism (with lab) and E&M Discussion* OR PHYS 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*
- PHYS 302 *Intermediate Electrodynamics*
- MATH 101 and 102 *Single Variable Calculus I* and *II*
- MATH 211 *Ordinary Differential Equations and Linear Algebra* **OR** MATH 221 *Honors Calculus III*
- MATH 212 *Multivariable Calculus* **OR** MATH 222 *Honors Calculus IV*

ADVANCED COURSEWORK IN PHYSICS AND CHEMISTRY

Choose nine credit hours from the following:

- PHYS 311 *Introduction to Quantum Physics I*
- PHYS 312 *Introduction to Quantum Physics II* **OR** CHEM 430 *Quantum Chemistry*

- CHEM 360 *Inorganic Chemistry*
- CHEM 415 *Chemical Kinetics and Dynamics*
- CHEM 420 *Classical and Statistical Thermodynamics* **OR** PHYS 425 *Statistical and Thermal Physics*

ADVANCED LABORATORIES

Choose four credit hours from the following:

- CHEM 365 *Organic Chemistry Lab*
- CHEM 366 *Inorganic Chemistry Lab*
- CHEM 367 *Materials Chemistry Lab*
- CHEM 368 *Chemical Measurement Lab*
- PHYS 331 *Junior Physics Laboratory I*
- PHYS 332 *Junior Physics Laboratory II*
- Up to two hours of CHEM 491 *Research for Undergraduates* **OR** PHYS 461/PHYS 462 *Independent Research*

ADVANCED COURSEWORK IN CAAM or MATH

Choose six credit hours from the following:

- MATH or CAAM courses at or above 300-level

Last Revised : August 03, 2015

- Undergraduate Students
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Chemical Physics

The Wiess School of Natural Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Chemistry and Physics.

Last Revised : August 03, 2015

Chemistry

The Wiess School of Natural Sciences

Chair
Matteo Pasquali

Professors
Pulickel M. Ajayan
Pedro J.J. Alvarez
Enrique Barrera
Andrew R. Barron
W. Edward Billups
Philip R. Brooks
Cecilia Clementi
Paul S. Engel
Naomi Halas
Jeffrey D. Hartgerink
John S. Hutchinson
Anatoly B. Kolomeisky
Seiichi P. T. Matsuda
George L. McLendon
Antonios G. Mikos
Emilia Morosan
K. C. Nicolaou
Jose N. Onuchic
George N. Phillips
Peter J. Rossky
Gustavo E. Scuseria
Edwin (Ned) Thomas
James M. Tour
R. Bruce Weisman
Kenton H. Whitmire
Lon J. Wilson
Peter G. Wolynes
Michael S. Wong
Boris I. Yakobson

Associate Professors
Zachary T. Ball
Michael Diehl
Jason H. Hafner
Laszlo Kurti
Christy F. Landes
Stephan Link
Jun Lou

Assistant Professors
Emilie Ringe
Isabell Thomann
Junrong Zheng

Professors Emeriti
Robert F. Curl, Jr.
Graham P. Glass
Ronald J. Parry

Lecturers
Lawrence B. Alemany
Michelle Gilbertson
Kristi Kincaid
Caroline V. McNeil

Instructors
Lesa Tran
Julianne M. Yost

Distinguished Faculty Fellows
Robert H. Hauge
Bruce R. Johnson

Faculty Fellow
Carolyn Nichol

Adjunct Faculty
Marco A. Ciufolini
Tohru Fukuyama
Scott R. Gilbertson
Kristen M. Kulinowski
Luz Maria Martinez Calderon
Michael L. Metzker
B. Montgomery Pettit
Corina Rogge
Yigong Shi
Yongcheng Song
Marcelo Videa Vargas
Damian Young

Caroline A. Masiello
Angel A. Marti
Eugene R. Zubarev

Degrees Offered: BA, BS, MA, PhD

The Department of Chemistry offers undergraduate chemistry majors leading to both the bachelor of science degree and the bachelor of arts degree. The BS program rigorously prepares students for advanced work in chemistry or a related discipline, and the degree requirements are consistent with the guidelines for certification by the American Chemical Society. This curriculum provides a broad and comprehensive introduction to core areas of chemistry while promoting depth of understanding in one or more specific fields. BS students complete a series of foundation courses in general chemistry, analytical chemistry, biological chemistry, inorganic chemistry, organic chemistry, and physical chemistry. Students then complete one or more specializations, or “tracks”, consisting of in-depth courses both in and out of the specialization. The BA degree is a more flexible program that provides a comprehensive overview of all areas of chemistry, including laboratory experiences, but can be coupled more easily with other majors or professional career paths. Both degree programs offer students a solid background in the fundamental principles of chemistry, the properties and reactions of chemical compounds, and their uses.

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; supramolecular chemistry, molecular recognition and biological catalysis; bioinorganic and organometallic chemistry; main group element and transition metal chemistry; 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; the study of fullerene molecules, carbon nanotubes, and their derivatives; polymer synthesis and characterization; molecular electronics; molecular machines; and chemical-based nanotechnology.

Last Revised : August 11, 2014

Chemistry

The Wiess School of Natural Sciences

Program Learning Outcomes for BS in Chemistry

Students graduating from this program will:

1. Master and apply the fundamentals of chemistry (organic, inorganic, analytical, physical, and biological chemistry).
2. Solve chemical problems using critical thinking and analytical reasoning.
3. Design, conduct, record, and analyze chemical experiments, while practicing responsible and ethical scientific conduct.
4. Use standard laboratory equipment and techniques, computers, and modern instrumentation.
5. Know and practice proper safety procedures in the laboratory.
6. Use literature search methods to locate and retrieve scientific information.
7. Read, understand, and critically assess chemical literature.
8. Effectively communicate the results of their work orally and in writing.
9. Conduct novel research under direction of faculty and effectively communicate the results of their research.
10. Demonstrate preparation for graduate (Ph.D.) programs in chemistry or for employment in government of industry as a bench chemist. The BS degree is also appropriate training for a wide variety of employment and graduate training options that require technical expertise, including careers in the health sciences, the public sector, and diverse industrial positions.

Degree Requirements for BS in Chemistry

For general university requirements, see Graduation Requirements. Every student wishing to complete the BS in Chemistry degree must complete the "General Requirements for BS in Chemistry" and complete the requirements for "Advanced Work: Specialization."

REQUIRED COURSES
Courses required for all students pursuing the BS in Chemistry:

GENERAL CHEMISTRY

- CHEM 151 *Honors Chemistry I*
- CHEM 152 *Honors Chemistry II*
- CHEM 153 *Honors Chemistry Laboratory I*
- CHEM 154 *Honors Chemistry Laboratory II*

Note: The CHEM 121/122/123/124 General Chemistry sequence is an acceptable substitute.

CHEMISTRY FOUNDATION COURSES

- CHEM 211/213 *Organic Chemistry I and Organic Chemistry Discussion*
- CHEM 311 *Physical Chemistry I*
- CHEM 312 *Physical Chemistry II*
- CHEM 330 *Analytical Chemistry*
- CHEM 360 *Inorganic Chemistry*
- BIOC 301 *Biochemistry I*

MATHEMATICS

- MATH 101 *Single Variable Calculus I*
- MATH 102 *Single Variable Calculus II*
- MATH 212 *Multivariable Calculus*

Note: MATH 221 & 222 *Honors Calculus III* and *IV* may substitute for MATH 212

Note: MATH 211 *Ordinary Differential Equations and Linear Algebra* is strongly recommended for students planning to specialize in Physical and Theoretical Chemistry or pursue graduate studies.

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 that for which the student has received 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.

PHYSICS

- PHYS 101/103 *Mechanics (with Lab) and Mechanics Discussion* **OR** PHYS 111 *Mechanics* (with lab) **OR** PHYS 125 *General Physics* (with lab)
- PHYS 102/104 *Electricy and Magnetism (with Lab) and E & M Discussion* **OR** PHYS 112 *Electricity and Magnetism* (with lab) **OR** PHYS 126 *General Physics II* (with lab)

ADVANCED LABORATORIES

Each major must complete at least three (3) advanced laboratories chosen from the list below.

- CHEM 365 *Organic Chemistry Laboratory*
- CHEM 366 *Inorganic Chemistry Laboratory*
- CHEM 367 *Materials Chemistry Laboratory*
- CHEM 368 *Chemical Measurement Laboratory*
- BIOC 311 *Advanced Experimental Biosciences*

RESEARCH

CHEM 391 *Research for Undergraduates*, taken for at least 3 credits. Enrollment in CHEM 391 requires permission of the course instructor. **Students are expected to complete CHEM 391 before the end of their junior year; permission will not normally be granted for students in their final year of undergraduate study.**

Additional independent research or laboratory coursework in chemistry to total eight (8) credit hours (including CHEM 391). This requirement may be satisfied by taking one or more of the following: (i) independent research as CHEM 491, (ii) honors research: CHEM 492 and 493, and (iii) additional laboratory course(s) in chemistry at the 300-level or above. Up to two (2) credits of CHEM 700 may be used toward completion of this requirement.

Advanced Work: Specialization

In addition to the General Requirements, each student must complete advanced work that satisfies the requirements of one specialization. A student may, working with his or her chemistry major advisor and with the approval of the Director of the Undergraduate Program, propose a track in another specialization. Such proposed tracks must have course and laboratory experiences comparable to those of the tracks listed below. A double specialization can be earned by completing the requirements for two specialties. For double specialization, only two advanced lecture courses may count towards both specializations. The remaining two advanced courses in each specialization must be unique (i.e., double specialization requires six advanced lecture courses, and triple specialization require eight). A nanochemistry specialization can be added to any of the standard tracks by adding two nanoscience courses.

For purposes of this requirement, “advanced coursework” includes chemistry lecture courses at the 400-level or higher. CHEM 212 or CHEM 320 or BIOC 302 counts as “advanced coursework” for purposes of this requirement. Courses in other departments at the 400-level or higher with substantial chemistry content may count toward this requirement with approval of the Director of the Undergraduate Program.

Specialization in Biological and Medicinal Chemistry

- CHEM 212 *Organic Chemistry II* or CHEM 320 *Organic Chemistry II*
- BIOC 302 *Biochemistry II*

Six (6) credit hours of additional advanced coursework in chemistry

Specialization in Inorganic Chemistry and Inorganic Materials

- CHEM 475 *Physical Methods in Inorganic Chemistry*
- CHEM 495 *Transition Metal Chemistry*
- Six (6) credit hours of additional advanced coursework in chemistry

Specialization in Organic Chemistry

- CHEM 212 *Organic Chemistry II* or CHEM 320 *Organic Chemistry II*
- CHEM 401 *Advanced Organic Chemistry*
- Six (6) credit hours of additional advanced coursework in chemistry

Specialization in Physical and Theoretical Chemistry

- CHEM 430 *Quantum Chemistry*
- CHEM 420 *Classical and Statistical Thermodynamics*
- One additional three-credit advanced course in physical chemistry:
  i. CHEM 415 *Chemical Kinetics and Dynamics*
  ii. CHEM 450 *Chemical Physics of Condensed and Biological Matter*
  iii. CHEM 531 *Advanced Quantum Chemistry*
  iv. CHEM 559 *Spectroscopy at the Single Molecule/Particle Limit*
- Three (3) credit hours of additional advanced coursework in physics or mathematics.

Honors Research

The Chemistry Honors Research Program is a suite of courses (CHEM 492/493) offering the opportunity for a rigorous two-semester “capstone” individual research project in Chemistry. This immersive program is intended to give students a first-hand experience of a career in research. Students interested in graduate school are strongly encouraged to apply. Students having completed previous independent research (as CHEM 391 and/or Chem 491) in an off-campus laboratory in the Texas Medical Center are eligible to apply to perform honors research in that laboratory. The honors research courses (CHEM 492 and CHEM 493) function as a pair and must all be taken in the same academic year. Registration for CHEM 492 requires a commitment to register for CHEM 493.

Students who complete the Chemistry Honors Research Program are given primary consideration for “Distinction in Research and Creative Work,” a university award for select undergraduates, chosen by the department and granted at commencement, which appears on the transcript and diploma.

Chemistry Honors Research Program components:

- CHEM 492 *Undergraduate Honors Research*. Fall semester, 5 credit hours. For approved students only, requires a formal application and recommendation of a faculty research advisor. Requirements include at least 15 hours of laboratory research per week and regular written and/or oral progress reports.
- CHEM 493 *Undergraduate Honors Research.* Spring semester, 5 credit hours. Requirements include at least 15 hours of laboratory research per week and a formal thesis.
- Applications may be submitted to the course instructor, February 1–August 1. Students are encouraged to apply early.

Program Learning Outcomes for BA in Chemistry

Students graduating from this program will:

1. Master and apply the fundamentals of chemistry (organic, inorganic, analytical, physical, and biological chemistry).
2. Solve chemical problems using critical thinking and analytical reasoning.
3. Use standard laboratory equipment and techniques, computers, and modern instrumentation.
4. Know and practice proper safety procedures in the laboratory.
5. Use literature search methods to locate and retrieve scientific information.
6. Read, understand, and critically assess chemical literature.
7. Effectively communicate the results of their work orally and in writing.
8. Demonstrate preparation for careers that require technical expertise but are not primarily research-based, such as the health sciences, the public sector, and diverse industrial positions.

Degree Requirements for BA in Chemistry

For general university requirements, see Graduation Requirements.

GENERAL CHEMISTRY

- CHEM 151 *Honors Chemistry I*
- CHEM 152 *Honors Chemistry II*
- CHEM 153 *Honors Chemistry Laboratory I*
- CHEM 154 *Honors Chemistry Laboratory II*

Note: The CHEM 121/122/123/124 General Chemistry sequence is an acceptable substitute.

CHEMISTRY FOUNDATION COURSES

- CHEM 211/213 *Organic Chemistry I* with *Organic Chemistry Discussion*
- CHEM 330 *Analytical Chemistry*
- CHEM 360 *Inorganic Chemistry*
- BIOC 301 *Biochemistry I*
- Two courses in physical chemistry, typically chose from among the following:
  i. CHEM 311 *Physical Chemistry I*
  ii. CHEM 312 *Physical Chemistry II*
  iii. BIOC 352 *Physical Chemistry for the Biosciences*

MATHEMATICS

- MATH 101 *Single Variable Calculus I*
- MATH 102 *Single Variable Calculus II*
- MATH 212 *Multivariable Calculus*

Note: MATH 221 & 222 *Honors Calculus III* and *IV* may substitute for MATH 212.

Note: MATH 211 *Ordinary Differential Equations* and *Linear Algebra* is strongly recommended for students planning to specialize in Physical and Theoretical chemistry or pursue graduate studies.

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 that for which the student has received 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.

PHYSICS

- PHYS 101/103 *Mechanics (with Lab) and Mechanics Discussion* **OR** PHYS 111 *Mechanics* (with lab) **OR** PHYS 125 *General Physics* (with lab)
- PHYS 102/104 *Electricy and Magnetism (with Lab) and E & M Discussion* **OR** PHYS 112 *Electricity and Magnetism* (with lab) **OR** PHYS 126 *General Physics II* (with lab)

ADVANCED LABORATORIES

Each major must complete at least three (3) advanced laboratories chosen from the list below.

- CHEM 365 *Organic Chemistry Laboratory*
- CHEM 366 *Inorganic Chemistry Laboratory*
- CHEM 367 *Materials Chemistry Laboratory*
- CHEM 368 *Chemical Measurement Laboratory*
- BIOC 311 *Advanced Experimental Biosciences*

ADVANCED COURSEWORK

Six (6) credit hours of additional advanced coursework in chemistry. For purposes of this requirement, "advanced coursework" includes chemistry lecture courses at the 400-level or higher. CHEM 212 or CHEM 320 or BIOC 302 counts as "advanced coursework" for purposes of this requirement. Courses in other departments with substantial chemistry content may count toward this requirement with approval of the Director of the Undergraduate Program.

Degree Requirements for BS in Chemical Physics

This degree is jointly managed by the Department of Chemistry and the Department of Physics and Astronomy. For more information, see Chemical Physics.

Last Revised : August 06, 2015

Chemistry

The Wiess School of Natural Sciences

Program Learning Outcomes for MA and PhD in Chemistry

Students graduating from this program will:

1. Design and conduct independent and novel experimental and/or theoretical/computational chemical-based research that contributes to the existing body of knowledge in the field.
2. Locate, retrieve, read, and interpret current chemical literature using modern literature search methods.
3. Demonstrate an awareness of the ethical, societal, and environmental impact of chemistry.
4. Effectively communicate to both the scientific community and the general public the results of their work both orally and in writing.
5. Effectively teach chemistry concepts at the university level.
6. Develop interactive skills in chemical discourse, networking, and other professional activities.

Degree Requirements for MA and PhD in Chemistry

For general university requirements, see Graduate Degrees. 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. Students are not normally admitted to study for an MA degree.

Requirements for the PhD in Chemistry

Research—The PhD in chemistry is awarded for original research in chemistry. During the first semester of residence, students select a research advisor from among the members of the faculty. In some cases, students may choose research advisors outside of the department. Approval of the department chair is required to formalize these advising relationships. 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 successfully complete CHEM 800 *Graduate Research* and CHEM 600 *Graduate Seminar* every semester of residence. Candidates earn a PhD after successfully completing at least 90 semester hours of advanced study in chemistry and related fields, 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.

Coursework—Within the first two years, the student must complete six 3-semester-hour graduate-level lecture courses at Rice University, or their approved equivalent. 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.
- Chemistry graduate courses must be at the 500 level or higher. Certain 300- and 400-level courses in other departments may be acceptable with prior approval by the department's graduate advising committee, but a maximum of three lower-level courses in other departments can count towards the six-class requirement, and these do not count towards the university-wide requirement of 90 credits at the 500 level. Courses must be in technical subjects in science or engineering. Courses in teaching, presentation, or management will not be counted toward the six-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 who pursue both the BS and the PhD at Rice need not duplicate course work for the two degrees.

However, teaching as an undergraduate does not substitute for the teaching requirements in the PhD program.

Responsible Conduct of Research —Each graduate student must successfully complete the ethics course UNIV 594.

Teaching—Each graduate student must participate in teaching (CHEM 700) for the equivalent of three semesters. Assignments are determined by departmental needs.

Qualifying Examination—The qualifying exam has written and oral components, and the expectations for these are available in the department office. The examination committee will be composed of three faculty members, excluding the research advisor. The written document must be submitted to the committee at least one week before the date of the oral examination. The examination must be taken by the last day of class at the end of the student's fourth semester in residency. Any follow-up work required by the committee must be completed by the assigned date, and the exam must be passed by the end of the sixth semester.

Advancement to Candidacy for the PhD—After completing the required coursework, teaching, and qualifying examination, 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 whose primary appointment is outside of the chemistry department.

Satisfactory Performance

To remain in good standing, a student must maintain a GPA of 3.00 (B) or higher in all lecture courses, a GPA of 3.00 (B) or higher in all semesters of CHEM 700, and a grade of B or higher in every semester of CHEM 600 and CHEM 800. Failure to maintain satisfactory grades and sufficient progress in research will result in probation and possible dismissal. The student must be enrolled full time in a departmentally approved research group beginning the second semester, and every semester thereafter. All graduate students are evaluated annually to ensure that they are making appropriate progress towards the degree. The student, advisor, or department may request a meeting between the student and a faculty committee at any time to evaluate progress or to determine a course of action. If progress is unsatisfactory, the committee may recommend a semester of probation, which could result in dismissal from the program if progress remains unsatisfactory in the probationary semester.

Requirements for the MA in Chemistry

MA Program—Although students are not normally admitted to study for an MA, graduate students may earn the MA after obtaining approval of their candidacy for the PhD. The MA degree may also be earned by students who do not achieve PhD candidacy by:

- Completing the six one-semester courses required for PhD candidacy
- Producing a master's thesis that presents the results of a program of research approved by the department
- Passing a final master's thesis defense and submitting the thesis to the Office of Graduate and Postdoctoral Studies.

Appeal

Students may petition the Chemistry Department Graduate Advising Committee for variances on these academic regulations.

Last Revised : August 03, 2015

- Undergraduate Students
- Graduate Students
- Non-Traditional Students
- Faculty
- Programs of Study
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- Important Notices

Chemistry

The Wiess School of Natural Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Chemistry.

Last Revised : August 03, 2015

- Undergraduate Students
- Graduate Students
- Non-Traditional Students
- Faculty
- Programs of Study
- Administration and Faculty
- Important Notices

Earth Science

The Wiess School of Natural Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Chair
Richard G. Gordon

Professors
John B. Anderson
Rajdeep Dasgupta
Gerald R. Dickens
André W. Droxler
Richard G. Gordon
Cin-Ty Lee
Adrian Lenardic
Alan Levander
Caroline Masiello
Julia Morgan
Fenglin Niu
Dale S. Sawyer
William W. Symes
Colin Zelt

Associate Professors
Brandon Dugan
Helge Gonnermann

Assistant Professors
Jeffrey Nittrouer
Laurence Yeung

Professors Emeriti
Hans Avé Lallemant
Albert Bally
Jean-Claude De Bremaecker
Dieter Heymann
William Leeman
Andreas Lüttge
Manik Talwani
Peter Vail

Lecturers
Vitor Abreu
Stephen H. Danbom
Gary G. Gray
Patrick J. McGovern
W. C. Riese
Robert R. Stewart

Wiess Visiting Scholars
Francis Albarede
Janne Blichert-Toft

Adjunct Faculty
Vitor Abreu
K. K. Bissada
Jun Cai
August Costa
Hugh Daigle
Stephen H. Danbom
Jeffrey J. Dravis
Cornelius Fischer
Gary Gray
Paul M. Harris
Alison Henning
N. Ross Hill
Thomas A. Jones
Stephen J. Mackwell
Patrick J. McGovern
David L . Olgaard
W. C. Rusty Riese
Malcolm Ross
Eric Scott
Stephanie S. Shipp
Robert R. Stewart
John Sumner
Robert Wegner
Julia S. Wellner

Degrees Offered: BA, BS, MS, PhD

All undergraduate majors in earth science take a five-course core sequence, typically in the sophomore and junior years, on earth processes, materials, observations, and history. Majors also take a course in geological field techniques and introductory courses in mathematics, chemistry, and in many cases, physics and biology.

The selection of upper-division courses and additional science courses depends on which major, BA or BS, and, for the BS major, which of five tracks are chosen by the student: geology, geochemistry, geophysics, environmental earth science, or a track designed by the student subject to the approval of the department undergraduate advisor. The program of study typically includes experience with analytical equipment, computer systems, and fieldwork.

The BS in earth science degree should be chosen by students planning a career or further study in earth science or a related field. The BA in earth science degree has fewer requirements and might be a good choice for students planning a career or further study to which earth science is incidental.

Last Revised : August 03, 2015

Earth Science

The Wiess School of Natural Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for BS in Earth Science

Students graduating from this program will:

1. Understand the structure and composition of the Earth.
2. Understand the processes that formed the Earth, affected its evolution, and that operate to change the Earth today.
3. Apply concepts and methods learned in mathematics, chemistry, and physics, to Earth science.
4. Develop a core of basic technical skills (laboratory, field measurement, and computation).
5. Demonstrate basic familiarity of the scientific literature, and basic skill in the oral and written communication of scientific results.

Degree Requirements for BS in Earth Science

For general university requirements, see Graduation Requirements. BS majors also must complete the "Additional Requirements" for one track (described below).

REQUIRED COURSES FOR ALL TRACKS

- MATH 101/102 *Single Variable Calculus I and II*
- CHEM 121/123 *General Chemistry I/General Chemistry Lab I* **and** CHEM 122/124 *General Chemistry II/General Chemistry Lab II* **OR** CHEM 151/153 *Honors Chemistry I/Honors Chemistry Laboratory I* **and** CHEM 152/154 *Honors Chemistry II/Honors Chemistry Laboratory II*
- PHYS 101/103 *Mechanics (with Lab)/Mechanics Discussion* **and** PHYS 102/104 *Electricity & Magnetism (with Lab)/E & M Discussion* **OR** PHYS 111 *Mechanics (with Lab)* **and** PHYS 112 *Electricty and Magnetism (with Lab)*
- ESCI 301 *Introduction to the Earth*
- ESCI 321 *Earth System Evolution and Cycles*
- ESCI 322 *Earth Chemistry and Materials*
- ESCI 323 *Earth Structure and Deformation*
- ESCI 324 *Earth's Interior*
- ESCI 334 *Geological Techniques*

Additional Requirements for the Geology Track

REQUIRED COURSES

- MATH 211 *Ordinary Differential Equations and Linear Algebra*
- ESCI 390 *Geology Field Camp (at least 3 hours)*

ELECTIVES

Choose one of the following courses:

- COMP 110 *Computation in Natural Science*
- CAAM 210 *Introduction to Engineering Computation*

Choose one of the following courses:

- ESCI 412 *Advanced Petrology*
- ESCI 430 *Principles of Trace-Element and Isotope Geochemistry*

Choose two of the following courses:

- ESCI 427 *Sequence Stratigraphy*
- ESCI 504 *Siliciclastic Depositional Systems*
- ESCI 506 *Carbonate Depositional Systems*
- ESCI 431 *Geomorphology*
- ESCI 421 *Paleoceanography*
- ESCI 552 *Marine Geology Systems*
- ESCI 435 *Mechanics of Sediment Transport*

Choose two of the following courses:

- ESCI 410 *Optical Mineralogy and Petrography*
- ESCI 418/CEVE 418 *Quantitative Hydrogeology*
- ESCI 426 *Interpretation of Regional 2D Seimic Data*
- ESCI 429 *Magmatic, Volcanic and Hydrothermal Processes*
- ESCI 442 *Exploration Geophysics*
- ESCI 463 *Structure and Evolution of Tectonic Systems*
- ESCI 464 *Global Tectonics*
- ESCI 467 *Geomechanics*
- ESCI 419 *Materials Characterization*

Additional Requirements for the Geochemistry Track

REQUIRED COURSES

- BIOC 201 *Introductory Biology*
- MATH 211 *Ordinary Differential Equations and Linear Alegbra*
- ESCI 390 *Geology Field Camp or* ESCI 391 *Earth Science Field Experience (at least 3 hours)*

ELECTIVES

Choose 12 hours from the following, including at least two courses in ESCI:

- ESCI 203 *Biogeochemistry*
- ESCI 340/EBIO 340/ENST 340 *Global Biogeochemical Cycles*
- ESCI 410 *Optical Mineralogy and Petrography*
- ESCI 412 *Advanced Petrology*
- ESCI 419 *Materials Characterization*
- ESCI 421 *Paleoceanography*
- ESCI 425/CHEM 425/ENST 425 *Organic Geochemistry*
- ESCI 426 *Interpretation of Regional 2D Seismic Data*
- ESCI 429 *Magmatic, Volcanic and Hydrothermal Processes*
- ESCI 430 *Principles of Trace-Element and Isotope Geochemistry for Earth and Environmental Science*

Choose six hours from the following:

- All upper division ESCI courses
- CEVE 401 *Chemistry for Environmental Engineering and Science Lab*
- CEVE 434/534 *Fate and Transport of Contaminants of the Environment*
- CEVE 550 *Environmental Organic Chemistry*
- EBIO 202 *Introductory Biology II*
- BIOC 211 *Intermediate Experimental Biosciences*
- CHEM 211/213 **and** CHEM 212 *Organic Chemistry I and II*
- CHEM 310 *Physical Chemistry*
- CHEM 415 *Chemical Kinetics and Dynamics*
- CHEM 495 *Transition Metal Chemistry*
- MATH 212 *Multivariable Calculus*
- COMP 110/NSCI 230 *Computation Science and Engineering*

CAAM 210 *Introduction to Engineering Computation*

Additional Requirements for the Geophysics Track

REQUIRED COURSES:

- MATH 211 *Ordinary Differential Equations and Linear Algebra*
- MATH 212 *Multivariable Calculus*
- PHYS 201 *Waves and Optics*
- PHYS 231 *Elementary Physics Lab II*
- ESCI 390 *Geology Field Camp or* ESCI 391 *Earth Science Field Experience* (*at least 3 hours)*

ELECTIVES

Choose one of the following courses:

- COMP 110/NSCI 230 *Computation in Natural Science*
- CAAM 210 *Introduction to Engineering Computation*

Choose six hours from the following:

- ESCI 418/CEVE 418 *Quantitative Hydrogeology*
- ESCI 426 *Interpretation of Regional 2D Seimic Data*
- ESCI 442 *Exploration Geophysics*
- ESCI 450/CEVE 450 *Remote Sensing*
- ESCI 452 *GIS for Scientists*
- ESCI 461 *Seismology I*
- ESCI 462 *Tectonophysics*
- ESCI 463 *Tectonic Systems*
- ESCI 464 *Global Tectonics*
- ESCI 467 Geomechanics
- ESCI 542 *Seismology II*
- ESCI 440 *Geophysical Data Analysis: Digital Signal Processing*
- ESCI 441 *Geophysical Data Analysis: Inverse Methods*
- ESCI 564 *Seismic Reflection Data Processing*

Choose six hours from the immediately preceding or following lists:

- Any three- or four-hour course in ESCI with a number between 410 and 475, except for research and special studies
- Any 300- or 400-level MATH, CAAM, or PHYS class
- CHEM 311 *Physical Chemistry*

Additional Requirements for the Environmental Earth Science Track

REQUIRED COURSES

- MATH 211 *Ordinary Differential Equations and Linear Algebra*
- BIOC 201 *Introductory Biology*
- ESCI 390 *Geology Field Camp* or ESCI 391 *Earth Science Field Experience (at least 3 hours)*
- STAT 280 *Elementary Applied Statistics*

ELECTIVES

Choose one of the following courses:

- COMP 110 *Computation in Natural Science*
- CAAM 210 *Introduction to Engineering Computation*

Choose 11 hours from the following, including at least two courses in ESCI:

- ESCI 340/EBIO 340/ENST 340 *Global Biogeochemical Cycles*
- ESCI 410 *Optical Mineralogy and Petrography*
- ESCI 540 *Physics and Chemistry of the Atmosphere*

- ESCI 418 *Quantitative Hydrogeology*
- ESCI 419 *Materials Characterization*
- ESCI 421 *Paleoceanography*
- ESCI 425/CHEM 425/ENST 425 *Organic Geochemistry*
- ESCI 426 *Interpretation of Regional 2d Seismic Data*
- ESCI 429 *Magmatic, Volcanic and Hydrothermal Processes*
- ESCI 431 *Geomorphology*
- ESCI 552 *Marine Geology Systems*
- ESCI 435 *Mechanics of Sediment Transport*
- ESCI 442 *Exploration Geophysics*
- ESCI 452 *GIS for Scientists*
- ESCI 463 *Structure and Evolution of Tectonic Systems*
- ESCI 467 *Geomechanics*
- ESCI 504 *Siliciclastic Depositional Systems*
- ESCI 506 *Carbonate Depositional Systems*
- CEVE 401 *Chemistry for Environmental Engineering and Science Lab*
- CEVE 406/ENST 406 *Introduction to Environmental Law*
- CEVE 412 *Hydrology and Water Resources Engineering*
- CEVE 434 *Fate and Transport of Contaminants in the Environment*
- CHEM 211 **and** CHEM 213 *Organic Chemistry I* **and** *Organic Chemistry Discussion*
- CHEM 310 *Physical Chemistry*
- CHEM 360 *Inorganic Chemistry*
- PHYS 201 *Waves and Optics*
- PHYS 231 *Elementary Physics Lab II*
- EBIO 202 *Introductory Biology*

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's undergraduate advisor. In addition to required earth science courses and related courses, these tracks will generally comprise 18 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.

ELECTIVES

Choose one of the following courses:

- ESCI 390 *Geology Field Camp (at least 3 hours)*
- ESCI 391 *Earth Science Field Experience (at least 3 hours)*

Choose six hours from the following:

- BIOC 201 *Introductory Biology*
- COMP 110/NSCI 230 *Computation in Natural Science*
- CAAM 210 *Introduction to Engineering Computation*
- CHEM 311 and CHEM 312 *Physical Chemistry I and II*
- MATH 211 *Ordinary Differential Equations and Linear Algebra*
- MATH 212 *Multivariable Calculus*
- PHYS 201 *Waves and Optics*

Choose 18 hours of additional courses numbered 300 or higher targeting a coherent theme selected with approval of the department undergraduate advisor.

Program Learning Outcomes for BA in Earth Science

Students graduating from this program will:

1. Demonstrate a basic understanding of the structure and composition of the Earth. This understanding should be adequate to support the incorporation of Earth science knowledge into the study and practice of a field other than Earth science.
2. Demonstrate a basic understanding of the processes that lead to the formation of the Earth, that control its evolution, and that operate to change the Earth today. This understanding should be adequate to support the incorporation of Earth science knowledge into the study and practice of a field other than Earth science.

3. Understand concepts and methods learned in introductory university mathematics and science classes and how they are used in describing and learning about the Earth.

Degree Requirements for BA in Earth Science

For general university requirements, see Graduation Requirements.

REQUIRED COURSES

- MATH 101/102 *Single Variable Calculus I and II*
- CHEM 121/123 *General Chemistry I/General Chemistry Lab I* **and** CHEM 122/124 *General Chemistry II/General Chemistry Lab II* **OR** CHEM 151/153 *Honors Chemistry I/Honors Chemistry Laboratory I* **and** CHEM 152/154 *Honors Chemistry II/Honors Chemistry Laboratory II*
- ESCI 301 *Introduction to the Earth*
- ESCI 321 *Earth System Evolution and Cycles*
- ESCI 322 *Earth Chemistry and Materials*
- ESCI 323 *Earth Structure and Deformation*
- ESCI 324 *Earth's Interior*
- ESCI 334 *Geological Techniques*

ELECTIVES

- Choose six hours from the following:
- BIOC 201 and EBIO 202 *Introductory Biology I and II*
- BIOC 211 and EBIO 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*

- Choose four upper division ESCI courses, approved by the department undergraduate advisor.
- Choose six 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. This can also be carried out as part of the Earth Science Honors Thesis Program.

Honors Research

Undergraduates are encouraged to embark on an undergraduate honors thesis. The purpose of the honors thesis is for students to develop and demonstrate their creative and independent research potential. Students are recommended to begin in the fall of their junior year to provide ample time for research projects to be developed, executed and written. Students are expected to enroll in at least two semesters of the course ESCI 481 Undergraduate Research in Earth Science, spanning their senior year. Juniors who have identified a research project and mentor can also enroll in ESCI 481. Students should sign up for ESCI 481 for 3 credits.

Criteria for participating in undergraduate honors thesis research

- Strong performance in ESCI courses, in particular, ESCI 321, 322, 323, 324, and 334
- A grade of A- or better in ESCI 481 Undergraduate Research in Earth Science
- Letter of recommendation of a faculty research mentor
- Research proposal

Requirements for completing an undergraduate honors thesis

Spring semester of junior year:

Each honors thesis candidate should choose a research topic, identify a faculty research adviser, and initiate independent research. The student should select a thesis committee, consisting of a faculty advisor, one member of the honors thesis committee, and one other faculty member of their choosing. Candidates are expected to turn in a preliminary written proposal (2 pages) at the end of their spring semester, accompanied by a formal application, both of which will be evaluated by the honors thesis committee for consideration of acceptance into the honors thesis program in their senior year. Required courses:

- ESCI 401 *Seminar: Undergraduate Honors Thesis* (1 credit hour)
- ESCI 593 *Seminar: Department Research* (1 credit hour)

And if they have research project and mentor identified, they can also take:

- ESCI 481 *Undergraduate Research in Earth Science* (3 credit hours)

Fall semester of senior year:

Students accepted into the honors thesis program continue to develop and refine their proposed research in concert with their research adviser and thesis committee. Students participate in meetings with other honors thesis candidates to discuss basic research protocols and philosophies, and meet independently with their chosen scientific adviser, and generate data, experiments or models. Students will give oral presentations of their research proposals in public by mid-semester, in the presence of their examining committee. At the end of the semester, students must submit final versions of their proposals, describing motivation, hypothesis, methodology, and preliminary results. The honors thesis committee will evaluate the proposals, and if approved, students can continue in the honors thesis program. Required courses:

- ESCI 401 *Seminar: Undergraduate Honors Thesis* (1 credit hour)
- ESCI 481 *Undergraduate Research in Earth Science (*3 credit hours*)*
- ESCI 594 *Seminar: Department Research* (1 credit hour)

Spring semester of senior year:

Students continue and complete their research. A mid-semester progress report must be submitted to the thesis committee for feedback. At the end of the spring semester, students submit their final theses, and give public oral exit talks. To complete the honors thesis program, student theses must be approved by the honors thesis committee. Required courses:

- ESCI 401 *Seminar: Undergraduate Honors Thesis* (1 credit hour)
- ESCI 481 *Undergraduate Research in Earth Science* (3 credit hours)
- ESCI 593 *Seminar: Department Research* (1 credit hour)

Further details about the program, and expectations and criteria for the thesis proposal and final thesis can be found on the Department of Earth Science website (earthscience.rice.edu).

Application Process

Students must apply and be accepted to participate in the senior honors research program. The application form can be downloaded from Department of Earth Science website (earthscience.rice.edu), and should be submitted along with a ~two page thesis proposal at the end of the spring semester of the junior year. Students will be informed of their acceptance into the honors thesis program before the start of the following fall semester.

Other points of consideration

Students who are accepted into the 'RUSP: Rice Undergraduate Scholars Program' can substitute ESCI 481 courses for semesters 2 and 3 with HONS 470 and HONS 471. However, the students will have to meet all other requirements of the honors thesis set by the department of the honors thesis set by the department.

Other expectations, conditions, and opportunities related to carrying out an Earth Science Honors Thesis can be found on the Department of Earth Science website.

Last Revised : August 03, 2015

Earth Science

The Wiess School of Natural Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for MS and PhD in Earth Science

MS in Earth Science
Students graduating from this program will:

1. Demonstrate a solid understanding of the nature and origin of the materials that compose the Earth.
2. Demonstrate a solid understanding of the physical and chemical processes that operate in the deep interior, outer shell, and at the surface of the Earth.
3. Develop knowledge of the geologic record of terrestrial and oceanic Earth processes and of life on Earth.
4. Be able to use appropriate quantitative, computational, and analytical techniques in the conduct of research investigations.
5. Demonstrate significant skills in scientific communication, both written and oral, and the ability to read and comprehend the scientific literature in their field of research.
6. Develop the ability to contribute to the peer reviewed literature.

PhD in Earth Science
Students graduating from this program will:

1. Demonstrate a sophisticated understanding of the nature and origin of the materials that compose the Sun's planets at a level consistent with teaching the broad range of these subjects to general students and a subset of these subjects to students focusing on the study of Earth Science.
2. Demonstrate a sophisticated understanding of the physical and chemical processes that operate in the deep interior, outer shell, and at the surface of the Earth at a level consistent with teaching the broad range of these subjects to general students and a subset of these subjects to students focusing on the study of Earth Science.
3. Develop a knowledge and understanding of the geologic record of terrestrial and oceanic Earth processes and of life on Earth at a level consistent with teaching the broad range of these subjects to general students and a subset of these subjects to students focusing on the study of Earth Science.
4. Use an appropriate set of state-of-the-art quantitative, computational, and analytical techniques in the conduct of their research.
5. Demonstrate significant skills in scientific communication, both written and oral. This includes the ability to read and comprehend the scientific literature and an understanding of the importance of the scientific literature -- as a foundation for their research activities.
6. Demonstrate not only the ability to contribute to the peer-reviewed literature, but also to write and publish a substantial contribution or contributions in the peer-reviewed literature.

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, mathematics, or engineering. For general university requirements, see Graduate Degrees. 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 or four to complete 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 500-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 comprised of peer-reviewed publication(s) that represent an original contribution to science
- Defend the research and conclusions of the thesis in an oral examination

Students 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.

Last Revised : August 03, 2015

- Undergraduate Students
- Graduate Students
- Non-Traditional Students
- Faculty
- Programs of Study
- Administration and Faculty
- Important Notices

Earth Science

The Wiess School of Natural Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Earth Science.

Last Revised : August 03, 2015

Environmental Analysis and Decision Making

The Wiess School of Natural Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Director
Katherine B. Ensor

Professors
Pedro Alvarez
Andrew R. Barron
Phil Bedient
Dale S. Sawyer
Evan H. Siemann

Associate Professors
Dan Cohan
Qilin Li

Professor in the Practice
Jim Blackburn

Faculty Fellow
Loren Raun

Degrees Offered: MSEADM

Rice University introduced the 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 part of five tracks in the 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. Skills acquired in 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.

A coordinated MBA/MSEADM degree is offered in conjunction with the Jesse H. Jones Graduate School of Business.

Last Revised : August 03, 2015

- Undergraduate Students
- Graduate Students
- Non-Traditional Students
- Faculty
- Programs of Study
- Administration and Faculty
- Important Notices

Environmental Analysis and Decision Making

The Wiess School of Natural Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for MS in Environmental Analysis and Decision Making

Students graduating from this program will:

1. Be able to apply rigorous technical and analytical skills required by industrial and governmental organizations to deal with environmental issues.
2. Be able to apply scientific evaluation methods to environmental impact assessments.
3. Be able to develop written, oral, and visual communication strategies to bridge the gaps between science, business and government.
4. Possess business and management skills to be effective in a business environment.
5. Possess knowledge of professional standards and ethics.

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 Academic Regulations, and also see Professional Degrees under Graduate Degrees.

Admission

Admission to graduate study in environmental anyalysis and desision 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.

REQUIRED SCIENCE CORE COURSES

- EBIO 570 *Ecosystem Management and Conservation*
- CEVE 510 *Principles of Environmental Engineering* or CEVE 501 *Chemistry for Environmental Engineering and Science*
- STAT 685 *Quantitative Environmental Decision Making*

REQUIRED COHORT COURSES

- NSCI 501 *Master's Seminar (two semesters required)*
- NSCI 511 *Science Policy and Ethics*
- NSCI 512 *Professional Master's Project*
- NSCI 610/ENGI 610 *Management in Science and Engineering*

ELECTIVES

Students will choose 21 credit hours elective courses from the following three focus areas and satisfying the following requirements:

- one course (3 credit hours) from each of EBIO, CEVE, and STAT (total of 9 credits)
- one course (3 credit hours) from the Management and Policy focus area
- three courses (9 credit hours) from one focus area

Recommended courses include, but are not limited to, the following:

Environmental Sustainability

- CEVE 501 *Chemistry for Environmental Engineering and Science*
- CEVE 502 *Sustainable Design*
- CEVE 507 *Energy and the Environment*
- CEVE 508 *Intro to Air Pollution Control*
- CEVE 509 *Hydrology and Watershed Analysis*
- CEVE 511 *Atmospheric Processes*
- CEVE 512 *Hydrologic Design Lab*
- CEVE 520 *Environmental Remeditation Restoration*
- CEVE 534 *Fate and Transport of Contaminants in the Environment*
- CEVE 536 *Environmental Biotechnology and Bioremediation*
- CEVE 550 *Environmental Organic Chemistry*
- EBIO 336 *Plant Diversity*
- EBIO 523 *Conservation Biology*
- EBIO 524 *Conservation Biology Lab*
- EBIO 525 *Ecology*
- EBIO 540 *Global Biochemical Cycles*
- EBIO 563 *Current topics in Ecology*
- EBIO 568 *Current topics in Conservation Biology*
- EBIO 569 *Core course in Ecology and Evolutionary Biology*
- ESCI 424 *Earth Science and the Environment*
- ESCI 618 *Quantitive Hydrogeology*
- ESCI 650 Remote Sensing
- ESCI 654 Geographic Information Science
- POST 411/GLHT 411 *Sustainable Development*
- STAT 684/CEVE 684 *Environmental Risk Assessment and Human Health* (Graduate/Undergraduate Equivalency: CEVE 484)

Management and Policy

- CEVE 505/ENGI 505 *Engineering Project Development and Management*
- CEVE 506 *Global Environmental Law and Sustainable Development*
- CEVE 528/ENGI 528 *Engineering Economics*
- CEVE 529 *Engineering Leadership and Ethics*
- ESCI 417 *Petroleum Industry Economics and Management*
- ECON 437/ENST 437 *Energy Economics*
- ECON 480/ENST 480 *Environmental Economics*
- MGMT 609 *Managing in a Carbon Constrained World*
- MGMT 610 *Fundamentals of the Energy Industry*
- MGMT 661 *International Business Law*
- MGMT 674 *Production and Operations Management*
- MGMT 676 *Social Enterprise*
- MGMT 721 *General Business Law*
- POST 501 *Energy Policy*

Quantitative Decision-Making

- EBIO 338 *Design and Analysis of Biological Experiments*
- CEVE 313 *Uncertainty and Risk in Urban Infrastructures*
- CEVE 528 *Engineering Economics*
- ESCI 650 *Remote Sensing*
- ESCI 654 *Geographic Information Science*
- ECON 480 *Environmental Economics*
- STAT 312 *Probability and Statistics for Civil and Environmental Engineers*

- STAT 605* *Statistical Computing*
- STAT 615 *Introduction to Linear Models*
- STAT 553 *Biostatistics*
- STAT 606* *SAS Statistical Programming*
- STAT 684 *Environmental Risk Assessment and Human Health*

**Only one of these two courses may be counted toward the degree.*

Professional Science Master's 5th Year Degree Option for Rice Undergraduates

Rice students have an option to achieve the MS in environmental analysis and decision making by adding an additional fifth 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 environmental analysis and decision making 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 director.

Last Revised : August 03, 2015

Environmental Analysis and Decision Making

The Wiess School of Natural Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Environmental Analysis and Decision Making.

Last Revised : August 12, 2013

Kinesiology

The Wiess School of Natural Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Chair
Nicholas K. Iammarino

Professors
Bruce Etnyre

Professors Emeriti
Eva J. Lee
Hally B. W. Poindexter
Dale W. Spence

Professor in the Practice
Brian Gibson

Lecturers
Lisa Basgall
Heidi Perkins
Augusto X. Rodriguez
P. Burke Wilson

Part-Time Lecturers
Roberta Anding
Steven L. Jones
Alexis Ortiz
Wendy Schell

Adjunct Faculty
Karen Basen-Engquist
Thomas Krouskop
Armin Weinberg

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 sub-discipline. Within the Kinesiology major there are two distinct major concentrations: sports medicine and health sciences. Additional information on the Kinesiology major and the two major concentrations can be found on the KINE website .

BA in Kinesiology with major concentration in Health Sciences

The goal of the health sciences 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.

BA in Kinesiology with major concentration in Sports Medicine

The sports medicine curriculum intends to provide a strong natural science foundation and 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 coursework in foundations of Kinesiology, research methods, motor learning, statistics, exercise physiology, and sports medicine. Practical experience is afforded through several academic labs. Other elective courses include epidemiology, case studies in

human performance, motor control, advanced exercise physiology and preventive medicine, sports nutrition, medical terminology 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.

Students who choose the sports medicine program 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 also may be directly employed in medical and corporate settings, which include both preventative and rehabilitative programs. Graduates who choose not to seek postbaccalaureate education generally are encouraged to obtain certification for exercise testing, physical fitness evaluation, or exercise prescription through the American College of Sports Medicine website .

Last Revised : August 03, 2015

Kinesiology

The Wiess School of Natural Sciences

Program Learning Outcomes for the BA in Kinesiology

Health Sciences Concentration Learning Outcomes:

Students graduating from this program will:

1. Prepare and deliver presentations effectively and be able to use information technology.
2. Work and collaborate in groups toward a common goal.
3. Read, select and interpret important information from health sciences literature. They will be able to design and conduct public health research studies using appropriate methodologies.
4. Promote public health education within the framework of legal, ethical, moral, and professional standards.
5. Collaborate with other professionals, staff, and communities in the planning and implementation, and evaluation of health education programs. They will be able to administer and manage health education programs, serve as a health education resource person, and communicate and advocate for health and health education.

Sports Medicine Concentration Learning Outcomes:

Students graduating from this program will:

1. Prepare and deliver presentations effectively and be able to use information technology.
2. Work and collaborate in groups toward a common goal.
3. Read, select and interpret important information from sports sciences literature. They will be able to design and conduct research studies using appropriate methodologies.
4. Identify and apply ethical standards to the design and execution of research studies.
5. Understand principles of human nutrition and its application to exercise and sport.
6. Understand the principles of sports psychology.
7. Be knowledgeable of anatomy relevant to sport, exercise and sport injury. They will develop an understanding of principles of biomechanics applied to exercise and sporting activities. Student will be knowledgeable of prevention, diagnosis, and treatment of injuries and diseases related to exercise and sports.
8. Collect and analyze data in a motor learning, exercise physiology, or other sports medicine lab settings.

Degree Requirements for the BA in Kinesiology

For general university requirements, see Graduation Requirements. 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. The chosen concentration should be noted on the declaration of major form.

Health Sciences Major Concentration

Advisors: Nicholas K. Iammarino, Heidi Perkins, and Augusto X. Rodriguez

Students must complete a total of 45 semester hours in addition to the general university requirements (see Graduation Requirements). Seven courses constitute a total of 21 required hours. These required courses include an introductory course designed to acquaint students with the fundamental concepts of personal health and models of health promotion, understanding and assessing community health needs, methods of understanding the disease process, a course that introduces statistics, a professional preparation course that introduces students to the

profession, theories and models commonly used in health promotion research and practice, and an application course in which students plan a health promotion program.

The remaining 24 semester hours are drawn from elective courses that are both within the Department of Kinesiology 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.

CORE REQUIREMENTS
21 credit hours total.

- HEAL 119 *Introduction to Health & Wellness*
- HEAL 222 *Principles of Public and Community Health*
- HEAL 313 *Foundations of Health Promotion and Education*
- HEAL 407 *Epidemiology*
- HEAL 422 *Theories and Models of Health Behavior*
- HEAL 460 *Planning and Evaluation of Health Promotion and Education*
- KINE 319 *Statistics for the Health Professional*

ELECTIVES
Choose 24 credit hours from the following:

HEAL Courses

- HEAL 103 *Nutrition*
- HEAL 132 *Medical Terminology*
- HEAL 208 *Chemical Alterations of Behavior*
- HEAL 212 *Consumer Health and the Media*
- HEAL 306 *Human Sexuality*
- HEAL 350 *Understanding Cancer*
- HEAL 360 *Violence in America: A Public Health Perspective*
- HEAL 379 *Internship in Health Sciences*
- HEAL 380 *Disparities in Health in America*
- HEAL 485 *Seminar on International Health Problems*
- HEAL 495 *Independent Studies in Health Sciences*
- HEAL 496 *Independent Studies in Health Sciences*
- HEAL 498 *Special Topics in Health Sciences*
- HEAL 499 *Teaching Practicum in Health Sciences*

Non-HEAL Courses

- ANTH 210 *Anthropology of Death*
- ANTH 381 *Medical Anthropology*
- ANTH 386 *Medical Anthropology of Food and Health*
- ANTH 388 *The Life Cycle: A Biocultural View*
- ANTH 446 *Advanced Biomedical Anthropology*
- BIOC 201 *Introductory Biology*
- BIOE 360 *Appropriate Design for Global Health*
- ENGL 272 *Literature and Medicine*
- ENGL 273 *Medicine and Media*
- ENST 315 *Environmental Health*
- GLHT 201 *Bioengineering and World Health*
- KINE 300 *Human Anatomy*
- KINE 301 *Human Physiology*
- KINE 326 *Exercise Epidemiology*
- KINE 440 *Research Methods*
- PHIL 314 *The Philosophy of Medicine*
- PHIL 315 *Ethics, Medicine, and Public Policy*
- PHIL 336 *Topics in Medical Ethics*
- POLI 329 *Health Policy*
- PSYC 345 *Health Psychology*
- SOCI 313 *Demography*
- SOCI 345 *Medical Sociology*
- SOCI 355 *Sociology of Drugs and Alcohol*
- SOCI 465 *Gender and Health*

- SOSC 330 *Health Care Reform in the 50 States*
- SOSC 398 *Pharmaceutical Politics and Policy*
- SOSC 430 *The Shaping of Health Policy*

Note: BIOC 122 may be substituted for BIOC 201

Sports Medicine Major Concentration

Advisors: Bruce Etnyre, Augusto X. Rodriguez

Students must complete a total of 44 semester hours in addition to the general university requirements (see Graduation Requirements). Eleven courses constitute a total of 29 required hours including detailed exposure to human anatomy and human physiology. In addition, students receive coursework in research methods, motor learning, statistics, exercise physiology, and sports psychology.

The remaining 15 semester hours are drawn from elective courses that are both within the Department of Kinesiology and from other academic departments. Our elective courses include epidemiology, case studies in human performance, motor control, advanced exercise physiology and preventive medicine, sports nutrition, medical terminology and muscle physiology and plasticity. Other electives include courses in chemistry, physics, biology and biochemistry, which may also be utilized as medical school prerequisites.

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 advisor. The application (proposal) process for independent studies is outlined on the KINE website. Qualified students also are encouraged to apply for any highly competitive internship. The internships generally provide students with an opportunity to experience the application of preventive and rehabilitative sports medicine concepts and practice in a healthcare or corporate setting. Independent studies and internships must be preapproved by the appropriate faculty advisor and are only for Kinesiology majors.

CORE REQUIREMENTS
29 credit hours total.

- HEAL 103 *Nutrition*
- KINE 300 *Human Anatomy*
- KINE 301 *Human Physiology*
- KINE 302 *Biomechanics*
- KINE 310 *Psychological Aspects of Sport and Exercise*
- KINE 311 *Motor Learning*
- KINE 319 *Statistics for the Health Professional*
- KINE 321 *Exercise Physiology*
- KINE 323 *Exercise Physiology Laboratory*
- KINE 325 *Motor Learning Lab*
- KINE 440 *Research Methods*

ELECTIVES
Choose 15 credit hours from the following:

KINE/HEAL Courses

- KINE 120 *Scientific Foundations of Kinesiology*
- HEAL 132 *Medical Terminology*
- KINE 351 *Human Anatomy Lab*
- KINE 326 *Exercise Epidemiology*
- KINE 375 *Sports Medicine Internship*
- KINE 403 *Sport Nutrition*
- HEAL 407 *Epidemiology*
- KINE 410 *Case Studies in Human Performance*
- KINE 412 *Motor Control*
- KINE 421 *Advanced Topics in Exercise Physiology and Preventative Medicine*
- KINE 441 *Muscle Physiology and Plasticity*
- KINE 495 *Independent Study in Sports Medicine*
- KINE 496 *Independent Study in Sports Medicine*
- KINE 498 *Special Topics in Sports Medicine*
- KINE 499 *Teaching Practicum in Sports Medicine*

Non-KINE Courses

- BIOC 201 *Introductory Biology*
- BIOC 211 Introductory Experimental Biosciences
- BIOC 301 *Biochemistry I*
- BIOC 302 *Biochemistry II*
- BIOC 311 *Advanced Experimental Biosciences*
- BIOC 313 *Introductory Synthetic Biology*
- BIOC 372 *Immunology*
- CHEM 121/123 *General Chemistry I/General Chemistry Laboratory I*
- CHEM 122/124 *General Chemistry II/General Chemistry Laboratory II*
- CHEM 151/153 *Honors Chemistry I/Honors Chemistry Laboratory I*
- CHEM 152/154 *Honors Chemistry II/Honors Chemistry Laboratory II*
- EBIO 202 *Introductory Biology II*
- PHYS 101/103 *Mechanics (with Lab)/Mechanics Discussion*
- PHYS 102/104 *Electricity & Magnetism (with Lab)/E & M Discussion*
- PHYS 125 *General Physics (with Lab)*
- PHYS 126 *General Physics II (with Lab)*
- PSYC 202 *Introduction to Social Psychology*
- PSYC 203 *Introduction to Cognitive Psychology*
- PSYC 321 *Developmental Psychology*

Last Revised : August 03, 2015

Kinesiology

The Wiess School of Natural Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Sports Medicine and Health Sciences.

Last Revised : August 03, 2015

Mathematics

The Wiess School of Natural Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Chair
David Damanik

Professors
Michael Boshernitzan
Robert M. Hardt
Frank Jones
Alexander Kiselev
Stephen W. Semmes
William A. Veech
Michael Wolf

Associate Professors
Zhiyong Gao
Shelly Harvey
Andrew Putman

Assistant Professors
Ronen Mukamel
Anthony Varilly-Alvarado

Professors Emeriti
Robin Forman
F. Reese Harvey
John Hempel
John C. Polking
Raymond S. Wells

Sr. Instructor
Stephen Wang

Instructors
Neil Fullarton
Vu Hoang
Kyle Kinneberg
David Krcatovich
Ye Luo
Allison Moore
Betul Orcan-Ekmekci
Arindam Roy
Richard Shadrach
Changhui Tan
Yunhui Wu
William Yessen
Zhenghe Zhang

Clinical Assistant Professor
Robin Ward (with RUSMP)

Research Professor
Michael Field

Adjunct Faculty
Ray Johnson
Milivoje Lukic

Degrees Offered: BA, BS, MA, PhD

Mathematics lies at the foundation of many disciplines in the sciences, engineering fields, and the social sciences, and this influence is growing as these subjects become increasingly quantitative. Recognizing this important role in the wide variety of directions available to our degree recipients, the program in mathematics provides undergraduates with a spectrum of choices. These range from nontheoretical treatments of calculus and courses in 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, dynamics, and partial differential equations.

Faculty research interests range from differential geometry, ergodic theory, group representations, partial differential equations, and probability to real analysis, mathematical physics, complex variables, algebraic geometry, number theory, combinatorics, geometric topology, algebraic topology, and dynamics.

Last Revised : August 11, 2014

Mathematics

The Wiess School of Natural Sciences

Program Learning Outcomes for BA in Mathematics

Students graduating from this program will:

1. Achieve both practical and theoretical fluency in calculus and linear algebra.
2. Acquire a background at the undergraduate level in a wide variety of central areas of mathematics.
3. Be acquainted with formal mathematical reasoning, including proofs.

Degree Requirements for BA in Mathematics

For general university requirements, see Graduation Requirements. 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 (eight 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 nine of the 24 hours required at the 300 level or above.

Students receive advanced placement credit for MATH 101 by achieving a score of four or five on the AP AB-level test and for MATH 101 and 102 by achieving a score of four or five 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 and at other times.

Program Learning Outcomes for BS in Mathematics

Students graduating from this program will:

1. Achieve both practical and theoretical fluency in calculus and linear algebra.
2. Acquire a broad background at the undergraduate level in all the major areas of mathematics, including analysis, algebra, and geometry.
3. Learn to read and write proofs.

Degree Requirements for BS in Mathematics

These requirements are in addition to general university graduation requirements. The chair of the undergraduate committee of the MATH department may modify requirements to meet the needs of students with advanced backgrounds.

REQUIRED COURSES

Single Variable Calculus

- MATH 101 *Single Variable Calculus I*
- MATH 102 *Single Variable Calculus II*

Differential Equations
One class from the following:

- MATH 211 *Ordinary Differential Equations and Linear Algebra*
- MATH 381 *Introduction to Partial Differential Equations*
- MATH 423/CAAM 423 *Partial Differential Equations I*

Multivariable Calculus

- MATH 212 *Multivariable Calculus* **OR** both MATH 221 and 222 *Honors Calculus III and IV*

Linear Algebra
One class from the following:

- MATH 221 *Honors Calculus III*
- MATH 354 *Honors Linear Algebra*
- MATH 355 *Linear Algebra*

Real Analysis
Two classes from the following:

- MATH 321 *Introduction to Analysis I*
- MATH 322 *Introduction to Analysis II*
- MATH 425 *Integration Theory*

Algebra

- MATH 356 *Abstract Algebra I*
- MATH 463 *Abstract Algebra II*

Geometry and Manifolds
One class from the following:

- MATH 370 *Calculus on Manifolds*
- MATH 401 *Differential Geometry*
- MATH 402 *Differential Geometry*

Complex Analysis
One class from the following:

- MATH 382 *Complex Analysis*
- MATH 427 *Complex Analysis*

Topology
One class from the following:

- MATH 443 *General Topology*
- MATH 444 *Geometric Topology*
- MATH 445 *Algebraic Topology*

A total of at least 33 credit hours in MATH (e.g., 11 three-hour courses) at the 300 level or above is required. Students may choose electives to reach this number. At most three credit hours for any given course number may be used for this degree.

Course requirements for a Minor in Mathematics

The minor in mathematics is available to students majoring in other fields who take at least 18 credit hours in MATH at the 200 level or above, including at least 12 credit hours at the 300 level or above. These are subject to the following breadth requirements—at least one course must be from each of the following areas:

Analysis

- MATH 302 *Elements of Analysis*
- MATH 321 *Introduction to Analysis I*
- MATH 381 *Introduction to Partial Differential Equations*
- MATH 382 *Complex Analysis*

Discrete Mathematics and Algebra

- MATH 356 *Abstract Algebra I*
- MATH 365 *Number Theory*
- MATH 368 *Topics in Combinatorics*

Linear Algebra

- MATH 221 *Honors Calculus III*
- MATH 354 *Honors Linear Algebra*
- MATH 355 *Linear Algebra*

Certain approved classes taken outside the mathematics department may be used to satisfy the breadth requirement in one area, but will not count towards the required 18 credit hours. An approved upper-level MATH course (other than 490 or 499) may be used to satisfy a breadth requirement. Students seeking to substitute approved courses should consult in advance with the chair of the undergraduate committee. At most three credit hours from any particular course or course number may be applied to the minor.

Last Revised : August 03, 2015

Mathematics

The Wiess School of Natural Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for PhD in Mathematics

Students graduating from this program will:

1. Apply abstract structures from algebra, analysis, geometry, and topology to analyze and solve both concrete problems and conceptual questions.
2. Learn fundamental mathematics independently, outside the structure of a regular course.
3. Present mathematical results and reasoning in a compelling way to an audience of mathematicians.
4. Use the mathematical literature and databases to find theorems, constructions, or counterexamples.
5. Write clear and convincing proofs of one's own original mathematical results.

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.

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 six hours a week.

For courses carrying dual undergraduate and graduate numbers, (e.g., MATH 463/563), the 500-level version is intended to prepare students for advanced work in mathematics. In particular, written assignments should be prepared to high professional standards, typically using LaTeX or other mathematical typesetting software. Mathematics graduate students should enroll in the 500-level version.

MA Program—Although students are not normally admitted to study for a masters degree, the department does offer non-thesis and thesis MA degrees. Doctoral students may petition for these once they have satisfied all university and departmental requirements.

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 the general examinations in algebra, analysis, and topology or prepare and present 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 one 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 exams, one each in algebra, analysis, and topology. Exams are offered every August, January, and May. 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 three by the January exams at the beginning of their fourth semester. The judgment of satisfactory performance on the general examinations for either the MA or PhD degree is the responsibility of the department graduate committee. 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.

Last Revised : August 03, 2015

Mathematics

The Wiess School of Natural Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Mathematics.

Last Revised : August 03, 2015

- Undergraduate Students
- Graduate Students
- Non-Traditional Students
- Faculty
- Programs of Study
- Administration and Faculty
- Important Notices

Nanoscale Physics

The Wiess School of Natural Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Director
F. Barry Dunning

Professors
Andrew R. Barron
Rui-Rui Du
Thomas C. Killian
Douglas A. Natelson
Frank R. Toffoletto

Associate Professors
Jason H. Hafner

Degrees Offered: MSNP

Rice University introduced the 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 five tracks in the 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.

A coordinated MBA/MSNP degree is offered in conjunction with the Jesse H. Jones Graduate School of Business.

Last Revised : August 03, 2015

Undergraduate Students
Graduate Students
Non-Traditional Students
Faculty
Programs of Study
Administration and Faculty
Important Notices

Nanoscale Physics

The Wiess School of Natural Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for MS in Nanoscale Physics

Students graduating from this program will:

1. Become knowledgeable in quantum theory and its application to nano- and mesoscale devices.
2. Obtain advanced practical skills valuable to nanotechnology- related industries.
3. Develop written, oral and visual communication strategies to bridge the gaps between science, business and government.
4. Build business and management skills to be effective in a business environment.
5. Develop and adopt professional standards and ethics.
6. Become familiar with the many potential opportunities afforded by nanotechnology.

Degree Requirements for 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 Academic Regulations.

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.

REQUIRED COURSES

Science Core Courses (12 credit hours)

- PHYS 533 *Nanostructures and Nanotechnology I*
- PHYS 534 *Nanostructures and Nanotechnology II*
- PHYS 537 *Methods of Experimental Physics I*

Plus one course from the choices below

- PHYS 538 *Methods of Experimental Physics II*
- PHYS 539 *Characterization and Fabrication at the Nanoscale (offered every other year)*
- PHYS 416 *Computational Physics*
- PHYS 605/ELE C605 *Computational Electrodynamics & Nano-Photonics*
- ELEC 571 *Imaging at the Nanoscale*

Cohort Courses (9 credit hours)

- NSCI 610/ENGI 610 *Management in Science and Engineering*
- NSCI 501 *Professional Master's Seminar* (required for **two** semesters)
- NSCI 511 *Science Policy and Ethics*
- NSCI 512 *Professional Master's Project*

INTERNSHIP

An internship may be conducted 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.

RECOMMENDED ELECTIVES

Students choose 18 credit hours of elective course work, of which at least 9 credit hours must be science/engineering courses at the 500 level or above. Examples of courses that may be used as electives in this program include:

Nano-Materials

- PHYS 517 *Computational Physics*
- PHYS 539 *Characterization and Fabrication at the Nanoscale*
- MSNE 535/PHYS 535 *Crystallography and Diffraction*
- MSNE 580 *Microscopy Methods in Material Science*
- MSNE 614 *Special Topics: Principles of Nanoscale Mechanics*
- MSNE 650 *Nanomaterials and Nanomechanics*

Nano-Optics and Nano-Photonics

- ELEC 568 *Laser Spectroscopy*
- ELEC 521 *High Performance Nanoscale Systems*
- ELEC 571 *Imaging at the Nanoscale*
- ELEC 573 *Optical Spectroscopy of Nanomaterials*
- ELEC 603 *Nano-optics and Nano-photonics*
- ELEC 585 *Fundamentals of Medical Imaging*
- PHYS 569/ELEC 569 *Ultrafast Optical Phenomena*

Nano-Bio

- BIOE 442 *Tissue Engineering*
- BIOE 498 *Biomems & Medical Microdevices*
- CHEM 547 *Supramolecular Chemistry*
- CHEM 600 *Biological Chemistry or Nanoscale Chemistry*
- ELEC 571 *Imaging at the Nanoscale*
- ELEC 568 *Laser Spectroscopy*
- PHYS 539 *Characterization and Fabrication at the Nanoscale*

Other Electives

- CEVE 505/ENGI 505 *Engineering Project Management and Economics*
- MGMT 609 *Managing Energy Transitions*
- MGMT 661 *International Business Law*
- MGMT 669 *Business Strategy in Energy Industry*
- MGMT 674 *Production and Operations Management*
- MGMT 676 *Project Management / Project Finance*
- MGMT 721 *Business Law*

Note: Each of these electives is not offered every year, and some courses may have prerequisites or require instructor permission. Most courses with the MGMT dedication carry 1.5 credit hours and last half of a semester.

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 fifth 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 director.

Last Revised : August 06, 2015

- Undergraduate Students
- Graduate Students
- Non-Traditional Students
- Faculty
- Programs of Study
- Administration and Faculty
- Important Notices

Nanoscale Physics

The Wiess School of Natural Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Nanoscale Physics.

Last Revised : August 11, 2014

Physics and Astronomy

The Wiess School of Natural Sciences

Chair
Thomas C. Killian

Professors
David Alexander
Matthew G. Baring
Anthony A. Chan
Marjorie D. Corcoran
Pengcheng Dai
Michael W. Deem
Rui-Rui Du
F. Barry Dunning
Jason H. Hafner
Naomi J. Halas
Patrick M. Hartigan
Huey W. Huang
Randall G. Hulet
Christopher Johns-Krull
Junichiro Kono
Neal Lane
Eugene H. Levy
Herbert Levine
Edison P. Liang
Emilia Morosan
Douglas Natelson
Peter Nordlander
Jose Onuchic
B. Paul Padley
Carl Rau
Patricia H. Reiff
Jabus B. Roberts Jr.
Gustavo E. Scuseria
Qimiao Si
Frank R. Toffoletto
Peter Wolynes

Associate Professors
Stanley A. Dodds
Karl M. Ecklund
Franciscus J. M. Geurts
Ching-Hwa Kiang
Han Pu

Assistant Professors
Mustafa Amin
Stephen J. Bradshaw
Matthew S. Foster
Kaden Hazzard
Andrea Isella
Wei Li
Andriy Nevidomskyy

Professors Emeriti
Stephen D. Baker
Paul A. Cloutier
Reginald J. Dufour
Thomas W. Hill
Paul M. Stevenson
Richard A. Wolf

Instructors
Robert Beaird
Michael Cone
Jared Stenson
Lam Yu

Senior Faculty Fellows
William J. Llope
Stanislav Sazykin
Ian A. Smith
Pablo P. Yepes

Adjunct Faculty
Markus Aschwanden
James L. Burch
Franklin R. Chang-Diaz
Stefan Kirchner
Hui Li
James H. Newman
Carolyn Sumners
J. Hunter Waite
Jian-Xin Zhu

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 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, astrophysics, and chemical physics provide preparation for employment or further study in physics and related fields. Students in the professional nonthesis, 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.

Last Revised : February 19, 2012

Physics and Astronomy

The Wiess School of Natural Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Undergraduate Degrees

For general university requirements, see Graduation Requirements. 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.

Program Learning Outcomes for BS in Physics

Students graduating from this program will:

1. Acquire and demonstrate a solid foundation of knowledge in physics and/or astrophysics and deeper knowledge of subdivisions of the field related to their interests.
2. Build the theoretical, computational, and laboratory skills necessary to succeed in graduate school or in the workplace and become leaders in their chosen discipline.
3. Develop the ability to identify, formulate, and solve challenging scientific and technical problems as encountered in physics and astronomy.
4. Learn basic skills in reading scientific literature. They will also be able to communicate scientific results orally and in writing with scientists and the general public.
5. Be able to conduct directed research.

Degree Requirements for BS in Physics

REQUIRED COURSES

All students, regardless of option, must complete the following:

- PHYS 101 *Mechanics (with Lab)* **and** PHYS 103 *Mechanics Discussion* **or** PHYS 111 *Mechanics (with lab)*
- PHYS 102 *Electricity and Magnetism (with Lab)* **and** PHYS 104 *E & M Discussion* **or** PHYS 112 *Electricity and Magnetism (with lab)*
- PHYS 201 *Waves and Optics*
- PHYS 202 *Modern Physics*
- PHYS 231 *Elementary Physics Laboratory*
- PHYS 301 *Intermediate Mechanics*
- PHYS 311 *Introduction to Quantum Physics I*
- PHYS 425 *Statistical and Thermal Physics*
- PHYS 491 and 492 *Undergraduate Research*
- PHYS 493 and 494 *Undergraduate Research Seminar*

  NOTE: The undergraduate research course and seminar must be taken concurrently
- MATH 101 and 102 *Single Variable Calculus I* and *II*
- MATH 211 *Ordinary Differential Equations and Linear Algebra*
- MATH 212 *Multivariable Calculus*

  NOTE: MATH 221 and 222 *Honors Calculus III* and *IV* may substitute for MATH 211 and 212

Additional courses for the BS in physics with general physics option

- PHYS 302 *Intermediate Electrodynamics*
- PHYS 312 *Introduction to Quantum Physics II*

- PHYS 331 and 332 *Junior Physics Laboratory I* and *II*
- PHYS 411 *Introduction to Nuclear and Particle Physics*
- PHYS 412 *Solid State Physics*
- 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 121/123 *General Chemistry I/General Chemistry Lab I* **and** CHEM 122/124 *General Chemistry II/General Chemistry Lab II* **OR** CHEM 151/153 *Honors Chemistry I/Honors Chemistry Laboratory I* **and** CHEM 152/154 *Honors Chemistry II/Honors Chemistry Laboratory II*

Additional courses for the BS in physics with applied physics option

- PHYS 302 *Intermediate Electrodynamics* **OR** ELEC 306 *Electromagnetic Fields and Devices*
- PHYS 312 *Introduction to Quantum Physics II* **OR** ELEC 361 *Quantum Mechanics for Engineers*
- Two of the following:
  i. PHYS 331 *Junior Physics Lab I*
  ii. PHYS 332 *Junior Physics Lab II*
  iii. ELEC 364 *Photonics Measurements*
- PHYS 412 *Solid State Physics* or approved substitute in applied physics
- ELEC 242 *Fundamentals of Electrical Engineering II* **OR** ELEC 243 *Electronic Measurement Systems*
- ELEC 305 *Introduction to Physical Electronics*
- MATH 381 *Introduction to Partial Differential Equations* **OR** CAAM 336 *Differential Equations in Science and Engineering*
- CHEM 121/123 *General Chemistry I/General Chemistry Lab I* **and** CHEM 122/124 *General Chemistry II/General Chemistry Lab II* **OR** CHEM 151/153 *Honors Chemistry I/Honors Chemistry Laboratory I* **and** CHEM 152/154 *Honors Chemistry II/Honors Chemistry Laboratory II*

Additional courses for the BS in physics with biological physics option

- PHYS 302 *Intermediate Electrodynamics*
- PHYS 312 *Introduction to Quantum Physics II*
- PHYS 355 *Introduction to Biological Physics*
- BIOC 201 *Introductory Biology*
- BIOC 211 *Intermediate Experimental Biosciences*
- BIOC 301 *Biochemistry I* or BIOC 341 *Cell Biology*
- CHEM 121/123 *General Chemistry I/General Chemistry Lab I* **and** CHEM 122/124 *General Chemistry II/General Chemistry Lab II* **OR** CHEM 151/153 *Honors Chemistry I/Honors Chemistry Laboratory I* **and** CHEM 152/154 *Honors Chemistry II/Honors Chemistry Laboratory II*
- CHEM 211/213 *Organic Chemistry I and Organic Chemistry Discussion*
- MATH 381 *Introduction to Partial Differential Equations* **OR** CAAM 336 *Differential Equations in Science and Engineering*

Additional courses for the BS in physics with computational physics option

- PHYS 302 *Intermediate Electrodynamics*
- PHYS 312 *Introduction to Quantum Physics II*
- PHYS 416 *Computational Physics*
- CAAM 335 *Matrix Analysis* **and** CAAM 336 *Differential Equations in Science and Engineering*
- CAAM 210 *Introduction to Engineering Computation*
- CAAM 453 *Numerical Analysis I*
- CAAM 519 *Computational Science I*
- One of the following:
  i. CAAM 435 *Dynamical Systems*
  ii. CAAM 536 *Numerical Methods for Partial Differential Equation*s
  iii. CAAM 454 *Numerical Analysis I*
  iv. CAAM 520 *Computational Science II*
- CHEM 121/123 *General Chemistry I/General Chemistry Lab I* **OR** CHEM 151/153 *Honors Chemistry I/Honors Chemistry Laboratory I*

Degree requirements for BS in Astrophysics

- PHYS 101 *Mechanics (with Lab)* **and** PHYS 103 *Mechanics Discussion* **or** PHYS 111 *Mechanics (with lab)*
- PHYS 102 *Electricity and Magnetism (with Lab)* **and** PHYS 104 *E & M Discussion* **or** PHYS 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*
- PHYS 302 *Intermediate Electrodynamics*
- PHYS 311 *Introduction to Quantum Physics I*
- PHYS 425 *Statistical and Thermal Physics*
- PHYS 491 and PHYS 492 *Undergraduate Research*
- PHYS 493 and PHYS 494 *Undergraduate Research Seminar*
  NOTE: The undergraduate research course and seminar must be taken concurrently.
- ASTR 230 *Astronomy Lab*
- ASTR 350 and ASTR 360 *Introduction to Astrophysics*
- Two credits of ASTR 400 *Undergraduate Research Seminar*
- Three courses from the following:
  i. ASTR 450 *Experimental Space Science*
  ii. ASTR 451 *Astrophysics I - Sun and Stars*
  iii. ASTR 452 *Astrophysics II - Galaxies and Cosmology*
  iv. ASTR 470 *Solar System Physics*
  v. PHYS 312 *Introduction to Quantum Physics II*
  vi. PHYS 480 *Introduction to Plasma Physics*
- MATH 101 and 102 *Single Variable Calculus I* and *II*
- MATH 211 *Ordinary Differential Equations and Linear Algebra*
- MATH 212 *Multivariable Calculus*
  NOTE: MATH 221 and 222 *Honors Calculus III* and *IV* may substitute for MATH 211 and MATH 212
- CAAM 336 *Differential Equations in Science and Engineering*
- NSCI 230/COMP 110 *Computation in Science and Engineering* **OR** CAAM 210 *Introduction to Engineering Computation*
- MECH 200 *Classical Thermodynamics*

Program Learning Outcomes for BA in Physics or Astronomy

Students graduating from this program will:

1. Acquire and demonstrate a solid foundation of knowledge in physics and/or astrophysics.
2. Recognize the importance of science in issues affecting their everyday lives. They use scientific approaches and think critically in evaluating articles in the scientific and popular press.

Degree requirements for BA in Physics

- PHYS 101 *Mechanics (with Lab)* **and** PHYS 103 *Mechanics Discussion* **or** PHYS 111 *Mechanics (with lab)*
- PHYS 102 *Electricity and Magnetism (with Lab)* **and** PHYS 104 *E & M Discussion* **or** PHYS 112 *Electricity and Magnetism (with lab)*
- PHYS 201 *Waves and Optics*
- PHYS 202 *Modern Physics*
- PHYS 231 *Elementary Physics Laboratory*
- PHYS 301 *Intermediate Mechanics*
- PHYS 302 *Intermediate Electrodynamics*
- PHYS 311 *Introduction to Quantum Physics I*
- PHYS 331 *Junior Physics Laboratory I*
- PHYS 425 *Statistical and Thermal Physics*
- One additional PHYS or ASTR course (3 credit hours) at 400 level
- MATH 101 and 102 *Single Variable Calculus* I and II
- MATH 211 *Ordinary Differential Equations and Linear Algebra*
- MATH 212 *Multivariable Calculus*
  NOTE: MATH 221 and 222 *Honors Calculus* III and IV may substitute for MATH 211 and 212
- NSCI 230 *Computation in Science and Engineering* **OR** CAAM 210 *Introduction to Engineering Computation* **OR** one MATH or CAAM course at or above 300 level

Degree requirements for BA in Astronomy

- PHYS 101 *Mechanics (with Lab)* **and** PHYS 103 *Mechanics Discussion* **or** PHYS 111 *Mechanics (with lab)*
- PHYS 102 *Electricity and Magnetism (with Lab)* **and** PHYS 104 *E & M Discussion* **or** PHYS 112 *Electricity and Magnetism (with lab)*
- PHYS 201 *Waves and Optics*
- PHYS 202 *Modern Physics*
- PHYS 231 *Elementary Physics Laboratory*

- PHYS 301 *Intermediate Mechanics*
- PHYS 302 *Intermediate Electrodynamics*
- ASTR 230 *Astronomy Lab*
- ASTR 350 and ASTR 360 *Introduction to Astrophysics*
- Two credits of ASTR 400 *Undergraduate Research Seminar*
- One of: the following:
  i. ASTR 450 *Experimental Space Science*
  ii. ASTR 451 *Astrophysics I - Sun and Stars*
  iii. ASTR 452 *Astrophysics II - Galaxies and Cosmology*
  iv. ASTR 470 *Solar System Physics*
  v. PHYS 480 *Introduction to Plasma Physics*
- MATH 101 and 102 *Single Variable Calculus I* and *II*
- MATH 211 *Ordinary Differential Equations and Linear Algebra*
- MATH 212 *Multivariable Calculus*
  NOTE: MATH 221 and 222 *Honors Calculus III* and *IV* may substitute for MATH 211 and MATH 212
- MECH 200 *Classical Thermodynamics*
- One of the following:
  i. PHYS 331 *Junior Physics Laboratory I*
  ii. NSCI 230/COMP 110 *Computation in Science and Engineering*
  iii. CAAM 210 *Introduction to Engineering Computation*

Degree requirements for BS in Chemical Physics

This degree is jointly managed by the Department of Chemistry and the Department of Physics and Astronomy. For more information, see Chemical Physics.

Last Revised : August 06, 2015

Physics and Astronomy

The Wiess School of Natural Sciences

Program Learning Outcomes for Advanced Degrees in Physics

Program Learning Outcomes for Master of Science in Teaching Physics
Students graduating from this program will:

1. Be proficient in, and able to teach, all the Planetary, Astronomy and Space Science topics included in the State of Texas TEKS and Next Generation Science standards for middle and high school courses.
2. Become proficient in the use of non-calculus mathematical techniques: trigonometry, logarithms, exponentials, graphing (including semi-log and log-log).
3. Solve problems based on Kepler's Laws and Newton's Laws.
4. Learn and model the Scientific Method, and best practices for teaching scientific content.
5. Present findings both as in written documents and by using Powerpoint.
6. Learn how to use scientific and astronomical equipment such as telescopes, digital cameras, GPS, electronic devices including multimeters, and portable planetariums.
7. Prepare a Final Project, which will include scientific research, educational research, and/or curriculum creation or analysis.

Program Learning Outcomes for PhD in Physics
Students graduating from this program will:

1. Acquire and demonstrate advanced knowledge in foundational areas of physics and astronomy, and a mastery of their selected subfield.
2. Develop the skills necessary to conduct independent research in physics and astronomy and become leaders in their chosen careers.
3. Develop the ability to identify, formulate, and solve challenging scientific and technical problems as encountered in physics and astronomy.
4. Become proficient in reading the scientific literature and in oral and written communication of scientific results.
5. Make an original and significant contribution to knowledge in their discipline.

Advanced Degrees

For general university requirements, see Graduate Degrees. 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 P & A department does not admit into a master of science program. The non-thesis master of science is typically a step in the program towards a PhD. The MS requires at least 30 credit hours of approved graduate-level course work, including research performed under the direction of a departmental faculty member.

To be eligible for the PhD degree, graduate students must demonstrate to the department their knowledge in the discipline and the ability to engage in advanced research. This normally is accomplished by: successfully completing required coursework for the MS; presenting a research progress report and proposal to a faculty committee: and passing an oral candidacy exam. Students must complete a total of 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.

Last Revised : August 03, 2015

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Physics and Astronomy

The Wiess School of Natural Sciences

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Course Listings

For the most current course offerings, please click here: Physics and Astronomy.

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Space Studies

The Wiess School of Natural Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Directors
David Alexander
Andrew Meade

Professors
Christopher M. Johns-Krull
Adrian Lenardic
Erzsebet Merenyi
Marcia O'Malley
Tayfun Tezduyar
Frank Toffoletto

Associate Professors
Ramon Gonzalez

Assistant Professors
Stephen Bradshaw
Hadley Wickham

Degrees offered: MSSpS

Rice University is offering this new degree for the first time in 2012. This degree is one of five tracks in the professional master's program at Rice housed in the Wiess School of Natural Sciences and focuses on training students in Space Engineering and Science with the intent of creating new options for engineering and science students interested in working in the space technology industry or related government entities, e.g. NASA, as well as governmental relations positions in non-profit organizations, industry and academic institutions.

The Space Studies track is a collaboration between the Wiess School of Natural Sciences and the George R. Brown School of Engineering, and is geared to help individuals increase their knowledge of space engineering and related science, program management, and policy. The program includes advanced engineering, biological and physical science classes and introduces students to economics, public policy, and management disciplines, which impact space commercialization and national policy. It focuses on training engineers and scientists interested in program management, providing them with the tools to face the complex challenges inherent in US space policy, human and robotic space exploration, and science in space exploration and technology development.

These master's degrees are designed for students seeking to gain further technical core expertise coupled with enhanced management and communication skills instilling a level of scholastic proficiency that exceeds that of the bachelor's level, and creating the cross-functional aptitudes needed in modern industry and government.

In addition, a coordinated MBA/MSSpS degree is offered in conjunction with the Jesse H. Jones Graduate School of Business.

Last Revised : August 03, 2015

Space Studies

The Wiess School of Natural Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for MS in Space Studies

Students graduating from this program will:

1. Develop advanced science, engineering, and computational skills.
2. Achieve a broad systems level understanding of the tools and methodologies needed in the space industry.
3. Be able to apply quantitative skills and conduct data analysis.
4. Develop the leadership and communication skills needed to solve real world problems in space, and related technology.
5. Gain exposure and real life experience in solving technical problems in a science and technology environment, and achieve professional competency in engineering and science implementation and application.

Degree Requirements for MS in Space Studies

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. Total required credit hours are 39 hours. At the conclusion of their 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, see the Professional Degrees section of Graduate Degrees.

Admission

Admission to graduate study in Space Studies is open to qualified students holding a bachelor's degree in a related science or engineering program that included course work in general physics, chemistry, calculus, linear algebra, and differential equations. Scores from the general Graduate Record Examination (GRE), good critical thinking and communication skills and strong quantitative abilities. Statistics, introductory economics and computer skills preferred. Department faculty evaluate the previous academic record and credentials of each applicant individually and make admission decisions.

REQUIRED COHORT REQUIREMENTS

- NSCI 511 *Science Policy and Ethics*
- NSCI 610 *Management for Science and Engineering*
- NSCI 501 *Master Seminar* (required for 1 semester)
- NSCI 502 *Space Studies Seminar Course*
- NSCI 512 *Internship Project*

CORE COURSES

- ASTR 570 *Solar System Physics*
- STAT 615 *Intro to Regression and Statistical Computing*
- MECH 572 *Aerospace Systems Engineering*

Two courses from the list below:

- ASTR 554 *Astrophysics of the Sun*
- ASTR 451 *Astrophysics I: Sun and Stars*
- BIOC 415 *Experimental Physiology*
- BIO 540 *Metabolic Engineering*
- ESCI 540 *Physics and Chemistry for the Atmosphere*
- ESCI 660 *Geological and Geophysical Fluid Dynamics*
- MECH 554 *Computational Fluid Mechanics*

Two Statistics/Computation Courses from the list below:

- CAAM 453 *Numerical Analysis I*
- CEVE 528 *Engineering Economics*
- ESCI 650 *Remote Sensing* (not available every year)
- MECH 554 *Computational Fluid Mechanics*
- PHYS 416 *Computational Physics*
- STAT 310 *Probability and Statistics*
- STAT 605 *Statistical Computing and Graphics*
- STAT 502/541/640 *Neural Networks and Information Theory, Multivariate Analysis, Data Mining and Statistical Learning - available with pre-requisites for specific focus areas*
- Depending on background, other courses can be chosen with permission & advisor.

***Three to four electives according to student's individual interests and career goals**:*

Focus: Engineering

- CEVE 504 *Atmospheric Particular Matter*
- CEVE 505 *Eng. Project Development& Management*
- CEVE 511 *Atmospheric Processes*
- CEVE 576 *Structural Dynamics and Control*
- COMP/ELEC/MECH 498 *Intro to Robotics*
- COMP 551 *Advanced Mobile Robotics/Lab*
- MECH 572 *Aerospace Systems Engineering*
- MECH 583 *Convective Heat Transfer*
- MECH 591 *Gas Dynamics*
- MECH 599 *Human Factors in Space*
- MECH 599/Sect 2 *Spacecraft Navigation*
- MECH 599/Sect 3 *Design for Aerospace Environments*
- MECH 691 *Hypersonic Aerodynamics*
- MECH 454 *Computational Fluid Mechanics*

Focus: Sciences (Astro Science/Earth Science/Life Sciences)

- ASTR 542 *Nebular Astrophysics*
- ASTR 551 *Astrophysics I: Sun and Stars*
- ASTR 552 *Astrophysics II Galaxy and Cosmology*
- ASTR 554 *Astrophysics of the Sun*
- ASTR 555 *Protostars and Planets*
- ASTR 565 *Compact Objects*
- ASTR 700 *Independent Study Course*

NOTE: *Focus areas in earth science, physics and life sciences can be chosen, depending on student's background. Students will consult with academic advisor about appropriate selection of their elective science courses.*

Focus: Management

- MGMT 734 *Technology Entrepreneurship*
- MGMT 629 *Business Plan Development*
- MGMT 601 *Financial Statement Analysis*
- MGMT 618 *Complexities of People and Organizations*
- MGMT 658 *Applied Risk Management*
- MGMT 619 *Corporate Governance*
- MGMT 719 *Thinking Strategically*

NOTE: *Courses vary. Some listed courses may not be offered every year, and others may be offered that satisfy the*

requirements with pre-approval. Students should consult with their academic advisors before enrolling.

THREE TO SIX MONTH INTERNSHIP

Practical experience may be conducted 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.

Professional Science Master's 5th Year Degree Option for Rice Undergraduates

Rice students have an option to achieve the MS in space studies by adding an additional fifth 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 space studies 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 director.

Last Revised : August 05, 2015

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Space Studies

The Wiess School of Natural Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Space Studies.

Last Revised : August 11, 2014

Subsurface Geoscience

The Wiess School of Natural Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Director
André W. Droxler

Professors
John B. Anderson
Gerald R. Dickens
Alan Levander
Julia Morgan
Fenglin Niu
Dale S. Sawyer
Colin A. Zelt

Associate Professors
Brandon Dugan

Assistant Professors
Helge Gonnerman

Lecturers
Stephen Danbom

Adjunct Faculty
Vitor Abreu
W.C. Rusty Riese

Degrees Offered: MSSG

Rice University introduced the 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 two focus areas: geology and geophysics. 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 five tracks in the 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 within oil-and gas-related industries.

A coordinated MBA/MSSG degree is offered in conjunction with the Jesse H. Jones Graduate School of Business.

Last Revised : August 03, 2015

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Subsurface Geoscience

The Wiess School of Natural Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for MS in Subsurface Geoscience

Students graduating from this program will:

1. Become proficient in applying geological knowledge and geophysical methods.
2. Become proficient in using seismic and other geophyhsical methods along with geological principles to find oil and natural gas in their focus area of geology.
3. Become a technical expert in aspects of exploration seismology in their focus area of geophysics.
4. Develop written, oral, and visual communication skills to bridge the gaps between science, business, and government.
5. Build business and management skills to be effective in a business environment.
6. Develop and adopt professional standards and ethics.

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 one of two focus areas: geology and geophysics. Instead of a thesis, 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.

Admission

Admission to graduate study in subsurface geoscience is open to qualified students holding a bachelor's degree in a related science that includes coursework in geoscience, general chemistry, physics, calculus, and differential equations.

Department faculty evaluate the previous academic record and credentials of each applicant individually.

REQUIRED PROFESSIONAL COURSES (9 credit hours)

- NSCI 610 *Management in Science and Engineering*
- NSCI 501 *Professional Master's Seminar* [required for two semesters]
- NSCI 511 *Science Policy and Ethics*
- NSCI 512 *Professional Master's Project*

There are two focus areas in the Subsurface Geoscience track: Geology and Geophysics.

Geology Focus Area

REQUIRED COURSES (22 credit hours)

- ESCI 615 *Petroleum Geology*
- ESCI 617 *Petroleum Industry Economics and Management*
- ESCI 558 *Seismic Reflection Data Interpretation*

- ESCI 642 *Exploration Geophysics*
- ESCI 334 *Geological Field Methods*
- ESCI 627 *Sequence Stratigraphy*
- ESCI 636 *Well Logging and Petrophysics*

ELECTIVES (9 credit hours)
Suggested Electives include:

- ESCI 544 *Hydrocarbon Exploration (AAPG Imperial Barrel competition)*
- ESCI 550 *Modern Exploration Technology*
- ESCI 504 *Siliciclastic Depositional Systems*
- ESCI 506 *Carbonate Depositional Systems*
- ESCI 564 *Seismic Data Processing*
- ESCI 663 *Advanced Structural Geology I*

Not every course is offered every year. Some courses may require pre-requisites or instructor permission. Substitutions for required or elective courses may be approved by the Track Advisor.

Geophysics Focus Area

REQUIRED COURSES (22 credit hours)

- ESCI 615 *Petroleum Geology*
- ESCI 617 *Petroleum Industry Economics and Management*
- ESCI 558 *Seismic Reflection Data Interpretation*
- ESCI 642 *Exploration Geophysics*
- ESCI 564 *Seismic Data Processing*
- ESCI 640 *Geophysical Data Analysis: Digital Signal Processing* or ESCI 441 *Geophysical Data Analysis: Inverse Methods*
- ESCI 550 *Modern Exploration Technology*

ELECTIVES (9 credit hours)
Suggested Electives include:

- ESCI 334 *Geological Field Methods*
- ESCI 627 *Sequence Stratigraphy*
- ESCI 505 *Joint Inversion of Exploration Geophysical Data*
- ESCI 663 *Advanced Structural Geology I*
- ESCI 636 *Well Logging and Petrophysics*
- ESCI 565 *Joint Inversion of Exploration Geophysical Data*
- ESCI 544 *Hydrocarbon Exploration (AAPG Imperial Barrel competition)*

ADDITIONAL ELECTIVES FOR BOTH FOCUS AREAS

- COMP 556 *Introduction to Computer Networks*
- ESCI 654 *Geographic Information Science*
- STAT 310 *Probability and Statistics*
- STAT 615 *Introduction to Statistical Computing and Computer Models*
- CEVE 528 *Engineering Economics & Management*
- MGMT 610 *Fundamentals of the Energy Industry*
- MGMT 661 *International Business Law*
- MGMT 674 *Production and Operations Management*
- MGMT 676 *Social Enterprise*
- POST 501 *Energy Policy*

Please contact the department for additoinal courses that can satisfy the requirements listed above. Substitutions for required or elective courses may be approved by the Track Advisor.

Internship

A three to six month internship under the guidance of a host company, government agency or national laboratory is required. At the conclusion of this internship, students must present their internship project in both oral and written form as part of the Professional Master's Project.

Professional Science Master's Fifth Year Degree Option for Rice Undergraduates

Rice students have an option to achieve the MS in subsurface geoscience by adding an additional fifth 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 director.

Last Revised : August 05, 2015

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Subsurface Geoscience

The Wiess School of Natural Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Subsurface Geoscience.

Last Revised : August 11, 2014

Air Force Science

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Commander and Professor
Lt. Colonel Lynn Bentley III

Associate Professors
Major Albert Meza
Major Shawn Owens

Degree Offered: None

The Air Force Reserve Officer Training Corps (ROTC) program prepares men and women of character, commitment, and courage to assume leadership positions as commissioned officers in the active duty United States Air Force. On completion of the curriculum, students will have a thorough understanding of the core values, leadership, teamwork, and other requirements to be an effective officer in the world's greatest Air Force. 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 or on-line at www.uh.edu/class/airforce.

All courses and physical training sessions take place at the University of Houston. Flight orientation occurs at airports in the Houston metro area.

Last Revised : August 11, 2014

Air Force Science

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Credit

ROTC classes may be taken for elective credit toward any degree plan at the University of Houston. All academic courses are open to all students. ROTC scholarship students incur a military obligation.

Four-Year Program

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

Each semester of the GMC consists of one classroom hour of instruction as well as Leadership Laboratory each week.

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 core values, leadership, teamwork, and management tools required to become an effective Air Force officer.

During the senior year, students study the national security policy process and regional and cultural studies, participate in a war-game, and complete final requirements for commissioning as second lieutenants.

Leadership Laboratory

As an Air Force ROTC cadet, each student is required to attend an additional two-hour class known as Leadership Laboratory.

Although not part of the academic class requirement, it is an essential element of officer training. Leadership Laboratory is an intensive military training program in which students gain invaluable leadership and managerial experience while learning about the Air Force way of life. Students have numerous opportunities to hear guest speakers and panel discussions, participate in field trips, and experience practical leadership exercises.

AFROTC Scholarship Opportunities

Air Force ROTC offers various scholarship opportunities for students at the University of Houston:

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 $18,000 per year plus $900 per year for books or $9,000 per year plus $900 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

covers full tuition per year and $900 for books. Currently, majors that qualify include: Electrical and Computer Engineering, and Strategic foreign languages. For the most up-to-date information, visit www.AFROTC.com.

Stipend

All AFROTC scholarship recipients and POC cadets receive a nontaxable monthly stipend. The annual stipend amount ranges from $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 Maxwell AFB, Alabama. Those who have not completed the GMC attend an extended FT Unit. This rigorous program of leadership training, physical conditioning and academics assesses the cadet's potential to be an Air Force officer.

Cadets also receive survival and firearms training and career information. Cadets receive travel pay and daily pay for FT.

Flight Orientation Program

All cadets can volunteer to participate in a joint Air Force ROTC/Civil Air Patrol flight orientation program. This consists of eight flights, four in the front seat of a small passenger aircraft and four additional flights in the back seat as an observer. A soaring program also is available in which cadets get four sorties in gliders. In addition, an abbreviated flying ground school course is taught in the ROTC classrooms using FAA textbooks. The flight program and ground school course are both free for all cadets.

Physical Fitness Training

Cadets meet twice per week at the University of Houston Alumni Center to perform physical fitness training. The training is mandatory and emphasizes push-ups, sit-ups, and running in order to pass the USAF physical fitness test.

Professional Development Training (PDT)

Cadets are eligible to compete to attend PDT during the summer months.
PDT consists of several programs, including:

- Tours of nearby active duty Air Force bases
- Soaring and free-fall parachuting at the United States Air Force Academy
- (USAFA)
- Cultural and Foreign Language Immersion
- Hands-on research at Air Force laboratories
- Shadowing a Air Force officer in Operation Air Force
- Internships at NASA and other government organizations

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

For more information contact the Unit Admissions Officer at 713-743-4932/3704 or visit the University of Houston Air Force website at www.uh.edu/class/airforce.

Summary

During this time of war, our mission of producing Air Force second lieutenants of character, commitment, and courage is more important than ever.

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

Last Revised : August 11, 2014

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Air Force Science

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Course Listings

For the most current course offerings, please click here: Air Force Science.

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Applied Physics

The Smalley-Curl Institute

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Chair
Kevin Kelly

Director
Naomi Halas

Executive Director
Alberto Pimpinelli

Participating Faculty

This program includes faculty from physics and astronomy, chemistry, materials science, electrical and computer engineering, bioengineering, chemical and biomolecular engineering, statistics, biosciences, mechanical engineering and earth science.

Degrees offered: MS*, PhD

* A stand-alone MS is not available.

A joint effort of both the natural sciences and the engineering divisions at Rice and overseen by the Smalley-Curl Institute (SCI), 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 Curriculum and Admissions Committee (APCAC) urges prospective students to contact individual departments or SCI for detailed descriptions of research facilities and ongoing research projects. Within SCI alone, there are more than 100 separate projects, and there are numerous other research opportunities.

Last Revised : August 03, 2015

Applied Physics

The Smalley-Curl Institute

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for MS and PhD in Applied Physics

Students graduating from this program will:

1. Acquire and demonstrate advanced knowledge in the foundational applications of physics including familiarity with past and current scientific literature in their specialization.
2. Develop the ability to conduct independent applied physics research including the aptitude to identify, formulate, and overcome challenging scientific and engineering problems in this endeavor.
3. Make an original and significant technical contribution in their chosen specialization area.
4. Provide future leadership in research and development in government, academia, and/or industry through effective development of and communication of innovative technological ideas.

Degree Requirements for MS and PhD in Applied Physics

The Applied Physics Program (APP) offers a PhD degree. The program does not offer a stand-alone thesis Master of Science degree, although students admitted to the program are required to earn the MS within the program before proceeding to the PhD. For each degree, the student must fulfill the university requirements set forth in the General Announcements 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 Curriculum and Admissions Committee (APCAC) may waive some course requirements for students who demonstrate a thorough knowledge of material in one or more core/elective course(s). Full requirements are available on line at sci.rice.edu/academics/graduate/graduate.php.

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 APCAC. The examination covers the work reported in the thesis as well as the entire field in which the student intends to work toward the PhD. The examining committee votes separately on awarding the master's degree and on admission to candidacy for the PhD. The student also must fulfill the teaching/grading requirements set by the host department to achieve candidacy. Fulfillment of all university degree requirements and successful defense of a PhD thesis in a public examination by an APCAC-approved committee is necessary for the PhD.

CORE COURSES

Students can choose 4 of the 8 listed, depending on area of research. Any taken beyond the first 4 will be counted as electives.

- PHYS 521 *Quantum Mechanics I* **OR** CHEM 530 *Quantum Chemistry*
- PHYS 526 *Statistical Physics* **OR** CHEM 520 *Classical and Statistical Thermodynamics* **OR** CHBE 540 *Statistical Mechanics*
- PHYS 515 *Classical Mechanics*
- PHYS 532 *Classical Electrodynamics*
- CHBE 501 *Fluid Mechanics and Transport Processes*
- PHYS 516 *Mathematical Methods*
- BIOE 502/SSPB 501 *Physical Biology*
- PHYS 563 *Introduction to Solid State Physics I*

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 APCAC or the host department.

ELECTIVES

Five electives are required. A full list of elective courses can be found on the Applied Physics website at http://rqi.rice.edu/curriculum/.

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, and PHYS 526/CHEM 520/CHBE 540 may be used for the nine required courses.

SPECIALIZATION CURRICULA

Some examples of specialization tracks that one may choose are listed below. The lists are only suggested lists and are by no means a full list of possible courses for the specialization area.

Applied Biological and Soft Matter Physics

Suggested core courses:

- BIOE 502/SSPB 501 *Physical Biology*
- CHBE 501 *Fluid Mechanics and Transport Processes*
- CHBE 540 *Statistical Mechanics*
- PHYS 515 *Classical Dyanmics*

Suggested elective courses:

- BIOE 584 *Lasers in Medicine and Bioengineering*
- BIOE 589 *Computational Molecular Biophysics*
- BIOE/PHYS 610 *Methods of Molecular Simulation*
- BIOE 684 *Advanced Biophotonics*
- BIOE 551 *Molecular Biophysics*
- CHBE 560 *Colloidal and Interfacial Phenomena*
- MSCI 555 *Materials in Nature and Biometic Strategies*
- MSCI/CHBE/CHEM 597 *Polymer Synthesis, Soft Materials & Nanocomposites*
- PHYS 551 *Biological Particles*
- PHYS 552 *Molecular Biophysics*

Applied Mathematical and Computational Physics

Suggested core courses:

- CHBE 501 *Fluid Mechanics and Transport Processes*
- CHEM 520 *Classical and Statistical Thermodynamics*
- PHYS 516 *Mathematical Methods*
- PHYS 532 *Classical Electrodynamics*

Suggested elective courses:

- BIOE/PHYS 610 *Methods of Molecular Stimulation*
- CAAM 615 *Theoretical Neuroscience I:Biophyiscal Modeling of Cells and Circuits*
- CHBE 615 *Applications of Molecular Simulations and Statistical Mechanics*
- CHEM 531 *Advanced Quantum Chemistry*
- ELEC 581 *Computational Neuroscience and Neural Engineering*
- MECH 520 *Nonlinear Finite Element Analysis*
- MSCI 533 *Computational Materials Modeling*
- PHYS 516 *Mathematical Models*
- PHYS 517 *Computational Methods*
- PHYS/ELEC 605 *Computational Electrodynamics and Nanophotonics*

Applied Mechanics

Suggested core courses:

- CHBE 501 *Fluid Mechanics and Transport Processes*
- CHBE 540 *Statistical Mechanics*
- PHYS 515 *Classical Dyanmics*
- PHYS 516 *Mathematical Methods*

Suggested elective courses:

- CHBE 602 *Physio-Chemical Hydrodynamics*
- CHBE 603 *Rheology*
- CHBE 630 *Chemical Engineering of Nanostructured Materials*
- MSCI 523 *Properties, Synthesis, and Design of Composite Materials*
- MSCI 535 *Crystallography and Diffraction*
- MSCI 623 *Analytical Spectroscopies: Tools in Materials Science*
- MSCI 634 *Thermodynamics of Alloys*
- MSCI 650 *Nanomaterials and Nanomechanics*

Applied Chemical Physics

Suggested core courses:

- CHEM 530 *Quantum Chemistry*
- CHBE 501 *Fluid Mechanics and Transport Processes*
- PHYS 526 *Statistical Physics*
- PHYS 563 *Classical Electrodynamics*

Suggested elective courses:

- BIOE/PHYS 610 *Methods of Molecular Simulation*
- CHEM 595 *Transition Metal Chemistry*
- CHEM 531 *Quantum Mechanics II/Quantum Chemistry*
- CHEM 533 *Nanostructure & Nanotechnology*
- CHEM 547 *Supramolecular Chemistry*
- CHEM 630 *Molecular Spectroscopy and Group Theory*
- CHBE 560 *Colloidal and Interfacial Phenomena*
- CHBE 590 *Kinetics, Catalysis and Reaction Engineering*
- CHBE 615 *Applications of Molecular Simulations and Statistical Mechanics*
- CHBE 630 *Chemical Engineering of Nanostructured Materials*
- PHYS 539 *Characterization and Fabrication at the Nanoscale*

Applied Optics & Photonics

Suggested core courses:

- PHYS 521 *Quantum Mechanics I*
- PHYS 526 *Statistical Physics*
- PHYS 532 *Statistical Physics*
- PHYS 563 *Classical Electrodynamics*

Suggested elective courses:

- BIOE 587 *Optical Imaging and Nanobiophotonics*
- BIOE 684 *Advanced Biophotonics*
- ELEC 562 *Optoelectronic Devices*
- ELEC 560 *Integrated and Fiber Optics*
- ELEC 568 *Laser Spectroscopy*
- ELEC/PHYS 569 *Ultrafast Optical Phenomena*
- ELEC 571 *Imaging at the Nanoscale*
- ELEC 573 *Optical Spectroscopy of Nanomaterials*
- ELEC 603 *Topics in Micro-and Nano-Photononics*
- PHYS 571 *Modern Atomic Physics and Quantum Optics*

Applied Physical Electronics

Suggested core courses

- PHYS 516 *Mathematical Methods*
- PHYS 521 *Quantum Mechanics I*
- PHYS 532 *Classical Electrodynamics*
- PHYS 563 *Introduction to Solid State Physics I*

Suggested elective courses:

- CHEM 511 *Spectral Methods in Chemistry*
- ELEC 562 *Optoelectronic Devices*
- ELEC 573 *Optical Spectroscopy of Nano Materials*
- ELEC 680 *Nano-Neurotechnology*
- MSNE 623 *Analytical Spectroscopies: Tools in Materials Science*
- PHYS 522 *Quantum Mechanics II*
- PHYS 539 *Characterization and Fabrication at the Nanoscale*
- PHYS 567 *Quantum Materials*
- PHYS 663 *Condensed Matter Theory: Applications*

Last Revised : August 05, 2015

Applied Physics

The Smalley-Curl Institute

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Applied Physics.

Last Revised : August 03, 2015

Civic Leadership

The Center for Civic Leadership

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Executive Director
Caroline Quenemoen

Undergraduate Advisor
Jesse Hendrix

Faculty Director
Bob Stein

Degrees Offered: None

In support of Rice's mission of providing a distinctive undergraduate experience, the Center for Civic Leadership (CCL) helps undergraduate students develop the knowledge, skills, and values to address the problems of the 21st century and to lead in a variety of community environments. The focus on civic leadership reflects not only Rice's mission but a broader trend that recognizes the civic purpose of 21st century institutions of higher education to cultivate social responsibility and active citizenship. The CCL's approach to leadership education stresses the development of knowledge to understand the complex challenges facing today's society, skills to motivate and collaborate with diverse stakeholders to take informed action, and values to effect positive change.

All students begin the program by completing a CCL Immersion Program, which introduces them to problems facing the city of Houston (through lectures, community tours, and short-term service) and develops skills in reflective practice critical to leadership development.

Additionally, students will complete one 3-credit elective in social issues and one 3-credit elective in leadership chosen from a list of courses covering relevant topics. Timely, personalized advising will play an important role in the selection of the electives in order to ensure that students follow an academically coherent path to the certificate. The purpose of this element of the certificate pathway is to provide foundational knowledge directly pertinent to a student's capstone project.

Subsequently, students will apply to participate in a CCL Action Program that allows them to work in collaboration with a community partner to address a problem or need. To be selected to one of these programs, students must demonstrate relevant academic preparation.

Upon completion of the above listed requirements, students with a minimum overall GPA of 3.3 may apply in the spring of their sophomore or junior year for admittance to the Certificate in Civic Leadership.

To receive the certificate, students must complete a substantial civic leadership project in partnership with a community organization under the guidance of one faculty and one CCL advisor. In the fall semester, all admitted certificate students take a course (UNIV 402) in which they prepare for their capstone projects by researching the community need or problem, designing a sustainable response, developing a project proposal, and reflecting on leadership challenges and solutions. Students subsequently carry out their projects independently in the spring semester under the direction of their faculty advisor and the capstone instructor (UNIV 403). To register for UNIV 403, students must have successfully completed UNIV 402 and received approval for their CCL capstone project proposal from their advisors, their community partner, and the UNIV 402 course instructor. UNIV 403 students must present their project results to the community partner through a formal presentation and written report before the conclusion of the course. Additionally, students are encouraged to present at a formal venue, such as a conference or symposium, within one year of course completion.

To be considered for receipt of the certificate requires submission of a portfolio that includes the capstone project or description of its outcomes, a reflection essay on civic leadership, and a public presentation to the campus and community. Upon recommendation of the capstone instructor and faculty advisor, the certificate will be awarded by vote of the faculty advisory board and recognized on the student's official transcript.

Last Revised : August 03, 2015

- Undergraduate Students
- Graduate Students
- Non-Traditional Students
- Faculty
- Programs of Study
- Administration and Faculty
- Important Notices

Civic Leadership

The Center for Civic Leadership

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for Certificate in Civic Leadership

Students graduating from this program will:

1. Integrate academic and experiential knowledge in new settings and be able to identify, frame, and analyze issues.
2. Address real world issues through interaction and collaboration with diverse community partners.
3. Communicate with and present their work effectively to a range of audiences both within and beyond the academic community.
4. Identify and express their individual values and goals and be able to act on them.
5. Demonstrate motivation to make a positive impact on society.

Requirements for Certificate in Civic Leadership

The requirements for the Certificate in Civic Leadership include 12 credit hours and 3 Experiential Learning Programs

REQUIRED ELECTIVES

Students should select approved CCL elective coursework with an advisor

- 3 credit hours Elective: Social Issues
- 3 credit hours Elective: Leadership

NON-COURSE REQUIREMENTS: CCL EXPERIENTIAL LEARNING PROGRAMS

- One Center for Civic Leadership Immersion Program, selected from the following:
  - Urban Immersion
  - Beyond the Sallyport
  - Leading Edge Workshop and LEAD 150
  - Alternative Spring Break Participant
  - Group International Service Project Participant
- One Center for Civic Leadership Action Program, selected from the following:
  - Urban Immersion Coordinator
  - Alternative Spring Break Site Leader
  - Group International Service Project Site Leader
  - Houston Action Research Team (HART)
  - Leadership Rice Summer Mentorship Experience
  - Loewenstern Fellowship
- One Civic Leadership Portfolio submitted on the last day of the semester in which the student completes UNIV 403

CAPSTONE

6 credits hours from the following:

- UNIV 402 *Civic Leadership Capstone I*

- UNIV 403 *Civic Leadership Capstone II*

The certificate requires a minimum of 2.0 in all requirements and submission of a portfolio by the last day of the semester that includes work samples completed for the certificate and a reflection essay that addresses how these experiences contributed to civic leadership development.

Admission

Upon completion of the Required Electives and Center for Civic Leadership Experiential Learning Programs, students with a minimum overall GPA of 3.3 or higher may apply in the spring of their sophomore or junior year for admittance to the Certificate in Civic Leadership.

To apply students must submit the following:

- a transcript demonstrating successful completion of required electives and eligible minimum GPA of 3.3
- an abstract of their project proposal for the capstone course (UNIV 402/403), which is designed to yield high level, independent, community-based projects, and the signature of the faculty member who agrees to serve as the advisor
- a paragraph explaining the relevance of their elective courses and CCL Action Program to the proposed capstone project

Only students who propose a feasible project and demonstrate a coherent path of preparation will be admitted to the CCL Certificate Program.

Last Revised : August 06, 2015

- Undergraduate Students
- Graduate Students
- Non-Traditional Students
- Faculty
- Programs of Study
- Administration and Faculty
- Important Notices

Civic Leadership

The Center for Civic Leadership

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

LEAD 101-INTRODUCTION TO CIVIC LEADERSHIP
LEAD 150-LEADERSHIP IN PROFESSIONAL CONTEXT
LEAD 250-LEADERSHIP AND PROFESSIONAL EXCELLENCE
LEAD 301-HISTORICAL AND INTELLECTUAL FOUNDATIONS OF LEADERSHIP
LEAD 309-LEADERSHIP: THEORY TO PRACTICE
LEAD 313-ENTREPRENEURIAL LEADERSHIP
LEAD 321-LEADERSHIP COMMUNICATION
LEAD 325-APPLIED LEADERSHIP: POWER; INFLUENCE, AND PERSUASION
LEAD 330-LEADERSHIP IN HIGHER EDUCATION
LEAD 335-CRISIS LEADERSHIP
LEAD 545-STRATEGIC THINKING FOR COMPLEX PROBLEM SOLVING
UNIV 201-CENTURY SCHOLARS PROGRAM
UNIV 215-ALTERNATIVE SPRING BREAK LEADERSHIP COURSE
UNIV 301-UNDERGRADUATE RESEARCH
UNIV 305-INTERNATIONAL SERVICE
UNIV 306-TRIP LOGISTICS
UNIV 307-SYNTHESIZING YOUR SERVICE EXPERIENCE
UNIV 402-CIVIC LEADERSHIP CAPSTONE I
UNIV 403-CIVIC LEADERSHIP CAPSTONE II

Last Revised : August 03, 2015

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 who wish to teach a student-taught course must first take COLL 300, a course on pedagogy that is taught by faculty masters in consultation with the Center for Teaching Excellence. As a part of their participation in COLL 300, students then propose College Courses during the semester before they are offered. Once approved by the dean of undergraduates, these 1-credit student-taught College Courses are offered for academic credit on the same basis as departmental courses. More information about student-taught courses can be found here.

No more than three hours of credit for student-taught College Courses (COLL) may be counted toward graduation. This includes all courses COLL 100-199 as well as COLL 200 Teaching Practicum.

Last Revised : June 18, 2014

College Courses

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: College Courses.

Last Revised : August 03, 2015

- Undergraduate Students
- Graduate Students
- Non-Traditional Students
- Faculty
- Programs of Study
- Administration and Faculty
- Important Notices

Environmental Studies

The Wiess School of Natural Sciences, The School of Social Sciences, and The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Director
Dominic Boyer

Environmental Science Major Advisor
Andre Droxler

Environmental Studies Minor Advisor
Dominic Boyer

ENST Steering Committee
Jim Blackburn
Dominic Boyer
Richard Johnson
Jeff Kripal
Elizabeth Long
Julia Morgan
Timothy Morton
Evan Siemann
Neyran Turan

Degrees Offered: BA

The Environmental Studies Program offers a double major in Environmental Science(BA), a minor in Environmental Studies, and several other interdisciplinary courses for students interested in broadening their understanding of environmental issues. These courses often are team-taught by faculty from various areas of study. Students wishing to major in an environmental program have three options: environmental science (double major only), environmental engineering sciences (see civil and environmental engineering), or environmental policy (see policy studies). In addition, chemical and biomolecular engineering majors may create a focus area in environmental engineering (see chemical and biomolecular engineering) and earth science majors may follow an environmental earth science track (see earth science).

Students seeking advice regarding environmental program in general as well as the minor may contact Dr. Dominic Boyer (dcb2@rice.edu) or the coordinator of the Center for the Study of Energy and Environmental Research in the Human Sciences (cenhs@rice.edu). Students seeking advice regarding the Environmental Science double major may contact Dr. Andre Droxler (andre@rice.edu).

Last Revised : August 03, 2015

- Undergraduate Students
- Graduate Students
- Non-Traditional Students
- Faculty
- Programs of Study
- Administration and Faculty
- Important Notices

Environmental Studies

The Wiess School of Natural Sciences, The School of Social Sciences, and The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for BA in Environmental Science

Students graduating from this program will:

1. Have a solid basis in the hard sciences that are fundamental to the Environmental Sciences.
2. Approach environmental issues from a scientific perspective.
3. Integrate scientific knowledge to understand complex natural systems and cycles.
4. Acquire knowledge on sciences and disciplines applied to the environment.
5. Understand environmental topics and solve issues using a variety of disciplinary perspectives (e.g., social sciences, economics, humanities, and architecture).
6. Acquire the basic principles and ideas of natural and applied sciences related to environmental studies.
7. Apply methods and theories to develop and test hypotheses using sound experimental, statistical, and/or design practices.
8. Use the acquired engineering knowledge to analyze and propose solutions to environmental issues.
9. Conduct in-depth research to assess and solve environmental issues.
10. Apply relevant methods and theories to designing experiments and gathering, analyzing, and interpreting data.
11. Propose solutions based on in-depth research.

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 may be taken in conjunction 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 five 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 (Students may petition to have electives, in addition to those currently listed, apply toward the double major):
  1) social sciences and economics
  2) humanities and architecture
  3) natural sciences
  4) engineering

Specific course requirements for a double major (BA) in environmental science include:

GENERAL PREREQUISITES

- BIOC 201 *Introductory Biology*
- EBIO 202 *Introductory Biology II*
- CHEM 121 and CHEM 123 **OR** CHEM 151 and CHEM 153 *General Chemistry I with Laboratory*
- CHEM 122 and CHEM 124 **OR** CHEM 152 and CHEM 154 *General Chemistry II with Laboratory*
- MATH 101 or 111 *Single Variable Calculus I*
- MATH 102 or 112 *Single Variable Calculus II*
- PHYS 101 **and** PHYS 103 *Mechanics (with Lab) and Mechanics Discussion* **OR** PHYS 111 *Mechanics(with Lab)* **OR** PHYS 125 *General Physics (with Lab)*
- PHYS 102 **and** PHYS 104 *Electricity and Magnetism (with Lab) and E & M Discussion* **OR** PHYS 112 *Electricity and Magnetism (with Lab)* **OR** PHYS 126 *General Physics II*

CORE COURSES

- EBIO 325 *Ecology*
- ESCI 301 *Introduction to Earth*

One of the following two courses

- CEVE 411 *Atmospheric Processes*
- ESCI 414 *Physics and Chemistry of the Atmosphere*

Two of the following three courses

- CEVE 401 *Chemistry for Environmental Engineering and Science Lab*
- CEVE 412 *Hydrology and Water Resources Engineering*
- ESCI 454/CEVE 453 *Geographic Information Science*

ADVANCED ELECTIVES

24 hours in advanced electives, including at least six semester hours from each category.

Category A—Social Sciences

- ANTH 332/ENST 332 *The Social Life of Clean Energy*
- ANTH 468 *Climate Variability and Human Response*
- ECON 437/ENST 437 *Energy Erconomics*
- ECON 480/ENST 480 *Environmental Economics*
- POLI 317 *The Congress*
- POLI 318 *The Presidency*
- POLI 331 *Environmental Politics and Policy*
- POLI 332 *Urban Politics*
- POLI 334 *American Political Parties*
- POLI 337 *Bureaucracy and Public Policy*
- PSYC 339 *Statistical Methods—Psychology*
- SOCI 304 / ENST 302 *Environmental Issues: Rice into the Future*
- SOCI 313 *Demography*
- SOCI 367/ENST 367 *Environmental Sociology*

Category B—Humanities and Architecture

Must take ENST 100 *Environmental Culture and Society,* and one of the following:

- ANTH 332/ENST 332 *The Social Life of Clean Energy*
- ARCH 313/ENST 313 *Case Studies in Sustainable Design*
- ARCH 322/ENST 322 *Case Studies in Sustainability*
- ENGL 358 *Consumption and Consumerism*
- ENGL 367/SWGS 367 *American Ecofeminism*
- ENGL 459 *Literature and Ecology*
- ENGL 472 *Native American Literature*
- FOTO 390/ESCI 380 *Visualizing Nature*
- HIST 376 *Natural Disasters in the Caribbean*
- HIST 425 20th *Century American Conservatism*
- HUMA 202/ENST 202 *Culture, Energy and the Environment*

- SPAN 403 *Literature and the Environment in Latin America*

Category C—Natural Sciences

- ENST 179/EBIO 179/LPAP 179 *Underwater Ecology*
- EBIO 316 *Lab Module in Ecology*
- EBIO 321 *Animal Behavior*
- EBIO 323/ENST 323 *Conservation Biology*
- EBIO 334/BIOC 334 *Evolution*
- EBIO 336 *Plant Diversity*
- EBIO 338 *Design and Analysis of Biological Experiments*
- CHEM 211 **and** CHEM 213 *Organic Chemistry I* **and** *Organic Chemistry Discussion*
- CHEM 395 *Advanced Module in Green Chemistry*
- ESCI 323 *Earth Structure and Deformation*
- ESCI 340/EBIO 340/ENST 340 *Global Biogeochemical Cycles*
- ESCI 421 *Paleoceanography*
- ESCI 430 *Trace Element and Isotope Geochemistry for Earth and Environmental Science*
- ESCI 442 *Exploration Geophysics*
- ESCI 450/CEVE 450 *Remote Sensing*
- ESCI 454/CEVE 453 *Geographic Information Science*

Category D—Engineering

- CEVE 201/HEAL 201 *Urban and Environmental Systems*
- CEVE 203 *Principles of Environmental Engineering*
- CEVE 306 *Global Environmental Law and Sustainable Development*
- CEVE 307/ENST 307/ESCI 307 *Energy and the Environment*
- CEVE 315 *Sustainable Technologies for Developing Countries*
- CEVE 401 *Chemistry for Environmental Engineering and Science*
- CEVE 406/ENST 406 *Introduction to Environmental Law*
- CEVE 411 *Atmospheric Processes*
- CEVE 412 *Hydrology and Water Resources Engineering*
- CEVE 434 *Fate and Transport of Contaminants in the Environment*
- CEVE 451 *Analysis of Environmental Data*
- CEVE 470 *Basic Soil Mechanics*
- CEVE 490/ENST 490 *Special Study and Research*
- ENST 281/CHBE 281 *Engineering Sustainable Communities*
- STAT 300 *Model Building*
- STAT 305 *Introduction to Statistics for the Biosciences*
- STAT 310/ECON 307 *Probability and Statistics*

Course Requirements for the Minor in Environmental Studies

The Environmental Studies minor was specifically created to provide undergraduates from a broad range of academic backgrounds with a cohesive program offering foundational literacy in the social, cultural, and scientific dimensions of environmental issues, and a cross-disciplinary holistic understanding of the challenges and solutions for creating a sustainable world. Students completing the minor will be able to synthesize frameworks, tools, and perspectives from multiple disciplines; master sustainability terminology; understand major environmental issues from multiple perspectives; develop and assess environmental solutions in an informed and logical manner; and convey knowledge and insights about environmental issues in multiple formats.

Requirements to complete the minor in Environmental Studies:

- Students must complete six courses (at least 18 credit hours)
- Students must take the core course
- Students must take one of the introductory courses from natural sciences (see Introductory Courses below)
- Current/former EBIO majors are eligible to substitute EBIO 325 in place of EBIO 124 to meet the introductory course requirement from the natural sciences.
- Students must take four elective courses with a substantial component devoted to environmental or sustainability issues to complete their minor.
    i. Two courses must come from the Schools of Architecture, Humanities and/or Social Sciences
    ii. Two courses must come from the Schools of Engineering and/or Natural Sciences.

Given the wide range of courses at Rice related to Environmental Studies, students are encouraged to contact the

Minor Director to suggest courses to include on the list of approved electives. The approved list of elective courses is as follows:

CORE COURSE

- ENST 100 *Environment, Culture and Society*

INTRODUCTORY COURSES

Students must choose one course from the following. Current/former EBIO majors are eligible to subsititute EBIO 325 in place of EBIO 124 to meet the introductory course requirement from the natural sciences.

- EBIO 124 *Introduction to Ecology and Evolutionary Biology*
- ESCI 101 *The Earth*
- ESCI 107 *Oceans and Global Change*
- ESCI 109 *Oceanography*

ELECTIVE COURSES

From the Schools of Architecture, Humanities, and Social Sciences

Choose from at least two courses (6 semester credit hours) from the following:

- ANTH 332/ENST 332 *The Social Life Of Clean Energy*
- ARCH 313/ENST 313 *Case Studies in Sustainable Design*
- ARCH 322/ENST 322 *Case Studies in Sustainability: The Regenerative Repositioning Of New or Existing Rice Campus Buildings*
- ECON 437/ENST 437 *Energy Economics*
- ECON 461 *Urban Economics*
- ECON 480/ENST 480 *Environmental Economics*
- ENGL 358 *Consumption & Consumerism*
- ENGL 459 *Topics in Literature And Ecology*
- FOTO 390/ESCI 380 *Visualizing Nature*
- HART 302 *From the Sublime to the Sustainable: Art, Architecture And Nature*
- HIST 425 *20th Century American Conservation Movement*
- HUMA 202/ENST 202 *Culture, Energy and the Environment: An Introduction To Energy Humanities*
- SOCI 304/ENST 302 *Environmental Issues: Rice into the Future*
- SPAN 403 *Literature And the Environment in Latin America*

From the Schools of Engineering and Natural Sciences

Choose from at least two courses (6 semester credit hours) from the following:

- CEVE 302/ENGI 302 *Sustainable Design*
- CEVE 307/ENST 307 / ESCI 307 *Energy and the Environment*
- CEVE 310 *Principles of Environmental Engineering*
- CEVE 406/ENST 406 *Introduction to Environmental Law*
- CHBE 281/ENST 281 *Engineering Sustainable Communities*
- EBIO 204/ENST 204 *Environmental Sustainability: Design & Practice Of Community Agriculture*
- EBIO 270 *Ecosystem Management*
- EBIO 319 *Tropical Field Biology*
- EBIO 320 *Ecology And Conservation of Brazilian Wetland Laboratory*
- EBIO 323/ENST 323 *Conservation Biology*
- EBIO 325 *Ecology*
- EBIO 327 *Biological Diversity Lab*
- EBIO 372 *Coral Reef Ecosystems*
- EBIO 379/ENST 379/ LPCR 379 *Lab Module in Aquatic Ecology with Scuba*
- ELEC 365/MSNE 365 *Nanomaterials for Energy*
- ESCI 321 *Earth System Evolution and Cycles*
- ESCI 340 / EBIO 340 / ENST 340 *Global Biogeochemical Cycles*
- ESCI 380 / FOTO 390 *Visualizing Nature*
- ESCI 407 *Introduction To Biogeochemistry II*
- ESCI 424 *Earth Science and the Environment*
- ESCI 425/CHEM 425/ENST 425 *Organic Geochemistry*
- ESCI 450/CEVE 450 *Remote Sensing*
- ESCI 452 *GIS for Geoscientists*

Students seeking advice regarding the Environmental Studies minor may contact Dr. Dominic Boyer (dcb2@rice.edu) or the coordinator for the Center for Energy and Environmental Research in the Human Sciences (cenhs@rice.edu).

Last Revised : August 06, 2015

Environmental Studies

The Wiess School of Natural Sciences, The School of Social Sciences, and The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Environmental Studies.

Last Revised : August 03, 2015

Undergraduate Students
Graduate Students
Non-Traditional Students
Faculty
Programs of Study
Administration and Faculty
Important Notices

Financial Computation and Modeling

The George R. Brown School of Engineering and The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Director
Katherine B. Ensor

Steering Committee and Undergraduate Advisors
Ted Loch-Temzelides
James R. Thompson

Degrees Offered: None

The Departments of Statistics and Economics collaborate to offer Rice undergraduate students a minor in financial computation and modeling (FCAM). The FCAM minor consists of six courses focusing on the strategies and computational technologies used in the financial industry. The minor is designed for those students with strong computational skills and an interest in finance. Many students pursuing the FCAM minor enter careers in the financial industry, either immediately after completion of their undergraduate studies or after graduate studies. Students completing the FCAM minor will understand the complexities of financial markets and their role in and impact on world economies.

The basic tools component of the FCAM curriculum will equip students with the economic, probability and statistical tools necessary to pursue the advanced analytical courses. In the advanced courses, students will be exposed to state-of-the-art models and methodologies based on long-standing assumptions about the behavior of financial markets. They also will be exposed to alternative views of market behavior and investment strategies. The goal is to educate students to question basic assumptions as well as utilize and understand technologies based on these important assumptions. In the financial industry, a large suite of solutions are implemented and continually enhanced. A goal of the FCAM program is to train leaders in this industry who not only will understand the financial technologies but also will understand the role, impact, and potential pitfalls of these technologies.

Last Revised : August 03, 2015

- Undergraduate Students
- Graduate Students
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- Important Notices

Financial Computation and Modeling

The George R. Brown School of Engineering and The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for the Interdisciplinary Minor in Financial Computation and Modeling

Students graduating from this program will:

1. Demonstrate knowledge of statistical techniques and methods and how to choose and apply appropriate methods to questions or problems in the field of finance.
2. Understand the basic concepts of Economic Theory and how they apply to financial markets as well as how financial markets impact global economies.
3. Demonstrate an understanding of basic financial databases and the ability to use technologies, like R and Excel, to model and solve financial problems.
4. Understand core quantitative modeling concepts and demonstrate key skills necessary for working in the field of finance and investing.
5. Demonstrate the ability to understand, interpret, and critically evaluate empirical financial studies and investment strategies.

Course Requirements for the Interdisciplinary Minor in Financial Computation and Modeling

BASIC TOOLS
Choose three from the following:

- ECON 100 *Microeconomics I* **OR** ECON 301 *Microeconomics II*
- STAT 310/ECON 307 *Probability and Statistics*
- STAT 376 *Econometrics* **OR** STAT 410 *Linear Regression* **OR** ECON 309 *Applied Econometrics*

FINANCIAL COMPUTATION AND MODELING
Choose three from the following:

- STAT 421 *Applied Time Series and Forecasting*
- STAT 449 *Quantitative Financial Risk Management* **OR** ECON 449 *Principles of Financial Engineering*
- STAT 486 *Market Models*

ELECTIVES
Choose one from the following:

- ECON 343 *Corporate Finance*
- BUSI 343 *Financial Management*
- ECON 443 *Financial Economics*
- ECON 355 *Financial Markets*
- ECON 455 *Money and Financial Markets*
- STAT 482 *Quantitative Financial Analytics*

Students majoring in economics must take at least one advanced course from statistics. Students majoring in statistics must take at least one advanced course from economics.

Last Revised : August 06, 2015

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Financial Computation and Modeling

The George R. Brown School of Engineering and The School of Social Sciences

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Course Listings

For the most current course offerings, please click here: Financial Computation and Modeling.

Last Revised : August 03, 2015

- Undergraduate Students
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Global Health Technologies

The George R. Brown School of Engineering, The Weiss School of Natural Sciences, The School of Humanities, and The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Director and Advisor
Rebecca Richards-Kortum

Steering Committee
George N. Bennett
Kyriacos Zygourakis

Undergraduate Advisors
Elias K. Bongmba
Maria Oden

Minor Advisor
Veronica Leautaud

Degrees Offered: None

Rice 360˚: Institute for Global Health Technologies collaborates with a number of departments to offer Rice undergraduate students a minor in global health technologies (GLHT) through the Beyond Traditional Borders (BTB) initiative—a unique, multidisciplinary program to educate and train students to reach beyond traditional disciplinary and geographic boundaries to understand, address, and solve global health disparities. With complementary contributions from the humanities, social science, policy, bioscience, and engineering programs at Rice, the GLHT minor prepares students to integrate diverse perspectives as they develop solutions to the complex problems of global health, using the formal approach of the engineering design process.

Advances in biotechnology and bioengineering are transforming how disease is detected and treated, and have led to significant advances in health over the last 50 years. Developing countries, however, have largely missed out on the gains in health enjoyed by the rest of the world, and the HIV/AIDS pandemic has greatly increased the complexity of health challenges faced by the world's poorest regions. With the GLHT minor, BTB aims to create future leaders who can develop effective solutions to significant world health challenges. Many students pursuing the GLHT minor—having been trained to develop and implement appropriate biotechnology and bioengineering solutions that integrate scientific, engineering, health, policy, and economic data perspectives—enter careers in medicine, public health, public policy, and international development.

Students begin the GLHT minor sequence (five core courses and two elective courses) in a multidisciplinary gateway course. GLHT 201 Bioengineering and World Health provides an overview of the scientific, economic, and policy issues associated with biotechnology and bioengineering advances required to address global health needs. Subsequent minor sequence courses foster a command of specialized knowledge relevant to the development of technologies appropriate for resource-constrained settings. Students conclude the GLHT minor with a common capstone course that enables them to benefit from one another's major area proficiencies. GLHT 451/452 Global Health Design Challenges requires multidisciplinary teams of students, mentored by interdisciplinary faculty teams, to work together in a two-semester course to develop a solution to an international health challenge.

Last Revised : July 31, 2012

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Global Health Technologies

The George R. Brown School of Engineering, The Weiss School of Natural Sciences, The School of Humanities, and The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for the Interdisciplinary Minor in Global Health Technologies

Students graduating from this program will:

1. Demonstrate the ability to prototype and build appropriate technologies that respond to global health design challenges or problems, and/or develop a community health plan or strategy to address these challenges. They will conduct independent research and design—from developing a research question and completing a literature review, to analyzing and interpreting data—to demonstrate the effectiveness of their proposed solution.
2. Demonstrate a broad understanding of the issue of human health, disease, and health care planning from Natural Science, Humanities, and Social Sciences perspectives.
3. Understand the basic elements of human health and disease from evolutionary, biological, and epidemiological perspectives.
4. Demonstrate critical thinking and analysis skills within the realm of global health and its related disciplines, including the ability to critically and responsibly synthesize materials and methods from a range of disciplines to address global health problems or questions.
5. Demonstrate a knowledge of how health and disease are, in part, social and cultural constructs; students will be able to explain how different populations of individuals within the same geographic locale or in very different geographic locales may understand health and disease differently. They will also demonstrate the ability to assess and explain how different kinds of health planning, delivery systems, institutions, and health products would be more or less effective for different populations.
6. Communicate effectively at the college level by demonstrating the ability to write research papers, literature reviews, and other scholarly papers and by being able to verbally present this information effectively and correctly.

Course Requirements for the Interdisciplinary Minor in Global Health Technologies

Students must complete five core courses. In addition to the core course sequence, students must complete six (6) credit hours in elective courses, three (3) in science/engineering and three (3) in humanities/social science.

CORE COURSE SEQUENCE

- GLHT 201 *Bioengineering for Global Health Environments*
- GLHT 360 *Appropriate Design for Global Health*
- One of the following:
  i. PSYC 370 *Introduction to Human Factors and Ergonomics*
  ii. SOCI 345 *Medical Sociology*
  iii. SOCI 381 *Research Methods*
  iv. ANTH 381 *Medical Anthropology*
  v. PSYC 480 *Advanced Topics*
  vi. GLHT 392 *Needs Finding and Development in Bioengineering*
- GLHT 451 and GLHT 452 *Global Health Design Challenges I and II*

All core courses will be offered each year: GLHT 201, PSYC 370, SOCI 381, ANTH 381, GLHT 392 and GLHT 451 in the fall and GLHT 360, SOCI 345, PSYC 480, and GLHT 452 in the spring. The sequence indicated is the required sequence, as prerequisites do apply. Prior to enrollment in the capstone course GLHT 451/452, students must successfully complete all other GLHT minor core course requirements, although electives may be taken concurrently. There is no requirement to initiate the GLHT minor in the freshman year. It can be initiated as late as the junior year (beginning of the fifth semester). It will be possible for students to receive credit for GLHT minor courses that also fulfill a requirement within their major.

ELECTIVES

For a list of approved elective courses, covering a wide range of relevant topics, please visit www.beyondtraditionalborders.rice.edu and/or speak with the minor advisors.

Admission

Most GLHT minor courses are open to all Rice students, including those not pursing the GLHT minor, with the exception of GLHT 360 and the capstone course GLHT 451/452, which are restricted to students completing the GLHT minor. In addition, for GLHT 360, students are required to submit a 250-word statement explaining their interests in and reasons for taking the course to beyondtraditionalborders@rice.edu to gain instructor permission to register for the course. Preferential admission to GLHT 360 will be given to students who indicate they are seeking to complete the GLHT minor course of studies. For information on GLHT minor declaration, visit this website.

Last Revised : August 06, 2015

- Undergraduate Students
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Global Health Technologies

The George R. Brown School of Engineering, The Weiss School of Natural Sciences, The School of Humanities, and The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Global Health Technologies.

Last Revised : August 03, 2015

- Undergraduate Students
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Lifetime Physical Activity Program

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Director
Dr. Elizabeth Slator

Instructors
Jill Banta
Damon Bowens
David Broadstone
Jennifer Buergermeister
Amanda Caldwell
Megan Gossett
Lisa Hastings
Mike Henshaw
Kristina Koutsoudas
Rathna Kumar
Susanna Leonard
Mike Maloney
D'Ondra McGee
Heather Nabors
Jacqueline Nalett
Marcia Oliveira
Patricia Patterson
Houston Taylor
Chris Watkins
Ernie Wu

Degrees Offered: None

Historically, Rice University has recognized that becoming physically educated is integral to one's overall education. Since the university was founded in 1912, the Lifetime Physical Activity Program has worked to create a multi-faceted learning experience that promotes the physical, social, and emotional benefits of physical activity. It is the mission of the Lifetime Physical Activity Program to teach both theoretical and practical components of a variety of exercise/performance activities such that they will bring enjoyment and demonstrate the importance of maintaining health and wellness throughout the course of a lifetime.

Specifically, the goals of the Lifetime Physical Activity Program are:

- To encourage a lifetime of fitness through the teaching of mechanical, physiological, and nutritional principles.
- To teach other pertinent knowledge such as historical and cultural foundations, rules, and strategy.
- To create an environment that fosters a sense of emotional satisfaction, physical accomplishment, and social interaction for its participants.
- To provide students with high-quality instruction specific to the course material so that they may learn skills that will improve the length and quality of their lives
- To expose Rice University students to activities that are not necessarily mainstream in United States culture.

Undergraduates must successfully complete one LPAP course (1 credit) in order to satisfy the graduation

requirement. Students may use up to four LPAP courses (4 credits total) towards the total credits necessary for graduation. LPAP courses are not repeatable for credit.

Lifetime Physical Activity Program classes are strongly recommended for all first-year students, including transfers who have not taken equivalent courses elsewhere. Because LPAP courses are participation based and must be supervised by an instructor, students are required to adhere to a program-wide attendance policy.

The Lifetime Physical Activity Program offers a variety of sport/exercise/performance activities. In the 40-plus sections that are offered each semester, many have a multi-sport focus (e.g., volleyball/basketball), allowing students to experience three or four activities during one year. A student may select an LPAP section that meets his/her scheduling needs and that offers activities that satisfy his/her interests. Some of the current activities offered include racquet sports (tennis, racquetball, badminton), fitness activities (aerobics, personal fitness, weight training), aquatic activities, dance (Latin, 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, yoga, and nutrition.

Last Revised : August 11, 2014

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Lifetime Physical Activity Program

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Lifetime Phys. Activity Program.

Last Revised : August 03, 2015

- Undergraduate Students
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Military Science

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Chair and Professor
Lieutenant Colonel Kurt Robinson

Assistant Professors
Lieutenant Colonel Steven Lopez
Captain McVay Chambers
Captain Jonathan Howard
Master Sergeant Al Frances
Sergeant First Class David Briseno
Sergeant First Class Roland Thomas
Staff Sergeant John Russell

Degrees Offered: None

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 U.S. Army, the U.S. 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.

Last Revised : February 19, 2012

Military Science

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

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. Credit for courses in military science may be 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. For requirements for a specific degree program, see the pages for that degree program. 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 paid 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 otherwise are 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 $900 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 hands-on 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 also are 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 tuition 100%. Recipients also receive benefits for educational fees (to include lab fees), a book allowance, and a subsistence allowance ranging from $300 to $500 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 $450 per month junior year and $500 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 also are 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.

Last Revised : August 06, 2015

Military Science

Course Listings

For the most current course offerings, please click here: Military Science.

Last Revised : August 03, 2015

Naval Science

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Chair and Professor
Michael A. Carambas

Associate Professors
Eric M. Gillard

Assistant Professors
Andrew E. Nelson
Kyle W. Scribner
Gerald C. Sellars

Undergraduate Advisor for Minor
Gerald C. Sellars

Degrees Offered: None

Students may enroll in the Naval Reserve Officers' Training Corps (ROTC) program as scholarship or non-scholarship students. A minor in Naval Science is also open and available to all degree-seeking Rice students. The faculty of the Department of Naval Science consists of active-duty military officers.

Last Revised : August 11, 2014

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Naval Science

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for Minor in Naval Science

Students graduating from this program will:

1. Gain a broad understanding of the United States Navy and Marine Corps to include their current structure, organization, missions, and national security importance.
2. Become familiar through the historical process with the major events, attitudes, personalities, and circumstances that have shaped the naval service and their relative impact on American history.
3. Develop an understanding of Western moral traditions and ethical philosophy as they relate to military leadership and the conduct of warfare, to include Aristotle, Bentham, Mill, Kant, and Aquinas.
4. Develop skills in critical analysis and writing. They will use all methods to show full comprehension of all material.

Course Requirements for the Minor in Naval Science

The minor in Naval Science (NAVA) is available to all students majoring in other fields. A minor in naval science requires the successful completion of at least six courses (a minimum of 18 credit hours), with a minimum minor grade point average of 2.0. At least three of these courses (minimum of 9 hours) must be at the 300-level or higher, and study abroad or transfer courses cannot count for more than 2 courses (total of 6 hours) toward the minor.

REQUIRED COURSES

- NAVA 101 *Naval Orientation*
- NAVA 103 *Sea Power and Maritime Affairs*
- NAVA 203 *Leadership Management I*
- NAVA 402 *Leadership and Ethics*

ELECTIVES

Choose two from the following:

- NAVA 301 *Navigation*
- NAVA 302 *Naval Operations and Seamanship*
- NAVA 303 *Evolution of Warfare*
- NAVA 403 *Naval Engineering*
- NAVA 410 *Amphibious Warfare*

All naval science courses are offered once every academic year with the exception of NAVA 303 and NAVA 410. These two courses are offered every other academic year.

Last Revised : August 03, 2015

Naval Science

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Naval Science.

Last Revised : August 03, 2015

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Politics, Law and Social Thought

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Directors
Peter C. Caldwell, HIST
Christian J. Emden, CLEU

Professors
Dominic Boyer, ANTH
Steven G. Crowell, PHIL
James D. Faubion, ANTH
David Leebron, POLI
Melissa Marschall, POLI
Donald Morrison, PHIL
George Sher, PHIL
Harvey Yunis, CLEU

Associate Professors
Luis Duno-Gottberg, SPLA
Julie Fette, CLEU

Assistant Professors
Gwendolyn Bradford, PHIL

Degrees Offered: None

Politics, Law and Social Thought (PLST) is a transdisciplinary minor. Its task is the study of political ideas in their philosophical and historical contexts as well as with regard to their effects on constitutional law and social and political practices. The central focus of the minor is political theory, taken in a wide sense to mean the theory and philosophy of how polities form, function, and fail. The minor has a strong orientation toward works of political, legal, and social philosophy, understood in their historical context. Politics, Law and Social Thought is a program of study that enables Rice students to successfully engage with the “big” political questions relevant to contemporary society in a global setting: Why democracy? What are the foundations of law? What is political liberty? What is political citizenship? Are states necessary? How do normative political and social orders come into existence? Is there a philosophical justification for human rights?

Last Revised : August 03, 2015

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Politics, Law and Social Thought

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for Interdisciplinary Minor in Politics, Law and Social Thought

Students graduating from this program will:

1. Have an understanding of the main lines of political, legal, and social thought in their historical context through original sources.
2. Have skills in analyzing and evaluating complex texts in political, legal, and social thought through a close reading and critical interpretation of arguments, metaphors, images, and the emotions that drive political arguments.
3. Have developed the ability to compare different authors and texts and formulate complex arguments across different traditions in the history of political thought.
4. Develop and communicate their own arguments about politics, law and society in research papers, class presentations, and discussions.

Course Requirements for the Interdisciplinary Minor in Politics, Law and Social Thought

PLST minor courses are open to all undergraduate students at Rice from all backgrounds. The following requirements apply to the PLST minor:

- Students must complete at least six courses (18 credit hours) from the list of courses posted in the General Announcements.
- Students must complete one core course and five elective courses. Additional core courses count toward the elective course requirements.
- At least four courses (12 credit hours) must be at the 300-level or higher.
- With the exception of core courses, no more than two courses (6 credit hours) from the same department may be used to fulfill the requirements of the minor.
- At least four of the courses (12 credit hours) applied toward the minor should be taken at Rice University. Students may apply up to 6 transfer credit hours from coursework taken outside Rice, if those transfer credits come from U.S. or international universities of similar standing. Requests for the application of transfer credit toward PLST minor requirements will be considered by the PLST director on an individual basis.
- Transfer credit coursework received via the articulation of AP, IB or A-level credit will not be considered. Additionally, transfer credit from online-only courses cannot be used to count toward the minor.

CORE COURSES

- PLST 301 *Modern Political Thought: From Machiavelli to Rawls*
- PLST 302 *Contemporary Political Theory*
- HIST 373 *19th-Century Social and Political Thought*

ELECTIVE COURSES

No more than two courses, or 6 credit hours, from the same department may be used to fulfill the minor requirements.

Anthropology

- ANTH 309 *Global Cultures*
- ANTH 317 *Revolution and Utopias*
- ANTH 319 *Symbolism and Power*
- ANTH 322 *Cultures and Identities: Race, Ethnicity, and Nationalism*
- ANTH 326 *The Anthropology of Law*
- ANTH 340 *Neoliberalism and Globalization*
- ANTH 372 *Cultures of Capitalism*
- ANTH 429 *Activism and Social Movements*

Classical and European Studies

- CLAS 236 *Art and Politics in Ancient Rome*
- CLAS 316 *Democracy and Political Theory in Ancient Greece*
- GERM 128 *The Culture of War: Violence, Conflict and Representation*
- GERM 331 *The Weimar Republic*
- GERM 333 *Nietzsche: Philosophy, Politics, History*
- GERM 334 *Nationalism and Citizenship*
- GERM 349 *German Political Thought*

History

- HIST 398/SWGS 398 *The Ten Most Important Supreme Court Decisions in U.S. History*
- HIST 423 *American Radicals and Reformers*
- HIST 448 *Western Europe Welfare State, 1880-1980: Origins, Consolidations, Crisis*
- HIST 455 *History of Human Rights*
- HIST 457 *Four Modern Revolutions: 1776, 1789, 1917, 1989*

Philosophy

- PHIL 111/SWGS 111 *Introduction to Feminist Philosophy*
- PHIL 116 *Introduction to the Philosophy of Law*
- PHIL 201/CLAS 201/MDEM 201 *History of Philosophy I*
- PHIL 202 *History of Philosophy II*
- PHIL 307 *Social and Political Philosophy*
- PHIL 316 *Philosophy of Law*
- PHIL 319/SWGS 319 *Feminist Philosophy*
- PHIL 327 *History of Social and Political Philosophy*

Political Science

- POLI 209 *Introduction to Constitutionalism and Modern Political Thought*
- POLI 210 *American Government and Politics*
- POLI 211 *Introduction to International Relations*
- POLI 321 *American Constitutional Law*
- POLI 333 *Comparative Legislatures*
- POLI 340 *Ancient and Medieval Political Theory*
- POLI 357 *Democracy and Democratization*
- POLI 457 *Conditions of Democracy*
- POLI 490 *Modern Political Theory and Interdisciplinary Fields*

Spanish, Portuguese & Latin American Studies

- SPAN 393 *Colonialism and Revolution in the Caribbean*

Last Revised : August 06, 2015

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Politics, Law and Social Thought

The School of Humanities

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Politics, Law and Social Thought.

Last Revised : August 14, 2015

- Undergraduate Students
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Poverty, Justice and Human Capabilities

The School of Humanities, The School of Social Sciences, and the George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Director
Diana Strassmann

Steering Committee
Elias Bongmba
Alexander X. Byrd
Vivian Ho
Anthony B. Pinn
Elora Shehabuddin

Undergraduate Advisors
Elias Bongmba
Anne Dayton
Diana Strassmann

Degrees Offered: None

The Program in Poverty, Justice and Human Capabilities (PJHC), provides students with a multifaceted understanding of human well-being, both in the U.S. and internationally. This unique interdisciplinary minor emphasizes a "capabilities approach," which considers what people are able to do and be—for example, live to old age and engage in economic and political activities—rather than strictly what material goods they possess. The program also acknowledges the central importance of a variety of additional influences on well-being beyond income, such as gender, racial, and ethnic disparities; health status; education; human rights; political freedoms; and material necessities like food and shelter. A key goal of the PJHC is to enrich students' understanding of poverty and inequality, so that, regardless of their choice of occupation, they will maintain a longstanding commitment to enhancing the well-being of all people. More generally, the program aims to train Rice students to be future leaders in solving global problems in human well-being.

The PJHC minor combines high-caliber undergraduate courses with service learning experiences with agencies that help disadvantaged communities and people. Students are placed with organizations where they work directly with clients and gain experiential knowledge that broadens their perspective on human lives and capabilities. Through these academic and experiential learning opportunities, students explore deeper understandings of the structural factors underlying poverty and human well-being and potential policy solutions. The program further aims to promote dialogue among all disciplines about how to address issues of poverty alleviation and human well-being with a sophisticated understanding of the challenges and sound strategies for moving forward.

Although impediments to human well-being take many forms, barriers to the capabilities of women and girls persist across societies; women and girls are therefore disproportionately represented among the poor and those unable to attain their full capabilities. Acknowledging gender inequality as a powerful influence on disparities in human well-being, the academic component of the program, including the content of core and required courses, recognizes gender as a central analytic category.

Last Revised : August 03, 2015

Poverty, Justice and Human Capabilities

The School of Humanities, The School of Social Sciences, and the George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for the Interdisciplinary Minor in Poverty, Justice and Human Capabilities

Students graduating from this program will:

1. Understand theoretical approaches to poverty and justice, drawing from the human capabilities framework, economics, history, philosophy, and other fields. Students will have in-depth knowledge about approaches to encouraging human flourishing and how deprivations and inequities are situated in social, institutional, and political economic systems.
2. Demonstrate a sophisticated understanding of the multiple influences on well-being beyond income and material wealth, including gender, racial, and ethnic disparities and the impact of colonialism on the Global South. Students will be able to provide examples from different geographical regions and not exclusively from one country or region and be able to apply the capabilities approach when evaluating these disparities.
3. Gain experiential knowledge of the challenges faced in disadvantaged communities through direct service.
4. Achieve an interdisciplinary knowledge of approaches to enhancing human well-being and mitigating human deprivations. Students will be able to apply this knowledge in evaluating potential policy solutions.
5. Demonstrate the oral, written, and visual communication skills essential for sophisticated and successful advocacy.
6. Become a global citizen by understanding the role that advocacy and service play in addressing poverty, strengthening justice, and improving well-being.

Course Requirements for the Interdisciplinary Minor in Poverty, Justice and Human Capabilities

PJHC minor courses are open to all Rice students, including those not pursuing the PJHC minor; however, in courses with limited space, preference will be given to declared minors. The core courses are HUMA/SOCI 371 and SWGS 322/ASIA 329/SOCI 372, which are offered each year. Students must submit a brief questionnaire to the program director to be considered for admission to HUMA/SOCI 371.

Students must meet the following requirements to complete the minor in PJHC:

- Students must complete six courses (18 credit hours).
- Students must take HUMA/SOCI 371, SWGS 322/ASIA 329/SOCI 372 and an approved capstone course (HIST 421 or SWGS 470) or capstone course sequence (SOCI 469 and 470 or SWGS 494, 496 and 497).
- Students must choose three electives, including one course from the PJHC Non-Western elective list, one course from the PJHC Race and Ethnicity elective list, and a third course from a broader list that also includes courses from the other lists. Electives must include courses from at least two different schools. A complete list of approved required and elective courses may be found at http://pjhc.rice.edu/minor-requirements/approved-electives/.
- As part of the minor, students must participate in an approved PJHC direct service learning experience. Students can choose from an array of options, including internships, service trips, and coursework, to complete this requirement. These options are described in detail at http://pjhc.rice.edu/service-learning-requirement/.

PJHC Courses

The following courses are among those that can be used to fulfill requirements for the minor. As course offerings may vary from year to year, students are urged to consult with the undergraduate advisors at the beginning of each semester. Please note that not all courses listed below will be offered every academic year. For a current list of courses, please visit the PJHC website at pjhc.rice.edu.

CORE COURSES

Both courses are required.

- HUMA/SOCI 371 *Poverty, Justice, and Human Capabilities*
- ASIA 329/SOCI 372/SWGS 322 *Human Development in Global and Local Communities*

CAPSTONE COURSES

One course or course sequence is required. Students can use additional capstone courses to fulfill the General Elective requirement (SWGS 497 or SWGS 470) or the Race and Ethnicity requirement (HIST 421 or SOCI 470). HIST 421 and SOCI 470 do not fulfill the Race and Ethnicity requirement unless a second capstone course is completed. Students who complete the entire *Engaged Research* course sequence may use SWGS 497 to fulfill the General Elective requirement.

Capstone Courses

- HIST 421 *Race, Education, and Society in the Urban South*
- SWGS 470 *Advanced Seminar in Poverty, Justice, and Human Capabilities*

Capstone Course Sequences

- SOCI 469 *Community Bridges Training* **and** SOCI 470 *Inequality and Urban Life*
- SWGS 494 *Pre-Seminar in Engaged Research* **and** SWGS 496 *Engaged Research Practicum* **and** SWGS 497 *Engaged Research Seminar*

ELECTIVES

One course from each category is required. An additional course from the Non-Western or Race and Ethnicity list can be used to fulfill the General Elective requirement. Separate courses must be used to fulfill the Non-Western and Race and Ethnicity requirements. The three required electives must come from at least two different schools.

Non-Western Elective Courses

- ANTH/ASIA 212 *Perspectives on Modern Asia*
- ANTH 340 *Neolibralism and Globalization*
- ASIA/RELI 232 *Religions from India*
- ASIA 251/POLI 250/SWGS 250 *International Political Economy of Gender*
- ASIA/ENGL 222 *The World and South Asia*
- ASIA 328/HIST 384/SWGS 384 *The Modern Girl and Asia in the World*
- ASIA 452 *Gender and Transnational Asia*
- ECON 450 *World Economic and Social Development*
- ECON 460 *International Development*
- ENGL 379 *Introduction to Third World Literature*
- ENGL 380 *Contemporary Anglophone Literatures*
- HIST 215/315 *Blacks in the Americas*
- HIST 226 *Colonial Spanish America*
- HIST 227 *Latin American Cultural Traditions*
- HIST 228 *Modern Latin America*
- HIST 231 *North, West, and Central Africa*
- HIST 232 *East, Central, and Southern Africa*
- HIST/LASR 251 *Continuities and Changes in Brazilian History*
- HIST 268 *Modern Slavery*
- HIST 271 *History of South Asia*
- HIST 278/378 *Modern Arab History*
- HIST 279/379 *The Caribbean in the Age of Revolution*
- HIST/LASR 313 *Modern Mexico*
- HIST 328 *Poverty and Social Justice in Latin America*
- HIST 330 *Atlantic Slave Trade and the Origins of Afro America*
- HIST 333 *Culture and Identity Politics in Contemporary Brazil*
- HIST 335 *Caribbean History to 1838*
- HIST 336 *Caribbean History, 1838 to the Present*

HIST 342 *Modern China*
- HIST 376 *Natural Disasters in the Caribbean*
- HIST 389 *Migration and Diasporas in the Indian Ocean*
- HIST 397 *Economic History in the Americas*
- HIST 428 *Slavery and Human Trafficking*
- HIST 478 *Topics in Latin American History*
- POLI 362 *Comparative Urban Politics and Policy*
- POLI 458 *Gender and Politics in the Middle East*
- RELI 111 *Introduction to African Religions*
- RELI/SWGS 315 *Gender and Islam*
- RELI 340 *Theology in Africa*
- RELI 348 *Christianity and Islam in Africa*
- RELI 356 *Major Issues in Contemporary Islam*
- RELI 424 *Religion and Politics in Africa*
- RELI 426 *Religion and Literature in Africa*
- SPAN 402 *The City in Latin America*

Race and Ethnicity Elective Courses

- ANTH/ASIA 387 *Asian American Contemporary Communities*
- ANTH 443 *Anthropology of Race, Ethnicity, and Health*
- EDUC 304 *Race, Class, Gender in Education*
- EDUC 335 *Urban Education*
- ENGL 369/SWGS 329 *The American West and Its Others*
- ENGL 371/SPAN 396/SWGS 354 *Chicano/a Literature*
- ENGL/SWGS 389 *Youth Studies*
- ENGL 393 *Black Manhattan: 1915–1940*
- ENGL 399 *The Black Imaginary*
- ENGL 471 *Chicana/o Literature*
- HIST 124 *Race and Place in Early America*
- HIST 186 *Historical Survey of the Jewish Civilization from its Origins to the Present*
- HIST 215/315 *Blacks in the Americas*
- HIST 241/SWGS 234 *U.S. Women's History I: Colonial Beginnings to the Civil War*
- HIST 242/SWGS 235 *U.S. Women's History II: Civil War to the Present*
- HIST/LASR 251 *Continuities and Changes in Brazilian History*
- HIST 266 *Slavery and the Founding Fathers*
- HIST 268 *Modern Slavery*
- HIST 279/379 *The Caribbean in Revolution*
- HIST 295/395 *The American South*
- HIST 335 *Caribbean History to 1838*
- HIST 336 *Caribbean History 1838 to the Present*
- HIST/SWGS 338 *Nineteenth-Century Women's Narratives*
- HIST 374 *Jewish History, 1500–1948*
- HIST/SWGS 398 *Ten Most Important Supreme Court Decisions in U.S. History*
- HIST 421 *Race, Education, and Society in the Urban South*
- HIST 427 *History of the Civil Rights Movement*
- HIST 428 *Slavery and Human Trafficking*
- POLI 330 *Minority Politics*
- POLI 438 *Race and Public Policy*
- POLI 483 *U.S.:Mexico Border Issues*
- RELI 157/311 *Religion and Hip Hop Culture in America*
- RELI 270 *Introduction to the Black Church in the U.S.*
- RELI 312 *The Religious Thought of Martin L. King, Jr. and Malcolm X*
- RELI 357 *What's Religious about Black Religion?*
- RELI/SOCI 379 *Contested Geographies: Race, Nation, and Diaspora*
- SOCI 301 *Social Inequality*
- SOCI 309 *Race and Ethnic Relations*
- SOCI 329 *Multiracial America*
- SOCI 437 *Sociology of Education*
- SOCI 470 *Inequality and Urban Life*

General Elective Courses

- ANTH 342 *Ethnographies of Care*
- ANTH 381 *Medical Anthropology*

- BIOE/GLHT 360 *Appropriate Design for Global Health*
- ECON 481 *Health Economics*
- ENGL 354/SWGS 364 *Queer Literary Cultures*
- ENGL 382/SWGS 380 *Feminist Theory*
- GERM 332/HIST 459 *Topic in Modern German History*
- GLHT 201 *Bioengineering and World Health*
- HEAL 222 *Principles of Public and Community Health*
- HEAL 380 *Disparities in Health in America*
- HIST 340/SWGS 345 *History of Feminism*
- HIST 423 *American Radicals and Reformers*
- HIST 448 *European Welfare States*
- HIST 455 *History of Human Rights*
- PHIL 307 *Social and Political Philosophy*
- POLI/RELI 320 *The Legal Framework of Religious Tolerance*
- POLI 332 *Urban Politics*
- POLI 356 *Representation and Policy Making*
- POLI 437 *Education Policy*
- PSYC/SWGS 331 *Psychology of Gender*
- SOCI 306/SWGS 324 *Sociology of Gender*
- SOCI 319 *Work and Occupation*
- SOCI 345 *Medical Sociology*
- SOCI 407 *Gender Seminar*
- SOCI 423 *Sociology of Food*
- SOCI 425 *Population and Health Seminar*
- SOCI 465 *Gender and Health*
- SWGS 101 *Introduction to the Study of Women, Gender, and Sexuality*
- SWGS 201 *Introduction to Lesbian, Gay, Bisexual, and Transgendered Studies*
- SWGS 385 *Sexual Debates in the U.S.: Social and Cultural Contexts*
- SWGS 470 *Advanced Seminar in Poverty, Justice, and Human Capabilities*
- SWGS 497 *Engaged Research Seminar*

Last Revised : August 03, 2015

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Poverty, Justice and Human Capabilities

The School of Humanities, The School of Social Sciences, and the George R. Brown School of Engineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Poverty, Justice and Human Capabilities.

Last Revised : August 03, 2015

Undergraduate Students
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Program in Writing and Communication

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Director
Tracy Volz

Lecturers
Katerina Belik
Elizabeth Cummins-Muñoz
Lina Dib
Andrew Klein
David Messmer
Burke Nixon

Teaching Fellows
Grant Adamson
Heather Elliott Neill
Laura Richardson
AnaMaria Seglie

Degrees Offered: None

The mission of the Program in Writing and Communication (PWC) is to integrate the practice of analytical writing and the techniques of both oral and visual communication into the Rice curriculum, with two goals in mind: To enable our students to articulate their ideas as we prepare them for academic and professional life; and to affirm the necessity of this ability and its fundamental value to every aspect of their education and across every University department and discipline.

The PWC provides oversight for the First-Year Writing-Intensive Seminars (FWIS). FWIS are content-based, 3 credit hour seminars in which writing and communication pedagogy plays a significant role in assignments and grading. The courses reflect a broad range of disciplines from across the university.

All first-year students must pass the English Composition Examination and complete a content-based FWIS during their first year at Rice. Students who fail the Composition Exam must successfully complete FWIS 100 during the fall of their first year and prior to enrolling in one of the required content-based FWIS courses.

The PWC also includes the Center for Written, Oral, and Visual Communication. Housed in Fondren Library, the Center supports teaching and learning through workshops, consulting, and courses for undergraduate and graduate students and faculty. Headed by a team of communication professionals, the Center also includes a large staff of writing and communication consultants, both graduate and undergraduate, who are available for individual tutoring appointments. The Center includes facilities for one-on-one consultations and group work, as well as advanced technology for preparation of oral and visual presentations. Physically accessible whenever Fondren Library is open, the Center is virtually accessible around the clock through the PWC website.

Last Revised : August 03, 2015

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Program in Writing and Communication

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Program in Writing and Communication.

Last Revised : August 03, 2015

Systems, Synthetic and Physical Biology

Institute of Biosciences and Bioengineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Director
Herbert Levine, BIOE

Professors
Gang Bao, BIOE
George N. Bennett, BIOS
Cecilia Clementi, CHEM
Dennis Cox, STAT
Michael Deem, BIOE
Ramon Gonzalez, CHBE
Lydia E. Kavraki, COMP
Marek Kimmel, STAT
Anatoly B. Kolomeisky, CHEM
Jianpeng Ma, BIOE
Jose Onuchic, PHYS
George Phillips, BIOS
Susan Rosenberg, BCM
Ka-Yiu San, BIOE
Yousif Shamoo, BIOE
Peter G. Wolynes, CHEM

Associate Professors
Michael Diehl, BIOE
Ido Golding, BCM
Oleg A. Igoshin, BIOE
Ching-Hwa Kiang, PHYS
Michael Kohn, BIOS
Christy Landes, CHEM
Luay K. Nakhleh, COMP
Robert Raphael, BIOE
Laura Segatori, CHBE
Jonathan Silberg, BIOS
Junghae Suh, BIOE

Assistant Professors
Genevera Allen, STAT
Matthew R. Bennett, BIOS
Deepak Nagrath, CHBE
Amina A. Qutub, BIOE
Jacob Robinson, ECE
Jeffrey J. Tabor, BIOE
Aryeh Warmflash, BIOS
David Y. Zhang, BIOE
Weiwei Zhong, BIOS

Participating Faculty

This program includes faculty from departments of Bioengineering, Biosciences, Chemical and Biomolecular Engineering, Chemistry, Computer Science, Physics & Astronomy, Statistics and Electrical and Computer Engineering.

Degrees offered: MS, PhD

Systems, Synthetic and Physical Biology (SSPB) is a new discipline that draws upon principles from physics, chemistry, engineering, and mathematics and integrates experimental biochemical, cell biological, and molecular genetics approaches with computational design, simulation, and modeling to anticipate the properties of complex and multiscale biological systems. The Graduate Program in SSPB represents a cooperative effort by faculty in the schools of Natural Sciences and the Engineering to provide training in this highly interdisciplinary field. This program is overseen by the Institute of Biosciences and Bioengineering (IBB) and overseen by an executive committee composed of members from any of the participating departments.

The interdisciplinary nature of the SSPB program allows students to achieve their graduate degree requirements by taking select classes from any of the participating departments and performing their dissertation research under supervision of any faculty associated with the program.

Last Revised : August 03, 2015

Systems, Synthetic and Physical Biology

Institute of Biosciences and Bioengineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for MS and PhD in Systems, Synthetic and Physical Biology

Students graduating from this program will:

1. Become knowledgeable about the breadth of topics within Science, Technology, Engineering, and Mathematics (STEM) disciplines that underlie the foundations of Systems, Synthetic and Physical Biology.
2. Independently integrate knowledge from diverse STEM fields to develop a solution plan for defined biological problems.
3. Apply knowledge from Biology, Mathematics, and Physics to an open-ended biological challenge.
4. Develop deep knowledge within the sub-area where they pursue their dissertation research.
5. Write well-organized, coherent technical prose that is at a level observed within peer-reviewed manuscripts.
6. Deliver oral presentations that are of the caliber that is expected at national conferences.
7. Demonstrate critical thinking skills when confronted with unanticipated questions.
8. Conduct independent research. Students will develop individually, or as part of a team, a solution to an open-ended research question, identify and pose a research problem and place that problem in context within the field's established literature, and thoughtfully relate their research to that of others in their field through peer-reviewed publications.
9. Assume responsibility for their continued professional growth by striving to acquire the knowledge and skills needed for scholarly achievement.

Degree Requirements for MS and PhD in Systems, Synthetic and Physical Biology

The Graduate Program in SSPB offers Master's and Doctoral degrees. Students will be directly admitted only to the Doctoral program. For each degree, the student must fulfill the university requirements set forth in the General Announcements under which he or she entered. The semester hour requirements may be fulfilled both by classroom hours and research hours.

Admission

Applicants for graduate study in SSPB must have:

- BA or BS degree in natural sciences, engineering, or related field (or some equivalent)
- Strong ability and motivation for research as indicated by academic record, Graduate Record Examination (GRE) scores, and recommendations

Although the program offers a MS degree, only students who intend to pursue the PhD degree are admitted into the program. In rare instances, students who fulfilled the MS degree requirements and who do not wish to continue their studies toward their PhD degree may choose to graduate with MS degree. Information on admission to the program is available on the SSPB website.

Coursework Requirements (MS and PhD program)

Students are required to have training in the following 5 foundation areas:

1. Molecular Biology (Introductory Biology class and at least one upper-level biology class such as Cell Biology, Genetics or Biophysics)
2. Biochemical reaction kinetics (Biochemistry, Bioreaction Engineering, or equivalent)
3. Physical Chemistry or Thermodynamics or Statistical mechanics,
4. Ordinary Differential Equations
5. Statistics

If students are missing formal training in these subjects, they are required to take the equivalent background courses during their first year at Rice (no more than one of these classes can be taken for Pass/Fail). The corresponding courses at Rice include the following:

- BIOC 341 *Cell Biology*
- BIOC 301 *Biochemistry I* **OR** BIOE 330 *Bioreaction Engineering*
- BIOC 352 *Physical Chemistry for Biosciences* **OR** BIOE 332 *Bioengineering Thermodynamics* **OR** PHYS 425 *Statistical & Thermal Physics* **OR** PHYS 526 *Statistical Physics* or CHEM 310 *Physical Chemistry*
- MATH 211 *Ordinary Differential Equations and Linear Algebra*
- BIOE 439 *Applied Statistics for Bioengineering and Biotechnology* **OR** STAT 331 *Applied Probability and Statistics*

Students are required to accumulate at least 25 semester hours of graduate approved courses while maintaining GPA 3.0 or higher. Students must be enrolled for at least 12 credits each semester. Required courses include a Responsible Conduct of Research (UNIV 594 or equivalent) and a series of three core courses: SSPB 501 Physical Biology, SSPB 502 Introduction to Systems Biology Modeling: Design Principles of Biochemical Networks, and SSPB 503 Synthetic Biology, to be taken during the first or second year of studies. Students are also required to take at least three classes on advanced topics in the SSPB field and two open elective courses, which are subject to approval by the Graduate Advising Commitee (GAC). It is recommended that at least one of the courses in advanced topics apply quantitative concepts from computer science, physics, and mathematics or statistics to biological problems, and at least one of the courses focus on biology within the sub-area where students pursue their dissertation research.

Other Program Requirements (MS students)

All students involved in research must complete the Collaborative Institutional Training Initiative (CITI) Responsible Conduct of Research online course. Candidates for the MS degree also must:

- Choose an advisor (PI) by the end of the first semester
- Fulfill a teaching requirement
- Submit an original research thesis
- Complete 30 semester hours of study (including thesis research hours)
- Defend the thesis in a public oral examination.

Other Program Requirements (PhD students)

All students involved in research must complete the Collaborative Institutional Training Initiative (CITI) Responsible Conduct of Research online course. Candidates for the PhD degree also must:

- Choose an advisor (PI) by the end of the first semester or equivalent
- Fulfill a teaching requirement
- Submit a thesis proposal that provides evidence of their ability to carry out original research in a specialized area of Systems, Synthetic and Physical Biology before the beginning of their fifth semester in residence
- Complete 90 semester hours of advanced study (including thesis research hours)
- Pass their qualifying exam which includes thesis proposal defense
- Defend the PhD thesis in a public oral examination.

Qualifying Exam (PhD students)

Students are expected to pass their qualifying exam before the beginning of their fifth semester in residence unless an extension has been granted by GAC. Students may retake the exam up to two times if granted permission to do so by GAC. Students who do not pass the Qualifying Exam may exit the program with a MS degree if the appropriate requirements have been met.

Thesis Proposal Defense: Students are required to submit their written proposal to their Graduate Progress Review (GPR) committee no later than two weeks before the scheduled exam. The proposal is expected to be in NIH NRSA-

like format - limited to 10 pages (not including References) and include the following sections: Abstract, Background, Problem Statement, Research Plan, Preliminary Results, References, and Proposed Timeline. Students whose research area may not be suitable for this format may seek approval of an alternative format by their GPR committee. On the day of the defense, students are expected to give an oral presentation of their proposal and answer technical questions. The student should expect to give a presentation, which if uninterrupted would last about 45 minutes, and be prepared for substantial questioning by the GPR committee.

Last Revised : August 05, 2015

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Systems, Synthetic and Physical Biology

Institute of Biosciences and Bioengineering

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Systems, Synthetic and Physical Biology.

Last Revised : August 03, 2015

Teaching and Learning

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Director
Joshua R. Eyler

Assistant Directors
Elizabeth Barre
Robin Paige

Degrees Offered: None

The graduate certificate program in teaching and learning is intended to provide participants with a combination of formal pedagogical training, practical experience, and mentoring that will prepare them to be effective college teachers. The program is open to any Rice graduate student or postdoctoral scholar in good standing.

Last Revised : August 03, 2015

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Teaching and Learning

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for Certificate in Teaching and Learning

Students graduating from this program will:

1. Develop an understanding of and explain best practices in teaching and learning.
2. Communicate individual pedagogical values and approaches to teaching and learning.
3. Assess key approaches, methodologies, and trends in the scholarship of teaching and learning.
4. Identify and evaluate pedagogical methods that apply to students' disciplines and teaching interests.
5. Demonstrate effectiveness as instructors through formal presentations.
6. Situate the role of teaching in higher education and the job market.

Course Requirements for the Graduate Certificate in Teaching and Learning:

For the graduate certificate in teaching and learning, candidates must complete the following four courses:

- UNIV 500 *Principles of Effective College Teaching*
- UNIV 501 *Research in Teaching and Learning*
- UNIV 502 *Practicum in College Teaching*
- UINV 599 *Teaching Portfolio*

All of these courses carry three hours of credit, with the exception of UNIV 599, which carries only two. In sum, the program is comprised of eleven credit hours. All courses will be offered every year.

Last Revised : August 03, 2015

Teaching and Learning

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Teaching and Learning.

Last Revised : August 03, 2015

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University Courses

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

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.

Last Revised : February 19, 2012

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University Courses

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: University Courses.

Last Revised : August 03, 2015

Anthropology

The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Chair
Eugenia Georges

Professors
Dominic C. Boyer
James D. Faubion
Susan Keech McIntosh

Associate Professors
Jeffrey B. Fleisher
A. Cymene Howe

Assistant Professors
Andrea Ballestero
Zoë Wool

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

Adjunct Professors
Chester Cain
Sarah Costello
George E. Marcus
Carol McDavid
Deepa Reddy
Patricia Seed

Lecturers
Beverly Mitchell

Degrees Offered: BA, MA, PhD

Anthropology is a discipline that encompasses many subjects of study, all related to understanding human beings and their cultures. A student may organize a major in one or more of anthropology's principal fields or may combine a major in anthropology with one in another discipline.

The goal of anthropology is to understand and interpret cultural and biological differences among human societies, both past and present. The department at Rice includes diverse offerings in all major subfields of the subject. In archaeology there are courses on the rise and decline of past civilizations and cultures, as well as practical courses that permit students to participate in excavations. In biological anthropology there are courses in human evolution, human nutrition, and on the practice of medicine in our own and other cultures. Cultural anthropology surveys the diversity of world cultures, and offers courses on particular culture areas and provides critical perspectives on the study of contemporary culture changes globally.

Last Revised : August 05, 2015

Anthropology

The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for BA in Anthropology

Students graduating from this program will:

1. Acquire a solid foundation in anthropological debates, concepts, goals, and historical development of the discipline. They will develop an understanding of the major subfields; familiarity with the debates, concepts and goals at the core of the discipline of anthropology; and a grasp how these are relevant to the discipline's changing understanding of the dynamics of cultures past and present.
2. Acquire a solid understanding of culture and social practice. Through the application of anthropological concepts, methods, and theories, they will acquire a historically-informed understanding of the salient aspects of culture and social practice, both theoretically and through the study of particular dimensions of culture, for example gender, sexuality, health, and media.
3. Develop an understanding of anthropological theory, method, and analytical tools. They will develop the critical and comparative tools of the discipline through acquisition of methodological, theoretical and analytic skills.
4. Acquire conceptual tools for understanding contemporary cultures in the context of globalization. They will develop disciplinary tools for responsibly researching and describing other cultures, as well as for critically conceptualizing the relationship between globalization and culture.
5. Apply research and analytical tools. They will choose and effectively apply appropriate research and analytical skills to individual research questions and case studies in order to become effective producers and critical evaluators of anthropological knowledge.

Degree Requirements for BA in Anthropology

The major in anthropology has two distinct areas of concentration: anthropological archaeology and social-cultural anthropology.

Anthropological archaeology. In this track, the focus is on research skills in the library, the field, and the laboratory. Archaeology students will also engage theoretical developments and critical contemporary debates on issues such as the politics of the past and cultural heritage. Students also develop at least one analytical skill, such as, archaeological statistics, osteology, or geoarchaeology, drawing on the university's laboratory and computer facilities. The archaeology program at Rice has a long-term focus on the archaeology of urban, complex societies in East and West Africa. The program offers students the opportunity to participate in archaeological excavations abroad as well as projects in Houston that focus on the city's African-American past. Students inquiring about the major with a focus on anthropological archaeology should see Dr. Jeffrey Fleisher (jfleisher@rice.edu; Sewall 582).

Social-cultural anthropology. This track engages with contemporary issues, populations and social dynamics that affect human life and culture broadly around the world. Social-cultural anthropology inquires across a vast range of human concerns from religion to social movements, from gender to medicine, from science studies to media, and from nature to law. Students are trained in ethnographic research methods and qualitative data collection and they learn the theoretical principles that have shaped the discipline as well as contemporary, innovative approaches that question how human sociality is constituted in the 21st century. The social-cultural anthropology program at Rice has always championed interdisciplinary, theoretical and experimental modes of anthropological inquiry and students are encouraged to add their creative intellectual insights to their research pursuits and goals. Students inquiring about the major with a focus on social-cultural anthropology should see Dr. Beverly Mitchell (bev@rice.edu 5th Floor, Sewall Hall).

Professor Susan McIntosh is the undergraduate transfer credit advisor. All students seeking transfer credit in anthropology for courses taken elsewhere should see Professor McIntosh for approval.

Students majoring in Anthropology must complete a total of 30 semester hours of approved courses (10 classes), at least 24 of which should be anthropology courses and at least 18 hours of which should be taken at the 300-level or above. Students may petition the undergraduate advisor to apply up to 6 semester hours of relevant work completed outside anthropology toward satisfaction of the major.

INTRODUCTORY COURSES
Complete two of the following three introductory courses:

- ANTH 201 *Introduction to Social and Cultural Anthropology*
- ANTH 203 *Human Antiquity: An Introduction to Physical Anthropology and Prehistory*
- ANTH 205 *Introduction to Archaeology*

METHOD COURSES
Complete one of the following:

- ANTH 362 *Archaeological Field Techniques*
- ANTH 458 *Human Osteology*
- ANTH 398 *Ethnographic Research Methods*

THEORY COURSES
Complete one of the following:

- ANTH 302 *Anthropological Theory: A Survey*
- ANTH 460 *Advanced Archaeological Theory*

ELECTIVES
Complete three ANTH courses at the 300-level or above.

RESEARCH
Complete one of the following:

- ANTH 494: *Capstone Preparation*/ANTH 495: *Anthropology Capstone*
- ANTH 490/ANTH 491: *Directed Honors Research*

Requirements for ANTH 494/495: *Anthropology Capstone*

The Anthropology Capstone provides an opportunity for students to conduct an independent research project on a topic that interests them, while working one-on-one with a faculty supervisor. The project culminates in a research paper and a presentation to the faculty and assembled students. The capstone is a required course for all Anthropology majors. Students who are enrolled in ANTH 490/491, Directed Honors Research, are not required to take the Anthropology Capstone.

The Capstone includes a one-credit course (ANTH 494) taken in the same semester alongside the three-credit Anthropology Capstone course (ANTH 495). ANTH 494 includes training with the Center for Written, Oral and Visual Communication and support in researching and writing the capstone.

Requirements for the Honors Program

The Honors Program is intended to acknowledge outstanding students, and to provide them with advanced training in the planning and execution of sustained, independent research. As a rule, students should petition their undergraduate advisor to be admitted to the Program sometime during the latter half of their junior year. Admission is at the discretion of the department faculty. The only formal prerequisite to admittance is a Grade Point Average in the major of at least 3.5. Once admitted to the Program, each student must complete a thesis, on a topic of her or his choosing, under the direction of one of the members of the department's faculty. Topics should be approved by the faculty advisor by the end of the first month of the senior year. Theses are due at the end of the last semester of the senior year.

Course Requirements for the Minor in Anthropology

A minor in anthropology requires the successful completion of at least six courses (a minimum of 18 credit hours):

INTRODUCTORY COURSES
Choose from two of the following:

- ANTH200/LING 200 *Introduction to the Scientific Study of Language*
- ANTH 201 *Introduction to Social and Cultural Anthropology*
- ANTH 203 *Human Antiquity: An Introduction to Physical Anthropology and Prehistory*
- ANTH 205 *Introduction to Archaeology*

ELECTIVES

Four other ANTH courses, three of which must be at the 300-level or above

Archaeological Field School in sub-Saharan Africa

The Department of Anthropology offers a six-week field school in June and July in sub-Saharan Africa, alternating between eastern and western locales. Past field schools have been on the island of Gorée, located off the coast of Senegal, where research focused on the development of Gorée as a supply port for the Atlantic trade, and at Songo Mnara, a 15th-century Swahili urban center on the southern Tanzanian coast. This course is offered for a total of six hours of credit (ANTH 364 and ANTH 370). The course is offered without specific prerequisites, but there is a general requirement that students have some prior course work in archaeology or African history. Program fees apply.

Last Revised : August 06, 2015

Anthropology

The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for MA and PhD in Anthropology

Students graduating from this program will:

1. Develop the skills to successfully pursue various professional endeavors, within and outside the academy.
2. Understand the historical development and the basic anthropological debates, concepts, and goals of their chosen subfields; apply this knowledge in order to understand and define aspects of human nature, culture, and social practice.
3. Develop the methodological, theoretical, and critical analytical skills at the heart of their chosen subfields in order to become capable producers of anthropological knowledge and to actively critique and reconfigure canonical anthropological knowledge.
4. Apply research and analytical skills to individual research questions and case studies to become active producers of research and knowledge, and to effectively critique and intervene in extant research and disciplinary discussions.
5. Students specializing in social-cultural anthropology will develop tools for responsibly conducting research with their interlocutors and consultants in a world of the increasingly complex interplay of small-scale and large-scale concerns and commitments.
6. Students specializing in anthropological archaeology will develop tools for responsibly conducting research at sites increasingly touched by the complex interplay of small-scale and large-scale concerns and commitments.

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 strongly desirable. Entering students devise a detailed first-year plan of study and provisional plans for succeeding years in consultation with an advisor. 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.

MA Program—Although students are not normally admitted to study for an MA, 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
- One of the three special papers required for the PhD
- A thesis

PhD Program—For the PhD degree, students must accomplish the following (in addition to the university requirements):

- Required course work for social-cultural students: 90 semester hours of graduate study (undergraduate courses, including language courses, do not satisfy this requirement
- Seven Required Courses
  i. ANTH 506 *History of Anthropological Ideas*
  ii. ANTH 507 *Anthropological Directions from Second World War to the Present*
  iii. ANTH 598 *Ethnographic Research Methods*
  iv. ANTH 601 *Graduate Proseminar in Anthropology*
  v. ANTH 602 *Anthropology Proposal Writing Seminar*

vi. ANTH 615 *Theories of Modernity/Postmodernity*
vii. ANTH 650 *Pedagogy (*one semester; a minimum of 18 hours of graduate credit is required in order to be eligible to take this course)

- Advanced to candidacy
- Complete and defend the dissertation

Requirements for candidacy (and thus eligibility for a candidacy MA), to be completed no later than the end of the eighth semester of enrollment in the program:

- Successful completion of all required courses. Students must receive at least a B (3.0) in a course for the department to deem it successfully completed. They must maintain a G.P.A. of at least 3.0 each semester to remain in good standing.
- The approval by a faculty committee (chosen among the regular [i.e. tenured or tenure-track] faculty at Rice) of three major papers (One of the first two of these papers should be written in the format and in conformity with the requirements of one of the major journals in the field):
  i. one concerning some issue of research design
  ii. one concerning an issue of theory or theorization
  iii. one an annotated bibliography of the substantive research relevant to the PhD project
- The approval by the same committee of the design and content of at least one undergraduate syllabus.
- The committee's approval of the proposal for the PhD.
- For students not bilingual, the passing of an examination (requiring the translation of at least 1,000 words into English in a period of 90 minutes, with the help of a dictionary) either of the language relevant to the field or of a major scholarly language, such as French, German, or Spanish.

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 three years of study contingent on satisfactory performance.

Last Revised : August 03, 2015

- Undergraduate Students
- Graduate Students
- Non-Traditional Students
- Faculty
- Programs of Study
- Administration and Faculty
- Important Notices

Anthropology

The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Anthropology.

Last Revised : August 03, 2015

Cognitive Sciences

The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Professors
Michel Achard
Michael Byrne
John W. Clark, Jr.
Steven J. Cox
James L. Dannemiller
Richard Grandy
Suzanne E. Kemmer
Mark Kulstad
Randi C. Martin
Frederick L. Oswald
James Pomerantz
Devika Subramanian

Associate Professors
Robert Englebretson
David M. Lane
Nancy Niedzielski

Assistant Professors
Simon Fischer-Baum
Caleb Kemere
Philip T. Kortum
Jessica Logan
Tatiana Schnur

Professors Emeriti
Don Johnson
Sydney M. Lamb
David J. Schneider
Stephen A. Tyler
James F. Young

Lecturers
David Caprette
John Greiner
Ozge Gurcanli

Adjunct Assistant Professors
David Eagleman
Amy Franklin

Degree Offered: BA

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, some use experimental methodology, and others work at more abstract theoretical levels. See http://cogsci.rice.edu/.

Last Revised : August 11, 2014

Cognitive Sciences

The School of Social Sciences

Program Learning Outcomes for BA in Cognitive Sciences

Students graduating from this program will:

1. Understand cognitive science as an interdisciplinary field and demonstrate the ability to synthesize key knowledge, theories, methods, research, and other elements from many related disciplines and bring these interdisciplinary elements to bear on problems or questions in the cognitive sciences.
2. Demonstrate a breadth of knowledge of the key issues, questions, and perspectives at stake in the multiple disciplines that contribute to the study of cognitive science.
3. Achieve a depth of knowledge in one core area of cognitive science – linguistics, neuroscience, psychology, or philosophy – and develop a knowledge base in that discipline, as well as an understanding of the theories, methods, and research approaches in that discipline.
4. Demonstrate the advanced critical thinking skills necessary to evaluate multiple theories or methods from a variety of related disciplines and choose which to apply to a particular problem or question in the cognitive sciences, as well as the advanced critical thinking ability necessary to evaluate the validity of research results that purport to address the same problem or question, but with different results.
5. Demonstrate the ability to communicate original research or research by other scholars effectively and at a college level in written and oral formats.

Degree Requirements for BA in Cognitive Sciences

For general university requirements, see Graduation Requirements. Students majoring in cognitive sciences must complete five core courses and seven additional courses (see below). Among the seven additional courses, at least three and no more than four must be in a single area of specialization—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:

- LING 200/ANTH 200 *Introduction to the Scientific Study of Language*
- PHIL 103 *Philosophical Aspects of Cognitive Science*
- PSYC 101 *Introduction to Psychology*
- PSYC 203 *Introduction to Cognitive Psychology*

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 140 *Computational Thinking: Computation and Problem Solving*
- COMP 200 *Elements of Computer Science*

- COMP 201 *Principles of Object-Oriented Programming*

Psychology

- PSYC 203 *Introduction to Cognitive Psychology*

Linguistics

- LING 200/ANTH 200 *Introduction to the Scientific Study of Language*
- LING 306 *Language, Thought, and Mind*
- LING 315/PSYC 315 *Introduction to 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/LING 309 *Psychology of Language*
- PSYC 351 *Psychology of Perception*
- PSYC 461 *Reasoning, Decision Making, and Problem Solving*
- PSYC 362/NEUR 362 *Cognitive Neuroscience*
- PSYC 430 *Computational Modeling of Cognitive Processes*
- PSYC 432 *Brain and Behavior*

ADDITIONAL COURSES
At least three and no more than four courses must be in one of the following areas of specialization:

1. Linguistics
2. Neuroscience
3. Philosophy
4. Psychology

Note: you may not use the same course to fulfill both a core course requirement and an additional course requirement; in other words, no double counting. Up to six credits of research courses (CSCI 390, NEUR 485, CSCI 481) may be applied to the major.

Linguistics

- LING 200/ANTH 200 *Introduction to the Scientific Study of Language*
- LING 300/ANTH 300 *Linguistic Analysis*
- LING 301/ANTH 301 *Phonetics*
- LING 304 *Introduction to Syntax*
- LING 306 *Language, Thought, and the Mind*
- LING 309/PSYC 309 *Psychology of Language*
- LING 311/ANTH 323 *Introduction to Phonology*
- LING 314 *Second Language Acquisition*
- LING 315/PSYC 315 *Introduction to Semantics*
- LING 317 *Language and Computers*
- LING 320 *The Origins and Evolution of Human Language*
- LING 325/PSYC 325 *Language Acquisition*
- LING 397 *Speech and Hearing Science*
- LING 403 *Foundations of Modern Linguistics*
- LING 404 *Research Methodologies and Linguistic Theories*
- LING 405 *Discourse Analysis*
- LING 409 *Special Topics*
- LING 411/ANTH 411 *Neurolinguistics*
- LING 419 *Bilingualism*
- LING 420 *Cognition and L2 Acquisition*
- LING 428 *Phonology*

Neuroscience

Many of the neuroscience courses are taught by Baylor College of Medicine faculty. For more information, see http://neuroscience.rice.edu/.

- CAAM 415/NEUR 415/ELEC 488 *Theoretical Neuroscience: Biophysical Modeling of Cells and Circuits*
- ELEC 481/BIOE 481/NEUR 481 *Computational Neuroscience and Neural Engineering*
- LING 411/ANTH 411 *Neurolinguistics*
- PSYC 362/NEUR 362 *Cognitive Neuroscience*
- PSYC 375 *Neuropsychology of Language and Memory*
- PSYC 432 *Brain and Behavior*
- NEUR 380/BIOC 380/PSYC 380 *Fundamental Neuroscience Systems*
- NEUR 385/BIOC 385 *Fundamentals of Neuroscience*
- NEUR 485 *Directed Research in Neuroscience*
- NEUR 500 *Functional Neuroanatomy and Systems Neuroscience*
- NEUR 525 *Neuroscience and Law*

Philosophy

- PHIL 103 *Philosophical Aspects of Cognitive Science*
- PHIL 303 *Theory of Knowledge*
- PHIL 305 *Mathematical Logic*
- PHIL 312 *Philosophy of Mind*
- PHIL 352 *Philosophy of Psychology*
- PHIL 353 *Philosophy of Language*
- PHIL 354 *Philosophy of Perception*
- PHIL 357 *Incompleteness, Undecidability, and Computability*

Psychology

- PSYC 308 *Memory*
- PSYC 309/LING 309 *Psychology of Language*
- PSYC 321 *Developmental Psychology*
- PSYC 325/LING 325 *Language Acquisition*
- PSYC 340 *Research Methods*
- PSYC 351 *Psychology of Perception*
- PSYC 461 *Reasoning, Decision Making, and Problem Solving*
- PSYC 362/NEUR 362 *Cognitive Neuroscience*
- PSYC 370 *Introduction to Human Factors and Ergonomics*
- PSYC 375 *Neuropsychology of Language and Memory*
- PSYC 380/NEUR 380/BIOC 380 *Systems of Neroscience*
- PSYC 409 *Methods in Human-Computer Interaction*
- PSYC 411 *History of Psychology*
- PSYC 430 *Computational Modeling of Cognitive Processes*
- PSYC 432 *Brain and Behavior*
- PSYC 441 *Human-Computer Interaction*
- PSYC 461 *Reasoning, Decision Making and Problem Solving*
- PSYC 465 *Olfactory Perception*
- PSYC 471 *Introduction to fMRI*
- PSYC 480 *Advanced Topics in HCI: Non-Traditional Interfaces*

ELECTIVES

Students must choose four additional courses from the following:

- ANTH 406/LING 406 *Cognitive Studies in Anthropology and Linguistics*
- BIOE 480/ELEC 480 *Intro to Neuroengineering*
- CAAM 415/NEUR 415/ELEC 488 *Theoretical Neuroscience I: Biophysical Modeling of Cells and Circuits*
- CAAM 416/ELEC 489/NEUR 416 *Thoretical Neuroscience II: Learning, Perception, and Cognition*
- COMP 211 *Principles of Program Design*
- COMP 440/ELEC 440 *Artificial Intelligence*
- COMP 450/ELEC 450/MECH 450 *Algorithmic Robotics*
- CSCI 390 *Supervised Research in Cognitive Sciences*
- CSCI 481 *Honors Project*
- ELEC 481/BIOE 481/NEUR 481 *Computational Neuroscience and Neural Engineering*
- ELEC 498/COMP 498/MECH 498 *Introduction to Robotics*
- ENGI 120 *An Introduction to Engineering Design*

- LING 200/ANTH 200 *Introduction to the Scientific Study of Language*
- LING 300/ANTH 300 *Linguistic Analysis*
- LING 301/ANTH 301 *Phonetics*
- LING 304 *Introduction to Syntax*
- LING 306 *Language, Thought, and Mind*
- LING 311/ANTH 323 *Introduction to Phonology*
- LING 314 *Second Language Acquisition*
- LING 315/PSYC 315 *Introduction to Semantics*
- LING 317 *Language and Computers*
- LING 320 *The Origins and Evolution of Human Language*
- LING 325/PSYC 325 *Language Acquisition*
- LING 403 *Foundations of Modern Linguistics*
- LING 404 *Research Methodologies and Linguistic Theories*
- LING 419 *Bilingualism*
- LING 420 *Cognition and L2 Acquisition*
- NEUR 385/BIOC 385 *Fundamentals of Neuroscience*
- NEUR 485 *Directed Research in Neuroscience*
- NEUR 500 *Functional Neuroanatomy and Systems Neuroscience*
- NEUR 525 *Neuroscience and Law*
- PHIL 103 *Philosophical Aspects of Cognitive Science*
- PHIL 303 *Theory of Knowledge*
- PHIL 305 *Mathematical Logic*
- PHIL 312 *Philosophy of Mind*
- PHIL 353 *Philosophy of Language*
- PHIL 357 *Incompleteness, Undecidability, and Computability*
- PSYC 308 *Memory*
- PSYC 309/LING 309 *Psychology of Language*
- PSYC 321 *Developmental Psychology*
- PSYC 325/LING 325 *Language Acquisition*
- PSYC 340 *Research Methods*
- PSYC 351 *Psychology of Perception*
- PSYC 461 *Reasoning, Decision Making, and Problem Solving*
- PSYC 370 *Introduction to Human Factors and Ergonomics*
- PSYC 375 *Neuropsychology of Language and Memory*
- PSYC 409 *Methods in Human-Computer Interaction*
- PSYC 411 *History of Psychology*
- PSYC 430 *Computational Modeling of Cognitive Processes*
- PSYC 441 *Human-Computer Interaction*
- PSYC 461 *Reasoning, Decision Making and Problem Solving*
- PSYC 465 *Olfactory Perception*
- PSYC 471 *Introduction to fMRI*
- PSYC 480 *Advanced Topics in HCI: Non-Traditional Interfaces*
- STAT 300 *Model Building*

Note: **Rice-Baylor neuroscience offerings change frequently. Baylor courses not on the above list may be counted at the discretion of the steering committee. The most up-to-date listing of courses counting as additional courses is found at cogsci.rice.edu .**

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 preceeding 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 undertake 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 1st 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 to faculty and students. For more details, contact the program director.

Independent Research

Majors may undertake supervised independent research by enrolling in CSCI 390 or the honors program. Students who wish to take CSCI 390 must complete a CSCI 390 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 CSCI 390 also must write a substantive research paper, which is to be submitted to both their advisor and the program director at the end of the semester, and presented in the Rice Undergraduate Research Symposium as a poster. (Copies of the contract form and instructions are available on the “forms” section of the cognitive sciences website.)

Last Revised : August 06, 2015

Undergraduate Students
Graduate Students
Non-Traditional Students
Faculty
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Important Notices

Cognitive Sciences

The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Cognitive Sciences.

Last Revised : August 03, 2015

Economics

The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Chair
Antonio Merlo

Professors
Kerry Back
Richard Boylan
Dagobert L. Brito
Bryan W. Brown
James N. Brown
John B. Bryant
Mahmoud El-Gamal
Hulya Eraslan
Malcolm Gillis
Peter Hartley
Vivian Ho
Ted Loch-Temzelides
Isabelle Perrigne
Robin C. Sickles
Kenneth Wolpin
George R. Zodrow

Associate Professors
Flavio Cunha
Marc Peter Dudey
Jeremy Fox
Xun Tang

Assistant Professors
Natalia Sizova

Professors Emeriti
Donald L. Huddle
Peter Mieszkowski
Ronald Soligo

Adjunct Professors
Bruce M. Lairson
John Michael Swint

Adjunct Associate Professors
Charles E. Begley
Russell Green

Adjunct Assistant Professors
John Diamond
Kenneth Medlock

Degrees Offered: BA, MA, MEECON, PhD

Undergraduates may major in economics or mathematical economic analysis (but not both). The major in mathematical economic analysis is recommended for students who intend to pursue graduate work in economics or a business or governmental job in which extensive analytical and quantitative skills are required.

Please note that students are responsible for making certain that their plan of study meets all degree requirements, including the university credit requirements and university distribution requirements specified elsewhere in General Announcements. Major requirements are not reduced for students with multiple majors, although some courses can satisfy the requirements for more than one major.

Master of Energy Economics (MEECON) participants will be able to produce insightful analyses of energy markets to inform such things as capital asset decisions, firm strategic direction, and future market orientation.

The PhD program in economics equips students with the theoretical and empirical skills essential to entering

research careers in academia, business and government.

Last Revised : August 04, 2015

Economics

The School of Social Sciences

Program Learning Outcomes for BA in Economics and Mathematical Economic Analysis

Students graduating from this program will:

1. Develop numerous mathematical, statistical and econometric skills, including a thorough knowledge of calculus, probability and statistics, and applied econometrics (including mastering the use of statistical software packages to analyze economic data and learning how to interpret statistical results). MTEC majors will also learn the elements of multiple variable calculus, linear algebra and optimization techniques, and other mathematical techniques utilized in more technical economic analyses.
2. Learn the core principles of economics, including the basic concepts of microeconomics and macroeconomics such as supply and demand, utility maximization by consumers and profit maximization by firms, competitive and other market structures, market equilibrium, and analysis of the performance of the national economy.
3. Learn how the basic principles they have absorbed are applied in economic analyses of a wide variety of applied and theoretical topics.
4. Learn how to write clearly, concisely, and cogently on economic matters.
5. Students in the MTEC program will also learn about the process of research in economics. Students will learn how to conduct a literature review on a topic, how to critically evaluate research that represents the current state-of-the-art, and how to apply their knowledge of economic principles and empirical methods to conducting and reporting on their own research.
6. Students in the honors program will learn how to conduct economic research, beginning with forming a research idea and progressing to the formulation of an economic model to analyze the issue under consideration, the identification of testable hypotheses, the collection of data and econometric testing of their hypotheses, and the presentation of preliminary and final results.

Degree Requirements for the BA, with a Major in Economics

To earn a B.A. degree in Economics, students must present a minimum of 14 courses with a grade point average (GPA) of at least 2.0. When students repeat courses or complete more than the minimum required number of courses, the departmental GPA will be based on the set of courses that (1) satisfies all requirements for the degree, and (2) results in the highest GPA for the student. However, when a course is taken at both Rice and another institution, the grade in the Rice course will be used for departmental GPA calculations.

CORE COURSES

The 14 courses presented for the major in economics consist of three courses from Mathematics and Statistics and five courses from Economics and Econometrics.

Mathematics and Statistics

- MATH 101 *Single Variable Calculus I* **OR** the combination of MATH 111 *The Fundamental Theorem of Calculus* **and** MATH 112 *Calculus and Its Applications*
- MATH 102 *Single Variable Calculus II*
- ECON 307/STAT 310 *Probability and Statistics*

Economics and Econometrics

- ECON 100 *Principles of Economics*

- ECON 200 *Microeconomics*
- ECON 203 *Macroeconomics*
- ECON 209 *Applied Econometrics*
- ECON 300 *Game Theory, Micro Topics for ECON Majors*

ELECTIVES
Six elective courses in ECON, including at least three 400-level electives.

Degree Requirements for the BA, with a Major in Mathematical Economic Analysis

To earn a B.A. degree in Mathematical Economic Analysis, students must present a minimum of 16 courses with a grade point average (GPA) of at least 2.0. When students repeat courses or complete more than the minimum required number of courses, the departmental GPA will be based on the set of courses that (1) satisfies all requirements for the degree, and (2) results in the highest GPA for the student. However, when a course is taken at both Rice and another institution, the grade in the Rice course will be used for departmental GPA calculations.

CORE COURSES
The 16 courses presented for the major in mathematical economic analysis consist of four core courses in Mathematics and Statistics and eight core courses in Economics

Mathematics and Statistics

- MATH 101 *Single Variable Calculus I*
- MATH 102 *Single Variable Calculus II*
- MATH 212 *Multivariable Calculus* **OR** MATH 221 *Honors Calculus III* **and** MATH 222 *Honors Calculus IV*
- One of the following:
    i. ECON 307/STAT 310 *Probability and Statistics*
    ii. STAT 410 *Introduction to Regression and Statistical Computing*
    iii. STAT 431 *Overview of Mathematical Statistics*

Economics

- ECON 100 *Principles of Economics*
- ECON 200 *Microeconomics*
- ECON 203 *Macroeconomics*
- ECON 209 *Applied Econometrics*
- ECON 305 *Game Theory, Micro Topics for MTEC Majors*
- ECON 308 *Mathematical Economics*
- ECON 310 *Econometrics or* STAT 376 *Econometrics*
- ECON 496 *Research in Economic Theory* or ECON 497 *Research in Econometrics*

ELECTIVES
Four electives in Economics, including at least three 400-level electives

Transfer Credit

In some cases, transfer credit may be awarded for courses completed at other schools after the student has matriculated at Rice. Students may present a maximum of two such transfer courses in fulfilling requirement (2a) and a maximum of three such transfer courses in fulfilling requirements (2b) and (2c) combined. (Additional transfer courses may count toward meeting university graduation requirements, but not toward fulfillment of requirements for the major.) Credits awarded to transfer students for courses taken prior to matriculation at Rice are not counted against the limit on transfer courses, but all students must complete more than half of their upper-level major work (300-level and 400-level courses) at Rice. For additional information on transfer credits, consult the economics department website.

Requirements for Departmental Honors

1. To earn departmental honors in economics, students must earn a grade of B+ or better in the department's two-semester honors program, ECON 498/499.
2. The honors program is available to both ECON and MTEC majors.
3. To be admitted to the honors program, students (a) must have a GPA of 3.67 or better in all courses taken toward fulfilling their departmental requirements at the beginning of the academic year in which they enter the honors program; (b) must have completed all of the core requirements for their major; (c) must have completed the 400-

level course or courses most closely related to their area of research, and (d) must be accepted to the honors program by the professor supervising the program.

4. For additional information on the honors program, consult the economics department website.

Last Revised : August 04, 2015

Economics

The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for MA and PhD in Economics

Students graduating from this program will:

1. Learn mathematical, statistical, econometric and computational tools to carry out independent research in economics.
2. Write an independent and original dissertation that is of sufficient quality to merit publication in a top economics journal.
3. Conduct a focused review of the literature and develop a research design to carry out independent research.
4. Learn to defend their research design and modeling choices by presenting their paper in a seminar environment.
5. Communicate their research effectively by writing clearly, concisely and cogently.
6. Read critically and assess research manuscripts related to their field of study and in other fields.

Degree Requirements for MA and PhD in Economics

Preparation for PhD Program. Applicants to the PhD program should have a strong background in mathematics and statistics. All applicants are required to take the Graduate Record Exam (GRE).

Requirements. For general university requirements, see Graduate Degrees. Candidates for the PhD usually spend from two to two and a half years in full-time course work and at least one year writing the dissertation; five years is a reasonable goal for completing the program. For the PhD, students must:

1. Attend the statistics and mathematics camp before starting their first year courses.
2. Complete an approved program of at least eighteen courses (including approved courses in other departments) no more than four of which are research workshops. At least two years of full-time study must be in residence at Rice.
3. Perform satisfactorily on the written general exams in economic theory and econometrics.
4. Write a research paper proposal before the start of their third year.
5. Write and present a research paper before the end of their third year.
6. Choose a dissertation advisor by the end of their seventh semester.
7. Attend a research workshop every semester after their first year and present own research in a workshop once every year after their second year.

Although students are not normally admitted to study for an MA, graduate students may earn the MA along the way to the PhD. In order to obtain a Master's Degree in Economics, a student must pass the first year core courses with an average of 2.67 or better, and complete six field courses with any passing grade.

Program Learning Outcomes for Master of Energy Economics

Students graduating from this program will:

1. Understand basic economic and statistical principles useful for analyzing and understanding commercial and other influences on energy markets.
2. Know important details about the energy industry including relevant basic scientific, economic, and political factors that shape the sector.
3. Appreciate how to combine the basic principles with specific knowledge to gain valuable insights into issues

affecting the energy sector.
4. Develop quantitative skills to better utilize data to inform strategic decisions.
5. Be better able to communicate insights arising from the economics perspective on issues affecting the energy sector.
6. Make more informed decisions on such things as the capital budgeting or strategic decisions of energy firms, or future energy market developments.
7. Be better able to critically assess suggestions from others about how best to handle challenges affecting the energy sector.
8. Obtain insights into commercially-oriented analysis through internships.

Degree Requirements for Master of Energy Economics

For general university requirements for graduate study, see Graduate Degrees. The professional masters degree Master of Energy program requires students to complete 40 credit hours in 12 months, organized in four sessions. Sessions I and II correspond to the Fall and Spring semester, respectively, and follow the standard Rice academic calendar. Sessions III and IV are two consecutive 7-week long sessions that take place during the summer.

3 courses in Session I (Fall semester)

- ECON 601 *Energy Economics I*
- ECON 602 *Microeconomics of the Energy Sector*
- ECON 603 *Applied Econometrics for Energy Markets*

3 courses in Sessions II (Spring semester)

- ECON 604 *Energy Economics II*
- Elective
- Elective

3 courses in Session III (Summer I)

- Elective
- Elective
- Elective

1 course in Session IV (Summer II)

- ECON 699 *Internship – Energy Economics*

Electives:

- ECON 605 *Taxation in the Energy Sector*
- ECON 606 *Corporate Finance for the Energy Sector*
- ECON 607 *The Economics of Energy and the Environment*
- ECON 608 *Risk Management in the Energy Industry*
- ECON 610 *Energy and the Macroeconomy*
- ECON 611 *Energy and Geopolitics*
- ECON 612 *Management of Public Policy Issues by Energy Companies*
- ECON 613 *International Trade in Energy Commodities*
- ECON 620 *Industrial Organization of the Energy Sector*
- ECON 621 *The Economics of the Electricity Industry*
- ECON 622 *Transportation Economics*

All courses (including required courses and electives) are graduate-level. An internship is required in the Summer II session for completion of the MEECON professional masters. The internship will provide students with practical experience relative to the degree. In addition, the internships provide prospective employers with an opportunity to effectively evaluate new talent. The internship is meant to last 7 weeks and should be directly related to the student's core area of study in the MEECON degree program. It is recognized that some students may have previous professional experience in their area of study, and that their employer may be able to fulfill the internship requirement by working on a special project with their current employer.

Information on admission to the MEECON program is available on the Economics website. For general university requirements, see Graduate Degrees and Admission to Graduate Study.

Last Revised : August 03, 2015

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Economics

The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Economics.

Last Revised : August 03, 2015

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Global Affairs

The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Faculty Director
Mark P. Jones

Program Faculty
Michael Ard
Dominic Boyer
Royce Carroll
Edward P. Djerejian
Justin Esarey
Steven Lewis
Tony Payan
Lyn Ragsdale
Richard Stoll
Ted Temzelides

Degrees Offered: MAGA

The Master of Arts in Global Affairs (MGA) program, a joint effort between the Baker Institute for Public Policy and the School of Social Sciences, offers graduate students a professional Master of Arts degree that simultaneously requires high standards of scholarship and offers practical training for global affairs careers in government, the private sector, and international organizations.

The MGA program is a two-year, 36-credit hour degree program. The core curriculum is offered in four 7-week terms, with two terms run in each semester. There is also a required one-week pre-term math boot camp. The third and fourth terms are reserved for pursuit of an Area of Study, participation in a required internship, and completion of a capstone project.

Last Revised : August 05, 2015

Global Affairs

The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for MA in Global Affairs

Students graduating from this program will:

1. Demonstrate leadership, communication, and research skills to conduct independent studies enabling them to understand and formulate public policy recommendations in the international arena.
2. Apply quantitative skills to data analysis to make policy recommendations.
3. Describe real-life experience in international public policy development by participating in an internship.
4. Assess the social responsibilities of governments, non-governmental organizations, corporations, and individuals in the global twenty-first century.
5. Analyze and develop new and innovative solutions to emerging challenges in the global community.

Admission

Applicants to the Master of Global Affairs are required to submit:

- B.S. or B.A. degree from an accredited four-year college or university (except Rice students enrolling in their senior year.)
- Statement of purpose
- Professional resume
- Three letters of recommendation
- Official transcripts from all colleges and universities attended
- Approved GRE scores
- Approved TOEFL scores for applicants whose native language is not English and who did not receive a degree from a country in which English is the official language of communication.

Degree Requirements for MA in Global Affairs

The Master of Arts in Global Affairs degree will require a minimum of 36 credit hours, including the internship and capstone course.

For general university requirements, see the Professional Degrees section of Graduate Degrees.

REQUIRED CORE COURSES
18 credit hours total.

- GLBL 501 *Global Systems I* (1.5 credit hours)
- GLBL 502 *Institutions and Development* (1.5 credit hours)
- GLBL 503 *Introduction to Statistics for Masters Students* (1.5 credit hours)
- GLBL 504 *Quantitative Applications in Global Politics and Policy* (1.5 credit hours)
- GLBL 505 *Macroeconomics and the Global Economy* (1.5 credit hours)
- GLBL 506 *Macroeconomics for the Global Economy* (1.5 credit hours)
- GLBL 507 *Decision Making Under Uncertainty* (1.5 credit hours)
- GLBL 510 *Cultural Directions in International Affairs* (1.5 credit hours)
- GLBL 512 *International Conflict* (1.5 credit hours)
- GLBL 513 *International Cooperation* (1.5 credit hours)
- GLBL 514 *The Middle East Cauldron and United States Policy* (1.5 credit hours)

GLBL 515 *International Security in a Multipolar World* (1.5 credit hours)
- GLBL 519 *Global Affairs Internship* (1.5 credit hours)
- GLBL 520 *Global Affairs Capstone* (1.5 credit hours)

AREA OF STUDY ELECTIVES

Three Electives for a total of 9 credit hours are to be selected from one area of study. Students will choose three elective courses according to their individual academic interests and career goals. No more than three hours at the 400-level (one course) can be used toward the Area of Study.

Area of Study: International Development

- ANTH 519 *Symbolism & Power*
- ANTH 540 *Neoliberalism & Globalization*
- ANTH 566 *Science, Local and Global*
- ANTH 613 *Culture after Communism*
- ANTH 572 *Cultures of Capitalism*
- ECON 450 *World Economics & Social Development* **** Pre Reqs*
- ECON 455 *Money and Financial Markets*
- ECON 480 *Environmental Economics*
- ECON 481 *Health Economics*
- ECON 483 *Public Finance: Tax Policy*
- HIST 495 *Modernization of China and Japan*
- HIST 572 *America in the Middle East*
- POLI 450 *Elections in the Americas*
- POLI 457 *Conditions of Democracy*
- POLI 462 *Comparative Public Policy*
- POLI 477 *Domestic Politics and International Relations*
- POLI 520 *Approaches to Comparative Government*
- POLI 563 *Coalition Politics and Parliamentary Government*
- POLI 564 *Political Economy of Development*
- POLI 568 *Comparative Political Institutions*
- POLI 572 *Foreign Policy Decision Making*
- POST 411 *Integrated Approaches to Sustainable Development*
- POST 430 *The Shaping of Health Policy*
- POST 455 *United States Middle East Policy*

Area of Study: International Political Economy

- ANTH 522 *Cultures & Identity: Race, Ethnicity, & Nationalism*
- ASIA 488 *Asia & Energy*
- ECON 421 *International Finance* ***Pre Reqs*
- ECON 437 *Energy Economics* ***Pre Reqs*
- ECON 447 *Advanced Topics in Energy Economics* **** Pre Reqs*
- ECON 450 *World Economics & Social Development* **** Pre Reqs*
- ECON 455 *Money and Financial Markets*
- ECON 479 *Economic Modeling and Public Policy* **** Pre Reqs*
- ECON 480 *Environmental Economics*
- ECON 481 *Health Economics*
- ECON 483 *Public Finance: Tax Policy*
- POLI 461 *Politics, Risk, and Energy*
- POST 501 *Energy Policy*

Area of Study: International Security

- AFSC 401 *National Security Affairs I*
- AFSC 402 *National Security Affairs II*
- POLI 472 *American Foreign Policy*
- POLI 473 *The Craft of Intelligence Analysis, Prediction and Connecting the Dots*
- POLI 474 *International Organizations: Theories & Practice*
- POLI 477 *Domestic Politics and International Relations*
- POLI 540 *International Relations*
- POLI 570 *Seminar in International Conflict*
- POLI 572 *Foreign Policy Decision Making*
- POLI 595 *Directed Reading-International Relations*
- POST 455 *United States Middle East Policy*

NOTE: *Courses vary. Some listed courses may not be offered every year, and others may be offered that satisfy the requirements with pre-approval. Students should consult their academic advisors before enrolling and check for any course pre-requisites.*

REQUIRED INTERNSHIP (6 credit hours)
Students are required to complete a minimum eight-week extensive field experience in which they intern at one of a variety of internationally-based or internationally-focused governmental and nongovernmental organizations, international commissions, embassies, agencies, or corporations. The internship will provide students valuable real-world application of their degree with the goal of facilitating their employment in these organizations.

REQUIRED CAPSTONE (3 credit hours)
In the second year, students select a topic of concentration and pursue in-depth research which delves into the real-world, policy aspects of the topic.

Foreign language proficiency:

Students who expect to complete their degree program with a particular regional focus in mind are expected to be proficient in one of the primary languages of that region. Proficiency is defined as the ability to read and speak the language. This requirement can be met in one of three ways:

- By passing a language proficiency exam administered by the Rice Language Center.
- By achieving a grade of B+ or better in an intermediate language course at Rice. Taking this class does not count toward the 36 credit hours total for degree completion.
- By graduating from a high school or university where a language other than English was the primary language of instruction.

Fifth-Year Master's Degree Option for Rice Undergraduate Students

Advanced Rice undergraduate students in good standing may apply to the MAGA program in their junior year. If accepted, students will take courses towards the master's degree in their senior year, while they complete requirements for their baccalaureate degree. A plan of study will need to be approved by the faculty director and associate program director.

NOTE: *Rice undergraduate students must complete the requirements for a baccalaureate degree and the Master of Arts in Global Affairs independently of each other, i.e. no course may be counted toward the fulfillment of both degrees.*

Last Revised : August 05, 2015

Global Affairs

The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Global Affairs.

Last Revised : August 03, 2015

Linguistics

The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Chair
Michel Achard

Professors
Michel Achard
Masayoshi Shibatani

Associate Professors
Robert Englebretson
Suzanne E. Kemmer
Nancy Niedzielski

Assistant Professors
Christina Willis Oko

Professors Emeriti
James E. Copeland
Philip W. Davis
Sydney M. Lamb
Stephen A. Tyler

Degrees Offered: BA, MA, PhD

The Rice Linguistics Department is the home of an active community of scholars with a wide range of interests. Broadly defined, the department adopts a functional, usage-based approach to language and linguistic theory. A number of recurrent themes emerge in faculty research and the degree programs offered: in-depth investigation of languages, coupled with the search for cross-linguistic generalization; the effects of semantics, language-in-use, sociocultural factors, and other functional influences that motivate and constrain linguistic form; grounding of theories in solid empirical data of many sorts; an interest in the relation between language and mind; and interest in discourse and social/communicative interaction more generally. These interests lead to intensive research activity in empirically well-supported theoretical and descriptive linguistics:

- cognitive/functional linguistics
- typology and language universals
- field studies in American Indian, Australian, Austronesian, African, and other languages
- sociolinguistics
- discourse studies
- phonetics and speech processing
- laboratory phonology
- language change and grammaticization

Last Revised : August 03, 2015

Linguistics

The School of Social Sciences

Program Learning Outcomes for BA in Linguistics

Students graduating from this program will:

1. Demonstrate the ability to perform independent research about languages and their speakers, including the ability to ethically complete field work, collect data, analyze data, utilize laboratory and computing technologies, draw meaningful conclusions from data, and convey research results effectively orally and in writing.
2. Identify and define the main approaches for researching language structure and use at all levels (sounds, words, grammar, meaning, social/cultural interaction), as well as be able to critically evaluate and apply the primary concepts, vocabularies, methods and theories in their own work.
3. Gain an appreciation of the diversity of language and the ways in which it changes over time. They will be able to analyze the diversity of sounds and grammar in the world's languages. They will also understand the diversity of regionally-, socially-, and ethnically-defined varieties within a single language. Students will be able to explain why this diversity is relevant to everyday life and how it is crucial to fields both inside and outside of linguistics.
4. Understand language in its relation to cognition, identity formation, culture, and society, and the systematic relationships among them.

Degree Requirements for BA in Linguistics

For general university requirements, see Graduation Requirements. 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 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 nine courses (27 semester hours) in linguistics at the 300 level or above, including five core courses as specified below.

CORE COURSES

- LING 300/ANTH 300 *Linguistic Analysis*
- LING 301/ANTH 301 *Phonetics*
- LING 304 *Introduction to Syntax* **OR** LING 311/ANTH 323 *Phonology*
- One class from the following:
  i. LING 305/ANTH 305 *Historical Linguistics*
  ii. LING 315/PSYC 315 *Introduction to Semantics*
  iii. LING 416 *Language Universals and Typology*
- LING 415/SWGS 415 *Sociolinguistics* **OR** LING 405 *Discourse*

In addition, competency in one language other than English is required. This requirement may be satisfied by two courses in a foreign language at the 200 level or above or equivalent or at the 100 level or above for non-European languages. No more than one independent study course may be counted toward the major requirements.

Options in the list of core courses that are not used as core courses can count as electives for the major.

The linguistics major requires, in addition to five core courses and the language requirement, at least four advanced linguistics electives (300 level or above).

Students interested in careers in medically-oriented fields or speech technology are encouraged to meet with the undergraduate advisor to discuss the course most appropriate to their future plans.

Honors Program

The Linguistics Honors Program provides selected undergraduate majors with the opportunity to conduct supervised research. 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 major advisor before the end of the 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 (the project supervisor). Acceptance into the program is by agreement of the linguistics faculty. On acceptance, the student will enroll in LING 482 *Honors Project*, 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 meet regularly with their project supervisor regarding their progress; the supervisor is responsible for providing 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.

Last Revised : August 17, 2015

Linguistics

The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Degree Requirements for MA and PhD in Linguistics

The Linguistics Department is not accepting new students into the graduate program for Fall 2015.

The doctoral linguistics program at Rice emphasizes the study of language use and functional/cognitive approaches to linguistic theory. Rice faculty engage in a broad range of research specializations, all of which play an important role for in-depth graduate training. These interrelated areas include cognitive linguistics, language change, sociolinguistics, discourse analysis, language documentation and description, phonetics, laboratory phonology, and typology. Other faculty research interests include phonological theory, acoustic phonetics, speech sciences and technology, syntax, language revitalization, neurolinguistics, and forensic linguistics. The program only admits students planning to study for the PhD degree full time. Undergraduate preparation ideally should include language study and course work in linguistics or disciplines related to linguistics, such as anthropology, applied linguistics, speech and hearing sciences, psychology, sociology, or studies of particular languages, although an advanced degree is not required. Students will earn a masters degree upon advancement to candidacy. 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 advisor 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.

Students will, in general, take five years to progress through the degree program. With no prior linguistics background, course work in the first three years will include:

- one problem-solving course in linguistic analysis (LING 500) to be taken in the first year of study
- two courses in the area of phonetics/phonology (LING 501 and 511)
- two courses in the area of syntactic/semantic analysis (LING 504 and LING 515 or LING 413)
- the two-course sequence in field methods (LING 407 and LING 408) to be taken normally in the second year of study
- two seminars in the department usually to be taken in the second and/or third year of study
- five additional elective courses, including two courses in other subfields of linguistics

Prior preparation in linguistics will be assessed with regard to its equivalence to particular Rice courses. Graduate students are required to register for at least 12 hours credit per semester before advancing to candidacy. The department requires a minimum semester GPA of 3.0 to avoid probationary status. Students are expected to serve as teaching assistants for one course per year for four of the five years during the time they are receiving departmental support and this service is included in the normal course load.

Before advancing to candidacy, students must prepare two in-depth research papers. Each paper must represent a different area in the field of linguistics (as determined by the linguistics faculty); a separate committee of two members of the faculty reads and referees each paper. The committees are chosen by the student and approved by the student's faculty mentor. The first publishable paper must be approved no later than the end of the fifth semester. Students who fail to meet this deadline will be dismissed from the program. The second publishable paper must be approved by the beginning of the eighth semester 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 their work in venues such as conference proceedings and/or journals when

possible.

Finally, students must fulfill the departmental language requirement of competency in at least one language other than English. See the department web page and Linguistics Graduate Student Handbook for specific details.

In the course of the first three years in the program, 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. During the first year, the graduate advisor serves as the student's advisor, but after the first year, the student selects a faculty mentor to provide more personalized advising in addition to the general advice of the graduate advisor. 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, called the dissertation prospectus, consisting of a substantial dissertation proposal and a comprehensive bibliography. It may be based on a grant proposal to an external funding agency, particulary 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.

Following advancement to candidacy, the student works full time toward the completion of the dissertation. The student is expected to consult regularly with the committee members during the data collection and writing process. Upon completion of a complete and acceptable draft of the dissertation, the student will then, in consultation with all members of the dissertation committee, schedule a public defense of the work. 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 fulfilled, the degree is then granted.

For more in-depth information about the linguistics graduate program requirements, consult the official Linguistics Graduate Student Handbook and the departmental web page at linguistics.rice.edu.

MA Program. Although students are not normally admitted to study for an MA, graduate students may earn the MA after obtaining approval of their candidacy for the PhD. After all the requirements necessary to advance to candidacy have been met, the student may apply for a candidacy masters.

Last Revised : August 03, 2015

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Linguistics

The School of Social Sciences

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Course Listings

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Last Revised : August 03, 2015

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Managerial Studies

The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Director
Richard J. Stoll

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 also must 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.

Last Revised : February 19, 2012

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Non-Traditional Students
Faculty
Programs of Study
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Important Notices

Managerial Studies

The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for BA in Managerial Studies

Students graduating from this program will:

1. Demonstrate knowledge of how private economic practices, responsibilities, rights, and rewards are related to public policy, regulating institutions, and politics (including local, state, and federal regulation, international policy, and the like) and will be able to critically evaluate the impact of policy, institutions, and politics on business practices.
2. Demonstrate an understanding of economic practices internal to conducting business, including financial reporting, accounting, and market efficiency while also demonstrating an understanding of economic practices external to business, including private investing in company stocks, bonds and options.
3. Define and critically apply interdisciplinary methodologies and theories (including those from psychology, economics, and mathematics) to problems in Managerial Studies, as well as demonstrate the ability to evaluate different forms of evidence.
4. Demonstrate sufficient proficiency in algebra, calculus, statistics and other pertinent mathematics to develop and verify economic hypotheses as well as to computationally evaluate business problems or proposals.
5. Demonstrate an understanding of the underlying principles that govern the way the profession accounts for and communicates business transactions.

Degree Requirements for BA in Managerial Studies

For general university requirements, see Graduation Requirements. 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:

CORE REQUIREMENTS

- BUSI 305 *Financial Accounting*
- ECON 100 *Principles of Economics* (microeconomics)
- ECON 343 *Corporate Finance* or ECON 443 *Financial Economics*
- MANA 404 *Management Communications*
- PSYC 101 *Introduction to Psychology*
- PSYC 231 *Industrial and Organizational Psychology*

CORE ELECTIVES

Core Statistics Elective
Choose from one of the following:

- PSYC 339 *Statistical Methods – Psychology*
- SOCI 382 *Social Statistics*
- STAT 280 *Elementary Applied Statistics*
- STAT 305 *Introduction to Statistics for Biosciences*
- STAT 310 *Probability & Statistics*

Advanced Methods Elective
One from the following:

- CAAM 378 *Introduction to O.R. and Optimization*
- ECON 310 *Econometrics*
- STAT 385 *Methods for Data Analysis*
- STAT 410 *Linear Regression*
- STAT 421 *Applied Time Series and Forecasting*
- STAT 486 *Market Models*

External Course Electives
Choose two courses from the following:

- ECON 239 *Law and Economics*
- ECON 348 *Organizational Design*
- ECON 301 *Microeconomics*
- ECON 355 *Financial Markets*
- ECON 421 *International Finance*
- ECON 435 *Industrial Organization*
- ECON 437/ENST 437 *Energy Economics*
- MECH 499 *Current Topics*
- POLI 335 *Political Environment of Business*
- POLI 338/POST338/SOSC 301 *Policy Analysis*
- STAT 411 *Advanced Statistical Methods*

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 two additional courses from:

- MANA 497/498 *Independent Research*
- ECON 445 *Managerial Economics*
- ECON 449 *Principles of Financial Engineering*
- STAT 486 *Market Models*
- STAT 421 *Applied Time Series and Forecasting*

MANA 497/498 are offered in collaboration with faculty in the Jesse H. Jones Graduate School of Business. 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 120 Herzstein Hall.

Last Revised : August 03, 2015

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Managerial Studies

The School of Social Sciences

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Course Listings

For the most current course offerings, please click here: Managerial Studies.

Last Revised : August 03, 2015

Neuroscience

The School of Social Sciences

Director
J. David Dickman

Advisors
Steven J. Cox
James Pomerantz

Professors
Behnaam Aazhang
Richard Baraniuk
Kathleen Beckingham
Janet Braam
John W. Clarke
Steven J. Cox
James L. Dannemiller
J. David Dickman
Don H. Johnson
Suzanne Kemmer
Herbert Levine
Randi C. Martin
James R. Pomerantz
Michael Stern
Devika Subramanian
Moshe Y. Vardi
Rick K. Wilson

Associate Professors
James McNew
Robert Raphael

Assistant Professors
Simon Fischer-Baum
Caleb Kemere
Jessica M. Logan
Peter Lwigale
Amina Qutub
Jacob Robinson
Tatiana Schnur
Weiwei Zhong

Professor in the Practice
David Caprette

Adjunct Professors
Dora Angelaki

Degrees Offered: None

Neuroscience is an interdisciplinary field that uses very diverse methodologies to investigate the human mind and brain and the relation between them. Its subject ranges from the study of cognitive processes and representations via the empirical study of behavior, to investigations of the biochemical processes that occur in brain functions, and all of the interactions and correlations between brain, behavior, and biology that can be observed and/or modeled. The primary aim of neuroscience is to provide an understanding of how the cognition and behavior of organisms are embodied in neural processes. Such an understanding of mind and brain, bringing to bear many types of knowledge, is necessary as a basis for understanding and solving many practical problems: understanding the neurophysiology of disease; devising treatment for many pathologies related to aging, stroke, autism, and hearing and other impairments; improved understanding of human behavior relating to risk, addiction, and social pathologies; addressing practical problems in memory, learning, and acquisition of literacy; understanding the neural basis of emotion and its relation to human perception and behavior; and many other applications.

Last Revised : August 03, 2015

Neuroscience

The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for the Interdisciplinary Minor in Neuroscience

Students graduating from this program will:

1. Demonstrate knowledge of the key issues, questions, and perspectives that define contemporary neuroscience.
2. Understand neuroscience as an interdisciplinary field and demonstrate the ability to draw on, and synthesize, key findings and concepts in the sciences, humanities and/or engineering in both the evaluation of existing theories and in the formulation and solution of new problems in neuroscience.

Course Requirements for the Interdisciplinary Minor in Neuroscience

A minor in neuroscience requires the successful completion of at least six courses (a minimum of 18 credit hours). At least three courses must be at the 300-level or higher, and no more than two courses can apply from study abroad to transfer credits.

Depending on a student's interest, those wishing to minor in neuroscience may choose from one of two unique tracks, either a Humanities and Social Science (HS) track, which represents cognitive and behavioral approaches to neuroscience, or a Natural Science and Engineering (SE) track, representing genetics, cellular/molecular, bioengineering, computation, and systems-level investigations. No more than two of these courses can be used to fulfill a student's major requirements.

CORE COURES
Regardless of the track chosen within the Neursocience minor, all students must complete the core course requirement.

- NEUR 380/PYSC 380/BIOC 380 *Fundamental Neuroscience Systems*

Course Requirements for the Humanities and Social Science Track (HS)

BIOPYSCHOLOGY

- NEUR 362/PSYCH 362 Cognitive Neuroscience: Exploring the Living Brain

TRACK ELECTIVES: HUMANITIES AND SOCIAL SCIENCE (HS)
Choose three courses from the Humanities and Social Sciences track electives list

BREADTH ELECTIVE: NATURAL SCIENCE AND ENGINEERING (SE)
One course must be chosen from the alternative track, to provide breadth of the field of Neuroscience.

Course Requirements for the Natural Science and Engineering Track (HS)

CELLULAR AND MOLECULAR NEUROSCIENCE

- NEUR 385/BIOC 385 Fundamentals of Neuroscience

TRACK ELECTIVES: NATURAL SCIENCE AND ENGINEERING (SE)
Choose three courses from the Humanities and Social Sciences track electives list

BREADTH ELECTIVE: HUMANITIES AND SOCIAL SCIENCE (HS)
One course must be chosen from the alternative track, to provide breadth of the field of Neuroscience.

Humanities and Social Science

- LING 306 *Language, Thought, and Mind*
- LING 397 *Speech and Hearing Sciences*
- LING 411/ANTH 411 *Neurolinguistics*
- NEUR 111 *Science and Art in Dialogue: Experiment, Imagination, and the Invention of Neuroscience*
- NEUR 416/CAAM 416/ELEC 489 *Theoretical Neuroscience II: Learning, Perception and Cognition*
- NEUR 301/501/PSYC 575 *Advanced Cognitive Neuroscience: Attention and Perception*
- NEUR 302/502/PSYC 576 *Advanced Cognitive Neuroscience: Higher Mental Function*
- NEUR 308/508/PSYC 574 *Introduction to Cognitive Neuroscience**
- NEUR 517 *Mechanisms of Memory*
- NEUR 530 *Theory, Content, and Execution in Cognitive Neuroscience**
- NEUR 331/531 *Computational Cellular Neuroscience Laboratory*
- PHIL 103 *Philosophical Aspects of Cognitive Science*
- PHIL 312 *Philosophy of Mind*
- PHIL 352 *Philosophy of Psychology*
- PHIL 353 *Philosophy of Language*
- PHIL 354 *Philosophy of Perception*
- PSYC 308 *Memory*
- PSYC 309/LING 309 *Psychology of Language*
- PSYC 351 *Psychology of Perception*
- PSYC 353 *Psychology of Emotion and Motivation*
- PSYC 430 *Computational Modeling of Cognitive Processes*
- PSYC 432 *Brain and Behavior*

Natural Science and Engineering Electives

- BIOC 415 *Experimental Physiology*
- BIOE 381 *Fundamentals of Nerve and Muscle Electrophysiology*
- BIOE 480/ELEC 480 *Introduction to Neuroengineering: Measuring and Manipulating Neural Activity*
- BIOE 485/COMP 485/ELEC 485 *Fundamentals of Medical Imaging I*
- BIOE 486/COMP 486/ELEC 486 *Fundamentals of Medical Imaging II*
- BIOE 492 *Sensory Neuroengineering*
- BIOE 548/ELEC 548 *Machine Learning and Signal Processing for Neuro Engineering*
- NEUR 415/CAAM 415/ELEC 488 *Theoretical Neuroscience I: Biophysical Modeling of Cells and Circuits*
- NEUR 416/CAAM 416/ELEC 489 *Theoretical Neuroscience II: Learning, Perception, and Cognition*
- NEUR 430 *Fundamentals of Human Neuroimaging I***
- NEUR 431 *Fundamental of Human Neuroimaging II***
- NEUR 485 *Neuroscience Research*
- NEUR 304/504 *Cellular Neurophysiology I & II***
- NEUR 306/506 *Concepts of Learning and Memory***
- NEUR 510 *Neuropharmacology*
- NEUR 318/518 *Introduction to Neuroscience Methods***
- NEUR 321/521 *Analysis of Neuronal Function* **
- NEUR 322/522 *Brain Cell Biology and Development***
- NEUR 323/523 *Genetics for Neuroscience***
- NEUR 335/535 *Cellular Neurophysiology***
- NEUR 540 *Graduate Neuroanatomy***
- NEUR 350/550 *Molecular Neurobiology***
- NEUR 376/576 *Neurobiology of Disease***
- NEUR 378/578 *Higher Brain Function***
- NEUR 379/579 *Neurobiology of Sensation and Movement***
- NEUR 380/580 *Physiology of Visual System***

* Indicates course is taught at UT-Health Science Center

** Indicates course is taught at Baylor College of Medicine

Last Revised : August 14, 2015

Neuroscience

The School of Social Sciences

For the most current course offerings, please click here: Neuroscience.

Last Revised : August 03, 2015

Undergraduate Students
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Policy Studies

The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

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 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. Humanities majors can explore career options where language skills are particularly valuable.

Students are encouraged to investigate research opportunities with Rice faculty. Students also may elect to participate in the Washington Semester Program at American University, which includes both course work and an internship in the federal government. Students may also participate in the Rice Policy Studies Abroad program in London for course credit, which includes an internship experience in London. See the policy studies director and website for more information.

Last Revised : February 19, 2012

Policy Studies

The School of Social Sciences

Program Learning Outcomes for BA in Policy Studies

Students graduating from this program will:

1. Develop a basic understanding of the policy world, including institutional structures of the policymaking environment.
2. Learn basic analytical tools necessary for entry into the policy environment through analytical or research methods or advanced language proficiency.
3. Demonstrate knowledge of the basic principles and ideas of multiple disciplines, (including but not limited to: economics, law, sociology, environment, and health sciences) which are directly related to policy studies.
4. Learn to approach policy problems with multi-disciplinary methods and cross-disciplinary models and theories. Students will also be able to synthesize ideas from multiple disciplines.
5. Develop knowledge of the social and cultural aspects of the implications and outcomes of policy decisions for different populations.
6. Develop an understanding of the application of their knowledge in the outside world through participation in internships or similar structured experiences or through major research projects.

Degree Requirements for BA in Policy Studies

For general university requirements, see Graduation Requirements. 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 capstone requirement.

The policy studies basic curriculum introduces students to the fundamental concepts and tools needed to understand and study policy, regardless of the policy area on which they choose to focus. 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 also are required to take six courses from one of the following areas of specialization or in an area approved by the policy studies director:

- Environmental policy
- Healthcare management
- International affairs
- Law and justice
- Urban and social change
- Energy Policy Studies

In consultation with the policy studies director, each student also must complete an approved capstone requirement. This requirement may be met by participating in an approved Rice University study abroad program, a School of Social Sciences Gateway experience, or another approved internship or research opportunity.

BASIC CURRICULUM COURSES
Choose four courses from the following:

- One ECON class from the following:
  i. ECON 100 *Principles of Economics*

ii. ECON 101 *Introduction to Microeconomics*
iii. ECON 103 *Introduction to Macroeconomics*
iv. ECON 111 *AP/Oth Credit in Microeconomics*
v. ECON 113 *AP/Oth Credit in Macroeconomics*

- POLI 338/POST 338/SOSC 301 *Policy Analysis*
- ECON 210 *Behavioral Economics*
- ECON 239 *Law and Economics*
- One class from the following:
  i. ECON 348 *Organizational Design*
  ii. POLI 337 *Public Policy & Bureaucracy*
  iii. POLI 336 *Politics of Regulation*
  iv. SOCI 348 *Organizational Sociology*
- POST 200 *Baker Institute Introduction to Public Policy Issues* **OR** POST 201 *Baker Institute Introduction to Public Policy*
- POST 300 *Public Policy Planning, Management and Advocacy*
- POST 350 *Global Urban Lab*
- One advanced analysis or methods course approved by the Policy Studies director
- One class in the following:
  i. POLI 317 *The Congress*
  ii. POLI 318 *The Presidency*
  iii. POLI 321 *American Constitutional Law*
  iv. POLI 342 *Politics of the Judiciary*

AREA CURRICULUM COURSES

Complete six courses from one of the following seven groups (courses listed are illustrative and not all-inclusive; students should review with current course offerings and discuss course substitutions with the policy studies director, who approves substitutions):

Environmental Policy

- CEVE 302/ENGI 302 *Sustainable Design*
- CEVE 307/ENST 307/ESCI 307 *Energy and the Envrionment*
- CEVE 406/ENST 406 *Introduction to Environmental Law*
- ECON 480/ENST 480 *Environmental Economics*
- ENGL 368/ENST 368 *Literature and the Environment*
- ENST 302/SOCI 304 *Environmental Issues: Rice into the Future*
- POLI 331 *Environmental Politics and Policy*
- POLI 336 *Politics of Regulation*
- SOCI 304/ENST 302 *Envrionmental Issues*
- SOCI 342 *Sociology of Globalization*
- SOCI 350 *Urban Transportation*
- SOCI 367/ENST 367 *Environmental Sociology*
- SOCI 415/ENST 415 *The Environmental Movement*
- SOCI 422 *Social Autopsies: How Society Kills Us*
- SOCI 423 *Sociology of Food*

Healthcare Policy and Management

- ANTH 381 *Medical Anthropology*
- ANTH 386 *Medical Anthropology of Food and Health*
- ANTH 388/SWGS 335 *Life Cycle: A Biocultural View*
- HEAL 212 *Consumer Health and the Media*
- HEAL 222 *Principles of Public and Community Health*
- HEAL 313 *Foundations of Health Promotion*
- HEAL 350 *Understanding Cancer*
- HEAL 360 *Violence in America*
- HEAL 407 *Epidemiology*
- PHIL 310 *Philosophy of Biology*
- PHIL 313 *Philosophy of Science*
- PHIL 314 *Philosophy of Medicine*
- PHIL 315 *Ethics, Medicine, and Public Policy*
- PHIL 337 *Research and Ethics*
- PHIL 339 *Death and Dying*
- POST 430/SOSC 430 *The Shaping of Health Policy*
- SOCI 334 *Sociology of the Family*

- SOCI 345 *Medical Sociology*
- SOCI 451 *Immigration in a Global World*
- SOSC 330 *Healthcare Reform in the 50 States*
- SOCI 334/SWGS 325 *Sociology of the Family*
- SOCI 345 *Medical Sociology*
- SOCI 355 *Sociology of Drugs and Alcohol*
- SOCI 422 *Social Autopsies: How Society Kills Us*
- SOCI 423 *Sociology of Food*
- SOCI 425 *Population Health Seminar*
- SOCI 451 *Immigration in the Global World*
- SOCI 465/SWGS 465 *Gender and Health*
- SOSC 330 *Healthcare Reform in the 50 States*

International Affairs

- ECON 420 *International Trade*
- ECON 421 *International Finance*
- HIST 386 *Carter, Reagan, and the End of the Cold War*
- POLI 354 *Latin American Politics*
- POLI 355 *Government and Politics of the Middle East*
- POLI 357 *Democracy and Democratization*
- POLI 360 *Western European Democracies*
- POLI 372 *American Foreign Policy*
- POLI 373 *International Conflict*
- POLI 378 *Politics of American National Security*
- POLI 462 *Comparative Public Policy*
- POST 351 *Ethics in the Media*
- POST 352 *International Economics*
- POST 354 *Understanding Britain Today*
- POST 355 *European Government & Politics*
- POST 356 *Politics, Democracy, and Islam: Apartism and Alienation in London's East End*
- POST 357 *International Finance*
- POST 358 *International Marketing*
- POST 359 *Analyzing & Exploring the Global City: London- Modernity, Empire, and Globalization*
- POST 401 *Energy Policy*
- POST 455 *United States Middle East Policy*

Law and Justice

- CEVE 406/ENST 406 *Introduction to Environmental Law*
- ECON 239 *Law, and Economics*
- ECON 439 *Advanced Topics in Law and Economics*
- HIST 398/SWGS 398 *The Ten Most Important Supreme Court Decisions in U.S. History*
- PHIL 306 *Ethics*
- PHIL 307 *Social and Political Philosophy*
- PHIL 315 *Ethics, Medicine, and Public Policy*
- PHIL 316 *Philosophy of Law*
- PHIL 319/SWGS 319 *Feminist Philosophy*
- PHIL 331 *Moral Psychology*
- POLI 330 *Minority Politics*
- POLI 438 *Race and Public Policy*
- POST 351 *Ethics in the Media*
- POST 354 *Understanding Britain Today*
- POST 356 *Politics, Democracy, and Islam: Apartism and Alienation in London's East End*
- SOCI 301 *Social Inequality*
- SOCI 309 *Race and Ethnic Relations*
- SOCI 311 *Sociology of Deviant Behavior*
- SOCI 321 *Criminology*
- SOCI 325 *Sociology of Law*
- SOCI 329 *Multiracial America*
- SOCI 338 *Social Problems*
- SOCI 349 *Deviance, Justice, and Popular Culture*
- SOCI 355 *Sociology of Drugs and Alcohol*
- UNIV 310 *Rice Legal Lab*

Urban and Social Change

- ANTH 344 *City/Culture*
- ARCH 311 *Houston Architecture*
- ARCH 313/ENST 313 *Case Studies in Sustainable Design*
- ARCH 455 *Housing and Urban Programs: Issues in Policy*
- ECON 450 *Economic Development*
- ECON 461 *Urban Economics*
- ECON 480/ENST 480 *Environmental Economics*
- ECON 481 *Health Economics*
- ECON 483 *Public Finance*
- ECON 484 *Public Goods*
- PHIL 307 *Social and Political Philosophy*
- POLI 332 *Urban Politics*
- POLI 438 *Race and Public Policy*
- POST 351 *Ethics in the Media*
- POST 354 *Understanding Britain Today*
- POST 356 *Politics, Democracy, and Islam: Apartism and Alienation in London's East End*
- POST 359 *Analyzing & Exploring the Global City: London-Modernity, Empire, and Globalization*
- 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 315 *Population and Society*
- SOCI 437 *Sociology of Education*
- SOCI 342 *Sociology of Globalization*
- SOCI 350 *Urban Transportation*
- SOCI 451 *Immigration in a Global World*
- SOCI 470 *Inequality and Urban Life*

Energy Policy Studies

- CEVE 307/ENST 307/ESCI 307 *Energy and the Environment*
- CEVE 406/ENST 406 *Introduction to Environmental Law*
- CHBE 281/ENST 281 *Engineering Sustainable Communities*
- ECON 437/ENST 437 *Energy Economics*
- ECON 447 *Advanced Topics in energy Economics*
- ESCI 415 *Economic Geology–Petroleum*
- ESCI 107 *Oceans and Global Change*
- POST 352 *International Economics*
- POST 355 *European Government & Politics*
- POST 357 *International Finance*
- POST 359 *Analyzing & Exploring the Global City: London- Modernity, Empire, and Globalization*
- POST 401 *Energy Policy*
- POST 411/GLHT 411 *Integrated Approaches to Sustainable Development*
- POST 455 *United States Middle East Policy*

Last Revised : August 03, 2015

- Undergraduate Students
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Policy Studies

The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Policy Studies.

Last Revised : August 03, 2015

Political Science

The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Chair
Brett Ashley Leeds

Professors
John R. Alford
Paul Brace
Gilbert Morris Cuthbertson
Keith Edward Hamm
William P. Hobby
Mark P. Jones
David W. Leebron
Brett Ashley Leeds
Melissa J. Marschall
Lanny W. Martin
T. Clifton Morgan
Lyn Ragsdale
Jerrold G. Rusk
Robert M. Stein
Randolph T. Stevenson
Richard J. Stoll
Rick K. Wilson

Associate Professors
Royce A. Carroll
Songying Fang
Leslie A. Schwindt-Bayer

Assistant Professors
Justin Esarey
Sara Polo

Professors Emeriti
John S. Ambler
Earl Black
Chandler Davidson
Fred R. von der Mehden

Lecturers
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, comparative politics, and politics and international relations. Graduate study is grounded in the areas of American politics, comparative politics, and international relations.

Last Revised : April 02, 2012

Political Science

The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for BA in Political Science

Students graduating from this program will:

1. Demonstrate a basic understanding of American Politics including governing institutions and branches, political actors and organizations, political behavior and the operation of government at both the national and sub-national levels.
2. Understand government and politics in a comparative perspective.
3. Understand government and politics in a global context.
4. Study a range of methods, theory, research and models essential to understanding the scope of the discipline's scholarship, research questions, and research activities.
5. Consider questions and issues in political science through multiple disciplinary perspectives.
6. Use critical thinking skills to apply methodological, theoretical, and research knowledge to political science issues in order to begin producing independent research in the field, including completion of research projects, research papers, articles, and poster sessions.

Degree Requirements for BA in Political Science

For general university requirements, see Graduation Requirements. Students majoring in political science must complete 30 semester hours (10 courses) in the field of political science, plus six hours (two courses) of upper-level work in any of the following fields: anthropology, economics, history, philosophy, psychology, or sociology.

Political science degree requirements are as follows:

- At least one course in each of the following fields: American politics, comparative politics, international relations, theory and methods.
- At least two of the four introductory courses.
- A concentration of at least four courses in one of the following fields (these four courses must include the introductory course and a seminar - 400-level course):
  i. American politics
  ii. Comparative politics
  iii. International relations
- A statistics course offered by the Department of Political Science.
- Two seminars with different instructors.

NOTE: POLI 110 and 112 do not satisfy any requirement for the political science major

Introductory Courses

- POLI 209 *Introduction to Constitutionalism and Modern Political Thought*
- POLI 210 *American Government and Politics*
- POLI 211 *International Relations*
- POLI 212 *Introduction to Comparative Politics*

NOTE: POLI 210 is the course that meets the Texas state licensing requirements in political science for teachers.

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 in the Department of Political Science, and a student may not take more than one 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. The faculty member supervising the thesis must have a full-time appointment in the Department of Political Science. 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. During the second semester, students write their honors thesis, which also must meet with committee approval. Students may not combine the two honors courses into one semester. Those who successfully complete the honors program may substitute it for one of the seminars required for the major. Failure to complete the second semester of the honors program will result in loss of credit for the first semester of the honors program.

Alternatively, students may earn honors in political science by successfully completing the Rice University Honors Program (RUSP), HONS 470/471. In addition to successfully completing this program, the student must complete a research project in political science, and the student must be supervised by a full-time faculty member in the political science department. See also Honors Programs.

Last Revised : August 03, 2015

Political Science

The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for MA and PhD in Political Science

Students graduating from this program will:

1. Demonstrate advanced knowledge of theoretical and empirical research in two of the following three sub-fields of Political Science: American politics, comparative politics, and international relations.
2. Learn and apply social science research design and methodologies, including advanced statistical techniques.
3. Demonstrate the ability to communicate their research effectively through multiple mediums including scholarly writing, oral presentation, and poster sessions.
4. Demonstrate their competence as political scientists through research, teaching, and professional development activities.

Degree Requirements for MA and PhD in Political Science

For general university requirements, see Graduate Degrees.

Requirements for the PhD:

Coursework. A student must complete successfully 42 semester hours of advanced coursework. This must include core courses in the major and minor field, three courses beyond the core in the major field, two courses beyond the core in the minor field, POLI 500, POLI 501, and three additional courses that meet the advanced research tools requirement.

Exams. A student must pass the Basic Tools Exam, the Midterm Review, three Preliminary Examinations (a general exam in the major field, a subfield exam in the major field, and a general exam in the minor field), a dissertation prospectus defense, and a dissertation defense.

Maintenance of Good Standing. A student must remain in good standing with the university and with the department. Remaining in good standing with the department requires a GPA of at least 3.33, satisfactory evaluations for work as a research and/or teaching mentee, and satisfactory participation in professional development activities.

For more details on these requirements see the department website.

Requirements for the MA:

The Master of Arts degree requires 30 semester hours of course work, all of which must be taken at the graduate level (500 level or above except with permission of the Director of Graduate Studies), and the completion of two research papers in seminars taken over the course of study. A minimum GPA of 3.0 is required for awarding the M.A.

The Political Science Department requires that not more than three years elapse between the time the student is admitted to the graduate program and the completion of the M.A. degree, unless an extension is approved by the Graduate Studies Committee.

Last Revised : August 03, 2015

Political Science

The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Political Science.

Last Revised : August 03, 2015

Psychology

The School of Social Science

Chair
David W. Wetter

Professors
Michael D. Byrne
James L. Dannemiller
Michelle "Mikki" R. Hebl
Randi C. Martin
Stephan J. Motowidlo
Frederick L. Oswald
James R. Pomerantz
Eduardo Salas

Associate Professors
Margaret E. Beier
David M. Lane

Assistant Professors
Christopher P. Fagundes
Simon J. Fischer-Baum
Philip T. Kortum
Jessica M. Logan
Tatiana T. Schnur
Anton J. Villado

Professors Emeriti
Kenneth R. Laughery
David J. Schneider

Associate Professor Emerita
Sarah A. Burnett

Senior Faculty Fellow
Cho Lam

Lecturers
Roberta M. Diddel
Özge Gürcani
D. Colette Nicolaou
Sandra V. Parsons
Carissa A. Zimmerman

Professors, Joint Appointments
Jennifer M. George
H. Albert Napier
Rick K. Wilson
Jing Zhou

Associate Professors, Joint Appointments
Richard R. Batsell
D. Brent Smith

Adjunct Professors
Dora E. Angelaki
John H. Byrne
John M. Cornwell
J. David Dickman
P. Richard Jeanneret
Harvey S. Levin
Katherine A. Loveland
Lynn M. Maher
John E. Overall
Deborah A. Pearson
Anne Bibiana Sereno
Melinda A. Stanley
Kevin C. Wooten
Anthony A. Wright

Adjunct Associate Professors
Michael S. Beauchamp
Timothy M. Ellmore
Gerri R. Hanten
S. Morton McPhail
S. Camille Peres
Angela L. Stotts

Adjunct Assistant Professors
Janice Bordeaux
Roberta M. Diddel
Harold K. Doerr
Ronald E. Fisher
Mary R. Newsome
Gary M. Oppenheim
Mary C. Portillo

Betty M. Sanders
Mihriban Whitmore
Rachel T. Winer

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 several fields of psychology, as well as in medicine, law, business, or education.

Program emphasis in graduate study is on doctoral training. An important feature of our doctoral program is its strong research orientation. Students are expected to spend most of their time actively engaged in research and are expected to acquire a high level of research competence. Faculty research interests and areas of specialization for graduate students include: cognitive psychology (basic mental activities such as perceiving, attending, remembering, learning, judging, verbalizing, and imagining), systems and cognitive neuroscience (understanding the relationship between the human brain and higher forms of behavior), human factors/human-computer interaction (the scientific discipline concerned with the understanding of interactions among humans and other elements of a system and the application of theories, principles, data, and other methods of design in order to optimize human well-being and overall system performance), industrial/organizational psychology (human behavior in organizational and work situations), and training (broad interdisciplinary area drawing on cognitive psychology, industrial/organizational psychology, and educational psychology).

Last Revised : August 03, 2015

Psychology

The School of Social Science

Program Learning Outcomes for BA in Psychology

Students graduating from this program will:

1. Develop a broad knowledge base in psychology and its content domains. They will be able to describe key concepts, principles, and overarching themes in psychology.
2. Understand research methods, and develop and apply research skills. They will be able to explain different research methods used by psychologists and design and conduct scientific studies to address psychological questions using appropriate research methods. Students will follow the APA Ethics Code in the treatment of human and nonhuman participants in the design, data collection, interpretation, and reporting of psychological research. Students will be able to generalize research conclusions appropriately based on the parameters of particular research methods.
3. Use critical thinking in psychological science. They will use scientific reasoning to interpret psychological phenomena and evaluate the appropriateness of conclusions derived from psychological research.
4. Understand the applications of psychology. They will describe major areas (e.g., clinical, cognitive, counseling, human factors, industrial/organizational, school) and emerging applied areas (e.g., health, forensics, media) of psychology. They will identify appropriate applications of psychology in solving problems, such as: the pursuit and effect of healthy lifestyles; the origin and treatment of abnormal behavior; psychological tests and measurement; psychology-based interventions in areas such as clinical, cognitive, counseling, educational, human factors, and industrial/organizational psychology; and the resolution of interpersonal and intercultural conflicts. Students will articulate how psychological principles can be used to explain social issues and inform public policy. Students will apply psychological concepts, theories, and research findings as these relate to everyday life.

Degree Requirements for BA in Psychology

For general university requirements, see Graduation Requirements. Students majoring in psychology must complete 47 semester hours in departmental courses. All majors must take the following courses:

CORE COURSES (17 credit hours)

- 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 - Psychology*

SELECTED SUBSTANCE COURSES (30 credit hours)

In addition to the 17 hours of core courses, majors must take an additional 30 hours of other courses that are to be selected from the psychology curriculum. Students may take up to 12 credit hours of PSYC 485/488 (*Supervised Research/Reading*) toward the major, but only 3 of the 12 hours may be from PSYC 488.

No substitutions or transfer credits are allowed for PSYC 339 or 340.

Once enrolled at Rice, students must obtain approval from the psychology department to transfer courses taken at another college or university. Students are strongly encouraged to take all of their core courses before taking the upper level courses that comprise their 30 hours of substance courses. Students should take PSYC 339 and PSYC

340 preferably by the end of their sophomore year.

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 the fall of their 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 of 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. Detailed information about the honors program is available from the instructor of the course or the department website.

Last Revised : August 03, 2015

Psychology

The School of Social Science

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for MA and PhD in Psychology

Students graduating from this program will:

1. Describe key concepts, principles, and overarching themes in psychology and develop a comprehensive knowledge of scientific theories and empirical findings in a specialty area.
2. Explain different research methods used by psychologists, and design and conduct studies to address psychological questions using appropriate research methods. They will analyze data from any of a wide variety of research designs using appropriate univariate, multivariate, and/or graphical methods. Students will demonstrate that they follow the APA Ethics Code in the treatment of human and nonhuman participants in the design, data collection, interpretation, and reporting of psychological research.
3. Apply scientific reasoning to interpret psychological phenomena. They will be able to identify methodological and statistical problems in published research and evaluate the appropriateness of conclusions derived from psychological research.
4. Write a paper that clearly summarizes previous research, details methods used in the research, presents statistical analyses, and relates the findings to previous research and theory. They will communicate results—through writing, tables, and graphs—that clearly and accurately reflect research findings. Students will present their research and answer questions in a formal setting.

Degree Requirements for MA and PhD in Psychology

For general university requirements, see Graduate Degrees. For both MA and PhD degrees, students must complete a research thesis, including a public oral defense. Required coursework is determined by the student's Research Interest Group (cognitive, cognitive neuroscience, human factors/human-computer interaction, industrial/organizational, or training). Students must complete an admission-to-candidacy procedure to establish their expertise in their chosen specialty. Competence in a foreign language is not required. For more information regarding course requirements for each Research Interest Group, please see the Department of Psychology Graduate Program.

Research Interest Groups (RIGs)

- **Cognitive:** The Cognitive RIG seeks an understanding of such basic mental activities as perceiving, attending, remembering, learning, judging, verbalizing, and imagining.
- **Systems & Cognitive Neuroscience:** The Systems and Cognitive Neuroscience RIG investigates the relationship between the human brain and higher forms of behavior, including sensation, perception, attention, memory, and language.
- **Human Factors/Human-Computer Interaction:** The Human Factors/Human-Computer Interaction RIG investigates interactions among humans and other elements of a system. We are especially concerned with the interaction of humans with computer systems.
- **Industrial/Organizational Psychology:** The Industrial and Organizational (I/O) RIG studies human behavior in organizational and work situations. Topics include motivation at work, the aging workforce, discrimination in the workplace, job performance, and team training.
- **Training**: Training is a broad interdisciplinary area drawing on cognitive psychology, industrial/organizational psychology, and educational psychology. Our current interests include the use of interactive technology in training, the role of individual differences in cognitive ability, and the use of games in training.

The program has a strong research orientation, and whether or not students plan to pursue a research career, they are expected to spend a large portion of their graduate years actively engaged in research.

Last Revised : August 05, 2015

Psychology

The School of Social Science

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Psychology.

Last Revised : August 03, 2015

Sociology

The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

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Stephen L. Klineberg
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James Elliott
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Sergio Chavez
Justin Denney

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Robert Werth

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David S. Buck
Keila Natilde Lopez
Michael O. Emerson
Roland B. Smith, Jr.

Adjunct Associate Professor
Robin Paige

Adjunct Lecturer
Kirstin Matthews

Degrees Offered: BA, MA and PhD

Sociology is a branch of the social sciences that evolved in response to the revolutionary social changes of the 19th century, such as industrialization and urbanization, that ushered in the modern era. Sociology's founding fathers include Emile Durkheim, Max Weber, Karl Marx, Herbert Spencer, and George Herbert Mead. They explored how social relationships and interactions affect individuals and large-scale social institutions, including religion, government, and education. Today, sociologists use qualitative techniques, including ethnography; participant observation; and case studies of a variety of social phenomena, processes, and problems as methods for exploring the meaning of social life and culture to those who live it, and in building inductive theory. Quantitative techniques engage in hypothesis testing of established theories and concepts, using techniques that include experimental designs, survey questionnaires, and network analysis. Sociology as a discipline includes "ways of knowing" that link it closely to methods of the natural sciences, and more interpretive and critical perspectives that are closer to scholarship in the humanities.

The Sociology department does not have a terminal MA program, and students seeking only a master's degree will not be admitted. However, the Master of Arts degree is earned as a student progresses toward the PhD.

Last Revised : August 11, 2014

Sociology

The School of Social Sciences

Program Learning Outcomes for BA in Sociology

Students graduating from this program will:

1. Understand the functions of theory and its use in the social sciences. Students will be familiar with key social theorists in the field. Students will understand key theoretical concepts and be comfortable using them beyond the classroom.
2. Gain richer understanding of the social world, including class, race, gender, ethnicity, education, family, occupation, deviancy, health, and global citizenship as well as how the human social world impacts its environment.
3. Apply sociological knowledge and training to understand theory and policy oriented around issues of human well-being in the US and globally, including how to understand the relationship between inequality and factors like race, class, gender, and education.
4. Apply methodological, theoretical, and research skills to carry out empirical research projects.

Degree Requirements for BA in Sociology

Eleven courses are required for the major in sociology (at least 33 semester hours). Ordinarily, these courses will be distributed as follows. Any exceptions to these requirements must be approved by the Major/Minor Advisor and/or chair of the Undergraduate Advising Committee Chair.

A SURVEY OF THE FIELD

- SOCI 101 *Introduction to Sociology*

THEORETICAL APPROACHES

Students are required to take at least one course that offers a systemic analysis of alternative theoretical perspectives.

- SOCI 380 *Social Theory*

RESEARCH METHODS

A) This course is highly recommended, and must be taken to meet the requirements of the major.

- SOCI 381 *Research Methods:* This course provides hands-on experience with both the quantitative and qualitative methods of sociological research. Sociology majors who are thinking about doing Honors research are urged to take this course no later than the fall semester of their junior year.

B) Students are required to take this course:

- SOCI 382 *Social Statistics:* This course provides students with the skills they need to analyze quantitative data in order to answer sociological research questions and to test hypotheses. Students learn sample description, sampling and probability, sampling theory, and how to make inferences from samples to populations. They learn to apply common univariate statistics for description, and bivariate and multi-variate statistics for testing relationships. Because most statistical analysis is done with the aid of computers, this course also focuses on common statistical packages.

AREAS OF SUBSTANTIVE INTEREST
The remaining courses (to reach a minimum total of eleven courses in all) should be chosen from the list of courses offered.

Honors Program

The Honors Program is designed to provide sociology majors with the opportunity to sharpen their research skills and deepen their understanding of the discipline through a two-to-three semester program of directed independent research and writing. The program also offers the opportunity for formal recognition, through Departmental Honors, of those undergraduates who have demonstrated unusual competence in sociology by successfully completing a sustained independent research project. Small grants for honors thesis research are generously supported by the Chandler and Ian Davidson Scholars Fund as well as the Walter Hall Scholars program.

Eligibility
To be eligible for the program, students must have:

- Taken at least four sociology courses beyond SOCI 101 *Introduction to Sociology*, including SOCI 381 *Research Methods*. If their project requires statistical analysis, students should also complete SOCI 382 *Social Statistics* before beginning their research.
- An A- average in all sociology courses taken.

Application Process

1. During the fall and early spring semester of their junior year, students are invited to consult with tenured and tenure-track members of the faculty about a potential thesis topic. All students must have at least one tenured or tenure-track faculty member in the sociology department as their thesis chair. The student must submit a written description of their proposed research project to the chosen faculty member for approval of their topic and review of their proposal, as well as secure agreement of the chosen faculty member(s) to serve as their thesis committee chair.
2. Once a thesis supervisor has been identified, the student must submit a written description of their proposed research project to the departmental undergraduate advisor. The proposal should be 2-3 pages in length, double-spaced, and is due by April 1st of their junior year. It should include a signed statement from the chosen faculty member agreeing to serve as their chair advisor.
3. The sociology faculty will vote on the merits of the proposed thesis project at their monthly faculty meeting in mid-April. If approved, the student may begin work on their thesis immediately, or at a start time agreed upon with their thesis supervisor (including summer semester, if desired).

Program

Students in the Honors Program register for two successive semesters in *Directed Honors Research* (SOCI 492 and 493). An honors thesis typically involves much discussion over both semesters between the student and their tenure or tenure-track advisor. Students should meet early in the process to agree on ground rules for the project, to choose the other members of the thesis committee (made up of one additional faculty member, who serves as a reader and ad-hoc advisor), and to set up a schedule for discussions and submission of written work. It is the department's experience that students who work alone without much consultation with faculty are less likely to succeed in their project than students who maintain close contact with their advisor and the department. Students are also encouraged to include other members of the committee in discussion of the thesis, especially as the project nears completion, so that their feedback can be incorporated before the final draft of the project is submitted.

Students normally begin by conducting a thorough review of the relevant literature, formulating hypotheses that grow out of the literature review, and proposing a research design that clearly describes how the data for the project are to be collected and analyzed. The research itself is usually carried out in the fall semester of the senior year (and sometimes in the summer following the junior year), and is analyzed, written up, and defended as a completed Honor's Thesis during the spring semester of the senior year. (Students are encouraged to examine several previously written theses, which are available in the sociology department.)

In addition to the student's primary advisor, the thesis is read and evaluated by the faculty members, sometimes from other departments, who make up the student's thesis committee.

Program Timeline

- A first draft of the final thesis must be turned in to the committee members no later than February 1st of the student's senior year.
- After receiving feedback on the project, the student will have until the last Monday in March to submit a final

draft of the senior thesis to their committee.
- A short presentation (10-15 minutes) of the final thesis project must be given to the full sociology faculty by mid-April. Faculty will vote on whether to grant Departmental Honors to the student at the conclusion of their presentation.

Course Requirements for the Minor in Sociology

Six classes are required for a minor in sociology (18 semester hours).

REQUIRED COURSES

- SOCI 101 *Introduction to Sociology*
- One methods course (SOCI 381) **OR** theory course

ELECTIVES

Four electives (12 credit hours), including at least one 400-level class.

Last Revised : August 06, 2015

Sociology

The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Program Learning Outcomes for MA and PhD in Sociology

Students graduating from this program will:

1. Understand and apply the role of theory in sociology.
2. Demonstrate understanding and application of both qualitative and quantitative sociological methods.
3. Demonstrate expertise in at least two specialty areas within sociology.

Degree Requirements for MA and PhD in Sociology

The PhD program is a five-year degree program. Students will normally obtain a master's degree after two years of study and research, and will usually need an additional three years to complete the requirements for a PhD. The course work is sequenced and will typically be completed in 2½ years. By this point, students will be required to have written their Masters thesis and completed their Masters degree. This leaves one semester to take the comprehensive exams and two years to complete the dissertation. Each student will attend a monthly Teaching and Professionalization Workshop that the department will hold throughout the academic school year.

The Sociology department does not admit students seeking only a masters degree. The Master of Arts degree is earned as a student progresses toward the PhD. Students who currently hold a Master's Degree are welcome to apply. However, PhD students must complete four semesters of residency and coursework at Rice University. At the department's discretion, some credits may transfer from other graduate programs.

Admission Policy

Students are admitted on a competitive basis. Admitted students must have a Baccalaureate degree (BA or BS) or equivalent, a minimum 3.0 (B) GPA in undergraduate work, and the intent to complete a PhD in sociology. We consider GRE scores, undergraduate GPA, letters of recommendation, writing samples, a personal essay, and professional experience when making admission decisions for the PhD program. We strongly encourage applications from women and minority groups.

Required Courses

- SOCI 526 *Contemporary Social Theory*
- SOCI 541 *Qualitative Research Methods*
- SOCI 580 *Classical Social Theory*
- SOCI 581 *Quantitative Research Methods*
- SOCI 582 *Quantitative Data Analysis I*
- SOCI 583 *Quantitative Data Analysis II*
- SOCI 596 *Statistical Computer Programming* (1 credit hour)
- SOCI 610 *Professionalization Workshop* (1 credit hour)
- SOCI 611 *Teaching Practicum* (1 credit hour)
- SOCI 700 *Thesis Seminar*

The sequence of courses will normally be as follows:

First Semester

SOCI 580 *Classical Social Theory* **or** SOCI 526 *Contemporary Social Theory*
- SOCI 581 *Quantitative Research Methods* **or** SOCI 541 *Qualitative Research Methods*
- SOCI 596 *Statistical Computer Programming*
- Elective 1
- SOCI 610 *Professionalization Workshop*

Second Semester

- **SOCI 582 *Quantitative Data Analysis I* and/or SOCI 541 *Qualitative Research Methods***
- **Elective 2**
- **Elective 3**
- **SOCI 610 *Professionalization Workshop***

SOCI 582 SOCI 541

Third Semester

- SOCI 526 *Contemporary Social Theory* **or** SOCI 580 *Classical Social Theory*
- SOCI 583 *Quantitative Data Analysis II*
- SOCI 541 *Qualitative Research Methods* (if not already taken)
- SOCI 610 *Professionalization Workshop*

Fourth Semester

- SOCI 700 *Thesis Seminar*
- Electives
- SOCI 611 *Teaching Practicum*
- SOCI 610 *Professionalization Workshop*

Semesters 5-10

- Electives, Comprehensive Exams, and Dissertation

Last Revised : August 03, 2015

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Sociology

The School of Social Sciences

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Course Listings

For the most current course offerings, please click here: Sociology.

Last Revised : August 03, 2015

Sport Management

The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

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Associate Professors
James G. Disch

Professor in the Practice
Tom Stallings

Adjunct Professors
Daryl Morey
George Postolos

Lecturers
Diane Crossey

Degrees Offered: BA

Sport Management is an interdisciplinary field of study that draws from a wide range of academic disciplines, including business, management, law, and communication. The thoroughly interdisciplinary emphasis of the sport management major aims to educate students in the skills and theory necessary to assume leadership roles both in and out of the sport industry.

Career preparation for leadership and entrepreneurial positions is the ultimate goal of the sport management major at Rice. Students will acquire a solid academic and practical foundation and thus will be competitive for opportunities that include entering the sport business industry or applying to the country's best law and business schools.

Last Revised : August 03, 2015

Sport Management

The School of Social Sciences

Program Learning Outcomes for BA in Sport Management

Students graduating from this program will:

1. Develop and hone professional skills through classroom learning and experiential learning through a steady progression of internships with added responsibilities.
2. Develop a diverse set of fundamental principles and skills, including skills in business, finance, and marketing used for producing a sporting event from beginning to end (from marketing and media promotion, to budget and sales, to execution and post-event evaluation).
3. Demonstrate an understanding of the sports industry in relationship to the legal sector as well as the broader relationship between the industry and society.
4. Articulate the marketing decisions executed within the sport industry.
5. Apply skills and strategies taught by industry professionals to execute a sales project with measurable goals.

Degree Requirements for BA in Sport Management

For general university requirements, see Graduation Requirements. For the BA degree, students majoring in sport management must complete a minimum of 45 credit hours.

CORE REQUIREMENTS (27 credit hours)

- SMGT 260 *Introduction to Sport Management*
- SMGT 276 *Sport Management Practicum*
- SMGT 360 *Sales and Revenue Generation in Sport*
- SMGT 362 *Sport Marketing*
- SMGT 364 *Sport Law*
- SMGT 366 *Event Management and Customer Service*
- SMGT 376 *Sport Management Internship I*
- SMGT 377 *Sport Management Internship II*
- SMGT 466 *Sport Public Relations*

RESEARCH REQUIREMENT (three credit hours)

- KINE 319 *Introduction to Measurement and Statistics*
- STAT 280 *Elementary Applied Statistics*

VERBAL COMMUNICATION REQUIREMENT (three credit hours)

- HUMA 201 *Public Speaking*
- HUMA 308 *Business and Professional Speaking*
- HUMA 309 *Argumentation and Debate*

WRITTEN COMMUNICATION REQUIREMENT (three credit hours)

- LEAD 321 *Leadership Communication*

ELECTIVES (nine credit hours)

- SMGT 350 *Sport Ethics*
- SMGT 361 *Sport Finance*
- SMGT 365 *Sport Mediation*
- SMGT 368 *Issues in Contemporary Sport*
- SMGT 405 *Research in Sport Management*
- SMGT 415 *Theories of High Level Performance*
- SMGT 430 *Introduction to Sport Analytics*
- SMGT 460 *Business Analysis in Sport*
- SMGT 470 *Sport Management Seminar*
- SMGT 490 *Seminar in Sport Analytics*
- ECON 200 *Microeconomics*
- ECON 301 *Microeconomics II*
- MANA 404 *Management Communications*
- BUSI 296 *Business Communications*
- BUSI 305 *Financial Accounting*
- BUSI 310 *Leading People in Organizations*
- BUSI 343 *Financial Management*
- BUSI 380 *Marketing*
- BUSI 390 *Strategic Management*

Description

Sport Management is an interdisciplinary field of study that draws from a wide range of academic disciplines, including business, management, law, and communication. 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 of the sport management major aims to educate students in the skills and theory necessary to assume leadership roles both in and out of sport.

Career preparation for leadership and entrepreneurial positions is the ultimate goal of the sport management major at Rice. Students will acquire a solid academic and practical foundation and thus will be competitive for opportunities that include entering the sport business industry or applying to the country's best law and business schools.

Students will complete a minimum of two internships prior to graduation, often with one of the professional teams in Houston (Rockets, Astros, Texans, Dynamo, etc). Students also will receive networking and out-of-class developmental training, as these play a significant role in obtaining high-profile positions in collegiate and professional sports.

Rice is one of a very small number of universities that has received "program approval status" from the North American Society of Sport Management. This is the highest level of academic achievement available in the field.

Students are encouraged to go to www.sport.rice.edu for the latest information about the major.

Last Revised : August 03, 2015

Sport Management

The School of Social Sciences

Department Info | Undergraduate Requirements | Graduate Requirements | Course Listings

Course Listings

For the most current course offerings, please click here: Sport Management.

Last Revised : August 03, 2015

Course Catalog: 2015-2016

Course/Title: Match ALL Words Search

View Full Academic Year: 2015-2016 Full Course Catalog: 2015-2016 Home Search Fall Courses Search Spring Courses

AFSC	Air Force Science
ARCR	Americas Research Center
AMCI	Ancient Mediterranean Civil
ANTH	Anthropology
APPL	Applied Physics
ARAB	Arabic
ARCH	Architecture
ASIA	Asian Studies
ASTR	Astronomy
BIOC	Biochemistry & Cell Biology
BIOE	Bioengineering
BUSI	Business
LEAD	Center for Civic Leadership
CHBE	Chemical & Biomolecular Eng
CHEM	Chemistry
CHIN	Chinese
CEVE	Civil and Environmental Eng
CLAS	Classical Studies
CLIC	Cntr Lang & Intercultural Comm
CSCI	Cognitive Sciences
COLL	College Course
COMM	Communication
CAAM	Comp. & Applied Mathematics
COMP	Computer Science
DSRT	Dissertation/Thesis Submission
ESCI	Earth Science
EBIO	Ecology & Evolutionary Biology
ECON	Economics
EDUC	Education
ELEC	Electrical & Comp. Engineering
EMSP	Emergency Med Studies/Practice
ENGI	Engineering
ENGL	English
ENST	Environmental Studies
EMBA	Executive Management
FILM	Film
FWIS	First-Yr Writing Intensive Sem
FREN	French Studies
FSEM	Freshman Seminar
GERM	German
GLBL	Global Affairs
GLHT	Global Health Technologies
GREE	Greek
HEAL	Health Sciences
HEBR	Hebrew
HIND	Hindi
HIST	History
HART	History of Art
HONS	Honors Program
HUMA	Humanities
HURC	Humanities Research Center
ITAL	Italian Language and Culture
JAPA	Japanese
JWST	Jewish Studies
KECK	Keck Center
KINE	Kinesiology
KORE	Korean
LATI	Latin
LASR	Latin American Studies
MLSC	Liberal Studies Core/Capstone
LPCR	Lifetime Phys Activity Credit
LPAP	Lifetime Phys Activity Program
LING	Linguistics
MGMP	MBA for Professionals-Evening
MGMW	MBA for Professionals-Weekend
MGMT	Management
MANA	Managerial Studies
MSNE	Materials Science & NanoEng
MATH	Mathematics
MECH	Mechanical Engineering
MDEM	Medieval/Early Modern Studies
MICO	Mgmt Integrated Crse Offering
MILI	Military Science

MUSI	Music
NSCI	Natural Sciences
NAVA	Naval Science
NEUR	Neuroscience
PHIL	Philosophy
FOTO	Photography
PHYS	Physics
POST	Policy Studies
POLI	Political Science
PLST	Politics, Law, Social Thought
PORT	Portuguese
PSYC	Psychology
RELI	Religion
RUSS	Russian
SOSC	Social Sciences
SOCI	Sociology
SPAN	Spanish
SMGT	Sport Management
STAT	Statistics
SSPB	Systems/Synthetic/Phys Biology
THEA	Theatre
TIBT	Tibetan
UNIV	University Courses
ARTS	Visual Arts
SWGS	Women, Gender, & Sexuality

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Public Affairs	B.J. Almond
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Recreation Center	Tina Villard
Registrar	David Tenney
Research Computing and Cyberinfrastructure	Jan Odegard
Risk Management	Renee Block
Sponsored Research	Melinda Cotten
Strategic Initiatives & Digital Education	Caroline Levander
Student Center and Student Activities	E. Kate Abad
Student Financial Services	Anne Walker
Student Health Services	Stacy Ware
Student Judicial Programs	Lisa Zollner
Student Wellbeing	Kate Noonan
Study Abroad	Beata Loch
Systems, Architecture & Infrastructure and Cloud Strategy	Barry Ribbeck
Telecommunications	Keith Kostelecky
Title IX Coordinator	Russell Barnes
Transportation Office	Eugen Radulescu
University Relations	Greg Marshall

College Masters

Baker College	Ivo-Jan and Rosemary van der Werff
Brown College	José Aranda and Krista Comer
Duncan College	Brandy and Caleb McDaniel
Hanszen College	Klaudia and Paul Brace
Jones College	Melanie and Michel Achard
Lovett College	Jose and Mayra Onuchic
Martel College	Beata and Ted Loch-Temzelides
McMurtry College	Margaret Beier and Chris Stickney
Sid Richardson College	Ken Whitmire
Wiess College	Alexander X. and Jeanette Byrd
Will Rice College	Bridget Gorman and Mike Reed

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Cronin, Thomas W., 2011. Adjunct Professor of Electrical and Computer Engineering
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Crowell, Steven G., 1983. Joseph and Joanna Nazro Mullen Professor of Philosophy, Professor of Philosophy, Department Chair of Philosophy

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Cruz, Miguel, 2007. Adjunct Assistant Professor of Bioengineering
BS (1983) University of Puerto Rico; PhD (1989) University of Puerto Rico–School of Medicine

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Cunha Flávio, 2014. Associate Professor of Economics
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Dabaghian, Yuri A., 2010. Assistant Professor of Computational and Applied Mathematics
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Dabak, Anand, 2003. Adjunct Associate Professor of Electrical and Computer Engineering
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Dabney, James B., 2000. Adjunct Professor of Mechanical Engineering
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Damanik, David, 2006. Robert L. Moody, Sr. Chair of Mathematics, Professor of Mathematics, Department Chair of Mathematics
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Damjanović, Danijela, 2009. Associate Professor of Mathematics
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Danbom, Stephen, 2001. Adjunct Professor of Earth Science
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Dane, Erik, 2007. Associate Professor of Management
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Dannemiller, James L., 2004. Lynette S. Autrey Professor of Psychology
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BS (1991) California Institute of Technology; PhD (1994) University of California–Berkeley

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DeAngelis, David, 2012. Assistant Professor of Finance
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Delk, Nikki, 2012. Faculty Fellow of Biochemistry and Cell Biology
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BS (2000) Morningside College; MA (2002) University of Montana–Missoula; PhD (2010) University of Colorado–Boulder

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DeVore, Ronald A., 2009. Adjunct Professor of Electrical and Computer Engineering
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Dick, Andrew J., 2007. Assistant Professor of Mechanical Engineering
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Dick, Christopher H., 2005. Adjunct Professor of Electrical and Computer Engineering
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Dickman, J. David, 2012. Adjunct Professor of Psychology, Director of the Neuroscience Program
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Diddel, Roberta M., 1985. Adjunct Assistant Professor and Lecturer of Psychology
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Diehl, Michael, 2005. Associate Professor of Bioengineering and of Chemistry
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Dixon, Richard A., 2003. Adjunct Professor of Biochemistry and Cell Biology
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Dodds, Stanley A., 1977. Associate Professor of Physics and Astronomy, Associate of Wiess College
BS (1968) Harvey Mudd College; PhD (1975) Cornell University

Doerr, Harold K., 2004. Adjunct Assistant Professor of Psychology
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Dugan, Brandon, 2004. Associate Professor of Earth Science
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Dunham, James F., 2001. Professor of Viola and Chamber Music
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BFA (1986), BArch (1987) Rhode Island School of Design; MAUD (1989), DDes (1992) Harvard University

El-Gamal, Mahmoud A., 1998. Chair of Islamic Economics, Finance, and Management; Professor of Economics; Professor of Statistics
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Emami, Maryam, 2010. Lecturer of French
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BS (1996) Virginia Polytechnic Institute and State University; DPhil (2000) University of Oxford

Emden, Christian, 2003. Professor of German Studies
BA (1995), BA (1996) University of Konstanz; MPhil (1997), PhD (2000) University of Cambridge

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BS (1964) University of California at Los Angeles; PhD (1968) Harvard University

Engelhardt Jr., Hugo Tristram, 1982. Professor of Philosophy
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Englebretson, Robert, 2000. Associate Professor of Linguistics
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BSE (1981), MS (1982) Arkansas State University; PhD (1986) Texas A&M University

Eraslan, Hülya, 2014. Professor of Economics
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Ernst, Philip A., 2014. Assistant Professor of Statistics
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Esarey, Justin, 2012. Assistant Professor of Political Science
BA and BS (2002) Bowling Green State University; MS (2004) Florida State University; PhD (2008) Florida State University

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BS (1973) Valparaiso University; MS (1977) Purdue University; PhD (1984) University of Texas– Austin

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Fang, Songying, 2009. Assistant Professor of Political Science
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Fang, Zheyu, 2013. Adjunct Assistant Professor of Electrical and Computer Engineering
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Fanger, Claire, 2009. Assistant Professor of Religion
BA (1979) Reed College; MA (1983) Boston University; MA (1987), PhD (1994) University of Toronto

Farach- Carson, Mary C., 2009. Ralph and Dorothy Looney Professor of Biochemistry and Cell Biology and Bioengineering, Vice Provost for Translational Biosciences (on leave)
BS (1978) University of South Carolina; PhD (1982) Medical College of Virginia/Virginia Commonwealth University

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Ferris, David, 1998. Associate Professor of Musicology
BM (1982) New England Conservatory; PhD (1993) Brandeis University

Festa, Elizabeth A., 2007. Lecturer in the Program in Writing and Communication
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Fette, Julie, 2005.Associate Professor of French Studies
BS (1989) Georgetown University; MA (1994) New York University; DEA (1995) Ecole Normale Superieure & Ecole des Hautes Etudes en Science; M Phil (1997) New York University; Doctorat (2001) Ecole des Hautes Etudes en Sciences; PhD (2001) New York University

Few Jr, Arthur A., 1970. Research Professor in Physics and Astronomy
BS (1962) Southwestern University; MBS (1965) University of Colorado; PhD (1969) Rice University

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BMus (1971) Oberlin College; MMus (1977) New England Conservatory of Music

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BMus (1971) Oberlin College

Fischer-Baum, Simon J., 2012. Assistant Professor of Psychology
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Fisher, Ronald E., 2002. Adjunct Assistant Professor of Psychology
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Fleishacker, Alan, 2003. Senior Lecturer of Architecture
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Fleisher, Jeffrey B., 2007. Associate Professor of Anthropology
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Fleming, Jefferson D., 1993. Fayez Sarofim Vanguard Professor of Finance
BA (1987) Cornell College; MBA (1989), PhD (1993) Duke University

Floyd, Eric, 2014. Assistant Professor of Accounting
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B. of Eng. (2000) The Cooper Union for the Advancement of Science and Art; PhD (2006) University of California, Santa Barbara

Fox, David Stephen, 1990. Lecturer of Architecture
BA (1973), BArch (1975) Rice University

Fox, Jeremy, 2015. Associate Professor of Economics
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Fox, Robert O., 2003. Adjunct Professor of Biochemistry and Cell Biology
BS (1976) University of Pittsburgh; MPhil (1978), PhD (1981) Yale University

Franklin, Amy, 2009. Adjunct Assistant Professor of Cognitive Sciences
BS (1999) University of Houston; MA (2007), PhD (2007) University of Chicago

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BSEE (1971) University of Central Florida; MSEE (1977) Southern Methodist University; MBA (1982) Texas Tech University

Fraser, Charles D., 2005. Adjunct Professor of Bioengineering
BA (1980) University of Texas at Austin; MD (1984) University of Texas Medical Branch– Galveston

French, Christopher, 1999. Artist Teacher of Cello Orchestral Repertoire
BMus (1982) North Park University

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BA (1991) Central China Normal University; MA (1999) Beijing University of Aeronautics and Astronautics; MBA (2002) Miami University

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BS (1971), MS (1973) Nagoya University; PhD (1977) Harvard University

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Gao, Zhiyong, 1986. Associate Professor of Mathematics
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George, Jennifer M., 1999. Mary Gibbs Jones Professor of Management, Professor of Psychology
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BA (1970) Florida Presbyterian College; MA (1971) Tulane University; PhD (1985) Columbia University

Geurts, Franciscus Johannes Maria, 2008. Associate Professor of Physics and Astronomy
Propedeuse Physics (1988), MS (1992), PhD (1998) Universiteit Utrecht, The Netherlands

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B.Music Education, Northwestern University, MM (1969) University of Maryland-College Park

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BS (1985) Pennsylvania State University; MS (1987) Carnegie Mellon University; PhD (1991) University of Illinois

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Gibson, Brian, 1996. Professor in the Practice of Kinesiology
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Gilbertson, Michelle, 2009. Wiess Instructor of Chemistry
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Gillis, Malcolm, 1993. University Professor, Ervin Kenneth Zingler Professor of Economics, Professor of Management
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Glassberg, Jeffrey, 2007. Adjunct Professor of Ecology and Evolutionary Biology
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Glick, William H., 2005. Dean of the Jesse H. Jones Graduate School of Business, H. J. Nelson III Professor of Management
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Glowinski, Roland, 1986. Adjunct Professor of Computational and Applied Mathematics
Ecole Polytechnique (1958); Ecole Nationale Superiewe das Telecommunications; PhD (1970) University of Paris

Goetz, Rebecca A., 2006. Adjunct Associate Professor of History, Associate of Baker College
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Goldman, Ronald N., 1990. Professor of Computer Science
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Goldsmith, Kenneth, 1991. Professor of Violin
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Gonzalez, Ramon, 2005. Professor of Chemical and Biomolecular Engineering
BS (1993) Central University of Las Villas, Cuba; MS (1999) Catholic University of Valparaiso, Chile; PhD (2001) University of Chile

González-Stephan, Beatriz, 2001. Lee Hage Jamail Chair of Latin American Literature, Spanish, Portuguese and Latin

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Gordon, Richard G., 1995. W. M. Keck Professor of Earth Science, Department Chair of Earth Science, Associate of Lovett College
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Gorlova, Olga Y., (2004) Adjunct Associate Professor of Statistics
MSc (1992) Novosibirsk University; PhD (2000) Novosibirsk University

Gorman, Bridget K., 2002. Professor of Sociology, Department Chair of Sociology, Master of Will Rice College
BA (1994) Western Washington University; MA (1996), PhD (2000) Pennsylvania State University

Gorry, G. Anthony, 1976. Friedkin Professor of Management, Professor of Computer Science
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BMus (1974), MA (1975), DMA (1978) University of Michigan

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Grande-Allen, Kathryn Jane, 2003. Professor of Bioengineering
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Grandy, Richard E., 1980. Carolyn and Fred McManis Professor of Philosophy, Professor of Philosophy
BA (1963) University of Pittsburgh; MA (1965), PhD (1968) Princeton University

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Greiner, John, 1997. Lecturer of Computer Science
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Greitzer, Mary, 2013. Lecturer in Music
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BS (1993) Tufts University; MS (1997), PhD (2000) California Institute of Technology

Gruber, Ira Dempsey, 1966. Research Professor of History
AB (1955), MA (1959), PhD (1961) Duke University

Grullon, Gustavo, 1998. Jesse H. Jones Professor of Finance
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Guerra, Rudy, 2001. Professor of Statistics
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BS (2001), MS (2001), PhD (2005) Universita Commerciale Luigi Bocconi

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Hafner, Jason H., 2001. Associate Professor of Physics and Astronomy and of Chemistry
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Hamadeh, Shirine T., 2003. Associate Professor of Art History
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AB (1969) Franklin and Marshall College; MA (1972) Florida Atlantic University; PhD (1977) University of Wisconsin–Milwaukee

Han, Jung Won, 2005. Lecturer of Korean
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Hanten, Gerri R., 2011. Adjunct Associate Professor of Psychology
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Haptonstall, Clark D., 2003. Professor in the Practice of Sport Management, Director of the Sport Management Program, Department Chair of Sport Management
BA (1991), MS (1993) Marshall University; PhD (2005) Florida State University

Haque, Moyeen, 1988. Lecturer of Civil and Environmental Engineering
BS (1978) Aligark Muslim University; MS (1982) University of Petroleum and Minerals; PhD (1988) University of Texas–Austin

Hardt, Robert M., 1988. W. L. Moody Professor of Mathematics
BS (1967) Massachusetts Institute of Technology; PhD (1971) Brown University

Harrington, Daniel A., 2009. Faculty Fellow in Biochemistry and Cell Biology
BS (1996), PhD (2004) Northwestern University

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–Los Angeles; MA (1980), PhD (1989) University of California–Berkeley

Hartgerink, Jeffrey D., 2002. Professor of Chemistry and of Bioengineering, , Associate Department Chair for Graduate Studies
AB (1993) Washington University; PhD (1999) Scripps Research Institute

Hartigan, Patrick M., 1994. Professor of Physics and Astronomy

BS (1981) University of Minnesota; PhD (1987) University of Arizona

Hartley, Maria K., 2011. Adjunct Assistant Professor of Ecology and Evolutionary Biology
BSc (1999) University of Greenwich, London; MSc (2002), PhD (2006) Rice University

Hartley, Peter Reginald, 1986. George and Cynthia Mitchell Chair in Sustainable Development
BA (1974), MEc (1977) Australian National University; PhD (1980) University of Chicago

Harvey, Shelly L., 2005. Associate Professor of Mathematics
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Hauge, Robert H., 1967. Distinguished Faculty Fellow in Chemistry and in Materials Science and NanoEngineering
BA (1960) Loras College; PhD (1965) University of California–Berkeley

Hawley, Richard, 2011. Professor of Clarinet
BM (1992) Curtis Institute of Music

Hazzard, Kaden, 2014. Assistant Professor of Physics and Astronomy
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Hebl, Michelle "Mikki" R., 1998. Martha and Henry Malcolm Lovett Chair of Psychology, Professor of Psychology, Professor of Management
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Heffes, Gisela, 2009. Associate Professor of Spanish, Portuguese and Latin American Studies, Associate of Duncan College
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Heinkenschloss, Matthias, 1996. Professor of Computational and Applied Mathematics
BS (1988), PhD (1991) Universität Trier, Germany

Hemmer, Thomas, 2009. Houston Endowment Professor of Accounting
BA (1984), MBA (1986), PhD (1990) Odense University, Denmark

Hennessy, Rosemary, 2006. L.V. Favrot Chair in Humanities, Professor of English Literature, Department Chair of English Director of the Center for the Study of Women, Gender, and Sexuality
BA (1972) University of Pennsylvania; MA (1976) Temple University; PhD (1990) Syracuse University

Henning, Alison T., 2011. Lecturer of Earth Science
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Henze, Matthias, 1997. Isla Carroll and Percy E. Turner Professor of Biblical Studies and Professor of Religion
MDiv (1992) University of Heidelberg; PhD (1997) Harvard University

Hester, Paul, 2003. Lecturer of Visual and Dramatic Arts
BA (1971) Rice University; MFA (1976) Rhode Island School of Design

Hewitt, Janice, 1999. Senior Lecturer of Professional Communications in the School of Engineering
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Heydorn, Richard P., 1998. Adjunct Professor of Statistics
BEE (1958), MA (1964) University of Akron; PhD (1971) Ohio State University

Hicks, Illya V., 2007. Associate Professor of Computational and Applied Mathematics
BS (1995) Southwest Texas State University; MA (2000), PhD (2000) Rice University

Hight, Christopher, 2003. Associate Professor of Architecture
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Hill, N. Ross, 2010. Adjunct Professor of Earth Science
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Hirasaki, George J., 1989. Research Professor of Chemical and Biomolecular Engineering
BS (1963) Lamar University; PhD (1967) Rice University

Hirschi, Kendal, 2003. Adjunct Professor of Biochemistry and Cell Biology
BA (1984) University of Arizona; MS (1988) Arizona State University; PhD (1993) University of Arizona

Ho, Vivian, 2004. James A. Baker III Institute Chair in Health Economics, Professor of Economics

BA (1984) Harvard; PhD (1992) Stanford University

Hobby, William P., 1989. Radoslav A. Tsanoff Professor of Public Affairs
BA (1953) Rice Institute

Hochberg, Scott, 2013. Lecturer of Education
BA (1975), MEE (1976) Rice University

Hochberg, Yael, 2013. Ralph S. O'Connor Associate Professor in Finance and Entrepreneurship
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Hoebig, Desmond, 2008. Professor of Cello
BM (1982), MM (1983) The Juilliard School of Music

Hokanson, David A., 2000. Adjunct Assistant Professor of Chemical and Biomolecular Engineering
BS (1977), MChE (1978) Rice University

Hopkins, John, 2013. Assistant Professor of Art History and Classical and European Studies
BS (2001) Northwestern University, MA (2004), PhD (2010) University of Texas-Austin

Horowitz, Sophie, 2014. Assistant Professor of Philosophy
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Hoskisson, Robert E., 2009. George R. Brown Professor of Strategic Management
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Hotez, Peter Jay, 2011. Adjunct Professor of Bioengineering
BA (1980) Yale University; PhD (1986) Rockefeller University; MD (1987) Cornell University

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BM (1999) University of Minnisota; MM (2003) Rice University; Performance Certificate (2008) Royal Northern College of Music; DMA (2014) Eastman School of Music

Houchens, Brent C., 2005. Adjunct Assistant Professor of Materials Science and NanoEngineering
BS (2000), MS (2002), PhD (2005) University of Illinois–Urbana-Champaign

Houlik-Ritchey, Emily, 2015. Assistant Professor of English
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House, Waylon V., 1986. Adjunct Associate Professor of Chemical and Biomolecular Engineering
BS (1966) Massachusetts Institute of Technology; MS (1969), PhD (1974) University of Pittsburgh

Howe, A. Cymene, 2009. Associate Professor of Anthropology
BA (1992) University of California–Berkeley; MA (1999), PhD (2003) University of New Mexico

Huang, Huey W., 1973. Sam and Helen Worden Chair of Physics and Astronomy
BS (1962) National Taiwan University; PhD (1967) Cornell University

Huang, Shih-Shan, Susan, 2006. Associate Professor of Art History
BA (1991) National Taiwan University; MA (1995) National University of Taiwan; PhD(2002) Yale University

Huang, Xuelin, 2008. Adjunct Associate Professor of Statistics
BS (1994) Peking University, China; MS (1997) Texas A&M University; PhD (2002) University of Michigan

Huberman, Brian Michael, 1975. Associate Professor of Visual Arts
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Hughes, Gordon, 2008. Mellon Associate Professor of Art History
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Hughes, Thomas J. R., 2002. Adjunct Professor of Mechanical Engineering
BS (1965), MS (1967) Pratt Institute; MS (1974), PhD (1974) University of California–Berkeley

Hulet, Randall G., 1987. Fayez Sarofim Professor of Physics and Astronomy
BS (1978) Stanford University; PhD (1984) Massachusetts Institute of Technology

Hund, John, 2006. Visiting Assistant Professor of Finance
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Huston, J. Dennis, 1969. Gladys Louise Fox Professor of English
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Hutchinson, John S., 1983. Dean of Undergraduates, Professor of Chemistry
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Iammarino, Nicholas K., 1978. Professor of Kinesiology, Department Chair of Kinesiology
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Igoshin, Oleg A., 2006. Associate Professor of Bioengineering
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Irish, Maya Soifer, 2010. Assistant Professor of History
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Jaber, Thomas I., 1988. Professor of Music, Director of Choral Ensembles
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Jacot, Jeffrey G., 2008. Associate Professor of Bioengineering
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Jalbert, Pierre D., 1996. Professor of Composition and Theory
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Ji, Yuan, 2008. Adjunct Associate Professor of Statistics
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Jimenez, Carlos, 1997. Professor of Architecture
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Johns-Krull, Christopher M., 2001. Professor of Physics and Astronomy
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Johnson, Bruce R., 1994. Distinguished Faculty Fellow in Chemistry, Executive Director of the Rice Quantum Institute
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Johnson, David B., 2000. Professor of Computer Science and of Electrical and Computer Engineering
BA (1982), MS (1985), PhD (1990) Rice University

Johnson, Richard R., 2008. Professor in the Practice of Environmental Studies in Sociology
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BA (1985) University of Bombay; MA (1987) Jawaharlal Nehru University; MA (1989) Syracuse University; PhD (1995) University of Minnesota

Joshi, Amit, 2009. Adjunct Assistant Professor of Electrical and Computer Engineering
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Joshua, Shanicca, 2011. Lecturer of Education
BS (1998) Tennessee State University; MEd (2002) The University of North Carolina--Charlotte

Juntti, Markku, 2007. Adjunct Professor of Electrical and Computer Engineering
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Kalamangalam, Giridhar, 2012. Adjunct Professor of Electrical and Computer Engineering
B.Med, B.Surgery (1989) University of Madras; MS (1991), PhD (1995) Oxford University

Kale, Prashant, 2007. Associate Professor of Strategic Management
BE (1986) Pune University, India; MA (1996), PhD (1999) Wharton School of Business

Kalra, Ajay, 2008. Herbert S. Autry Chair in Business, Professor of Marketing
MA (1980) Birla Institute of Technology and Science; PhD (1992) Duke University

Kamakura, Wagner, 2013. Jesse H. Jones Professor of Marketing
BS (1974) Aeronautical Institute of Technology, MS (1979) University of Sao Paolo, PhD (1983) University of Texas–Austin

Kamins, Benjamin C., 1987. Professor of Bassoon

Kaminski, Vincent, 2001. Professor in the Practice of Management
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Kantor, Paul, 2012. Sallie Shepherd Perkins Professor of Violin
BMus (1977), MMus (1978) The Juilliard School

Kavraki, Lydia, 1996. Noah Harding Professor of Computer Science, Professor of Bioengineering
BS (1989) University of Crete; MS (1992), PhD (1995) Stanford University

Keefe, Christina, 2008. Professor in the Practice in Theatre, Director of the Theatre Program
BFA (1979) New York University; MFA (1994) University of South Carolina

Kehoe, John, 2002. Senior Lecturer of Management
BA (1960) Northwestern University; MA (1964) St. Louis University; DBA (1975) Harvard University

Kelly, Kevin, 2002. Associate Professor of Electrical and Computer Engineering, Applied Physics Graduate Program Chair
BS (1993) Colorado School of Mines; MS (1996), PhD (1999) Rice University

Kemere, Caleb, 2012. Assistant Professor of Electrical and Computer Engineering
BS (1998) University of Maryland College Park; MS (2000) Stanford University; PhD (2006) Stanford University

Kemmer, Suzanne E., 1993. Associate Professor of Linguistics and Cognitive Sciences, Associate of Sid Richardson College
BA (1980) Rice University; MA (1985), PhD (1988) Stanford University

Kenter, Franklin, 2013. Pfeiffer-VIGRE Postdoctoral Instructor of Computational and Applied Mathematics
BA (2008), MA (2010), PhD (2013) University of California—San Diego

Khoury, Dirar, 1998. Adjunct Associate Professor of Electrical and Computer Engineering
BS (1987) Louisiana Technical University; MS (1989), PhD (1993) Case Western Reserve University

Kiang, Ching-Hwa, 2002. Associate Professor of Physics and Astronomy
BS (1987) National Taiwan University; PhD (1995) California Institute of Technology

Kieffer, Alexandra, 2015. Assistant Professor of Musicology
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Killian, Thomas C., 2000. Professor of Physics and Astronomy, Department Chair of Physics and Astronomy
AB (1991) Harvard University; MPhil (1993) Cambridge University; PhD (1999) Massachusetts Institute of Technology

Kimbro, Rachel Tolbert, 2007. Associate Professor of Sociology
BA (2001) Rice University; MA (2003), PhD (2005) Princeton University

Kimmel, Marek, 1990. Professor of Statistics
MS (1977), PhD (1980) Silesian Technical University

Kimmey, Kim, 2008. Lecturer of Communications
BBA (1978) Baylor University; MS (1996) Texas A&M University

King, Stephen, 2003. Lynette S. Autrey Professor of Voice and Chair of Voice
BMus (1982) Auburn University; MMus (1985) Florida State University; DMA (1991) Southern Baptist Theological Seminary

Kirchner, Stefan, 2009. Adjunct Assistant Professor of Physics and Astronomy
Vordiplom (1993), MS (1995), Diplom (1997) University of Würzburg; PhD (2002) Technical University of Karlsruhe, Germany

Kirienko, Natasha, 2015. Assistant Professor of BioSciences
BS (2002), MS (2004) Southern Federal University, Russia; PhD (2009) University of Wyoming

Kirk, David E., 1982. Associate Professor of Tuba
BM (1982) Juilliard School of Music

Kiselev, Alexander, 2014. Professor of Mathematics
BS (1992) St. Petersburg State University; PhD (1996) California Institute of Technology

Klein, Andrew A., 2014. Lecturer in the Program in Writing and Communication
BA (2002) University of Michigan; MA (2010), PhD (2013) Rice University

Klein, Anne C., 1989. Professor of Religion
BA (1969) State University of New York at Binghamton; MA (1971) University of Wisconsin–Madison; PhD (1981) University of Virginia

Kley, Katharina, 2015. Lecturer of German
BA (2002) University of Greifswald; MA (2006) University of Arizona; MA (2008) University of Leipzig

Klineberg, Stephen L., 1972. Professor of Sociology, Associate of Lovett College
BA (1961) Haverford College; MA (1963) University of Paris; PhD (1966) Harvard University

Knepley, Matthew, 2015. Assistant Professor of Computational and Applied Mathematics
BS (1994) Case Western Reserve; MS (1996) University of Minnesota; PhD (2000) Purdue University

Knightly, Edward W., 1996. Professor of Electrical and Computer Engineering and Computer Science, Department Chair of Electrical and Computer Engineering
BS (1991) Auburn University; MS (1992), PhD (1996) University of California–Berkeley

Kohn, Lawrence, 2014. Lecturer of Education
BS (1982) Youngstown State University; MEd (1995), EdD (2001) University of Houston

Kohn, Michael H., 2004. Associate Professor of Ecology and Evolutionary Biology
MSc (1994) University of Munich; PhD (2000) University of California–Los Angeles

Koka, Balaji, 2008. Associate Professor of Strategic Management
BE (1984) Madurai Kamaraj University, India; MBA (1987) Indian Institute of Management, India; PhD (1999) University of Pittsburgh

Kolomeisky, Anatoly B., 2000. Professor of Chemistry and of Chemical and Biomolecular Engineering
MS (1991) Moscow State University; MS (1996), PhD (1998) Cornell University

Kono, Junichiro, 2000. Professor of Electrical and Computer Engineering, of Physics and Astronomy, and of Materials Science and NanoEngineering
BS (1990), MS (1992) University of Tokyo; PhD (1995) State University of New York–Buffalo

Kortum, Philip T., 2005. Assistant Professor of Psychology
BS (1985) University of Nebraska; MS (1990) Northeastern University; PhD (1994) University of Texas– Austin

Koushanfar, Farinaz, 2006. Associate Professor of Electrical and Computer Engineering
BS (1998) Sharif University of Technology, Tehran, Iran; MS (2000) University of California–Los Angeles; MA (2005), PhD (2005) University of California–Berkeley

Kripal, Jeffrey J., 2002. J. Newton Rayzor Professor of Religion, Associate of Brown College
BA (1985) Conception Seminary College; MA (1987), PhD (1993) University of Chicago

Krouskop, Mark, 2013. Lecturer of Theater and Theater Production Manager
BA (2002), MFA (2012) University of Houston

Kürti, Lázló, 2015. Associate Professor of Chemistry
Diploma (1998) University of Debrecen, Hungary; MS (2001) University of Missouri; PhD (2006) University of Pennsylvania

LaBove, Shannon, 2013. Lecturer in Forensics
BA (1997) University of Houston; MA (2002) West Texas A&M University; JD (2005) Georgia State University

Lairson, David R., 1977. Adjunct Professor of Economics
BA (1970), MA (1971), PhD (1975) University of Kentucky

Lam, Cho, 2004. Senior Faculty Fellow of Psychology
BA (1989) University of Manitoba; MA (1995) California State University–Fresno; PhD (2002) Binghamton University

Lamos, Colleen R., 1989. Associate Professor of English
BA (1978) State University of New York–Binghamton; PhD (1988) University of Pennsylvania

Landes, Christy F., 2009. Associate Professor of Chemistry, Norman Hackerman-Welch Young Investigator
BS (1998) George Mason University; PhD (2003) Georgia Institute of Technology

Lane, David M., 1977. Associate Professor of Psychology, Statistics, and Management
BA (1971) Clark University; MA (1973) Tufts University; PhD (1977) Tulane University

Lansford, Benjamin, 2014. Professor in the Practice of Accounting
BA (1997) University of South Carolina; MBA (2000) University of Pittsburgh; PhD (2005) Pennsylvania State University

Lapinksi, Lisa, 2014. Assistant Professor of Visual and Dramatic Arts
BA (1990) University of California–San Diego; MFA (2000) Art Center College of Design

Lapotko, Dmitri, 2011. Faculty Fellow in Biochemistry and Cell Biology and Physics and Astronomy
MS (1985), PhD (1988) Belarussian State University; DSc (2003) A.V. Lykov Heat and Mass Transfer Institute

Latva-aho, Matti Sakari, 2007. Adjunct Professor of Electrical and Computer Engineering
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Lavenda, Richard A., 1987. Professor of Composition and Theory
BA (1977) Dartmouth College; MMus (1979) Rice University; DMA (1983) University of Michigan

Leal, Suzanne, 2008. Adjunct Professor of Statistics
BS (1981) Fordham University; MS (1989), PhD (1994) Columbia University

Lee, Cin-Ty., 2002. Professor of Earth Science
BA (1996) University of California at Berkeley; PhD (2001) Harvard University

Lee, J. Jack, 2004. Adjunct Professor of Statistics

DDS (1982) National Taiwan University; MS (1984), PhD (1989) University of California–Los Angeles

Leebron, David W., 2004. President and Professor of Political Science
BA (1976) Harvard University; JD (1979) Harvard Law School

Leeds, Brett Ashley, 2001. Professor of Political Science, Department Chair of Political Science
BA (1991), University of North Carolina at Chapel Hill; PhD (1998) Emory University

LeGrand, Thomas, 2003. Associate Professor of Clarinet
BMus (1980) Curtis Institute of Music

Lenardic, Adrian, 1999. Professor of Earth Science
BA (1986) University of Wisconsin; MS (1990), PhD (1995) University of California–Los Angeles

Lerup, Lars, 1993. Harry K. and Albert K. Smith Professor of Architecture
BArch (1968) University of California at Berkeley; MArch (1970) Harvard University

Levander, Alan R., 1984. Carey Croneis Professor of Earth Science
BS (1976) University of South Carolina; MS (1978), PhD (1984) Stanford University

Levander, Caroline F., 2000. Carlson Chair in the School of Humanities, Professor of English, Vice President for Digital Education and Strategic Initiatives
BA (1986), MA (1993), PhD (1995) Rice University

Levin, Harvey S., 2004. Adjunct Professor of Psychology
BA (1967) City University of New York; MA (1971), PhD (1972) University of Iowa

Levine, Herbert, 2012. Karl F. Hasselmann Professor of Bioengineering, Professor of Physics and Astronomy and of Biochemistry and Cell Biology
BS (1976) Massachusetts Institute of Technology; MA (1997) Princeton; PhD (1979) Princeton

Levy, Eugene H., 2000. Andrew Hays Buchanan Professor of Physics and Astronomy
AB (1966) Rutgers University; PhD (1971) University of Chicago

Lewis, Steven W., 1996. Professor in the Practice, Research Fellow at the James A. Baker III Institute for Public Policy, Associate Director at the Chao Center for Asian Studies
BS (1985) Ohio University; PhD (1996) Washington University

Li, Haiyang, 2005. Professor of Strategic 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

Li, Joseph, 2011. Artist Teacher of Opera Studies
BA (2002); MMus (2004) Manhattan School of Music

Li, King Chuen Peter, 2007. Adjunct Professor of Bioengineering
BS (1977), MD (1981) University of Toronto; MBA (1998) San Jose State University

Li, Qilin, 2006. Associate Professor of Civil and Environmental Engineering and of Materials Science and NanoEngineering
BE (1995) Tsinghua University, Beijing, China; MS (1999), PhD (2002) University of Illinois–Urbana-Champaign

Li, Wei, 2012. Assistant Professor of Physics and Astronomy
BS (2004) University of Science and Technology of China; PhD (2009) Massachusetts Institute of Technology

Liang, Edison P., 1991. Andrew Hays Buchanan Professor of Astrophysics
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Liberman-Aiden, Erez, 2013. Adjunct Assistant Professor of Computer Science and Computational and Applied Mathematics
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Lichtarge, Olivier, 2008. Adjunct Professor of Biochemistry and Cell Biology
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Lilleberg, Jorma, 2002. Adjunct Professor of Electrical and Computer Engineering
BS (1984) University of Oulu; PhD (1992) Tampere University of Technology

Lin, Cho-Liang, 2006. Professor of Violin
BMus (1981) The Juilliard School of Music

Link, Stephan, 2006. Associate Professor of Chemistry, Professor of Electrical and Computer Engineering
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Little, Stephen H., 2010. Adjunct Associate Professor of Bioengineering
BS (1993) York University, Canada; MD (1997) McMaster University, Canada

Llope, William J., 1994. Senior Faculty Fellow in Physics and Astronomy
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Loch-Temzelides, Ted, 2008. Professor of Economics
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Loewen, Peter V., 2006. Associate Professor of Musicology
BMus (1987) University of Manitoba; MMus (1990), PhD (2000) University of Southern California

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BA (1973) University of California–Santa Barbara; PhD (1981) Rice University

López-Durán, Fabiola, 2011. Assistant Professor of Art History
BA (1987) Universidad de los Andes School of Architecture; PhD (2009) Massachusetts Institute of Technology

Lopez Alonso, Moramay, 2009. Associate Professor of History
Licenciatura (1994) Instituto Tecnologico Autonomo de Mexico; MA (1999), PhD (2000) Stanford University

Lord, Tom F., 1992. Lecturer of Architecture
BA (1960) Southern Methodist University; MA (1965) Yale University

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BE (1998) Tsinghua University, Beijing, China; MS (1999) Ohio State University; PhD (2004) Princeton University

Loveland, Katherine A., 1991. Adjunct Professor of Psychology
BA (1975) University of Virginia; PhD (1980) Cornell University

Ludwig, Jonathan, 2003. Senior Lecturer of Russian
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BBA (1994) University of Iowa College of Business; MD (1998) University of Iowa College of Medicine

Lundin, Robert, 2013. Lecturer of Education
BA (2000) Rice University; MEd (2003) University of St. Thomas; EdD (2009) Vanderbilt University

Lurie, Susan, 1987. Associate Professor of English
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Lüttge, Andreas, 1999. Research Professor of Earth Science, Research Professor of Chemistry, Associate of Will Rice College
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Lwigale, Peter Y., 2008. Associate Professor of Biochemistry and Cell Biology
BS (1994), MS (1997) University of Northern Iowa; PhD (2001) Kansas State University

Ma, Jianpeng, 2000. Professor of Bioengineering, Professor of Biochemistry and Cell Biology
BS (1985) Fudan University P.R. China; PhD (1996) Boston University

Maas, Michael R., 1984. Professor of History and of Classical and European Studies
BA (1973) Cornell University; MA (1975), PhD (1982) University of California–Berkeley

MacKenzie, Kevin R., 2000. Adjunct Assistant Professor of Biochemistry and Cell Biology
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Mackie, Hilary S., 1993. Associate Professor of Classics
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Mackwell, Stephen J., 2005. Adjunct Professor of Earth Science
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Maher, Lynn M., 2007. Adjunct Professor of Psychology
BA (1978) Catholic University of America; MA (1979) George Washington University; PhD (1995) University of Florida

Makdisi, Ussama, 1997. Arab-American Educational Foundation Professor of Arab Studies in History, Professor of History
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Manca, Joseph, 1989. Nina J. Cullinan Professor of Art History, Professor of Art History, Associate of Baker College
BA (1978) University of Rochester; MA (1980), MPhil (1982), PhD (1986) Columbia University

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Marschall, Melissa J., 2003. Professor of Political Science
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Martí-Arbona, Angel A., 2008. Associate Professor of Chemistry, of Bioengineering, and of Materials Science and NanoEngineering
BS (1999), PhD (2004) University of Puerto Rico–Rio Piedras

Martin, Lanny W., 2004. Professor of Political Science
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Martinez Calderon, Luz Maria, 2011. Adjunct Associate Professor of Chemistry
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Masiello, Caroline A., 2004. Associate Professor of Earth Science
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BTech (1981) Indian Institute of Technology, Kanpur, India; MS (1982) University of Wisconsin–Madison; PhD (1987) Stanford University

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Schaefer, Jacqueline, 2012. Lecturer of Architecture
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Schweinberger, Michael, 2013. Assistant Professor of Statistics
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Strait, Richard B., 2007. Adjunct Professor of Chemical and Biomolecular Engineering
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Tabor, Jeffrey J., 2010. Assistant Professor of Bioengineering
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Tang, Xun, 2014. Associate Professor of Economics
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Tao, Yizhi Jane, 2002. Associate Professor of Biochemistry and Cell Biology
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Thomann, Isabell, 2012. Assistant Professor of Electrical and Computer Engineering and of Materials Science and NanoEngineering
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Thomas, Edwin L., 2011. William and Stephanie Sick Dean of the George R. Brown School of Engineering, Professor of Materials Science and NanoEngineering and of Chemical and Biomolecular Engineering
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Thompson, Ewa M., 1970. Research Professor of Slavic Studies
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BS (1967) Southwestern State College; PhD (1972) Oklahoma State University

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Tran, Thanh T., 2004. Adjunct Lecturer of Electrical and Computer Engineering
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Van der Werff, Ivo-Jan, 2007. Professor of Viola, Master of Baker College
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Villado, Anton J., 2008. Assistant Professor of Psychology
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Wallach, Dan Seth, 1998. Professor of Computer Science and of Electrical and Computer Engineering
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Wolfe, Cary E., 2003. Bruce and Elizabeth Dunlevie Professor of English, Professor of English
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Wolfthal, Diane, 2008. David and Caroline Minter Professor of Humanities, Professor of Art History
BA (1970) City College; MA (1973) Queens College; PhD (1983) New York University

Wolpin, Kenneth, 2014. Lay Family Chair in Economics and Distinguished Research Professor
BS (1967) City College of New York; PhD (1974) Graduate School of the City University of New York

Wolynes, Peter C., 2011. D.R.Bullard-Welch Foundation Professor of Science, Professor of Chemistry, of Biochemistry and Cell Biology, of Physics and Astronomy and of Materials Science and NanoEngineering

AB (1971) Indiana University; AM (1972) Harvard University; PhD (1976) Harvard University

Wong, Michael S., 2001. Professor of Chemical and Biomolecular Engineering, of Chemistry, and of Materials Science and NanoEngineering, Department Chair of Chemical and Biomolecular Engineering
BS (1994) California Institute of Technology; MS (1997), PhD (2000) Massachusetts Institute of Technology

Wong, Stephen B., 2001. Lecturer of Computer Science
BA (1981) Swarthmore College; PhD (1988) Massachusetts Institute of Technology

Wong, Stephen T. C., 2010. Adjunct Professor of Bioengineering and Electrical and Computer Engineering
BE (1984) University of Western Australia; MS (1989), PhD (1991) Lehigh University

Wood, Philip R., 1990. Associate Professor of French
BA (1974) University of Cape Town; MA (1980) University of York; PhD (1988) Yale University

Woods, Gary L., 2008. Professor in the Practice of Computer Technology and Electrical and Computer Engineering
BA, BSEE (1988) Rice University; MS (1991), PhD (1997) Stanford University

Wool, Zoë, 2015. Assistant Professor of Anthropology
BA (2004) York University; MA (2005), PhD (2011) University of Toronto

Wooten, Kevin C., 1994. Adjunct Professor of Psychology
BA (1976), MA (1978) University of Houston–Clear Lake; PhD (1991) Tulane University

Worth, David S., 2002. Senior Lecturer of Humanities, Director of Forensics
BA (1992), MA (1995) Texas Tech University; PhD (2003) University of Oklahoma

Wright, Anthony A., 1980. Adjunct Professor of Psychology
BA (1965) Stanford University; MA (1970), PhD (1971) Columbia University

Wu, Samuel Miao-Sin, 2009. Adjunct Professor of Bioengineering
AB (1973) University of California–Berkeley; PhD (1979) Harvard University

Wysocki, Gerald, 2006. Adjunct Assistant Professor of Electrical and Computer Engineering
MS (1999) Wroclaw University of Technology, Wroclaw, Poland; PhD (2003) Johannes Kepler University, Linz, Austria

Xing, Yuhang, 2003. Associate Professor of Finance, Faculty Director of the El Paso Finance Center
BA (1997) Peking University; MS (1998) Northwestern University; PhD (2003) Columbia University

Xu, Qianfan, 2013. Adjunct Assistant Professor of Electrical and Computer Engineering
BE (1999), ME (2002) Tsinghua University; PhD (2007) Cornell University

Yakobson, Boris I., 1999. Karl F. Hasselmann Professor of Materials Science and NanoEngineering and of Chemistry
MS (1978) Novosibirsk State University; PhD (1982) Russian Acadamy of Sciences

Yarbrough, Fay, 2013. Associate Professor of History
BA (1997) Rice University, MA (2000), PhD (2003) Emory University

Yeh, Meng, 2001. Senior Lecturer of Chinese
BA (1986) Tamkang University; MA (1988), PhD (1993) University of Texas–Austin

Yekovich, Robert A., 2003. Dean of the Shepherd School of Music, Elma Schneider Professor of Music
BMus (1978), MMus (1980) University of Denver; DMA (1991) Columbia University

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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Yost, Julianne M., 2011. Wiess Instructor of Chemistry
BS (2003) Cedar Crest College; PhD (2009) Duke University

Young, James, 1990. Research Professor of Electrical and Computer Engineering
BS (1965), MS (1966) Massachusetts Institute of Technology; PhD (1970) Stanford University

Yuan, Ying, 2010. Adjunct Associate Professor of Statistics

BS (1995) Huazhong University of Science and Technology, China; MA, MS (2000) Brandeis University; PhD (2005) University of Michigan

Yunis, Harvey E., 1987. Andrew W. Mellon Chair in Humanities, Professor of Classics
BA (1978) Dartmouth College; BA (1982), MA (1985) University of Cambridge; PhD (1987) Harvard University

Zammito, John H., 1994. John Antony Weir Professor of History, Associate of Hanszen College
BA (1970) University of Texas–Austin; PhD (1978) University of California–Berkeley

Zanetti, Renato, 2012. Adjunct Assistant Professor of Mechanical Engineering
PhD (2007) University of Texas at Austin

Zavyalova, Anastasiya, 2012. Assistant Professor of Strategic Management
BS (2006) Methodist University; PhD (2012) University of Maryland, College Park

Zeff, Stephen A., 1978. Keith Anderson Professorship in Business and 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; DLitt (Hon.) (2010) University of Waterloo, Canada; Dr. Econ. Mgmt Sci (Hon.) (2011) Universidad de Alcalá, Spain

Zelt, Colin A., 1995. Professor of Earth Science
BS (1984) University of Victoria; PhD (1989) University of British Columbia

Zhang, David, 2013. Assistant Professor of Bioengineering
BS (2005), PhD (2010) California Institute of Technology

Zhang, Yan Anthea, 2001. Fayez Sarofim Vanguard Professor of Management Professor of Management
BA (1992), MA (1995) Nanjing University; MA (1997) City University of Hong Kong; PhD (2001) University of Southern California

Zhang, Yin, 1996. Professor of Computational and Applied Mathematics
BS (1977), MS (1981) Chongqing Institute of Architecture and Engineering, China; PhD (1987) State University of New York–Stony Brook

Zheng, Junrong, 2008. Assistant Professor of Chemistry
BS (1997), MS (2000) Peking University; MS (2003) Rensselaer Polytechnic Institute; PhD (2007) Stanford University

Zhong, Lin, 2005. Associate Professor of Electrical and Computer Engineering
BS (1998), MS (2000) Tsinghua University, Beijing, China; PhD (2005) Princeton University

Zhong, Weiwei, 2008. Assistant Professor of Biochemistry and Cell Biology
BS (1997) University of Science and Technology of China; MS (2003), PhD (2002) University of Georgia

Zhou, Jing, 2003. Houston Endowment Professor of Organizational Behavior, Professor of Psychology
BS (1987), MA (1990) Peking University; PhD (1996) University of Illinois–Urbana

Zhu, Jian-Xin, 2010. Adjunct Associate Professor of Physics and Astronomy
BS (1990), MS (1993) Nanjing University; PhD (1997) University of Hong Kong

Zimmerman Espinosa, Carissa A., 2011. Lecturer of Psychology
BA (2005) Trinity University; MS (2008), PhD (2010) Florida State University

Zodrow, George, 1979. Professor of Economics
BA, MME (1973) Rice University; MA (1977), PhD (1980) Princeton University

Zoghbi, Huda Y., 2011. Adjunct Professor of Biochemistry and Cell Biology
BSc (1975) American University of Beirut; MD (1979) Meharry Medical College

Zubarev, Eugene, 2005. Associate Professor of Chemistry and of Materials Science and NanoEngineering
MS (1993) Moscow State University; PhD (1996) Russian Academy of Sciences

Zygourakis, Kyriacos, 1980. A.J. Hartsook Professor of Chemical and Biomolecular Engineering, Professor of Bioengineering
Diploma (1975) National Technical University of Athens; PhD (1981) University of Minnesota

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BA (1953) Willamette University; MA (1954) Stanford University; Certificat d'etudes politiques (1955) University of Bordeaux; PhD (1964) University of California–Berkeley

Andrews, John F., 1982–91. Professor Emeritus of Environmental Science and Engineering
BSCE (1951), MS (1954) University of Arkansas; PhD (1964) University of California–Berkeley

Apple, Max, 1972–2001. Gladys Louise Fox Professor Emeritus of English
BA (1963) University of Michigan; MA (1965) Stanford University; PhD (1970) University of Michigan

Armeniades, Constantine D, 1969–2006. Professor Emeritus of Chemical and Biomolecular Engineering
BS (1961) Northeastern University; MS (1967) Case Institute of Technology; PhD (1969) Case Western Reserve University

Avé Lallemant, Hans G., 1970–2006. Professor Emeritus of Earth Science, Associate of Sid Richardson College
BA (1960), MA (1964), PhD (1967) University of Leiden

Bailar, Benjamin F., 1987–97. H. Joe Nelson III Professor Emeritus of Administration
BA (1955) University of Colorado; MBA (1959) Harvard Graduate School of Business Administration

Baker, Stephen D., 1963–2004. Professor Emeritus of Physics and Astronomy
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–Austin

Bixby, Robert E., 1984–98. Noah Harding Professor Emeritus of Computational and Applied Mathematics
BS (1968) University of California at Berkeley; MS (1971), PhD (1972) Cornell University

Black, Earl, 1993-2012. Herbert S. Autrey Professor Emeritus of Political Science
BA (1964) University of Texas–Austin; PhD (1968) Harvard University

Bonner, Billy E., 1985–2009. Professor Emeritus of Physics and Astronomy
BS (1961) Louisiana Polytechnic Institute; MA (1963), PhD (1965) Rice University

Boterf, Chester Arthur, 1973–93. Professor Emeritus of Art
BA (1959) Kansas University; MFA (1965) Columbia University

Brown, Katherine Tsanoff, 1963–89. Professor Emerita of Art History, Honorary Associate of Will Rice College
BA (1938) Rice Institute; MFA (1940) Cornell University

Burnett, Sarah A., 1972–2012. Professor Emerita of Psychology
BS (1966) Memphis State University; MA (1970), PhD (1972) Tulane University

Burrus, C. Sidney, 1965–2005. Maxfield and Oshman Professor Emeritus of Electrical and Computer Engineering, Research Professor
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Burt, George, 1984–97. Professor Emeritus of Theory and Composition
BA (1955) University of California at Berkeley; MA (1958) Mills College; MFA (1962) Princeton University

Camfield, William A., 1969–2002. Joseph and Joanna Nazro Mullen Professor Emeritus of Art History
AB (1957) Princeton University; MA (1961), PhD (1964) Yale University

Cason, Carolyn, 1956–74. Lecturer Emerita of Dietetics
BS (1934) University of Texas at Austin; MA (1939) Columbia University

Chance, Jane, 1973–2011. Mellon Distinguished Professor Emerita of English
BA (1967) Purdue University; MA (1968), PhD (1971) University of Illinois

Citron, Marcia J., 1976-2015. Martha and Henry Malcolm Lovett Distinguished Service Professor Emerita and Professor Emerita of Musicology and Music History
BA (1966) Brooklyn College; MA (1968), PhD (1971) University of North Carolina

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) Johns Hopkins University

Cloutier, Paul A., 1967–2008. Professor Emeritus of Physics and Astronomy
BS (1964) University of Southwestern Louisiana; PhD (1967) Rice University

Copeland, James E., 1966–2001. Professor Emeritus of Linguistics and German
BA (1961) University of Colorado; PhD (1965) Cornell University

Curl Jr, Robert F., 1958–2005. University Professor Emeritus, Kenneth S. Pitzer-Schlumberger Professor Emeritus of Natural Sciences
BA (1954) Rice Institute; PhD (1957) University of California–Berkeley

Daichman, Graciela S., 1973–99. Lecturer Emerita of Spanish and Portuguese
Profesorado (1959) Instituto Nacional del Profesorado en Lenguas Vivas, Argentina; MA (1975), PhD (1983) Rice University

Datta, Evelyne D., 1987-2012. Senior Lecturer Emerita of French
Maîtrise de Philologie romane (1966) University of Ghent, Belgium; MA (1979) University of Houston; PhD (1987) Rice University

Davidson, Chandler, 1966–2003. Radoslav A. Tsanoff Professor Emeritus of Public Affairs and Sociology
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 of Chemical Biomolecular 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–Berkeley

Dennis, John E., 1979–2002. Noah Harding Professor Emeritus of Computational and Applied Mathematics
BS (1962), MS (1964) University of Miami; PhD (1966) University of Utah

Dessler, Alexander J., 1963–93. Professor Emeritus of Space Physics and Astronomy
BS (1952) California Institute of Technology; PhD (1956) Duke University

Dharan, Bala G., 1982–2009. J. Howard Creekmore Professor Emeritus of Accounting
BTech (1973) Indian Institute of Technology, India; MBA (1975) Indian Institute of Management, India; MS (1977), PhD (1981) Carnegie Mellon University

Drew, Katherine Fischer, 1950–96. Lynette S. Autrey Professor Emerita of History
BA (1944), MA (1945) Rice Institute; PhD (1950) Cornell University

Driskill, Linda P., 1970–2013. Professor Emerita of English

BA (1961), MA (1968), PhD (1970) Rice University

Dufour, Reginald J., 1975–2015. Professor Emeritus of Physics and Astronomy
BS (1970) Louisiana State University; MS (1971), PhD (1974) University of Wisconsin–Madison

Durrani, Ahmad J., 1982–2008. Professor Emeritus 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

Dyson, Derek C., 1966–2000. Professor Emeritus of Chemical and Biomolecular Engineering
BA (1955) University of Cambridge; PhD (1966) University of London

Eifler, Margret, 1973–2005. Professor Emerita of German Studies
BA (1962), MA (1964), PhD (1969) University of California–Berkeley

Evans, Elinor Lucile, 1964–85. Albert K. and Harry K. Smith Professor Emerita of Architecture
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

Few Jr, Arthur A., 1970–2008. Professor Emeritus of Physics and Astronomy and Environmental Science
BS (1962) Southwestern University; MBS (1965) University of Colorado; PhD (1969) Rice University

Fisher Jr, Frank M., 1963–2002. Professor Emeritus of Biology
BA (1953) Hanover College; MS (1958), PhD (1961) Purdue University

Forman, Robin, 1987–2010. Professor Emeritus of Mathematics
BA (1981), MA (1981) University of Pennsylvania; PhD (1985) Harvard University

Freeman, John W., 1964–2000. Professor Emeritus of Space Physics and Astronomy, Research Professor, Associate of Lovett College
BS (1957) Beloit College; MS (1961), PhD (1963) University of Iowa

Fultz, Lucille P., 1990–2007. Associate Professor Emeritus of English
AB (1959) Spellman College; MA (1968) University of Iowa; PhD (1990) Emory University

Gardner, Gerald H. F., 1990–93. Professor Emeritus of Geophysics
BS (1948) Trinity College, Dublin; MSc (1949) Carnegie Mellon University; PhD (1953) Princeton University

Gillis, Malcolm, 1993–2004. President Emeritus
BA (1962), MA (1963) University of Florida; PhD (1968) University of Illinois

Glantz, Raymond M., 1969–2006. Professor Emeritus of Biochemistry and Cell Biology, Research Professor
BA (1963) Brooklyn College; MS (1964), PhD (1966) Syracuse University

Glass, Graham P., 1967–2005. Professor Emeritus of Chemistry
BS (1959) Birmingham University, England; PhD (1963) Cambridge University

Goux, Jean-Joseph, 1990–2011. Laurence H. Favrot Professor Emeritus of French Studies
Licence de Philosophie (1965), DES Philosophie (1966), Doctorat du 3ème cycle de Philosophie (1973), Doctorat d'Elat es Lettres et Sciences Humaines (1988) Sorbonne, Paris

Gruber, Ira Dempsey, 1966–2009. Harris Masterson, Jr. Professor Emeritus of History
AB (1955), MA (1959), PhD (1961) Duke University

Hansz, Ingrid, 1987–2000. Lecturer Emerita of Spanish and Portuguese, 2001 Language Consultant for School of Continuing Studies
BA (1952) Universidad de la Republica; MA (1987) Rice University

Harcombe, Paul A, 1972–2007. Professor Emeritus of Ecology and Evolutionary Biology
BS (1967) Michigan State University; PhD (1973) Yale University

Harvey, F. Reese, 1968–2003. Professor Emeritus of Mathematics
BS, MA (1963) Carnegie Institute of Technology; PhD (1966) Stanford University

Haskell, Thomas L., 1970–2009. Samuel G. McCann Professor Emeritus of History
BA (1961) Princeton University; PhD (1973) Stanford University

Havens, Neil, 1964–2000. Professor Emeritus of Art and Art History
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

Hellums, Jesse David, 1960–1998 and 2003–2005. A.J. Hartsook Professor Emeritus of Chemical and Biomolecular Engineering and of Bioengineering
BS (1950), MS (1957) University of Texas–Austin; PhD (1961) University of Michigan

Hempel, John, 1964-2013. Milton B. Porter Professor of Mathematics
BS (1957) University of Utah; MS (1959), PhD (1962) University of Wisconsin at Madison

Heymann, Dieter, 1966–98. Professor Emeritus of Geology and Geophysics, Adjunct Professor of Chemistry
MS (1954), PhD (1957) University of Amsterdam, The Netherlands

Hirasaki, George J., 1989 - 2013. A. J. Hartsook Professor Emeritus of Chemical and Biomolecular Engineering
BS (1963) Lamar University; PhD (1967) Rice University

Hodges, Lee, 1930–71. Professor Emeritus of French
BS (1930) Harvard University; MA (1934) Rice Institute

Holt, Edward C., 1956–93. Professor Emeritus of Civil and Environmental Engineering
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–Los Angeles; PhD (1964) Vanderbilt University

Hyman, Harold M., 1968–97. William P. Hobby Professor Emeritus of History
BA (1948) University of California–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

Johnson, Don Herrick, 1977–2008. J.S. Abercrombie Professor Emeritus of Electrical and Computer Engineering, Professor of Statistics
SB, SM (1970), EE (1971), PhD (1974) Massachusetts Institute of Technology

Jones, Samuel, 1973–97. Professor Emeritus of Music
BA (1957) Millsaps College; MA (1958), PhD (1960) Eastman School of Music, University of Rochester

Jump, J. Robert, 1968–2003. Professor Emeritus of Electrical and Computer Engineering, Professor of Computer Science, Honorary Master of Lovett College
BS (1960), MS (1962) University of Cincinnati; MS (1965), PhD (1968) University of Michigan

Kanatas, George, 1994–2015. Jesse H. Jones Professor Emeritusof Finance
BS (1966) City College of New York; PhD (1971) University of Kansas; PhD (1978) Johns Hopkins University

Kauffmann, Robert Lane, 1976–2015. Professor Emeritus of Hispanic and Classical Studies
BA (1970) Princeton University; PhD (1981) University of California–San Diego

Kaun, Kathleen, 1998–2013. Lynette S. Autrey Professor Emerita of Voice
BM (1966) Indiana University; MM (1970) University of Texas–Austin

Kecht, Maria-Regina, 1997–2010. Associate Professor Emerita of German Studies
Teacher's Diploma (1978) Pushkin Institute, Moscow State University; MA (1979) University of Illinois–Urbana-Champaign; PhD (1982) Innsbruck University

Keeton, Darra, 1994-2012. Professor Emerita of Visual Arts
BFA (1974) Miami University, Ohio; MFA (1979) Queens College, New York

Kelber, Werner H., 1973–2005. Isla Carroll Turner and Percy E. Turner Professor Emeritus of Religion
MT (1963) Princeton Theological Seminary; MA (1967), PhD (1970) University of Chicago

Kiperman, Anita, 1976–98. Lecturer Emerita of Spanish
BA (1957) Universidad Nacional de Buenos Aires; MA (1971) University of Houston

Konisky, Jordan, 1996–2007. Professor Emeritus of Biochemistry and Cell Biology

BS (1963), Providence College; PhD (1968) University of Wisconsin

Kulstad, Mark, 1975–2015. Professor Emeritus of Philosophy
BA (1969) Macalester College; PhD (1975) University of Michigan

Lamb, Sydney M., 1981–98. Agnes Cullen Arnold Professor Emeritus of Linguistics and Cognitive Sciences
BA (1951) Yale University; PhD (1958) University of California–Berkeley

Lane, Neal F., 1996–2014. Malcolm Gillis University Professor Emeritus, Professor Emeritus of Physics and Astronomy
BS (1960), MS (1962), PhD (1964) University of Oklahoma

Laughery, Kenneth R., 1982–2002. Herbert S. Autrey Professor Emeritus of Psychology, Research Professor
BS (1957), MS (1959), PhD (1961) Carnegie Mellon University

Leal, Maria Teresa, 1965–96. Professor Emerita of Spanish and Portuguese
BA (1946) Pontifícia Universidade Católica, Brazil; PhD (1963) Universidade Federal de Rio de Janeiro, Brazil

Lecuyer, Maurice Antoine, 1962–79. Professor Emeritus of French
Baccalaureat es lettres (1937), Licence es lettres (1943), Diplome d'etudes superieures (1944) Universite de Paris, France; PhD (1954) Yale University

Lee, Eva J., 1969–2000. Professor Emerita of Kinesiology
BS (1962) North Texas State University; MEd (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; MSEE (1960), PhD (1963) University of Pittsburgh; JD (1972) University of Houston

Leeman, William P., 1977–2005. Professor Emeritus of Earth Science
BA (1967), MA (1969) Rice University; PhD (1974) University of Oregon

Long, Elizabeth, 1978-2014. Professor Emerita of Sociology, Department Chair of Sociology, Associate of Baker College
BA (1966) Stanford University; MA (1974), PhD (1979) Brandeis University

Lüttge, Andreas, 1999-2013. Professor Emeritus of Earth Science, Professor Emeritus of Chemistry, Associate of Will Rice College
BS (1982) Technische University Carolo Wilhelmina; MS (1985), PhD (1990) Eberhard-Karls Universitat

Marcus, George E., 1975–2006. Professor Emeritus of Anthropology
BA (1968) Yale University; PhD (1976) Harvard University

Martin, William, 1968–2005. Harry & Hazel Chavanne Professor Emeritus of Religion and Public Policy and Sociology
BA (1958), MA (1960) Abilene Christian University; BD (1963) Harvard Divinity School; PhD (1969) Harvard University

Matusow, Allen J., 1963–2015. William Gaines Twyman Professor Emeritus of History, Associate Director Emeritus for Academic Programs of the James A. Baker III Institute for Public Policy; Research Professor in History
BA (1958) Ursinus College; MA (1959), PhD (1963) Harvard University

McEvilley, Thomas, 1969–2005. Distinguished Lecturer Emeritus of Art History
BA (1963) University of Cincinnati; MA (1965) University of Washington; MA (1968) University of Cincinnati

McIntosh, Roderick J., 1980. Professor Emeritus of Anthropology
BA (1973) Yale University; MLITT (1975), PhD (1979) Trinity College, University of Cambridge

McLellan, Rex B., 1964–2013. Professor Emeritus of Materials Science and NanoEngineering
BMet (1957) Sheffield University; PhD (1962) Leeds University

Miele, Angelo, 1964–93. Foyt Family Professor Emeritus of Mechanical Engineering and Materials Science and Computational and Applied Mathematics, Research Professor

Mieszkowski, Peter, 1981–2009. Professor Emeritus of Economics
BS (1957), MA (1959) McGill University; PhD (1963) Johns Hopkins University

Miettinen, Hannu E., 1977–2009. Professor Emeritus of Physics and Astronomy
Fil. Kand. (1967), Fil. Lic. (1971) University of Helsinki; PhD (1975) University of Michigan

Miller, Clarence A., 1981–2008. Louis Calder Professor Emeritus of Chemical and Biomolecular Engineering
BA, BS (1961) Rice University; PhD (1969) University of Minnesota

Minter, David Lee, 1967–80 and 1990–2002. Bruce and Elizabeth Dunlevie Professor Emeritus of English
BA (1957), MA (1959) North Texas State University; BD (1961), PhD (1965) Yale University

Murray, William, 1992–2003. Associate Professor Emeritus of Voice
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, Honorary Associate of Will Rice College
BA (1942) George Pepperdine University; BD (1946), PhD (1951) Yale University

Nordgren, Ronald P., 1989–2000. Herman and George R. Brown Professor Emeritus of Civil and Environmental Engineering
BS (1957), MS (1958) University of Michigan; PhD (1962) University of California–Berkeley

O'Dell, Charles Robert, 1982–2000. Andrew Hays Buchanan Professor Emeritus of Astrophysics
BSEd (1959) Illinois State University; PhD (1962) University of Wisconsin–Madison

Palmer, Graham A., 1974–2000. Professor Emeritus of Biochemistry and Cell Biology
BS (1957), PhD (1962) University of Sheffield

Parry, Ronald J., 1978–2012. Professor Emeritus of Chemistry and of Biochemistry and Cell Biology
BA (1964) Occidental College; PhD (1968) Brandeis University

Parsons, Spencer W., 1969-2015. Associate Professor Emeritus of Architecture
BA (1953) University of Michigan; MArch (1963) Harvard University

Patten, Robert L., 1969–2012. Lynette S. Autry Professor Emeritus in Humanities, Professor Emeritus of English
BA (1960) Swarthmore College; MA (1962), PhD (1965) Princeton University

Pearson Jr, James Boyd, 1965–99. J. S. Abercrombie Professor Emeritus of Electrical and Computer Engineering
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; BD (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

Piper, William Bowman, 1969–1999. Professor Emeritus of English
BA (1951) Harvard University; MA (1952) Columbia University; PhD (1958) University of Wisconsin–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

Polking, John C., 1968–2004. Professor Emeritus of Mathematics, Research Professor
BS (1956) University of Notre Dame; MS (1961), PhD (1966) University of Chicago

Poulos, Basilios N., 1975–2008. Professor Emeritus of Visual Arts
BFA (1965) Atlanta School of Art; MFA (1968) Tulane University

Queller, David, 1989–2011. Professor Emeritus of BioSciences
BA (1976) University of Illinois; PhD (1982) University of Michigan

Rachford Jr, Henry H., 1964–82. Professor Emeritus of Mathematical Sciences
BS (1945), MA (1947) Rice Institute; ScD (1950) Massachusetts Institute of Technology

Rea, Joan, 1968–2000. Professor Emerita of Spanish and Portuguese
BA (1954) New York University; MA (1964) University of Houston; PhD (1970) University of Texas–Austin

Sass, Ronald L., 1958–2005. Harry C. and Olga Keith Wiess Professor Emeritus of Ecology and Evolutionary Biology
BA (1954) Augustana College; PhD (1957) University of Southern California

Schneider, David J., 1989–2009. Professor Emeritus of Psychology
BA (1962) Wabash College; PhD (1966) Stanford University

Schnoebelen, Anne, 1974–2004. Joseph and Ida Kirkland Mullen Professor Emerita of Music
BA (1958) Rosary College; MMus (1960), PhD (1966) University of Illinois

Seed, Patricia, 1982–2006. Professor Emerita of History
BA (1971) Fordham University; MA (1975) University of Texas–Austin; PhD (1980) University of Wisconsin–Madison

Sellers, James, 1971–1993. Former Professor of Religion
BEE (1947) Georgia Institute of Technology; MS (1952) Florida State University; PhD (1958) Vanderbilt University

Smith, George, 1981–2010. Professor Emeritus of Visual and Dramatic Arts
BFA (1969) San Francisco Art Institute; MA (1972) Hunter College

Soligo, Ronald, 1967-2012. Professor Emeritus of Economics
BA (1958) University of British Columbia; PhD (1964) Yale University

Spence, Dale W., 1963. Professor Emeritus of Kinesiology
BS (1956) Rice Institute; MS (1959) North Texas State University; EdD (1966) Louisiana State University

Speziale, Marie, 2002–2013. Professor Emerita of Trumpet
BM (1964) College Conservatory of Music, University of Cincinnati

Spuler, Richard, 1992-2013. Senior Lecturer Emeritus of German
BA (1975), MA (1976) Washington State University; PhD (1980) Ohio State University

Stebbings, Ronald F., 1968–95. Professor Emeritus of Space Physics and Astronomy
BSc (1952), PhD (1956) University College, London

Stevenson, Paul M., 1984–2015. Professor Emeritus of Physics and Astronomy
BA (1976) Cambridge University; PhD (1979) Imperial College

Strassmann, Joan, 1980–2011. Professor Emerita of BioSciences
BS (1974) University of Michigan; Ph.D. (1979) University of Texas–Austin

Stormer Jr, John C., 1983–95. Croneis Professor Emeritus of Geology
AB (1963) Dartmouth College; PhD (1971) University of California–Berkeley

Subtelny, Stephen, 1968–2000. Professor Emeritus of Ecology and Evolutionary Biology
BA (1949) Hobart College; MA (1952), PhD (1955) University of Missouri

Talwani, Manik, 1985–2006. Professor Emeritus of Advanced Studies and Research in Earth Science, Research Professor
BScHons (1951), MSc (1953) Delhi University; PhD (1959) Columbia University; PhD (Honoris Causa) (1981) Oslo University

Taylor, Julie M., 1981–2005. Professor Emerita of Anthropology
BA (1966) Harvard University; Diploma (1969), PhD (1973) Oxford University

Taylor, Ronald N., 1983–2009. Professor Emeritus of Management
BA (1960) Westminster College; MA (1964) University of Nebraska; PhD (1970) University of Minnesota

Thompson, Ewa M., 1970–2012. Professor Emerita of Slavic Studies
BA (1963) University of Warsaw; MFA (1963) Sopot Conservatory of Music, Poland; PhD (1967) Vanderbilt University

Todd, Anderson, 1949–92. Gus Sessions Wortham Professor Emeritus of Architecture
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

Tyler, Stephen A., 1970–2011. Herbert S. Autry Professor Emeritus of Anthropology and Linguistics
BA (1957) Simpson College; MA (1962), PhD (1964) Stanford University

Uecker, Wilfred C., 1984–2012. Professor Emeritus of Management

BA (1968), MBA (1970), PhD (1973) University of Texas–Austin

Urrutibéheity, Hector N., 1967–2000. Professor Emeritus of Spanish and Portuguese
Profesorado (1956) La Plata National University, Argentina; PhD (1968) Stanford University

Vail, Peter R., 1986–2001. W. Maurice Ewing Professor Emeritus of Oceanography
AB (1952) Dartmouth College; MS (1953), PhD (1959) Northwestern University

Van Helden, Albert, 1970–2001. Lynette S. Autrey Professor Emeritus of History
BEng (1962), MS (1964) Stevens Institute of Technology; MA (1967) University of Michigan; PhD (1970) University of London

Veletsos, Anestis S., 1964–2008. Brown and Root Professor Emeritus of Civil and Environmental Engineering
BS (1948) Robert College, Turkey; MS (1950), PhD (1953) University of Illinois

von der Mehden, Fred R., 1968–97. Albert Thomas Professor Emeritus of Political Science
BA (1948) University of the Pacific; MA (1950) Claremont Graduate School; PhD (1957) University of California–Berkeley

Wadsworth, Philip A., 1964–73. Professor Emeritus of French
AB (1935), PhD (1939) Yale University

Wall, Frederick T., 1972–79. Professor Emeritus of Chemistry
BC (1933), PhD (1937) University of Minnesota

Wallace, Kristine Gilmartin, 1969–2006. Lecturer Emerita of Classics
BA (1963) Bryn Mawr; MA (1965), PhD (1967) Stanford University

Wang, Chao-Cheng, 1968–2000. Noah Harding Professor Emeritus of Computational and Applied Mathematics, Associate Professor of Mechanical Engineering and Materials Science
BS (1959) National Taiwan University; PhD (1965) Johns Hopkins University

Ward, Calvin H., 1966–2014. Professor Emeritus of Civil and Environmental Engineering
BS (1955) New Mexico State University; MS (1958), PhD (1960) Cornell University; MPH (1978) University of Texas School of Public Health

Wells Jr, Raymond O., 1965–2000. Professor Emeritus of Mathematics
BA (1962) Rice University; MS (1964), PhD (1965) New York University

Widrig, Walter M., 1969–2000. Professor Emeritus of Art History
BA (1951) Yale University; MA (1956) Columbia University; PhD (1975) New York University

Wilson, Joseph B., 1954–98. Professor Emeritus of German Studies
BA (1950), MA (1953) Rice Institute; PhD (1960) Stanford University

Winkler, Michael, 1967–2000. Professor Emeritus of German Studies
BA (1961) St. Benedict's College; MA (1963), PhD (1966) University of Colorado

Wolf, Richard A., 1967–2002. Professor Emeritus of Physics and Astronomy, Research Professor
BEngPhys (1962) Cornell University; PhD (1966) California Institute of Technology

Wood, Susan, 1981–2013. Gladys Louise Fox Professor Emerita of English
BA (1968) East Texas State University; MA (1970) University of Texas–Arlington

Young, James F., 1990–2011. Professor Emeritus of Electrical and Computer Engineering
BS (1965), MS (1966) Massachusetts Institute of Technology; PhD (1970) Stanford University

Young, Richard D., 1965–92. Professor Emeritus of Economics and Mathematical Sciences
BA (1951), MA (1954) University of Minnesota; PhD (1965) Carnegie Institute of Technology

Last Revised : August 03, 2015

Message from the President

Now barely into our second century, Rice University has changed a tremendous amount since 59 students and 12 faculty members participated in the first matriculation in the early fall of 1912. We have remained true to our founding ideals and ambitions, building over the course of a century one of the great universities of America. Rice's mission and aspirations are captured in our mission statement:

As a leading research university with a distinctive commitment to undergraduate education, Rice University aspires to pathbreaking research, unsurpassed teaching and contributions to the betterment of our world. It seeks to fulfill this mission by cultivating a diverse community of learning and discovery that produces leaders across the spectrum of human endeavor.

We are indeed an unusual university. While we are among the renowned research universities of the world, we also are among the smallest. And although comparatively small, we are committed to a wide spectrum of endeavors ranging across our eight schools and many inter-disciplinary institutes and centers. Our success is built on the contributions of every part of our community: graduate and undergraduate students, faculty and staff, alumni and other supporters across our city and around the world.

Our ambition and our standards are not constrained by our size. We strive to be bold in our aspirations and entrepreneurial in our approach. We seek to make a distinctive contribution to our home city of Houston while achieving a global impact through education, research and service. We are committed to enriching understanding, creating opportunity, discovering knowledge and improving our world.

The General Announcements of the University sets forth the immense array of opportunities for our students, as well as the rules and policies which govern their participation as students in the university. But we demand more of each other than just adherence to rules and policies. We expect that all members of our community will be guided in all their endeavors by the core Rice values: Responsibility, Integrity, Community and Excellence. These values are just as important as the academic offerings and rules included in these announcements.

We take great pride in the diversity of our community. Our success requires thoughtfulness and respect in every interaction on our campus, whether with members of the Rice community or the visitors we welcome. Our "culture of care" demands not only that we not cause harm to others, but also that we look out for each other and provide or seek help when needed.

We are pleased that you have chosen to become a part of this dynamic university as it embarks on its second century of excellence and achievement. On behalf of our faculty and staff, I wish you every success as you pursue your educational endeavors. We take pride in the special community of Rice, and look forward to working with you as you seize the opportunities of Rice to achieve your aspirations and dreams.

David W. Leebron
President
Rice University

Last Revised : August 03, 2015

Contact Information

William Marsh Rice University

Physical Address: 6100 Main Street, Houston, Texas 77005
Mailing Address: P.O. Box 1892, Houston Texas 77251-1892
Telephone: Campus Operator 713-348-0000
Homepage Address: www.rice.edu

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

Admissions

Office of Admission-MS 17
109 Lovett Hall, 713-348-7423

Business Matters

Office of the Cashier-MS 55
110 Allen Center, 713-348-4946

Career Services

Center for Career Development-MS 521
Huff House, 713-348-4055

Credits, Transcripts

Office of the Registrar-MS 57
116 Allen Center, 713-348-4999

Financial Aid, Scholarships, Part-time Employment on Campus

Office of Financial Aid-MS 12
250 Allen Center, 713-348-4958

Graduate Studies

Chair of the appropriate department (see Graduate Degree Chart)
or Office of Graduate and Postdoctoral Studies-MS 13
323 Allen Center, 713-348-4002

Undergraduates and Undergraduate Curricula

Office of the Dean of Undergraduates-MS 6
101 Lovett Hall, 713-348-4996

For questions about the organization or technical editing of the General Announcements, please email vpaa@rice.edu.

Last Revised : August 12, 2013

Accreditation

Rice University is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award baccalaureate, masters, and doctorate degrees.

Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 (http://www.sacscoc.org) or call 404-679-4500 for questions about the accreditation of Rice University or allegations of significant non-compliance with a requirement or standard. All other inquiries should be addressed directly to the appropriate office at Rice University.

Last Revised : August 03, 2015

Complaints Process

Rice University's "Program Integrity"-Compliant Student Complaint Process

The Texas Higher Education Coordinating Board (THECB) and the Texas Administrative Code (19 TAC § 1.110-1.120) require Rice University -- and all other Texas universities -- to provide a student complaint procedure that complies with the U.S. Department of Education's "Program Integrity" regulations as part of the university's eligibility for Title IV federal funds.

The requisite complaint process must inform current, former or prospective students who have exhausted Rice's grievance, complaint or appeal processes how to initiate a complaint outside of Rice with THECB. The THECB's procedures for such complaints are found here. Students wishing to use this outside process should ensure they have first addressed their complaint to the appropriate Rice University complaint process. If Rice is unable to resolve the matter after the student has exhausted internal complaint and appeal processes, the student may then file a complaint with THECB according to the following:

1. The THECB's complaint process can be found here. Students start THECB complaint process by sending the first three forms linked below either by electronic mail to StudentComplaints@thecb.state.tx.us or by regular mail to the Texas Higher Education Coordinating Board, Office of General Counsel, P.O. Box 12788, Austin TX 78711-2788 (fax forms are not accepted). The fourth form must also be included for complaints regarding a student with a disability.

   (a) THECB Student Complaint Form
   (b) FERPA Consent and Release Form
   (c) THECB Consent and Agreement Form
   (d) Authorization to Disclose Medical Record Information

2. Complainants should understand that the THECB does not handle, investigate, or attempt to resolve complaints concerning actions that occurred more than two years prior to the filing of a student complaint form with the THECB (unless the delay in filing the THECB complaint was caused by the complainant exhausting Rice's grievance procedures). The THECB also does not handle the various types of complaints listed in 19 TAC § 1.113.

3. Former students must file a complaint with the THECB no later than one year after the student's last date of attendance at Rice, or within 6 months of discovering the grounds for complaint, unless the delay in filing the THECB complaint was caused by the complainant exhausting Rice's grievance procedures.

4. The THECB will refer complaints alleging that Rice has violated state consumer protection laws to the Consumer Protection Division of the Office of the Attorney General of Texas for investigation and resolution. If THECB determines that a complaint is appropriate for investigation and resolution by Rice's accrediting agency (SACSCOC -- the Southern Associations of Colleges and Schools Commission on Colleges) or an educational association such as ICUT (Independent Colleges & Universities of Texas), the THECB may refer the complaint to the appropriate entity and may terminate the referral of the complaint to those entities at any time and proceed to investigate and adjudicate the complaint.

5. If a person wishes to file a complaint against Rice through the university's accrediting agency, SACSCOC, that agency's complaint process can be found here. A complainant should complete SACSCOC's Complaint Form and send two print copies to the President, Southern Association of Colleges and Schools Commission on Colleges, 1866 Southern Lane, Decatur, GA 30033-4097. The details of the agency's complaint process explain that it is intended to address significant, documented, alleged non-compliance with SACSCOC accreditation standards, policies or procedures. Complainants are expected to have attempted to resolve the issue through Rice's complaint processes before filing a complaint with SACSCOC.

6. If the complaint concerns compliance with statutes or regulations administered by the THECB and the complaint has not been referred to another entity, the THECB Office of General Counsel staff, often assisted by other staff of THECB, will initiate an investigation. The student must provide documentation that all Rice grievance, complaint

or appeal procedures have been exhausted.

7. The THECB, as part of its investigation, may request a Rice response, and may also contact other persons or entities named in the complaint or in Rice's response, in order to ascertain relevant facts. The THECB will also, where appropriate, attempt to facilitate an informal resolution acceptable to both the student and Rice. When this is not feasible, the THECB will evaluate investigation results and recommend action by the Commissioner of the THECB, who after considering any recommendations will render a written determination dismissing the complaint or requiring Rice to take specific actions to remedy the complaint. The Commissioner may also request the THECB to review and decide issues regarding institutional integrity.

Last Revised : July 15, 2014

Disclaimer

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

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Ethical Concerns

Rice University pursues excellence at all levels and strives to practice the highest standards of ethical conduct. Rice students are encouraged, as are all community members, to communicate ethical concerns or questions to officials in their schools or departments, the Dean of Undergraduates, or the Dean of Graduate & Postdoctoral Studies. They may also contact the offices of Human Resources, Internal Audit, General Counsel, Equal Employment Opportunity/Affirmative Action or Risk Management, all of which are listed in the university directory or website. The University also provides an ethics reporting mechanism through the EthicsPoint website (a third-party agent) that allows students and other community members a simple, risk-free way to report activities that may involve potential criminal conduct, ethical breaches, or violations of university policies. (Follow the EthicsPoint link at http://internalaudit.rice.edu/) Persons making reports through EthicsPoint may elect not to provide their names in making a complaint or raising a concern. Rice treats the investigation of any report as a confidential matter. Reports submitted to EthicsPoint are forwarded to the proper university officials for appropriate action. No person will be subjected to retaliation or reprisal for making a report or inquiry in good faith or for seeking guidance on dealing with potential or suspected improper behavior.

Last Revised : August 03, 2015

Equal Opportunity Notice

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. Rice University does not discriminate against any individual on the basis of race, color, religion, sex, sexual orientation, gender identity, national or ethnic origin, ancestry, age, disability, or veteran status in its admissions, educational programs, or employment. In employment, the university seeks to recruit, hire, and advance qualified candidates, including women, members of underrepresented minority groups, individuals with disabilities, and certain classes of military veterans specified by law.

Last Revised : August 11, 2014

