The Course Announcement is intended to provide only general information about Brown University; including courses offered, and it is not in any manner contractually binding.

The information contained herein is subject to revision and change at any time.

Equal Opportunity and Nondiscrimination

Brown University does not discriminate on the basis of sex, race, color, religion, age, handicap, status as a veteran, national or ethnic origin, or sexual orientation in the administration of its educational policies, admission policies, scholarship and loan programs, or other school-administered programs.

- Walter Feldman

The cover image is from a multi-colored silk screen print produced in a limited edition. It represents for the artist, Walter Feldman, a reflection of the continuing building and the constant search for new and constructive ideas embodied at Brown University.

- Walter Feldman
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Academic Calendar

Summer 2013

April 1 - 11 Pre-registration for Summer courses.
April 12 - 23 Summer registration closed for Fall registration (online via Banner for continuing students).
April 24 - June 26 Late registration period for Summer courses.
June 23, 2013 Residence halls open.
June 24, 2013 Summer Session begins.
June 26, 2013 Last day to change courses. (All students MUST be in their registered courses by Thursday, June 27.) Independence Day holiday. No University exercises.
July 4, 2013 Last day to change grade options.

Fall 2013

August 1, 2013 Last day of payment of charges.
August 30, 2013 Beginning of Graduate School Orientation.
August 31, 2013 Beginning of College Orientation.
September 3, 2013 Opening Convocation: 4:00 p.m. Registration of new students for the first semester (7:00 pm to midnight).
September 4, 2013 Classes of the first semester begin. Web registration begins at 8:00 am.
September 11, 2013 First day of RISD Fall Session.
September 18, 2013 Last day to register for a Fall RISD course without a fee or change a grade option for a Fall RISD course - (5:00 p.m. deadline).
September 19, 2013 Last day to add a course on-line and/or without a fee (11:59 p.m. deadline - extended due to Rosh Hashanah holiday opening week of semester).
October 1, 2013 Last day to add a course, change from audit to credit, or change a grade option declaration (5:00 p.m. deadline). Deadline for students currently on leave to apply for readmission for semester II.
October 4, 2013 Fall Weekend Holiday. No University exercises.
October 15, 2013 Date by which sophomores entering their 5th semester must file their concentration declaration forms via ASK to avoid having a "No Concentration" hold placed against their Banner registration. (5:00 pm deadline).
October 18, 2013 Mid-semester deadline. Last day to change from credit to audit in a course (5:00 p.m. deadline). Last day to request a Course Performance Report.
October 21 - Nov 1 Advising period for spring pre-registration. Students in their first through third semesters will need to procure their advising PIN from their advisor in order to register.
October 31, 2013 Date by which advisors must approve sophomore submitted concentrations in ASK to avoid having a "No Concentration" hold placed against the student's Banner registration. (5:00 pm deadline).
November 1, 2013 Deadline for submission of proposals for undergraduate group study projects (GISPs) for Semester II.
November 5 - 12 Registration for Semester II. (Note: No student will be permitted to register for his or her fifth semester unless an approved declaration of concentration has been filed.)
November 12, 2013 End of the pre-registration period. Last day for advisors to approve second concentrations in ASK for students in their 7th semester declaring a second/additional concentration. (5:00 p.m. deadline) *Any declarations not "advisor approved" and recorded in Banner by the Office of the Registrar by the 5:00 p.m. deadline will not be honored.

Spring 2014

January 1, 2014 Last day for payment of charges.
January 6, 2014 First day of RISD Winter Session.
January 13, 2014 Last day to register for a Winter RISD course without a fee or change a grade option for a Winter RISD course (5:00 p.m. deadline).
January 20, 2014 Martin Luther King, Jr. holiday. No University exercises.
January 21, 2014 Registration of new students for the second semester (4:00 pm to midnight).
January 22, 2014 Classes of the second semester begin. Web registration begins at 8:00 am. Theses of candidates for Masters and Ph.D. degrees in May (on Semester I registration fee) due.
February 4, 2014 Last day to add a course on-line and/or without a fee (5:00 p.m. deadline).
February 7, 2014 Last day of Winter RISD classes.
February 13, 2014 First day of RISD Spring Session.
February 15 - 18 Long weekend. No University exercises.
February 19, 2014 Classes resume. Last day to add a course, change from audit to credit, or change a grade option declaration (5:00 p.m. deadline).
February 20, 2014 Last day to register for a Spring RISD course without a fee or change a grade option for a Spring RISD course (5:00 p.m. deadline).
March 7, 2014 Mid-semester deadline. Last day to change from credit to audit in a course (5:00 deadline). Last day to request a Course Performance Report.
March 22 - 30 Spring Recess.
March 31, 2014 Classes resume.
March 31 - April 11 Advising period for fall pre-registration. Students in their first through their semesters will need to procure their advising PIN from their advisor in order to register.
April 1, 2014 Deadline for students currently on leave to apply for readmission for semester I. Date by which sophomores entering their 5th semester must file their concentration declaration forms via ASK to avoid having a "No Concentration" hold placed against their Banner registration. (5:00 pm deadline).

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 4, 2014</td>
<td>Deadline for submission of proposals for undergraduate group study projects (GISPs) for Semester I.</td>
</tr>
<tr>
<td>April 10, 2014</td>
<td>Date by which advisors must approve sophomore submitted concentrations in ASK to avoid having a &quot;No Concentration&quot; hold placed against the student's Banner registration. (5:00 pm deadline).</td>
</tr>
<tr>
<td>April 15 - 22</td>
<td>Registration for Semester I, 2014-15. (Note: No student will be permitted to register for his or her fifth semester unless an approved declaration of concentration has been filed.)</td>
</tr>
<tr>
<td>April 22, 2014</td>
<td>End of the pre-registration period. Last day for advisors to approve second concentrations in ASK for students in their 7th semester declaring a second/additional concentration. (5:00 p.m. deadline) *Any declarations not &quot;advisor approved&quot; and recorded in Banner by the Office of the Registrar by the 5:00 p.m. deadline will not be honored.</td>
</tr>
<tr>
<td>April 25 - May 6</td>
<td>Reading Period (optional and at the discretion of the instructor).</td>
</tr>
<tr>
<td>May 1, 2014</td>
<td>Deadline for undergraduates to declare a leave for Semester I. Theses of candidates for Masters and Ph.D. degrees in May due.</td>
</tr>
<tr>
<td>May 6, 2014</td>
<td>Classes end for courses not observing the reading period. Last day to drop a course (5:00 p.m. deadline) or to request an incomplete from an instructor.</td>
</tr>
<tr>
<td>May 7 - 16</td>
<td>Final Examination Period. (No exams on Sunday May 11).</td>
</tr>
<tr>
<td>May 14, 2014</td>
<td>Last day of Spring RISD classes.</td>
</tr>
<tr>
<td>May 25, 2014</td>
<td>Commencement.</td>
</tr>
</tbody>
</table>

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
General Regulations

General academic requirements
Undergraduate degrees:
Information regarding general academic degree requirements are listed under 'The College' section of the University Bulletin as well as on the respective websites of the Office of the Registrar (http://brown.edu/Administration/Registrar/guidelines/undergrad_progs) and the Dean of the College (http://brown.edu/Administration/Dean_of_the_College/degree).

Advanced degrees:
Information regarding Advanced degree requirements for specific academic programs are listed on the Graduate School (http://www.brown.edu/academics/degree-granting) website. Information regarding general and overall guidelines for advanced degrees are also listed on the Office of the Registrar (http://www.brown.edu/Administration/Registrar/guidelines/advanced_progs) website.

Enrollment and course registration
Instructions about enrollment will be sent via e-mail prior to the opening of each semester to all students. To complete enrollment, all requirements of the pertinent administrative offices of the University must be met, including registration for courses, payment of accounts, and arrangements for housing as appropriate. Fees will be charged for failure to meet established deadlines. All students must complete enrollment in order to be eligible to remain at the University.

Students are urged to note carefully the instructions provided at registration in order to assure eligibility for enrollment, proper registration in courses, and to avoid unnecessary payment of Late Registration and Change of Course fees. All registration materials and/or processes are considered official university documents. Any falsification of signatures or other tampering with such forms/processes constitutes a violation of the Academic Code.

All registration-related deadlines for each semester are listed in the 'Academic Calendar' section of the Bulletin and also on the Office of the Registrar website as well as answers to common registration-related questions.

For the full text on the Academic Regulations and Instructions for Registration, see the Registrar's Office web site at:
http://www.brown.edu/Administration/Registrar/guidelines/index.html

For a tutorial on registration, see:
http://www.brown.edu/CIS/Training/onlinetraining/index.php

To access the most up-to-date course information including credit bearing summer session offerings (*The course information in the PDF versions of the University Bulletin and Course Announcement Bulletin is current as of August 2013), see:
http://selfservice.brown.edu/menu and select 'Brown Course Search'

Course Credit
The semester course is the unit of credit. This is defined as a course taken for the duration of one semester and, for purposes of evaluation, may be considered the approximate equivalent of four semester hours.

Maximum Course Load and Auditing
No student enrolled in The College or the Graduate School may enroll for more than five Brown credits in a semester. A degree candidate paying full tuition (4 or more enrollment units per semester) and is enrolled in less than five academic credits may be permitted to audit (see below section on auditing) additional course(s). At no time may a student be registered for more than 5 credits/courses including audits.

Enrollment Without Academic Credit
Auditing. An auditor is a student who is registered in a course without earning academic credit upon successful completion under the following conditions: (1) the student must be properly registered for it; (2) the student must pay the usual course fee except as indicated in the next paragraph; (3) the student is entitled to all instruction in the course, including conferences, the criticism of papers, tests, and examinations. Any student registered on a full-time basis may be permitted to audit additional courses in any semester without charge. The total number of course registrations, including audits, may not exceed five credits. Non-degree or student paying less than four enrollment units of tuition may choose to audit if they so choose, but the student does so with the understanding that they will pay the equivalent rate as if registered for academic credit.

With the concurrence of the instructor, the fact that a course has been audited shall be entered on the permanent record of any student electing this privilege. The status of a course in which a student has registered may not be changed from audit to credit after the fourth week of classes or from credit to audit after midsemester.

Vagabonding. A "vagabond" is a student who, with the permission of the instructor involved, visits a given course occasionally or regularly without payment of fee. It is understood that such a student shall be entitled to participate in classes and activities, including discussions, conferences, and papers, only at the pleasure of the instructor.

Attendance, Grading, Examinations
Attendance
It is in the interest of every student to attend all sessions of the classes in which registered, and each student has an obligation to contribute to the academic performance of all by full participation in the work of each class; however, within such limits as are necessary for the general welfare, a student benefits also from exercising discretion and assuming responsibility for his or her educational progress.

Accordingly, unless the instructor imposes attendance requirements, students are not limited with respect to the number of absences from a course. When, in the instructor’s opinion, a student is abusing the privilege of voluntary attendance, the appropriate dean’s office should be notified so that appropriate action may be taken.

A student is always fully responsible for any course work missed because of absences and will be assigned failing grades in final examinations missed without excuse from the dean’s office.

No student organization shall make any appointment for undergraduates which conflicts with college exercises unless permission has been obtained from the dean.

Grading System
At the end of each semester final grades are given in semester courses. In all courses, except those designated by the instructor as Mandatory Satisfactory/No Credit, a student may, in consultation with the advisor, elect to be graded on a basis of either Satisfactory/No Credit or A, B, C/No Credit. A student must for every course taken indicate by the end of the fourth week of the semester which basis for grading is elected. Any student regularly enrolled in a course, no matter whether for A, B, C/No Credit or for Satisfactory/No Credit, may request from the instructor a more detailed written evaluation of his or her work. (See Course Performance Report below.) Such supplemental evaluations are intended primarily for the information of the student and do not replace departmental evaluations.

No Credit. This grade is given when courses are not satisfactorily completed. The notation No Credit, and the description of the course in which it is given, are not entered on the official academic transcript.

1. Courses may be designated to be graded on a Mandatory Satisfactory/No Credit basis for all students enrolled on the initiative of the instructor. The designation of a course by an instructor to be graded S/NC only must be announced no later than the first day of classes and entails the responsibility for providing Course
Per the student's department and the dean, a student may register for such courses as to carry advanced degree credit. On occasion, however, and with approval of the Graduate Council, set higher grade requirements.

Satisfactory or C in a 1000 or 2000 level course carries credit toward all other courses. Repeating Courses:

Repeating Courses: In the first half, the second half of the course registration must also be as completed as per the Registrar's Office. For a course, the instructor will assign a grade of A, B, C, or S satisfactorily. A grade of NC assigned in accordance with the course will be submitted as appropriate. A grade change from inc to A, B, C, or S. A grade of NC assigned in accordance with the provisions in the Faculty Rules for such examinations, unless other arrangements are agreed to by the instructor and the student, and communicated to the registrar. If the final examination is not excused by the dean, the student will receive no credit for the course.

A grade of INCABS will be assigned if appropriate and will be resolved in accordance with the provisions of No. 3 and No. 4 above.

Year Courses: A year course is one in which both halves must be passed in order to get credit for the entire year. The grade at the end of the first semester is normally a temporary one. Neither semester may be elected independently without special permission. The final grade submitted at the end of the course covers the work of the entire year and is recorded as the final grade for both semesters. It is normally expected that the second half of the academic year will be completed in the second semester of the same academic year in which the first half was taken. If the second half of the year course is not completed at the end of that academic year, the grade for the first semester will become a No Credit. If the student completes the second part of the year course during a later academic year, he or she may need to notify the Registrar's Office, in order to reactivate the first part of the course.

In registering for the second half of a year course, students must register for credit if the first half was taken for credit. Similarly, if registered for audit in the first half, the second half of the course registration must also be as an audit. Exceptions must be approved by both the academic department and the Committee on Academic Standing.

Repeating Courses: Unless a course is explicitly approved by either the College Curriculum Council or Graduate Council as being able to be repeated for credit. Once course credit has been earned with an initial passing grade A, B, C, or Satisfactory (S) or through Transfer Credit it cannot be officially registered for again for in an effort to improve one's initial grade.

Grade Requirements for Advanced Degrees: A minimum grade of either Satisfactory or C in a 1000 or 2000 level course carries credit toward all advanced degrees. Individual departments may, subject to the approval of the Graduate Council, set higher grade requirements.

Advanced degree candidates may be required to register in courses primarily for undergraduates (numbered 1–999); these courses do not carry advanced degree credit. On occasion, however, and with approval of the student's department and the dean, a student may register for such a course with extra work for advanced degree credit. This course then has the same standing as a 1000-level course and an EX is noted on the transcript. This provision for extra work does not apply to courses of the level of 1–999 taken for graduate credit by students in MD program.

Course Performance Reports: Students, regardless of grade option selected, may request the instructor to complete a Course Performance Report. This request has to be made prior to midsemester. The instructor may decline to complete such a form if it is believed he or she has inadequate information to do so. Particular consideration should be given to requests from students for whom the course is part of their concentration program. Copies of Course Performance Reports will be made available to: (1) the student, (2) the dean's office, and (3) the student's concentration advisor. While not part of the official record, Course Performance Reports may be sent out of the University at the student's request as information on his or her work at Brown University. In such cases, the student must provide copies of all material to be enclosed at the time the transcript is requested.

Concentration Evaluations: Undergraduate students may request a written evaluation of performance in concentration, which will consist of the student's own statement and an evaluation prepared by an appropriate faculty member. The following points may be included in such an evaluation: any special characteristics of the concentration program; information not on the student's official transcript, such as the interest and motivation of the student, the probable capacity for more advanced work, the ability to conduct research, and so forth; and a comment describing the basis on which the evaluation was prepared. If the student elects to have a concentration evaluation prepared, the student's statement and request for departmental evaluation should be submitted to the concentration advisor by the end of the first week of the student's final semester. There is no specific form for concentration evaluations; faculty may use whatever format they choose.

Transcripts: Requests for transcripts must be made either in writing by completing a Transcript Order Form, or electronically. For further information please visit the Office of the Registrar's website (http://www.brown.edu/Administration/Registrar). Transcripts will be issued only if all financial obligations to the University have been met.

An official transcript consists of a copy of the permanent record listing courses passed and grades received. A statement is added to all transcripts explaining the grading system and indicating that the student may elect to include other material with the official transcript. The student should choose this material in consultation with his or her advisor. The University will mail this material in one envelope along with the official transcript.

Examinations

A final, written examination (at the end of each semester) shall be given in each course numbered under 2000 unless the instructor of a particular course decides to use some other mode of final evaluation. If the written examination is not to be used, the mode of final examination which is to be used shall be made known to the students in the course no later than midterm and, in addition, the department and the registrar shall be informed.

Final Examination Schedule: A pre-defined period at the close of each semester is provided for final examinations for those courses for which such an examination is scheduled. Two examination periods are scheduled for each day. The examination group is determined by, in most cases, the offering time associated with the course (indicated by the figure in parentheses) and also as displayed on Banner Web. The schedule for 2013-2014 is as follows:

<table>
<thead>
<tr>
<th>Semester I, 2013-2014</th>
<th>Date</th>
<th>9 am Group</th>
<th>2 pm Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec. 13 F</td>
<td>13</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Dec. 14 S</td>
<td>16</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Dec. 15 Su</td>
<td>5</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Dec. 16 M</td>
<td>14</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Dec. 17 T</td>
<td>15</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Dec. 18 W</td>
<td>12</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Nonacademic Discipline

Brown strives to sustain a learning environment that supports individual exploration. Central to this effort are the four primary Principles of the Brown University Community: individual integrity, respect for others, respect for University resources, and respect for the values of teaching, learning, and scholarship. Our community believes that adherence to these principles supports the overall academic mission of the University. Violations of these principles will be handled through the procedures governing the Academic Code and the Non-Academic Disciplinary Procedures. These procedures are designed to address behaviors that impede the educational activity of the University or that infringe upon the rights of others.

Non-academic disciplinary cases are administered by the Office of Student Life, the Peer Community Standards Board, and the University Disciplinary Council. Specific hearing procedures can be found online at www.brown.edu/randr. Printed copies of the Non-Academic Disciplinary Procedures are available from the Office of Student Life.

Curricular Programs

Diversity Perspectives

Diversity Perspectives courses focus primarily or at least substantially on the knowledge and experience of groups that are underrepresented in traditional approaches to knowledge and learning. These courses examine the ways in which disciplines, histories, and paradigms of knowledge are reconfigured by the study of diversity-related intellectual questions.

Diversity Perspectives courses are designated “DVPS” at the end of course descriptions. They may be viewed in Brown Course Search by choosing “Diversity Perspectives” in the Curricular Programs field.

First Year Seminars

First-year seminars ensure close contact between first-year students and faculty members while simultaneously offering a rigorous introduction to the concepts and methods of a particular subject area or department. Seminars have few if any prerequisites and are offered in all areas of the curriculum, from anthropology to physics to literary arts. Students receive regular feedback on the work they produce for the seminars, and seminar faculty often serve as informal mentors for their students long after the class has ended.

First-year seminars are designated “FYS” at the end of course descriptions. A complete list of each semester’s seminars may be viewed in the Brown Course Search by choosing “First-Year Seminars” in the Curricular Programs field. Registration for first-year seminars takes place during the summer prior to students’ matriculation to Brown. Depending on availability, first-year students may also add seminars to their course schedules during pre-registration and shopping periods.

Liberal Learning

The Liberal Learning course list was created to assist students in planning a course of study consistent with the goals of a liberal education. These courses, which are an established part of the Brown curriculum, emphasize synthesis rather than survey and focus on methods, concepts, and values. Reflecting Brown’s conviction that liberal education requires active student involvement, Liberal Learning courses entail extensive student participation through papers, projects, reports, and class discussion.

Liberal Learning Courses are designated with “LILE” at the end of course descriptions. A complete list of each semester’s LILE courses may be viewed in the Brown Course Search by choosing “Liberal Learning” in the Curricular Programs field.

Writing-Designated Courses

Brown students are expected to work on writing in their general studies and in the concentration. Students may begin to fulfill this expectation by taking at least one course that carries the WRIT designation. WRIT

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
courses are offered across the curriculum and help students develop the ability to write well in styles appropriate to different academic disciplines. A complete list of each semester’s WRIT courses may be viewed in the Brown Course Search by choosing “Writing-Designated Courses” in the Curricular Programs field.

**Diversity Perspectives**

**Fall 2013**

**Africana Studies**
AFRI 0090 S01 14491 An Intro to Africana Studies Francoise N. Hamlin
AFRI 0210 S01 14492 Afro Latin Americans Anani Dzidzienyo
AFRI 0700 S01 14494 Freedom Freedoms Judy F. Richardson
AFRI 1110 S01 14499 Voices Beneath the Veil Elmo Terry-Morgan
AFRI 1150 S01 14487 Afro-Caribbean Philosophy Paget Henry
AFRI 1210 S01 14498 Afro-Brazilians + Brazilians Polity Anani Dzidzienyo
AFRI 1620 S01 14493 Black New Orleans: A Research Brenda Marie Osbey
AFRI 1630 S01 14500 Modernist Africana Poetry Brenda Marie Osbey

**American Studies**
AMST 1611A S01 14271 20thC US Immigrant Ethnic Lit Richard Alan Meckel

**Anthropology**
ANTH 0066S S01 16147 Egypt in Revolution Ian B. Straughn
ANTH 0200 S01 15158 Culture and Human Behavior Marida C. Hollos
ANTH 0300 S01 15160 Culture and Health Sherine F. Hamdy
ANTH 0800 S01 15166 Intro to Linguistic Anthro Paja L. Faudree
ANTH 1305 S02 16300 Medical Humanities Amy L. Moran-Thomas
ANTH 1624 S01 15168 NE Indians,Colonists,Africans Patricia E. Rubertone
ANTH 1800 S01 15169 Magic Mushrooms to Big Pharma Paja L. Faudree

**Arabic**
ARAB 0900 S01 16112 Love, Revolution and Nostalgia Miled Faiza

**Classics**
CLAS 0855 S01 15429 The Bhagavad Gita James L. Fitzgerald

**Comparative Literature**
COLT 0810I S01 14343 Talemakers of Non-Western Wild Dore J. Levy
COLT 1811D S01 14503 Reading Revolution Esther K. Whitfield

**Education**
EDUC 1700 S01 16177 Asian Americans in Higher Edu Liza D. Cariaga-Lo

**English**
ENGL 0710B S01 14797 African Amer Lit and Slavery Rolland D. Murray
ENGL 1710J S01 14803 African Lit in Globalization Olakunle George
ENGL 1810I S01 14620 Aesthetics and Sexuality Jacques Khalip

**Ethnic Studies**
ETHN 0090E S01 16637 Critical Mixed Race Studies Alexandra R. Agloro
ETHN 1890A S01 16540 Latino Politics in the U.S. Anthony DeSales Affigne

**German Studies**
GRMN 1340N S01 15303 Literature and Multilingualism Zachary Sng

**Haitian-Creole**
CROL 0300 S01 16260 Advanced Intermediate Creole Patrick Sylvain

**Hispanic Studies**
HISP 0730 S01 14171 Early/Contmp Wtrr of Span Amer Jose R. Ortiz Castillo

**History of Art and Architecture**
HIAA 0770 S01 14682 Architecture and Urbanism Itohan I. Osayimwese

**Judaic Studies**
JUDS 0050L S01 15824 The Jew in the Modern World Adam Teller

**Persian**
PRSN 1200 S01 14140 Iranian Cinema Iraj Anvar

**Public Health**
PHP 1070 S01 15424 Brd of Disease in Devel Cnty Stephen T. McFarvey
PHP 1680I S01 15427 Disability/Health and Community Sarah E. Skeels

**Public Policy and American Institutions**
PPAI 1701W S01 16537 Race and Public Policy David M. Blanding

**Religious Studies**
RELS 0130 S01 14135 The Hindu Tradition Gregory R. Schopen
RELS 0290D S01 14132 Women, Sex and Gender in Islam Nancy Khalek
RELS 1440 S01 14145 Themes in Japanese Buddhism Janine T. Anderson Sawada
RELS 1530C S01 14982 Interpreting the Self: Biogra Nancy Khalek

**Russian**
RUSS 0320C S01 15563 Demons and Angels Michal Oklot
RUSS 1967 S01 16169 Russian Postmodernism Michal Oklot

**Slavic**
SLAV 1300 S01 15507 Sociolinguistics Masako Ueda Fidler

**Spring 2014**

**Africana Studies**
AFRI 0760A S01 24893 Rastafarianism Barrymore A. Bogues
AFRI 0990 S01 24550 Black Lavendar-Gay-Leban Plays Elmo Terry-Morgan
AFRI 1020C S01 24557 Afro-Luso-Brazilian Triangle Anani Dzidzienyo
AFRI 1050E S01 24560 RPM Playwriting Elmo Terry-Morgan
AFRI 1050Q S01 24566 New Narratives in Afr Amer Hist Wanda W. Bayeza
AFRI 1360 S01 23880 Knowledge, Texts + Methodology Anani Dzidzienyo

**American Studies**
AMST 1010 S01 23658 Intro to American Studies Matthew Guterl
AMST 1904F S01 25739 SE Asian Refugees/Americans Wanni W. Anderson
AMST 1904V S01 25330 Decolonizing Minds Naoko Shibusawa
AMST 1904X S01 25688 Imagining China In America Caroline B. Frank

**Anthropology**
ANTH 0066N S01 25415 Peoples, Cultures Greater Mex Matthew C. Gutmann
ANTH 0100 S01 24437 Intro to Cultural Anthropology Daniel J. Smith
ANTH 1110 S01 25444 Circumpolar Ethnography Douglas D. Anderson
ANTH 1110 S01 25451 Africa in Anthro Perspective Melissa Hackman
ANTH 1125 S01 25037 Indigenous Archaeologies TBD
ANTH 1151 S01 25409 Ethnographies Muslim Mid East Ian B. Straughn
ANTH 1310 S01 24440 Anthro Perspctv Intermt Hlth Amy L. Moran-Thomas
ANTH 1320 S01 24441 Anthro + Internship Devpmnt Adia Benton
ANTH 1322 S01 24442 Anthropology of Global Aid TBD
ANTH 1323 S01 24693 Cult, Poltics of Clnial Cities Lina M. Fruzzetti
ANTH 1411 S01 24443 Nations within States Douglas D. Anderson
ANTH 1623 S01 24512 Archaeology of Death Patricia E. Rubertone
ANTH 1810 S01 24445 Language and Power Paja L. Faudree

**Classics**
CLAS 0850 S01 24669 Mythology of India James L. Fitzgerald
CLAS 1140 S01 24667 Classical Philosophy of India David Bucht

**Education**
EDUC 0410E S01 24073 Empowering Youth Margary D. Martin
EDUC 1560 S01 25411 Philosophy of Education Sarah R. Leibel

**English**
ENGL 0700E S01 24277 Postcolonial Literature Olakunle George
ENGL 1710I S01 24305 Harlem Renaissance Rolland D. Murray

**Gender and Sexuality Studies**
GNSS 0090C S01 24434 Reproductive Health Sarah D. Fox

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
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<th>Department</th>
<th>Course Code</th>
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<td>The Politics of Leadership Roger Cobb</td>
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Public Health
PHP 0050 S01 16562 Pain and the Human Condition Nisha Gupta Trivedi

Public Policy and American Institutions
PPAI 0700J S01 15331 Comparative Policies Andrew Pennock

Religious Studies
RELS 0090F S02 16339 Friendship in the Anc’t World Saul Olyan
RELS 0090G S01 15976 Women and Religion in Classics Gregory R. Schopen

Russian
RUSS 0320C S01 15663 Demons and Angels Michal Oklot
RUSS 0320E S01 15344 Crime and Punishment Vladimir Golstein

Sociology
SOC 0300K S01 14356 Inequalities and Health Susan Short

Urban Studies
URBN 0230 S01 16548 Urban Life in Providence Rebecca L. Carter

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American Studies
AMST 0150K S01 25284 Culture, Communities, Change Susan Smulyan

Anthropology
ANTH 0066N S01 25415 Peoples, Cultures Greater Mex Matthew C. Gutmann

Biology
BIOL 0150A S01 23664 Tech/Anlys DNA-based Biotech Jody Hall
BIOL 0150C S01 23665 Scndary Metabolites Med Plants Fred V. Jackson
BIOL 0150D S01 23809 Techng in Regenerative Mdcne Beth Anne Zielinski-Habershaw
BIOL 0190S S01 23668 Phage Hunters, Part II Sarah E. Taylor

Chemistry
CHEM 0080F S01 25550 Kitchen Chemistry Sarah Delaney

Cognitive, Linguistic and Psychological Sciences
CLPS 0050I S01 24796 Art and Science of Learning Russell M. Church

Education
EDUC 0410E S01 24073 Empowering Youth Margaret D. Martin

Engineering
ENGN 0120A S01 24997 Crssng Consumr Chasm by Desgn Richard D. Fleeter
ENGN 0120B S01 24998 Crssng Spce Chsm Thr Engn Dsgn Richard D. Fleeter

English
ENGL 0760O S01 24407 The Terrible Century Timothy R. T. Bewes

French
FREN 0720A S01 24463 Courty Love to Postmod Desire Virginia A. Krause

Gender and Sexuality Studies
GNSS 0090C S01 24434 Reproductive Health Sarah D. Fox

German Studies
GRMN 0750E S01 25427 Reading Film: An Introduction Zachary Sn

History
HIST 0970S S01 23977 Sport in American History Howard P. Chudacoff

Literary Arts
LITR 0110A S03 23937 Fiction I TBD
LITR 0110B S04 23942 Poetry I TBD
LITR 0710 S01 23953 Writers on Writing Seminar Forrest Gander

Modern Culture and Media
MCM 0800J S01 25294 Revolution is Being Photograph Ariella Azoulay

Physics
PHYS 0100 S01 24889 Nature/Meaning Sci Explanation Leon N. Cooper
PHYS 0112 S01 25548 Extra-Solar Planet Astronomy Gregory S. Tucker
PHYS 0114 S01 25549 Science + Technology of Energy Derek M. Stein

Public Health
PHP 0030 S01 24846 Health of Hispaniola Timothy M. Empkie

Religious Studies
RELS 0090H S01 25216 The Bible and Social Media Nicola F. Denzey

Sociology
SOC 0300C S01 25511 The Nature of Community Ann Dill
SOC 0300D S01 23774 Who Am I? Gregory C. Elliott
SOC 0300L S01 23775 Environment and Society in Afr Michael White

Liberal Learning

Fall 2013

Africana Studies
AFRI 0090 S01 14491 An Intro to Africana Studies Francoise N. Hamlin
AFRI 1150 S01 14487 Afro-Caribbean Philosophy Paget Henry

American Studies
AMST 1610A S01 14416 Amer Advertng: Hist and Conseq Susan Smulyan

Anthropology
ANTH 0110 S01 15157 Anthro + Gibal Social Problems Adia Benton
ANTH 0200 S01 15158 Culture and Human Behavior Marida C. Hollos
ANTH 0300 S01 15160 Culture and Health Sherine F. Hamdy
ANTH 0800 S01 15168 Intro to Linguistic Anthro Paja L. Faurdree
ANTH 1252 S01 16474 Kill Assessment Derek P. Pardue
ANTH 1300 S01 16476 Anthropology of Addictions Irene Glasser
ANTH 1305 S02 16300 Medical Humanities Amy L. Moran-Thomas
ANTH 1326 S01 16607 The New Economic Anthropology David E. Pedersen
ANTH 1624 S01 15168 NE Indians,Colonists,Africans Patricia E. Rubertone
ANTH 1880 S01 15169 Magic Mushrooms to Big Pharma Paja L. Faurdree

Archaeology and Ancient World
ARCH 0740 S01 16295 Revolutions in Archaeology Suzanne E. Piliaar

BioMed-Neuroscience
NEUR 0010 S01 15679 The Brain:Intro to Neuroscienc Michael A. Paradiso

Biology
BIOL 0030 S01 14213 Principles of Nutrition Mary M. Flynn
BIOL 0380 S01 14224 Ecz + Evo Infectious Disease Daniel M. Weinreich

Classics
CLAS 0010 S01 15388 The Greeks Stephen E. Kidd
CLAS 0210B S01 15378 Death in Ancient Greece Pura Nieto Hernandez
CLAS 1120E S01 15389 Slavery in the Ancient World John P. Bodel
CLAS 1120J S01 15394 Presidency/Western Tradition Joseph Michael Pucci

Cognitive, Linguistic and Psychological Sciences
CLPS 0610 S01 15575 Nature of Cognitive Developmnt David M. Sobel

Comparative Literature
COLT 0810I S01 14343 Talemakers of Non-Western Wrld Dore J. Levy

Computer Science
CSCI 0020 S01 15222 The Digital World Donald L. Stanford

Early Cultures
ERLY 1150 S01 16653 Animal Acts Susan A. Curry

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Education
EDUC 1700 S01 16177 Asian Americans in Higher Educ Liza D. Cariaga-Lo

English
ENGL 0310A S01 14840 Introduction to Shakespeare Coppelia Kahn
ENGL 0510E S01 14590 British Romanticism William Keach
ENGL 0580E S01 14516 Inventing America James F. Egan
ENGL 0760H S01 14591 Realism and Modernism Paul B. Armstrong
ENGL 1311G S01 16027 Shakespeare and Love James A. Kuzner
ENGL 1311H S01 16153 Sagas Without Borders Lesley E. Jacobs
ENGL 1360S S01 14586 Renaissance Ovid Coppelia Kahn
ENGL 1361A S01 16031 Fantasies of Milton James A. Kuzner
ENGL 1760G S01 14589 Amer British Poetry Since 1945 Mutiu Konuk Blasing
ENGL 1761V S01 15238 The Korean War in Color Daniel Kim

Center for Environmental Studies
ENVS 0070C S01 15258 Transcending Transpnt Impacts Kurt Teichert
ENVS 0070D S01 15249 Misusing Scientific Info Cornelia Dean
ENVS 1400 S01 15259 Sustainable Design Kurt Teichert

Hispanic Studies
HISP 0730 S01 14171 Early/Contmp Wrtr of Span Amer Jose R. Ortiz Castillo

Judaic Studies
JUDS 0050L S01 15824 The Jew in the Modern World Adam Teller

Modern Culture and Media
MCM 0110 C06 16754 Intro to MCM TBD
MCM 0110 S01 15900 Intro to MCM Lynne Joyrich
MCM 0790 S01 16541 Art in Digital Culture Elisa Giardina Papa

Music
MUSC 0200 S01 15520 Computers and Music Peter Andreas Bussigel
MUSC 1250 S01 15519 Sound Design James R. Moses

Persian
PRSN 1200 S01 14140 Iranian Cinema Iraj Anvar

Portuguese and Brazilian Studies
POBS 0910 S01 15684 On the Dawn of Modernity Onesimo T. Almeida

Public Health
PHP 0320 S01 15423 Introduction to Public Health Melissa A. Clark
PHP 1070 S01 15424 Birth of Disease in Devel Cntry Stephen T. McGarvey
PHP 1680I S01 15427 Disability/Health and Community Sarah E. Skeels

Religious Studies
RELS 0055 S01 14141 Modern Problems of Belief Mark Cladis
RELS 0130 S01 14135 The Hindu Tradition Gregory R. Schopen
RELS 0290D S01 14132 Women, Sex and Gender in Islam Nancy Kahle
RELS 0400 S01 14724 New Testament/Begin of Christnty Nicola F. Denzey
RELS 1440 S01 14145 Themes in Japanese Buddhism Janine T. Anderson Sawada
RELS 1530C S01 14982 Interpreting the Self: Biogra Nancy Kahle

Russian
RUSS 0320C S01 15663 Demons and Angels Michal Oklot
RUSS 1967 S01 16169 Russian Postmodernism Michal Oklot

Science and Society
SCSO 1700P S01 16600 Neuroethics Jeffrey S. Poland

Slavic
SLAV 1300 S01 15507 Sociolinguistics Masako Ueda Fidler

Urban Studies
URBN 1870M S01 15555 Urban Regimes in Amer Republic Marion E. Orr
URBN 1870N S01 15552 Cult/H/I Life Built Envirnt Samuel Zipp

Spring 2014
Africana Studies
AFRI 1360 S01 23880 Knowledge, Texts + Methodology Anani Dzidzienyo

American Studies
AMST 1010 S01 23658 Intro to American Studies Matthew Guterl

Anthropology
ANTH 0066N S01 25415 Peoples, Cultures Greater Mex Matthew C. Gutmann
ANTH 0100 S01 24437 Intro to Cultural Anthropology Daniel J. Smith
ANTH 0500 S01 24438 Anthropological Archaeology Andrew K. Scherer
ANTH 1110 S01 24511 Africa in Anthro Perspective Melissa Hackman
ANTH 1125 S01 25037 Indigenous Archaeologies TBD
ANTH 1151 S01 25409 Ethnographies Muslim Mid East Ian B. Straughn
ANTH 1221 S01 24510 Anthropology of Masculinity Melissa Hackman
ANTH 1232 S01 24439 War and Society Catherine A. Lutz
ANTH 1310 S01 24440 Anthro Perspcvit Internt Hlth Amy L. Moran-Thomas
ANTH 1320 S01 24481 Anthro + International Development Adia Benton
ANTH 1322 S01 24442 Anthropology of Global Aid TBD
ANTH 1323 S01 24693 Cultr, Poltics of Cinial Cities Lina M. Fruzzetti
ANTH 1623 S01 24512 Archaeology of Death Patricia E. Rubertone
ANTH 1720 S01 24513 The Human Skeleton Andrew K. Scherer
ANTH 1810 S01 24445 Language and Power Paja L. Faddeev

Applied Mathematics
APMA 1200 S01 24876 Operatsns Rsrch-Problistc Modls Hongjie Dong

Archaeology and Ancient World
ARCH 0420 S01 24140 Archaeologies of Greek Past Foteni Kondyli

Biology
BIOL 0190H S01 23667 Plants, Food, and People Peter Heywood
BIOL 0200 S01 23670 Foundation of Living Systems John J. Stein

Clastics
CLAS 1120Q S01 24871 Seven Wonders Ancient World John F. Cherry

Cognitive, Linguistic and Psychological Sciences
CLPS 0030 S01 24794 Intro to Linguistic Theory Pauline I. Jacobson
CLPS 0200 S01 24800 Human Cognition David M. Sobel
CLPS 0510 S01 24803 Perception, Illusion, Vis Art William H. Warren

Computer Science
CSCI 0080 S01 25668 Overview of Computer Science Michael L. Littman
CSCI 0931 S01 25047 Intro to CS for Hum + Soc Sci TBD
CSCI 1800 S01 24744 Cybersecurity and Intmtl Rels TBD

East Asian Studies
EAST 1070 S01 23636 An Intro to Lit of 20thC China Lingzheng Wang

Education
EDUC 1560 S01 25411 Philosophy of Education Sarah R. Leibel

English
ENGL 0300A S01 25283 Poetry and Things Ian Alexander Hala Sampson
ENGL 0300K S01 25341 Love and Hate James A. Kuzner
ENGL 0310A S01 25340 Introduction to Shakespeare James A. Kuzner
ENGL 1560R S01 24415 Literature + Science 1800-1950 Vanessa L. Ryan
ENGL 1560W S01 24416 Getting Emotional Jacques Khalip
ENGL 1761P S01 24307 Yeats, Pound, Eliot Mutiu Konuk Blasing

Hispanic Studies
HISP 0730 S01 24327 Early/Contmp Wrtr of Span Amer TBD

Italian Studies
ITAL 0981 S01 25219 Machiavelli in Intl Context Caroline Castiglione

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<td>20th Century German Culture</td>
<td>Kristina C. Mendicino</td>
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For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
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<td>PHIL 1620</td>
<td>S01 14391 Philosophy of Quantum Mechanics</td>
<td>Nina R. Emery</td>
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### Physics

**PHYS 1270**
- **S01 15145 Extragalactic Astronomy**
- Ian P. Dell'antonio

### Political Science

**POLS 0110**
- **S01 14423 Intro to Political Thought**
- Alexander H. Gourevitch

**POLS 0820D**
- **S01 14439 Freedom John O. Tomasi**

**POLS 1821M**
- **S01 14433 War in Film and Literature**
- Rose McDermott

**POLS 18210**
- **S01 14450 Pol of Econ Devl**
- Ina Ashutosh Varshney

**POLS 1821T**
- **S01 14441 Criminal Justice System**
- Ross E. Cheit

**POLS 1822K**
- **S01 16499 Laws of Violence**
- Arnulf A. Becker

### Portuguese and Brazilian Studies

**POBS 0810**
- **S01 15676 Cross-Cultural Identities**
- Patricia I. Sobral

**POBS 0910**
- **S01 15684 On the Dawn of Modernity**
- Onesimo T. Almeida

**POBS 1030**
- **S01 15677 Adv Lang Study/ Creative Wrtng**
- Leonor Simas-Almeida

### Public Policy and American Institutions

**PPAI 0700J**
- **S01 15331 Comparative Policies**
- Andrew Pennock

**PPAI 1700B**
- **S01 15328 Social Welfare Policy**
- Theresa J. Devine

**PPAI 1701M**
- **S01 15323 Juvenile Justice**
- Picy Valerie A. Cooley

**PPAI 1701W**
- **S01 16537 Race and Public Policy**
- David M. Blanding

### Religious Studies

**RELS 0090F**
- **S02 16339 Friendship in the Anc’l World**
- Saul Olyan

**RELS 0325**
- **S01 15232 Judaism, Christianity and the Bible**
- Michael L. Satlow

**RELS 0400**
- **S01 14724 New Testament Begins**
- Nicola F. Denzey

**RELS 1150**
- **S01 16609 Religion in Dead Sea Scrolls**
- T. M. Dadrian

### Russian

**RUSS 0320E**
- **S01 15344 Crime and Punishment**
- Vladimir Golstein

**RUSS 1290**
- **S01 15430 Russian Lit in Translation**
- Alexander Levitsky

**RUSS 1967**
- **S01 16169 Russian Postmodernism**
- Michal Oklot

### Slavic

**SLAV 1300**
- **S01 15507 Sociolinguistics**
- Masako Ueda Fidler

### Sociology

**SOC 0020**
- **S01 14351 Perspectives on Socl Interactn**
- Gregory C. Elliott

**SOC 0300K**
- **S01 14356 Inequalities and Health**
- Susan Short

**SOC 1010**
- **S01 14357 Classical Sociological Theory**
- Henry S. Franklin

**SOC 1340**
- **S01 15236 Prm/Method Geogrphc Info Sysm**
- Rachel S. Franklin

**SOC 1420**
- **S01 14365 Violence and Society**
- Gregory C. Elliott

**SOC 1870A**
- **S02 16290 Investing in Social Change**
- Ann Dill

**SOC 1871O**
- **S02 16009 Law, Innovation, Entrepreneurship**
- Donald J. Yackt

**SOC 1871T**
- **S01 14372 Senior Seminar**
- Andrew Pennock

### Theatre Arts and Performance Studies

**TAPS 0100**
- **S01 14863 Playwriting I**
- Ka Vang

**TAPS 0100**
- **S02 14866 Playwriting I**
- Elmo Terry-Morgan

**TAPS 0200**
- **S01 14862 Playwriting II**
- Katherine Louise Pearl

**TAPS 1230**
- **S01 14852 Performance Theory**
- Patricia Ybara

**TAPS 1270**
- **S01 14865 Performance in the Asia**
- Eng Bong Lm

**TAPS 1400**
- **S01 14838 Advanced Performance**
- Spencer Golub

**TAPS 1420**
- **S01 14870 Global Queer Performance**
- Eng Bong Lm

### Urban Studies

**URBN 1870A**
- **S01 15616 American Culture**
- James James Caffrey

**URBN 1870M**
- **S01 15551 Urban Regimes in Amer Republic**
- Marion E. Orr
URBN 1870N S01 15552 Cultur/Soc Life Built Envirmt Samuel Zipp  

Visual Art  
VISA 1800C S01 16272 Honors Seminar Paul T. Myoda  

Spring 2014  

Africana Studies  
AFRI 0710A S01 23886 Racial/Gender Politicis-Brazil Keisha-Khan Y. Perry  
AFRI 0990 S01 24550 Black Lavender-Gay+Lesbin Plays Elmo Terry-Morgan  
AFRI 1050Q S01 24556 New Narratives in Afr Amer Hist Wanda W. Bayeza  
AFRI 1640 S01 23879 History of Africa, 1950-2025 Nancy J. Jacobs  

American Studies  
AMST 0150K S01 25284 Culture, Communities, Change Susan Smulyan  
AMST 0191Q S01 25221 Disbelieving the Evidence Ashley Elizabeth Bowen-Murphy  
AMST 0191R S01 25224 Fat, Messy, and Late Sarah Rose Yahm  
AMST 0191S S01 25225 Visualizing the Near East Elizabeth Kay Wolffson  
AMST 1700I S01 23660 Community Engagement Elizabeth M. Hoover  

Ancient Western Asian Studies  
AWAS 1500 S01 24365 Anct Babylonian Magic + Med Matthew T. Rutz  

Anthropology  
ANTH 0100 S01 24437 Intro to Cultural Anthropology Daniel J. Smith  
ANTH 1310 S01 24440 Anthro Perspctv Intmt Hist Amy L. Moran-Thomas  

Archaeology and Ancient World  
ARCH 0365 S01 24138 Byzantium-Constntrple-Istanbul Felipe Rojas Silva  
ARCH 0420 S01 24140 Archaeologs of Greek Past Foteini Kondyl  

BioMed-Neuroscience  
NEUR 1600 S01 25061 Experimental Neurobiology John J. Stein  

Biology  
BIOL 0415 S01 25234 Microbes in the Environment Jeremy J. Rich  

Business, Entrepreneurship and Organizations  
BEO 1940A S01 24939 BEO Capstone II TBD  
BEO 1940B S01 25210 BEO Capstone II Steven F. Petteruti  

Chemistry  
CHEM 0080F S01 25550 Kitchen Chemistry Sarah Delaney  

Computer Science  
CSCI 1800 S01 24744 Cybersecurity and Intnl Rels TBD  

Development Studies  
DEVL 1801 S01 25650 Participatory Development Patricia Agupusi  

Economics  
ECON 1275 S01 25620 History of Economic Thought Robert D. van Horn  
ECON 1305 S01 24222 Economics of Education Justine Hastings  

Education  
EDUC 0410E S01 24073 Empowering Youth Margery D. Martin  
EDUC 1560 S01 25411 Philosophy of Education Sarah R. Leibel  
EDUC 1730 S01 24067 Amer Higher Ed in Hist Contxt Luther Spoehr  
EDUC 1860 S01 24076 Soc Context of Learning/Devel Jin Li  

Egyptology  
EGYT 1430 S01 24368 History of Egypt I Laurel D. Bestock  

Engineering  
ENGN 0120A S01 24997 Crsng Consumr Chasm by Devel Richard D. Fleeter  
ENGN 0120B S01 24998 Crsng Spces Chsm Thr Engn Dsgn Richard D. Fleeter  

English  
ENGL 0201W S01 25551 The American Detective Novel Kathleen Amy Fitzpatrick  
ENGL 0201Y S01 25265 Studies in the American Novel Andrew J. Lack  
ENGL 0201Z S01 25266 Dark Matter: Black Literature John Murillo  
ENGL 0202A S01 25283 Poetry and Things Ian Alexander Hala Sampson  
ENGL 0310A S01 25340 Introduction to Shakespeare James A. Kuzner  
ENGL 0500G S01 24276 Literature and Revolutions William Keach  
ENGL 0710K S01 24278 Catastrophic Communities Ravit Reichman  
ENGL 1310H S01 24410 Origins of American Lit James F. Egan  

Center for Environmental Studies  
ENVS 1755 S01 25247 Globalization and the Environ J. Timmons Roberts  
ENVS 1929 S01 24563 The Fate of the Coast Cornelia Dean  
ENVS 1965 S01 25388 Environmental Schlrshp/Comm Heather M. Leslie  

Gender and Sexuality Studies  
GNSS 0090C S01 24434 Reproductive Health Sarah D. Fox  
GNSS 0120 S01 24432 Intro Gendr/Sexuality Studies Daniel L. Davis  
GNSS 1960B S01 24433 Health/Healing in US History Deborah F. Weinstein  

Geological Sciences  
GEOG 0240 S01 24582 Earth:Evolutn of Habitbl Planet Timothy D. Herbert  
GEOG 1150 S01 24776 Limnology: The Study of Lakes James M. Russell  
GEOG 1350 S01 24579 Weather and Climate Meredith K. Hastings  
GEOG 1450 S01 24778 Structural Geology Julia A. Tulis  

German Studies  
GRMN 0400 S01 23644 Intermediate German II Jane Sokolosky  
GRMN 0400 S02 23645 Intermediate German II Jane Sokolosky  
GRMN 0600B S01 24188 Was ist Deutsch? Thomas W. Knesche  
GRMN 0750E S01 25427 Reading Film: An Introduction Zachary Sng  

Hispanic Studies  
HISP 0730 S01 24327 Early/Contmp Wrtr of Span Amer TBD  
HISP 0740 S01 24324 Intensive Survey of Spanish Lit TBD  

History of Art and Architecture  
HIAA 0630 S01 25226 Cultural History of the Nether Jeffrey M. Muller  
HIAA 1560A S01 23900 Italy and the Mediterranean Evelyn Lincoln  

History  
HIST 1210 S01 23988 Europn Intell Hist/Disc Modern Mary Gluck  
HIST 1992 S01 23984 History Honors Workshop Robert Douglas Cope  
HIST 1992 S02 23985 History Honors Workshop Robert Douglas Cope  
HIST 1994 S01 23986 History Honors Thesis Part II Robert Douglas Cope  

Italian Studies  
ITAL 0981 S01 25219 Machiavelli in Int Context Caroline Castiglione  
ITAL 1020 S01 24031 Boccaccio’s Decameron Massimo Riva  

Judaic Studies  
JUDS 0670 S01 25653 War and Peace in Hebrew Bible TBD  
JUDS 1630 S01 25045 The Talmud Michael L. Satlow  
JUDS 1711 S01 25046 History of Israel Rachel Rojanski  
JUDS 1820 S01 25041 Holocaust Literature David C. Jacobson  

Literary Arts  
LITR 0110A S01 23935 Fiction I TBD  
LITR 0110A S02 23936 Fiction I TBD  
LITR 0110A S03 23937 Fiction I TBD  
LITR 0110A S04 23938 Fiction I TBD  
LITR 0110B S01 23939 Poetry I TBD  
LITR 0110B S02 23940 Poetry I TBD  
LITR 0110B S03 23941 Poetry I TBD  
LITR 0110B S04 23942 Poetry I TBD  
LITR 0110D S01 23943 Digital Language Art I TBD  
LITR 0110E S01 23944 Screenwriting I TBD  
LITR 0210A S01 23947 Fiction Writing II TBD  
LITR 0210A S02 23948 Fiction Writing II Joanna E. Howard  
LITR 0210B S01 23949 Poetry Writing II TBD  
LITR 0210D S01 23950 Electronic Writing II TBD  
LITR 0210E S01 23952 Screenwriting II TBD  
LITR 0710 S01 23953 Writers on Writing Seminar Forrest Gander  

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
LITR 1010A S01 23954 Advanced Fiction Meredith Steinbach
LITR 1010A S02 23955 Advanced Fiction JoAnna E. Howard
LITR 1010B S01 23956 Advanced Poetry Peter Gale Nelson
LITR 1010F S01 23957 Advanced Translation Forrest Gander
LITR 1010G S01 23958 Cave Writing John H. Cayley
LITR 1110R S01 25277 Performance Dimensions of Text Thalia L. Field
LITR 1150M S01 25276 Short Fiction Experiments Thalia L. Field
LITR 1150X S01 24120 Reading, Writing, Thinking Carole Maso

Modern Culture and Media
MCM 0240 S01 23820 Television Studies Lynne Joyrich
MCM 0260 S01 23829 Cinematic Coding/Narrativity Philip Rosen

Philosophy
PHIL 0010 S01 24038 The Place of Persons David P. Christensen
PHIL 0060 S01 25099 Modern Science + Human Values Nina R. Emery
PHIL 0360 S01 24035 Early Modern Philosophy Justin Broackes
PHIL 0880 S01 24036 Ethical Themes Amer Short Story Felicia Nimue Ackerman
PHIL 1260 S01 24045 Plato Mary Louise G. Gill
PHIL 1590 S01 24041 Philosophy of Science David P. Christensen
PHIL 1600 S01 24034 Philosophy of Law David Estlund

Physics
PHYS 0100 S01 24889 Nature/meaning Sci Explanation Leon N. Cooper
PHYS 0560 S01 24388 Experiments in Modern Physics Gang Xiao
PHYS 1560 S01 24395 Modern Physics Laboratory Vesna Mitrovic
PHYS 1600 S01 24396 Computational Physics Robert A. Pelcovits

Political Science
POLS 1820J S01 23846 Dynamics of Agenda Building Roger Cobb
POLS 1821G S01 23853 Represent/Parties/Interest Grps Wendy J. Schiller
POLS 1822H S01 23858 Patronage and Corruption in Co Rebecca B. Weitz-Shapiro
POLS 1822U S01 23849 War and Human Rights Nina Tannenwald
POLS 1822X S01 23848 Technology + International Pol Jordan N. Branch
POLS 1823F S01 25657 Between Colonialism and Self-D Arnulf A. Becker
POLS 1823G S01 25362 Women and War Rose McDermott
POLS 1823I S01 25658 Urban Politics and Policy Katherine Tate
POLS 1823J S01 25285 Freedom, Work, Leisure Alexander H. Gourevitch
POLS 1823Q S01 25660 Democratic Theory and Globaliz TBD
POLS 1920 S01 23850 Senior Honors Thesis Preparatin Linda J. Cook

Public Health
PHP 0030 S01 24846 Health of Hispaniola Timothy M. Empkie

Public Policy and American Institutions
PPAI 0100 S01 24895 Introduction to Public Policy Valerie A. Cooley

Religious Studies
RELS 0080 S01 24010 Gender, Power, God(s) Ross S. Kraemer
RELS 0410 S01 24013 Christianity in Late Antiquity Susan Ashbrook Harvey
RELS 0600 S01 24014 Islam and Modernity Nancy Khalek
RELS 0750 S01 24015 Death in the Ancient World Nicola F. Denzey
RELS 0820 S01 24016 African American Religious Str Andre Willis
RELS 1000 S01 25287 Methods in Religious Studies Thomas A. Lewis

Sociology
SOC 0300C S01 25511 The Nature of Community Ann Dill
SOC 0300D S01 23774 Who Am I? Gregory C. Elliott
SOC 1620 S01 23781 Globalization/Social Conflict Patrick G. Heller
SOC 1870E S01 23785 Alternatives to Violence Gregory C. Elliott
SOC 1871D S01 23789 Sociology of Development Jose Itzigsohn
SOC 1871R S01 23996 Knowledge Mtks, Globl Transf Michael D. Kennedy
SOC 1871W S01 23788 Geographical Analysis of Soc Rachel S. Franklin
SOC 1990 S01 23784 Seminar Seminar Michael D. Kennedy

Theatre Arts and Performance Studies
TAPS 0100 S01 24162 Playwriting I TBD
TAPS 0110 S01 24171 Playwriting II TBD
TAPS 1240 S01 24164 Perform Histriogrph/Theatr Hst Spencer Golub
TAPS 1250 S01 24165 20th-Cent W Theatre/Performance Eng Beng Lim
TAPS 1380 S01 24167 mise en Scene Spencer Golub

University Courses
UNIV 1520 S01 24930 The Shaping of World Views Onesimo T. Almeida

Urban Studies
URBN 1000 S01 24766 Fieldwrk in the Urban Community Jan Mateusz Pacewicz
URBN 1200 S01 24765 The U.S. Metropolis, 1945-2000 Samuel Zipp

Visual Art
VISA 1800P S01 25087 Art/Work: Professional Practice Heather Darcy Bhandari

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Africana Studies

AFRI 0090. An Introduction to Africana Studies. This course introduces students to the vibrant and contested field of Africana Studies by critically exploring and analyzing the links and disjunctures in the cultural, political, and intellectual practices and experiences of people of African descent throughout the African diaspora. Beginning with a critical overview of the history, theoretical orientations, and multiple methodological strategies of the discipline, the course is divided into three thematic units that examine intellectuals, politics, and movements; identity construction and formation; and literary, cultural, and aesthetic theories and practices in the African diaspora. DVPS LILE WRIT FYS

AFRI 0110C. Autobiography of the Civil Rights Movement. Most of the rich written history of the civil rights movement originates from first-hand accounts documented in oral histories and autobiographies. This interdisciplinary course explores the milestones of the civil rights movement through the lens of several autobiographies. The aim is to critique autobiography as a historical document as well as use it to tell the stories of the civil rights movement. We will compare and contrast different texts, analyze content and map a history of the era. Students will work with a writing fellow to develop one critical paper and one autobiographical paper. Enrollment limited to 20 first year students. FYS WRIT

AFRI 0210. Afro Latin Americans and Blackness in the Americas. This course focuses on the position of Blacks in the national histories and societies of Latin America from slavery to the present-day. Emphasis is on a multidisciplinary engagement with issues and the exposure of students to the critical discussion of national images and realities about blackness and Africa-descended institutions and practices. The role of racial issues in national and transnational encounters and the consequences of migration of people and ideas within the hemisphere are explored.

AFRI 0570. 20th Century Black Feminist Thought and Practice in the U.S. This course will explore the ways that black women in the U.S. have experienced racial and gendered discrimination as well as what sorts of strategies (e.g., political, intellectual, narrative, and creative) black women have devised in response. We will be especially concerned with elements of African-American feminist thought and its articulation in writings, music, literature and practice/activism in the 20th century U.S. Enrollment limited to 80.

AFRI 0600. Race, Gender, and Urban Politics. This course will introduce students to the methods and practice of studying black urban life with a primary focus on US cities. We will critically examine the urban cultural studies debates concerning race, gender, class and sexuality. The approach of the course will be interdisciplinary, drawing upon works from anthropology, literature, history, music, and film. Topics include tourism, immigration, poverty, popular culture, gentrification, violence, and criminalization. WRIT

AFRI 0700. Freedom Films. "Freedom Films" is a First Year Seminar which will focus on historical documentary films related to the Southern Civil Rights Movement of the 1960s. We will analyze how these films reflect, change, and inform our views of the traditional Civil Rights Movement and how some offer contrasting narratives of that movement. We will also examine how and in what ways the films accurately and adequately reflect the historical realities of the Southern Civil Rights Movement based on readings and research. Enrollment limited to 20 first year students. DVPS FYS

AFRI 0700E. Postcolonial Literature (ENGL 0700E). Interested students must register for ENGL 0700E.

AFRI 0710A. Racial and Gender Politics in Contemporary Brazil. Brazil is commonly understood as an example of a "racially democratic" nation, but as scholars have recently shown, racism permeates all aspects of Brazilian society. This course traces the development of the theorization of race, racial identity and race relations in contemporary Brazil. The approach of the course will be interdisciplinary, drawing upon works from anthropology, literature, history, music, and film. Topics will include colonialism and enslavement, nationalism, social activism and popular culture. We will also consider how Brazilian social relations differ from or conform to other racialized patterns in other nation-states in the Americas. Particular attention will be placed on the interrelationship between race, gender, class, and nation. WRIT

AFRI 0760A. Rastafarianism. This course explores the philosophy, history, politics, and theology of Rastafari, one of the Caribbean’s most influential and misunderstood liberation movements.

AFRI 0800B. African American Literature and the Legacy of Slavery (ENGL 0710B). Interested students must register for ENGL 0710B.


AFRI 0990. Black Lavender: Black Gay/Lesbian Plays/Dramatic Constructions in the American Theatre. An interdisciplinary approach to the study of plays that address the identities and issues of black gay men and lesbians and offers various perspectives from within and without the black gay and lesbian artistic communities. Focuses on analysis of unpublished titles. Also includes published works by Baraka, Bullins, Corbitt, Gibson, Holmes, West, and Pomo Afro Homos. Some evening screenings of videotapes. Enrollment limited to 40. WRIT

AFRI 1020C. The Afro-Luso-Brazilian Triangle. Examines three historical components of the South Atlantic in terms of history, culture, and contemporary political and economic consequences. European colonialism in Africa and Brazil constitutes the baseline for this exploration, but the long and tardy nature of Portuguese colonialism in Africa in comparison with other European colonial powers, especially in its post-World War II manifestations, is our starting point. Enrollment limited to 40.

AFRI 1050A. Advanced RPM Playwriting. Third level of RPM Playwriting; for students that have successfully completed RPM Playwriting and Intermediate RPM Playwriting (workshop). Instructor permission.

AFRI 1050D. Intermediate RPM Playwriting. Second level of RPM Playwriting; for students that want to continue developing their RPM plays or want to begin a new project (workshop).

AFRI 1050E. RPM Playwriting. Research-to-Performance Method (RPM) Playwriting guides students through the process of developing new plays that are informed by scholarly research (workshop).

AFRI 1050Q. New Narratives in African American History: The Art and Craft of Poetic and Creative Non-Fiction. This seminar examines various examples of creative and poetic non-fiction, pertaining to race and the African American experience.
toucing upon historic examples and precedent, emphasis will be on contemporary works, including the genres of poetry, drama, the narrative, the memoir, the travelogue and the personal essay. The course will explore what these works offer to the knowledge, popularization and perception of black history and to the shaping of cultural dialogue on blackness and race. Enrollment limited to 25.

Spr AFR1050G S01 24556 Th 4:00-5:20(17) (W. Bayeza)

AFRI 1050R. The History of Afro Futurism and Black Science Fiction. Any class called The History Of Afro Futurism and Black Science Fiction automatically begs the question – "Well, what isn’t futuristic about being Black in America?" The entire history of Black America can be seen as a fundamentally futurological and science fictional enterprise – a perpetual bidding on hope and struggling for change endeavor that frequently employs far flung visions of tomorrow and other more oblique speculative stratagems in pursuit of outcomes barely foreseeable in the near-present. Enrollment limited to 25.

Spr AFR1050R S01 24553 W 3:00-5:20(14) (G. Tate)

AFRI 1060V. Black Transnationalism. This seminar will explore the complex dynamics of black transnationalism during the long 20th century, focusing on the circulation of ideas and practices of African and African-descended communities and how they were contested and reconfigured as they flowed back and forth. Particular attention will be paid to some less-examined archives, interpretations and perspectives; ideas of black women activist-scholars; aesthetic practices, sonic regimes and religion; insights and experiences of those who lived diaspora. Seminar readings and discussions will introduce and "trouble" some key theoretical issues in the notion of black transnationalism, e.g. diaspora, Pan-Africanism, globalization, translocalism, identity, articulation, and solidarity. Enrollment limited to 20.

Spr AFR1060V S01 24555 T 4:00-6:20(16) (G. Augusto)

AFRI 1090. Black Freedom Struggle Since 1945. Lecture course that examines the extended history of the mass civil rights movement in the U.S. Starting at World War II, we consider the roles of the courts, the federal and state governments, organizations, local communities, individuals and various activist strategies in the ongoing struggle for African American equality, focusing on African American agency, particularly in the South, but also in Boston, Mass. Sources include photographs, documentaries, movies, letters, speeches, autobiographies, and secondary readings. Requirements: Weekly readings, documentary viewings, 4 short papers, 2 exams.

Spr AFR1090 S01 24551 TTh 1:00-2:20(10) (F. Hamlin)

AFRI 1110. Voices Beneath the Veil. Thirty plays, written by Afro-American playwrights and presented on the American stage between 1858 and the 1990s, are examined as cultural and historical documents of Afro-American realities. Supplementary readings from the humanities and social sciences provide critical framework for in-class discussions and student papers. Instructor permission required. WRIT

Fall AFR1110 S01 14490 TTh 10:30-11:50(13) (E. Terry-Morgan)

AFRI 1150. Afro-Caribbean Philosophy. An introduction to the field of Afro-Caribbean philosophy. The first half focuses on the history of the field, identifying its African background and surveying some of its major schools, such as the Afro-Christians, the poeticians, the historicists, and existentialists. The second half consists of a more intensive comparative focus on the ontologies and epistemologies of two of these schools.

Fall AFR1150 S01 14487 MWF 2:00-2:50(07) (P. Henry)

AFRI 1210. Afro-Brazilians and the Brazilian Polity. Explores the history and present-day conditions of Afro-Brazilians, looking specifically at the uses of Africana in contemporary Brazil, political and cultural movements among Afro-Brazilians, domestic politics and its external dimensions, and Brazilian race relations within a global comparative framework. Texts from a variety of disciplines. A reading knowledge of Portuguese is not required but students so advantaged should inform the instructor.

Fall AFR1210 S01 14498 W 3:00-5:20(17) (A. Dzidzienyo)

AFRI 1260. The Organizing Tradition of the Southern Civil Rights Movement. This seminar aims to fill in some of the gaps of the official canon by emphasizing that the modern (1954-1966) southern civil rights movement was not as it is mainly portrayed, a movement of mass protest in public spaces led by charismatic leaders; but rather, a movement of grassroots community organizing - quiet day-to-day work. Enrollment limited to 40.

Spr AFR1260 S01 24554 T 4:00-6:20(16) (C. Cobb)

AFRI 1360. Africana Studies: Knowledge, Texts and Methodology. This course will explore the issues of Africana Studies as a discipline by engaging in a series of critical readings of the central texts, which laid the protocols of the discipline. The course will also raise issues of knowledge production and methodologies. This course is a senior capstone seminar. Open to all senior Africana Studies concentrators; others by instructor permission only. Enrollment limited to 25. DVPS LILE

Spr AFR1360 S01 23880 W 3:00-5:20(13) (A. Dzidzienyo)

AFRI 1540. Black Popular Cultures. This course is an historical and topical examination of the development of black popular cultures. We will explore the debates about popular culture and specifically examine the ways that race (as well as gender, sexuality and class) shape these debates. In addition we will explore specific black popular cultural practices (music, dance, film, radio, theater, etc.) as well as the larger contexts for their production and reception. Instructor permission required.

Spr AFR1540 S02 23740 M 3:00-5:20(13) (P. Rose)

AFRI 1620. Black New Orleans: A Research Seminar. Examines the development of a unique African/ American cultural and political identity in New Orleans. The seminar focuses on the development of the Faubourg Tremé, the oldest free black community in the United States, and covers the period from 1718 until 1899. Topics include: slavery and resistance; relations between enslaved and free blacks; social and political agitation; and the resulting early development of the nation’s Civil Rights movement and legislation. There is discussion also of the formation and continued tradition of artists’ and artisans’ guilds; Creole language (e.g., Creole slave songs, proverbs); NOLA relationship to the Caribbean and Latin America. Enrollment limited to 20. DVPS

Fall AFR1620 S01 14493 T 4:00-6:20(18) (B. Osbey)

AFRI 1630. Modernist Africana Poetry of the Americas. Focus on origins of Modernism among Africana authors of the Americas, with emphasis on the poetry, poeticas and poetry movements of Brazil and Latin America, the Caribbean and US from 1888 through the first half of the 20th century. Begins with an overview of innovations wrought by Rubén Dario of Nicaragua, arguably the first modernist poet, and continues with the Harlem Renaissance of the 1910’s and 20’s; the Brazilian writers at the center of the Week of Modern Art of 1922; Caribbean writers of the Negrito and Négrière movements; concludes with the work of such US and Anglophone Caribbean poets as Gwendolyn Brooks, Robert Hayden and Martin Carter. Enrollment limited to 20. DVPS

Fall AFR1630 S01 14500 Th 4:00-6:20(16) (B. Osbey)

AFRI 1640. Development, Dependency, and Decline in Africa, 1950-2025. This course on the history of Africa begins as European empire unraveled after the Second World War and ends with a look toward the future. Development was high on the international and national agenda in the mid-twentieth century, but the most conspicuous outcome of the following decades was dependency and decline. Yet the story is more mixed than has been represented in American headlines; it was not one of pre-determined and constant failure. More than ever, at the beginning of this new millennium, conditions across the continent have diverged. What are current signs for future development or continuing crisis? WRIT

Spr AFR1640 S01 23879 MWF 12:00-12:50(05) (N. Jacobs)

AFRI 1710I. Harlem Renaissance: The Politics of Culture (ENGL 1710I). Interested students must register for ENGL 1710I.

Spr AFR1710I S01 25123 Arranged "To Be Arranged"

AFRI 1710J. African Literature in Globalization Time (ENGL 1710J). Interested students must register for ENGL 1710J.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
AFRI 1920B. Health Inequality in Historical Perspective (BIOL 1920B). Interested students must register for BIOL 1920B.

AFRI 1955. History and Memory in African Literature. Focuses on the close reading of nine works by writers of African descent—encompassing a variety of eras, forms and genres, stretching from the slave narratives to use contemporary settings. The thrust is to examine how each writer wrestles with issues of history and memory, with particular attention to the sometimes explicit, sometimes implicit interest in ideas and modes of expression that are rooted in African culture. Enrollment limited to 20 sophomores, juniors, and seniors; preference given to African Studies and English concentrators.

AFRI 1970. Independent Reading and Research. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

AFRI 2001. Theories of Africana Thought: Intellectual History and Critical Theory. This course will be a close reading of the various ideas, theories and practices of the thinkers, writers, artists and activists whose work and practices have constituted an Africana intellectual tradition. In conducting this review we will examine questions around the formation and the history of thought and intellectual traditions in general. We will also think about the various fields of knowledge which have shaped Africana thought. The course therefore will spend some time working through the different meanings of intellectual work and critical thought and theory. Enrollment limited to 12 graduate students.

AFRI 2002. Theories of Africana Thought: Literary and Expressive Cultures. A preoccupation of Africana Studies involves the central yet highly contested role of the notion of what constitutes black culture in the modern world. To what degree can we claim aesthetic and other distinctions between black cultures in the Diaspora and other modern western cultural practices and expressive forms? What role did enslavement, forced migration and segregation play in shaping African culture in the modern west? These cultural debates which played a central role in literary, musical, philosophical, aesthetic, historical and sociological analyses of the culture of people of African descent frame this course. Enrollment limited to 12 graduate students.

AFRI 2101. Africana Studies and Interdisciplinarity. This graduate seminar brings together various methodological and theoretical approaches to interpreting Africana life, culture, thought, and politics. Placing special emphasis on emergent scholarship that shapes and reshapes the discipline of Africana Studies, we examine a selection of humanistic and social scientific studies of various local, national, and international contexts. Texts demonstrate the ways in which innovative interdisciplinary methods are crucial for understanding the complexity of the Africana world. We will give attention to the strategies scholars utilize to formulate their research questions, design their methodologies, and create new ideas that contribute to the advancement of Africana Studies scholarship. Enrollment limited to 20.

AFRI 2104. Theorizing the Black Diaspora. This seminar will focus on the theorization of the black diaspora as a way to explore the various articulations of colonialism, gendered racism and resistance against that racism throughout African-descendant communities. Course readings will highlight the scholarship of black women who have contributed to the internationalization of radical black vis-a-vis theories of diaspora, transnationalism, transformative politics, identity formation, and community. Enrollment limited to 20.

AFRI 2450. Exchange Scholar Program.

AFRI 2600L. Seminar: Afro-Theism (RELS 2600L). Interested students must register for RELS 2600L.

American Studies

AMST 0150K. Culture, Communities, and Change. Studying varied organizations such as museums, community arts groups, rock bands, and dance companies, this seminar works on three levels. Students consider the role of cultural production in local, national, and international economies and lives; think about methods for studying creative communities; and write the "biographies" of Providence cultural organizations. Issues of tourism, representation, hierarchy, urban space, and social change as well as questions about who puts culture to work and the role of cultural workers will be addressed. We will consider public humanities, engaged scholarship and community organizing as methods as we explore the Providence cultural scene. Enrollment limited to 17 first year students. FYS WRIT

AMST 0150L. Object Histories: The Material Culture of Early America (HIST 0970A). Interested students must register for HIST 0970A.

AMST 0191O. Revolting Bodies: Aesthetics, Representation, and Popular Culture. Our bodies make us feel (un)comfortable, sublime, ridiculous, grotesque. In this course we examine how social and visual images of our bodies force us to consider our identities in socially approved ways. We employ cultural and disability studies, queer theory, science fiction, and film to ask how representations structure the ways we "know" and "see" bodies. Reality television, performance art, and blogs will allow us to consider how revolting bodies can become bodies in revolt—bodies that imagine new possibilities. Students interested in queer, feminist and African American theoretical perspectives and those in health sciences are welcome. Enrollment limited to 17 first year students and sophomores. WRIT Fall AMST0191O S01 15096 Th 9:00-10:20(06) (M. Kargbo)

AMST 0191P. Beyond Chinatown: The Past, Present, and Future of Asian American Spaces. Beyond the "exotic" dishes, cultural festivals, and distinct architecture of Chinatowns, Little Tokyos, Little Manilas/Filipinotowns, Koreatowns, Little Saigons, and Little Indias, Asian American spaces are both historical remnants of racial oppression and the current home of diverse ethnic communities. Using field trips, films, first person accounts and scholarly explorations, this class examines such spaces by considering the people involved—tourists and residents—and how their complex relationship creates urban and suburban ethnic spaces. Students will workshop and revise papers as well as gain a grounding in approaches to Asian American studies, urban studies, and to the study of public spaces. Enrollment limited to 17 first year students and sophomores. WRIT Fall AMST0191P S01 15096 Th 2:30-3:50(11) (R. Noche)

AMST 0191Q. Disbelieving the Evidence: Popular Opposition to 20th Century Public Health Initiatives. Why do Americans reject programs that make them healthier? Many of the most effective public health initiatives in the 20th century encountered deep resistance. This course explores three initiatives (vaccination, fluoride, and black lung) that continue to generate skepticism or outright opposition. Students will practice several different styles of writing intended for different audiences, including an op-ed and a Wikipedia entry. This writing-designated course will appeal to students of public health, politics, and those interested in the social impact of medical research, as well as those wanting practice in science writing. Enrollment limited to 17 first year students and sophomores. WRIT Spr AMST0191Q S01 25221 Th 9:00-10:20(08) (A. Bowen-Murphy)

AMST 0191R. Fat, Messy, and Late: Unregulated Bodies in American Capitalism. This course examines disorganized bodies in 19th and 20th century US history and how slenderness, neatness, and timeliness became virtues. Through these lenses we study capitalism working upon individual bodies;
the way these "moral virtues" generate forms of self-regulation; and the way these forms of self-regulation perpetuate the status quo. We draw upon history, sociology, anthropology, and critical theory, starting each section in the 19th century and moving to the present. Using our personal experiences, we examine how belief systems become internalized. This interdisciplinary course welcomes community health and biology concentrators as well as humanities and social science concentrators. Enrollment limited to 17 first year students and sophomores. WRIT

AMST 0191S. Visualizing the Near East: From National Geographic to the Arab Spring

American visual media remains flooded with images, inspiring and hopeful, or horrifying and terrifying, of the peoples and places of the Near East. By examining National Geographic photography, Hollywood cinema, televised news programs, and images and videos encountered online, we examine how visual culture has both reflected and actively helped shape the relationship between the U.S. and the Near East. Students will experiment with a diverse methods of visual analysis, work with a class Tumblr site, and write and revise a series of essays. Enrollment limited to 17 first year students and sophomores. WRIT

AMST 1010. Introduction to American Studies: American Icons

Why do certain American photos, novels, and films become 'iconic'? What does the very word 'icon' mean? Studying a collection of American images, texts, places, and practices, this course investigates the key themes of American Studies. DVPS LILE

AMST 1250B. Gravestones and Burying Grounds

Students examine gravestones and burying grounds as material evidence of American cultural history. Themes include the forms of written language and visual imagery in colonial New England, changing roles of women and minorities in society, historical craft practices, implications of stylistic change, attitudes towards death and bereavement, and the material evidence of discrete cultural traditions. Includes field trips.

AMST 1550. Methods in Public Humanities

A survey of the skills required for public humanities work. Presentations from local and national practitioners in a diverse range of public humanities topics: historic preservation, oral history, exhibition development, archival and curatorial skills, radio and television documentaries, public art, local history, and more. Enrollment limited to 50. Spr AMST1550 S01 23656 MWF 11:00-11:50(04) (A. Vaik)

AMST 1610A. American Advertising: History and Consequences

Traces the history of American advertising, particularly in the 20th century, to understand the role advertising plays in our culture. Topics include the rise of national advertising, the economics of the advertising industry, the relation of advertising to consumption, the depiction of advertising in fiction and film, and broadcast advertising. LILE

AMST 1611A. Making America: Twentieth-Century U.S. Immigrant/ Ethnic Literature

Examines the literature of first and second generation immigrant/ethnic writers from 1900 to the 1970's. Attempts to place the individual works (primarily novels) in their literary and sociocultural contexts, examining them as conscious works of literature written within and against American and imported literary traditions and as creative contributions to an ongoing national discourse on immigration and ethnicity. DVPS

AMST 1611M. Trauma and the Shame of the Unspeaking: The Holocaust, Slavery, and Childhood Sexual Abuse

The problem of representing traumatic experience has been raised by philosophers, artists, and survivors. This course compares three historical situations by reading histories, memoirs, fictions, poems; viewing photographs and film; and analyzing the material cultural artifacts such as memorials. Readings will include Freud, Harriet Jacobs, La Capra, Primo Levi, Toni Morrison and "Maus" by Art Spiegelman.

AMST 1612Z. First Nations: the People and Cultures of Native North America

Interests students must register for TAPS 1250. Fall AMST1612Z S01 14268 MWF 11:00-11:50(04) (S. Zipp)

AMST 1612X. Performances in the Americas (TAPS 1270)

Interested students must register for TAPS 1270. Fall AMST1612X S01 16000 Arranged 'To Be Arranged'

AMST 1612Y. Twentieth-Century Western Theatre and Performance (TAPS 1250)

Interested students must register for TAPS 1250. Spr AMST1612Y S01 25321 Arranged 'To Be Arranged'

AMST 1612Z. First Nations: the People and Cultures of Native North America to 1800 (HIST 1805)

Interested students must register for HIST 1805. Fall AMST1612Z S01 16371 Arranged 'To Be Arranged'

AMST 1700G. Public Memory: Narratives of 9/11

This junior seminar will focus on narratives concerned with the events of 9/11 and their aftermath: documentary, testimony, stories, memoirs, novels, graphic novels and feature films. We will also study and visit some of the memorials and museums that have been proposed or created in connection to 9/11 and consider them in the context of public memory and public art. Course work will require a project or research paper that engages the question of the role of the humanities in the creation of the public memory of catastrophic events. Enrollment limited to 20 junior and senior American Studies concentrators. WRIT

AMST 1700I. Community Engagement with Health and the Environment

This junior seminar explores how local community organizations are taking up issues of health and the environment in culturally relevant contexts. We will examine issues of environmental justice, health disparities and the basic tenets of community based participatory research. We will then partner with a local community organization and, depending on need, assist in the design, implementation, and/or evaluation of a program designed to improve the local environment and/or health status of the community. Enrollment limited to 20 junior and senior American Studies concentrators. WRIT

AMST 1903G. Oral History and Community Memory

Students in this seminar will conduct oral history interviews and archival research to create an audio and visual history of one Providence neighborhood. Collected materials will be prepared for public presentation as a walking tour and web site. Enrollment limited to 20 juniors, seniors, and graduate students.

AMST 1903H. Space and Place: Geographies of the Black Atlantic

Is the map on an iPhone representative of the space beneath our feet? Does a 'map' have to represent geographic space or can it represent something else? For centuries people have sought to make sense of
the geographies of their everyday lives as well as environments out of their purview. In this course, we will engage with a number of approaches to space and place including historical, cultural, ethnographic, literary, geographic, and artistic, focusing on African diasporas and the Black Atlantic. Students will analyze texts, artworks, and web-based projects, and at the end of the course, create their own maps. Enrollment limited to 20 juniors, seniors, and graduate students.

**AMST 1903Z. Shrine, House or Home: Rethinking the House Museum Paradigm.**

This seminar will examine historic house museums within the context of American culture from the founding of Mount Vernon in 1853 to their present decline in popularity and relevance. Utilizing sources from a variety of disciplines including literature, women’s and family history, and museum and preservation theory and practice, students will re-examine the prevailing historic house museum paradigm and develop interpretation plans for house museums in the Providence area. Enrollment limited to 20. If oversubscribed, priority is given to students in the Public Humanities Programs and Department of American Civilizations. No prerequisites.

Fall AMST1903Z S01 16473 W 3:00-5:20(17) (L. Stein)

**AMST 1904F. The American Experience: The Southeast Asian Refugees/Americans.**

Explores the complexity of the American experience, the displacements and diasporas of the Vietnamese, the Cambodians, the Hmong, the Lao, and the lu Mien in America through multiplicity of perspectives and interdisciplinary approach. Special emphases are on the reinvention of new lives in New World, the American-borne generation, how the American-ness and the sense of “home” are constructed, defined, and contested through literary and cinematic works, self-representations, and cultural productions written and produced by these new Asian Americans themselves. Enrollment limited to 20.

Spr AMST1904FS01 25739 T 4:00-6:20(16) (R. Potvin)

**AMST 1904H. The Teen Age: Youth, Society and Culture in Early Cold War America.**

An interdisciplinary and multimedia exploration of the experiences, culture, and representation of youth in the United States from the end of World War II through the beginning of the Vietnam War. Enrollment limited to 20 juniors and seniors.

Fall AMST1904H S01 14273 M 3:00-5:20(15) (R. Meckel)

**AMST 1904M. Charles Chapin and the Urban Public Health Movement.**

Examines the science, politics, and programs of the 19th and early 20th century urban public health movement. Scope will be national but the purview. In this course, we will engage with a number of approaches to space and place including historical, cultural, ethnographic, literary, geographic, and artistic, focusing on African diasporas and the Black Atlantic. Students will analyze texts, artworks, and web-based projects, and at the end of the course, create their own maps. Enrollment limited to 20. If oversubscribed, priority is given to students in the Public Humanities Programs and Department of American Civilizations. No prerequisites.

Fall AMST1904S01 12477 Th 4:00-6:20(16) (R. Potvin)

**AMST 1904N. The Korean War in Color (ENGL 1761V).**

Interested students must register for ENGL 1761V.

Fall AMST1904N S01 15871 Arranged ‘To Be Arranged’

**AMST 1904T. Women and Work in the 21st Century.**

Debates about women and work seem to be everywhere in American culture, dominated by the question of whether professional women can “have it all.” Simultaneously, women—especially women of color—continue to be concentrated in the lowest-level, most poorly-paid jobs. And as more families depend on women’s income, the contradictions between waged work and unwaged family work grow more acute. Controversies about women and their labor—waged and unwaged—have a long history in the U.S. This course will explore current debates from historical, sociological, and theoretical perspectives, with particular attention to the impact of race and class. Enrollment limited to 20 sophomores, juniors, seniors.

Fall AMST1904TS01 16547 M 3:00-5:20(15) (B. Carter)

**AMST 1904V. Decolonizing Minds: A People’s History of the World.**

This seminar will explore the knowledge-production and military-financial infrastructures that maintain empires, as well as the means through which people have either resisted or embraced empire. While some attention will be made to the 19th and early 20th century colonial context, the bulk of the course will focus on the Cold War liberal era to the neoliberal regime that continues today. Possible topics include: popular culture and ideology, the Cold War university, area studies, international anti-war networks, transnational labor activism, the anti-colonial radical tradition, and the Arab Spring/Occupy Movements. Weekly readings; evaluation based on participation and analytical essays. Enrollment limited to 20.

Spr AMST1904V S01 25330 W 3:00-5:20(14) (N. Shibusawa)

**AMST 1904X. Imagining And Depicting China In America.**

Geographically remote and less-obviously intertwined politically and culturally, China’s distance has fostered an active imaginary, producing rich visual and textual resources. This seminar examines narrative and visual culture over the long period Americans have been fascinated with China and the Chinese, from the 18th century to the present. Visual primary sources are our principal “texts” and include paintings, cartoons, decorative arts, photography, films, fiction, news articles, and government documents. The goal of the course is to interrogate how we envision China and the Chinese today, placing that vision within a critical historical perspective. Enrollment limited to 20.

Spr AMST1904XS01 25688 Th 4:00-6:20(17) (C. Frank)

**AMST 1905C. Mainstream Journalism in America (through the prism of The New York Times).**

Jefferson is supposed to have said that if he were forced to choose between a free government and a free press he would choose a free press, because without it a free government would not survive. It is certainly true that newspapers, and later the electronic media, have had major impacts on American politics and society. Now these media are in a period of convulsive change; their business model is broken and no one can fix it. This course will consider the growth, evolution, influence and future of these media, particularly The New York Times. Enrollment limited to 20.

Spr AMST1905CS01 25583 F 3:00-5:20(15) ‘To Be Arranged’

**AMST 1905E. American Poetry II: Modernism (ENGL 1711A).**

Interested students must register for ENGL 1711A.

Spr AMST1905ES01 25116 Arranged ‘To Be Arranged’

**AMST 1905F. American Poetry I: Puritans through the Nineteenth Century (ENGL 1511O).**

Interested students must register for ENGL 1511O.

Fall AMST1905FS01 15870 Arranged ‘To Be Arranged’

**AMST 1905G. Literature and the Problem of Poverty (ENGL 1710K).**

Interested students must register for ENGL 1710K.

Fall AMST1905GS01 15889 Arranged ‘To Be Arranged’

**AMST 1905H. Global Queer Performance (TAPS 1420).**

Interested students must register for TAPS 1420.

Fall AMST1905HS01 16001 Arranged ‘To Be Arranged’

**AMST 1970. Independent Reading and Research.**

Required of all honors candidates in the senior year. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. S/NC

**AMST 2010. Introduction to Interdisciplinary Methods.**

Introduction to interdisciplinary studies required of all first-year graduate students in American Studies. Graduate students from other departments may enroll with permission of the instructor.

Fall AMST2010 S01 14274 Th 9:40-12:00(08) (M. Gutelir)

**AMST 2020E. Introduction to Interdisciplinary American Studies.**

This graduate-level course offers an introduction to the discipline of American Studies through a close reading of four important texts representing different methodologies and theories within the discipline. We will also read a series of seminal articles focused on transnationalism, highlighting the significance of border-crossings to the American experience throughout the semester. The goal of the course is to familiarize students with pedagogical approaches within American Studies, through active seminar discussions, fieldtrips within the community, and work with material and visual media as well as secondary texts.

Fall AMST2020ES01 16672 T 4:00-6:20(18) (C. Frank)
AMST 220B. Culture, Politics and the Metropolitan-Built Environment.  
This interdisciplinary readings seminar will provide graduate students with an introduction to recent scholarly work on 20th century and contemporary cities and suburbs. Readings will be drawn from cultural, political, social, and intellectual history, American Studies, political science, sociology, and ethnography. They will investigate the interconnections between urban and suburban development and the role of ideology, class, gender, race, and globalization in shaping planning, architecture, culture, policy, politics, and social movements. This class is open to students in American Studies, History, Sociology, Political Science, Anthropology, and other disciplines who find themselves interested in multi-disciplinary approaches to the study of cities and suburbs.

Spr AMST220B S01 23812 Th 4:00-6:20(17) (S. Zipp)

AMST 2450. Exchange Scholar Program.  
To Be Arranged

Examines the methodological and theoretical underpinnings of current and past American studies scholarship. Enrollment limited to graduate students with preference given to American Studies graduate students. S/NC

Fall AMST2520 S01 14418 Arranged (S. Smulyan)

This course surveys public humanities work, including cultural heritage preservation and interpretation, museum collecting and exhibition, informal education, and cultural development. It also provides an overview of the contexts of that work in nonprofit organizations, including governance, management, and development.

Spr AMST2540 S01 25720 TTh 10:30-11:50 (S. Lubar)

AMST 2650. Introduction to Public Humanities.  
This class, a foundational course for the MA in Public Humanities with preference given to American Studies graduate students, will address the theoretical bases of the public humanities, including topics of history and memory, museums and memorials, the roles of expertise and experience, community cultural development, and material culture. Enrollment limited to 20 graduate students.

Fall AMST2650 S01 14275 T 4:00-6:20(18) (A. Valk)

The course offers an opportunity for RISD and Brown students to work together to understand the growing interdisciplinary field of public art. We will explore the potential of working in the public realm as artists and/or art administrators. Topics include: pivotal events and artworks that formed the history of public art from the early 20th century to the present; approaches to site-specificity; ideas of community and audience; current debates around defining the public and public space; temporary vs. permanent work; controversies in public art; memorials, monuments, and anti-monuments; case studies; public art administration models, among others. It is both a seminar and a studio; students work individually and together on research, presentations, proposals and public projects. Contact the instructor Janet Zweig (janetzweig@earthlink.net). Enrollment limited to 12 seniors and graduate students. Instructor permission required.

Fall AMST2653 S01 14601 M 1:00-5:15(06) (J. Zweig)

Cultural policy is the aggregate of governmental activities in the arts, humanities, and heritage. This seminar explores its history and public/private context and offers practical insights about how to influence cultural policy design, especially methods to achieve public consensus through planning. Students discuss contemporary issues, examine policy planning principles, and learn practical methods through case study to develop policy recommendations. Enrollment limited to 20 seniors and graduate students.

Fall AMST2656 S01 14814 W 10:00-12:30(03) (C. Dreeszen)

AMST 2660. Projects in Public Humanities.  
Devoted to one or more advanced projects in Public Humanities not covered in detail by the regular courses. Projects in public humanities provide practical, hands-on project and group project management experience that is essential for careers in museums, historic preservation, and cultural agencies. Students will work with faculty advisor to project completion. Written permission and topic description required. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. This course is repeatable for credit. Prerequisite: AMCV 2650 or demonstrated ability of equivalent experience. Instructor permission required.

AMST 2661. Visualizations in the Humanities: From the Cabinet of Curiosities to the Geoparser.  
Museums, maps, network graphs and datasets reflect and shape the work of scholars in the humanities. This course provides an overview of the way that literary and historical scholars have organized, analyzed, and presented their research to each other and the public. The course includes theoretical, historical and practical work. The first part of the course is historical; the second part will focus on the tools of the digital humanities, with students undertaking projects in their fields of study. Enrollment limited to 20.

Fall AMST2661 S01 14758 M 3:00-5:20(15) (S. Lubar)

AMST 2670. Practicum in Public Humanities.  
Practicums in public humanities provide practical, hands-on training that is essential for careers in museums, historic preservation, and cultural agencies. Students will work with faculty to find appropriate placements and negotiate a semester’s or summer work, in general a specific project. Available only to students in the Public Humanities M.A. program.

Fall AMST2670 S01 14599 Arranged (A. Valk)
Spr AMST2670 S01 24110 Arranged (A. Valk)

AMST 2680. Practicum in Public Humanities.  
Practicums in public humanities provide practical, hands-on training that is essential for careers in museums, historic preservation, and cultural agencies. Students will work with faculty to find appropriate placements and negotiate a semester’s or summer work, in general a specific project. Available only to students in the Public Humanities M.A. program.

Fall AMST2680 S01 14600 Arranged (A. Valk)
Spr AMST2680 S01 24111 Arranged (A. Valk)

AMST 2690. Management of Cultural Institutions.  
This course explores public humanities institutions as an organizational system that interacts with broader community systems. Students will emerge with an understanding of the realities of the managerial, governance and financial structures of public humanities institutions and how those structures interact with mission, programming and audience. The course is designed to help those who work on the program side of public humanities and cultural institutions--as educators, librarians, curators, interpreters, exhibit designers, public programming coordinators, grand makers, etc.--engage more strategically with those aspects of their institutions that encompass planning, organizational behavior, revenue generation, finance, marketing, and governance.

Spr AMST2690 S01 24109 M 3:00-5:20(13) 'To Be Arranged'

AMST 2920. Independent Reading and Research.  
Section numbers vary by instructor. Search Banner by instructor name to find the correct section number and CRN to use when registering for this course. You will need instructor permission to register and the course may be repeated with different instructors. Open to American Studies graduate students only. S/NC

AMST 2921. Independent Reading and Research.  
Section numbers vary by instructor. Search Banner by instructor name to find the correct section number and CRN to use when registering for this course. You will need instructor permission to register and the course may be repeated with different instructors. Open to American Studies graduate students only. S/NC

AMST 2922. Independent Reading and Research.  
Section numbers vary by instructor. Search Banner by instructor name to find the correct section number and CRN to use when registering for this course. You will need instructor permission to register and the course may be repeated with different instructors. Open to American Studies graduate students only. S/NC

AMST 2923. Independent Reading and Research.  
Section numbers vary by instructor. Search Banner by instructor name to find the correct section number and CRN to use when registering for this course. You will need instructor permission to register and the course may be repeated with different instructors. Open to American Studies graduate students only. S/NC
course. You will need instructor permission to register and the course may be repeated with different instructors. Open to American Studies graduate students only. S/NC

ANTH 2999. Thesis Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.
Fall AMST2999 S01 14003 Arranged 'To Be Arranged'
Spr AMST2999 S01 23522 Arranged 'To Be Arranged'

Anthropology

ANTH 0066N. Peoples and Cultures of Greater Mexico.
This course will focus on the cultural area known as Greater Mexico, incorporating Mexicans resident south of the Rio Grande, as well as the approximately 25 million Mexicans living permanently or for at a time in the United States. Specific topics to be covered in the class include: urban peasants and rural proletarians, recent challenges to gender conventions, national and international migration, nationalism and the changing meanings of the Conquest and colonial periods, land and indigenous rights, everyday violence, machismo, popular culture, and protest and rebellion. Limited to first-year students.
Spr ANTH0066N S01 25415 Th 9:30-11:50(08) (M. Gutmann)

ANTH 0066S. Contemporary Egypt in Revolution.
On January 25, 2011 protestors in Egypt amassed in Tahrir Square in Cairo with basic demands: Bread, Freedom, Social Equality, and Human Dignity. After hundreds of peaceful protestors were killed at the hands of riot police and hired thugs, eighteen days later, President Husni Mubarak resigned. Yet since then, hundreds more have been killed. Egypt’s revolution continues, and the basic demands are as crucial today as they were at its inception. We will read contemporary Egypt from the perspectives of anthropologists and social historians, and discuss the value of social theory and analysis for understanding current political turmoil. Enrollment limited to 20 first year students. DVPS FYS. S/NC
Fall ANTH0066S S01 16147 T 4:00-6:20(18) (L. Straughn)

ANTH 0066T. Postcolonial Matters: Material Culture between Colonialism and Globalization.
This course is about things - 'stuff' - as it is about people past and present and their entanglements in and through colonial situations. It explores colonialism past and present through the combined lenses of postcolonial theory and material culture - the emphasis is thus not so much on literary and figurative representations of colonial conflicts and engagements but rather on the material surroundings of people living those colonial worlds. In other words, this course is about what people did and about the things they used to construct their daily lives in colonial situations across the globe and through time. Enrollment limited to 20 first year students. FYS
Fall ANTH0066T S01 16157 W 9:30-11:50(02) (P. van Dommelen)

ANTH 0100. Introduction to Cultural Anthropology.
This course provides an introduction to cultural anthropology, surveying its defining questions, methods, and findings. We will examine the history and utility of anthropology’s hallmark method, ethnography, the long-term immersion of the researcher in the culture under study. We will compare anthropological findings and comportment in other cultures to its own. No prerequisites. WRIT
Spr ANTH0100 S01 24437 MWF 10:00-10:50(03) (D. Smith)

The course introduces anthropological approaches to some of the central problems we face in the globalizing twenty-first century. We will trace both large- and small-scale movements of people, commodities, borders, and pollution to improve our understanding of the complex international, transnational, and local social phenomena that shape the human experience today.
Fall ANTH0110 S01 15157 TTh 1:00-2:20(10) (A. Benton)

ANTH 0200. Culture and Human Behavior.
The goal is to challenge our beliefs about some taken for granted assumptions about human behavior and psyche by examining cultures with different conceptions of self and cognition. We will examine the issues of the role of nature and nurture in development, the nature of intelligence, coming of age, the association of psychological characteristics with gender and the naturalness of emotions.
Fall ANTH0200 S01 15158 MW 10:00-10:50(03) (M. Hollos)

ANTH 0300. Culture and Health.
An introduction to the field of Medical Anthropology. Lecture reading and discussion will examine the social context of health and illness, looking at the diverse ways in which humans use cultural resources to cope with disease and develop medical systems. The course will provide an introduction to the overall theoretical frameworks that guide anthropological approaches to studying human health related behavior. Medical anthropology offers a unique and revealing perspective on the cultural diversity that characterizes human experiences of sexuality, disease, aging, mental illness, disability, inequality and death. DVPS LILE WRIT
Fall ANTH0300 S01 15160 MWF 1:00-1:50(06) (S. Hamdy)

ANTH 0310. Human Evolution.
Examination of theory and evidence on human evolution in the past, present and future. Topics include evolution and adaptation, biocultural adaptation, fossil evidence, behavioral evolution in primates, human genetic variation and contemporary human biological variation. WRIT
Fall ANTH0310 S01 15159 TTh 2:30-3:50(11) (A. Scherer)

ANTH 0450. Two Billion Cars: Humans, Markets, Cultures, and the Automobile.
The global car population is predicted to reach two billion by the year 2020. The social, political, health, and environmental consequences are immense. These, as well as the cultural and political economic explanations for the car population explosion, will be explored in this class, as will alternative futures for transit.
Spr ANTH0450 S01 25375 MW 3:00-4:20(13) (C. Lutz)

ANTH 0500. Past Forward: Discovering Anthropological Archaeology.
This course offers a broad journey through the human past, from material culture crafted by our evolutionary ancestors to the remnants of the recent historic past. To facilitate this journey, the class explores the methods, concepts, and theories that anthropologists employ in the study of past peoples, places, and things. Case studies stretch across the globe. As a hands-on endeavor, archaeology focuses on tangible evidence. In this course, small-group discussion, laboratory, and field exercises will complement lectures, leading to an understanding of how anthropologists study the past and how that knowledge affects the present. LILE
Spr ANTH0500 S01 24438 MWF 1:00-1:50(06) (A. Scherer)

ANTH 0520. Classic Mayan Civilization.
Examines the history, art, and society of the Classic Maya, with special emphasis on Preclassic precursors, dynasties, environmental adaptation, imagery, architecture, urban form, and the Maya Collapse.
Fall ANTH0520 S01 15247 TTh 10:30-11:50(13) (S. Houston)

ANTH 0800. Sound and Symbols: Introduction to Linguistic Anthropology.
This introduction to the study of language and culture considers how language not only reflects social reality but also creates it. We'll examine specific cases of broad current relevance, in the process learning how an analytical anthropological approach to language use lays bare its often hidden power. We'll consider how language creates and reinforces social inequality and difference, how language promotes and resists globalization, and how language is used creatively in performance, literature, film, advertising, and mass media. We will also consider how language does important social work in specific contexts, such as classrooms, courtrooms, medical settings, and political campaigns. DVPS LILE
Fall ANTH0800 S01 15166 MW 11:00-11:50(04) (P. Faivre)

ANTH 1100. Circumpolar Ethnography.
An examination of the traditional and modern lifeways of native peoples across the Arctic and subarctic from European Lapland through Siberia, Alaska, Canada, and Greenland. Topics covered are society; ethnic relations; religion (Shamanism); art; and politics, including issues of land claims and home rule.
Spr ANTH1100 S01 24444 TTh 2:30-3:50(11) (D. Anderson)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
In this course we engage with anthropological literature and films on the diverse ethnicities, cultures, and "traditions" of sub-Saharan Africa. We trace the histories and the processes of cultural, social, and political change, beginning with colonialism and ending with the contemporary period. We will deconstruct and deconstruct dominant Western ideas of Africa that present it as primitive and characterized by poverty, AIDS, famine, and violence. We will learn about how Africans see and represent themselves through reading ethnographies, engaging with African popular culture, and watching documentary films.

ANTH 1125. Indigenous Archaeologies.
This course in an introduction to Indigenous archaeology, sometimes defined as archaeology "by, for and with Indigenous peoples." These approaches combine the study of the past with the contemporary social justice concerns. However, they are more than this. In addition to seeking to make archaeology more inclusive of and responsible to Indigenous peoples, they seek to contribute a more accurate understanding of archaeological record. They thus do not reject science, but attempt to broaden it through a consideration of Indigenous epistemologies. This course covers topics as the history of anthropological archaeology, Indigenous knowledge and science, decolonizing methodologies, representational practices and NAGPRA. DVPS LILE

ANTH 1151. Ethnographies of the Muslim Middle East.
An introduction to ethnographic studies of Middle East, focus on: religion, language, modernity, gender, and political culture. Students will engage in critical examination which anthropologists sought to capture Middle Eastern life, and problems that have pervaded anthropological representation, methodologically and theoretically. You will learn, through the ways anthropologists approach the peoples, ideas, and cultures of the region in ways that complement and contradict the knowledge production of other disciplines, the processes we come to understand cultural difference, and ways this encounter sheds light on our selves and practices. Previous course in Anthropology/ Middle East studies is suggested. Enrollment limited to 25. DVPS LILE

ANTH 1221. Anthropology of Masculinity.
Contemporary anthropological and historical study of masculine identities and practices throughout the world, focusing on topics such as the cultural economies of masculinity, cultural regions and images of manhood, male friendship, machismo, embodied masculinity, violence, power, and sexual fault lines. Prerequisite: Prior course in Social Science or instructor’s permission required.

ANTH 1232. War and Society.
Cross-cultural and historical perspectives on war and its larger social context. Course readings and lectures use political economic, cultural, and feminist approaches to understanding war and its effects on social life. Case studies will be drawn from several eras and areas of the globe, including the Rwandan genocide, Central American counterinsurgency wars of the 1980s, and the war in Iraq.

ANTH 1252. Kill Assessment: An Investigation into Death, Genocide and Other Forms of Violence.
Is violence best understood as a set of "random acts" marginal to society? Or, do societies need violence to make culture systematic and functional? We will address two major issues throughout this course. First, we will discuss different types of violence: physical, material, structural and symbolic violence. Second, we will become familiar with ways that social groups turn violence into an aesthetic object and an artistic project. LILE

ANTH 1300. Anthropology of Addictions and Recovery.
The purpose of this course is to consider the uses and misuse of alcohol, tobacco and drugs, and approaches to recovery from addictions. We will read some of the major cross cultural, ethnographic, linguistic, and social-political works on addictions. Students will have the opportunity to conduct their own anthropological interviews regarding substance misuse and recovery as well as observe a local 12 step recovery meeting. Enrollment limited to 20. LILE

ANTH 1305. Medical Humanities: Critical Perspectives on Illness, Healing, and Culture.
Medicine is arguably the most humanistic of the hard sciences, one that strives to ensure the basic dignity of individuals. In our increasingly globalized world, access to medical care is recognized as a fundamental human right. However, there continues to be considerable debate over the "best" ways to provide medical services to economically and culturally diverse communities across the globe, given the complex ways that people prioritize and perpetuate their health. Drawing on a range of disciplines, this seminar explores the multifaceted relationships between biomedicine and cultural understandings of illness, both in the US and worldwide. Instructor permission required. Enrollment limited to 25 juniors and seniors.

ANTH 1310. International Health: Anthropological Perspectives.
This upper-level medical anthropology course focuses on the social and cultural complexity of health problems in developing nations, employing anthropological approaches to public health. International health issues such as HIV/AIDS, malaria, tuberculosis, leprosy, reproductive health, violence, and mental illness will be examined. The historical, political and socio-cultural dimensions of international health problems will be explored through reading ethnographic case studies. WRIT

ANTH 1320. Anthropology and International Development: Ethnic Perspectives on Poverty and Progress.
Examines international development from an ethnographic perspective, looking critically at issues of poverty and progress from local points of view. Course is organized around the premise that culture is central to understanding processes of development. Broad development themes such as public health, agriculture, democracy, and the environment will be explored through readings representing a wide range of regions and cultures.

From child soldiers to starving refugees, Americans are inundated with media images of violent suffering in the developing world. Our politicians frequently present international humanitarian intervention as an unequivocal good, without examining the actual outcomes of aid initiatives. This course uses tools from anthropology to explore the motivations for global aid, along with the concrete—and often unexpected—effects it produces on the ground. For grounding an ethnographic approach, we seek to understand the enduring influence of the concept of "rights," the ways that local populations both welcome and resent humanitarian work, and the successes and failures of international charitable organizations. First-year students require an instructor override to register.

ANTH 1323. The Culture and Politics of Colonial Cities: Migration, Markets and the Diaspora.
Two colonial powers (British Empire and Portuguese) form the basis for this comparative approach to unravel and comprehend how colonial policies differed in two regions. Colonial cities have a special mystique, and studying them in the present unravels socio-historical and political connections make the present more meaningful. For post-colonialism, we address migration and Diaspora, the participation of groups under analysis in transnational economy and local and global markets. Focusing on the Diaspora, we seek to tie history and cultural development to the wider issue of Diaspora and the displacement of people, the search for opportunities, migration and the global markets. DVPS LILE

ANTH 1326. The New Economic Anthropology.
This course introduces students to the new economic anthropology of capitalism and situates it within the historical development of economic anthropology since the late 19th century. The course begins by introducing...
students to basic notions of 'economy' as understood in the ancient Mediterranean up through to the present. The course covers early anthropological research into forms of personhood and sociocultural organization that contrasts sharply with the assumed universality of homo economicus. The course focuses on key debates within economic anthropology over the possibility of using 'western' economic categories for analysis and explores some of the alternative frameworks developed by anthropologists. LILE
Fall ANTH1326 S01 16607 TTh 9:00-10:20(08) (D. Pedersen)

ANTH 1411. Nations within States.
Examines the interactions between small-scale indigenous societies (often referred to as Fourth World Nations) and the modern states within which they now exist. The relationship is obviously asymmetrical, yet these ethnic or "racial" minorities have the support of world opinion and international organizations. The sociocultural, economic, and political structure of these nations within states is the focus of the course.
Spr ANTH1411 S01 24443 MW 8:30-9:50(02) (D. Anderson)

ANTH 1623. Archaeology of Death.
Examines death, burial, and memorials using comparative archaeological evidence from prehistory and historical periods. The course asks: What insights do burial or funerary practices give us about the human condition? How do human remains illuminate the lives of people in the past? What can mortuary artifacts tell us about personal identities and social relations? What do gravestones and monuments reveal about beliefs and emotions? Current cultural and legal challenges to the excavation and study of the dead are also considered. DVPS LILE
Spr ANTH1623 S01 24512 MWF 12:00-12:50(05) (P. Rubertone)

ANTH 1624. Indians, Colonists, and Africans in New England.
The course explores the colonial and capitalist transformation of New England's social and cultural landscapes following European contact. Using archaeology as critical evidence, we will examine claims about conquest, Indian Extinction, and class, gender and race relations by studying the daily lives and interactions of the area's diverse Native American, African American, and European peoples. DVPS LILE
Fall ANTH1624 S01 15168 TTh 10:30-11:50(13) (P. Rubertone)

ANTH 1720. The Human Skeleton.
More than simply a tissue within our bodies, the human skeleton is gateway into narratives of the past—from the evolution of our species to the biography of individual past lives. Through lecture and hands-on laboratory, students will learn the complete anatomy of the human skeleton, with an emphasis on the human skeleton in functional and evolutionary perspective. We will also explore forensic and bioarchaeological approaches to the skeleton. By the course conclusion, students will be able to conduct basic skeletal analysis and will be prepared for more advanced studies of the skeleton from medical, forensic, archaeological, and evolutionary perspectives. Enrollment limited to 20. Not open to first year students. Instructor permission required. LILE
Spr ANTH1720 S01 24513 MWF 11:00-11:50(04) (A. Scherer)

ANTH 1810. Language and Power.
This course considers how language and power relate to each other in social life. We first consider theoretical approaches to the politics of language use, such as Foucault on discursive formations, Bourdieu on language as social capital, and Bakhtin on the oppression inherent in standard languages. We then consider specific issues, including joking as linguistic resistance, language death and revitalization, the cochlear implant debate, and racializing discourses. We end with language use in the U.S. "culture wars," covering such topics as the Ebonics controversy, language and electoral politics, hate speech, and English language legislation.
Spr ANTH1810 S01 24445 TTh 10:30-11:50(09) (P. Rubertone)

ANTH 1820. Lost Languages: The Decipherment and Study of Ancient Writing Systems.
Humans make many marks, but it is writing that records, in tangible form, the sounds and meanings of language. Creating scripts is momentous; writing facilitates complex society and is a crucial means of cultural expression. This course addresses the nature of writing in past times. Topics include: the technology of script; its precursors and parallel notations; its emergence, use, and "death"; its change over time, especially in moments of cultural contact and colonialism; writing as a physical object or thing; code-breaking and decipherment, including scripts not yet deciphered; and the nature of non-writing or pseudo- or crypto-scripts.
Fall ANTH1820 S01 15283 TTh 2:30-3:50(11) (S. Houston)

ANTH 1880. From Magic Mushrooms to Big Pharma: Anthropology of Drugs.
This course considers the social, political, and medical issues associated with illegal and pharmaceutical drugs. Some of the topics we consider are debates over the commercialization and criminalization of hallucinogenic plants such as marijuana, the politics of antiretroviral distribution, the ethics of medical and ethnic tourism, the legacies of colonialism and botanical migrations, "biopiracy" and indigenous knowledge, and critiques of modern food production, including the "locavore movement" and opposition to genetically modified foods. Through it all, we consider how the ways people talk and write about these issues affect concrete realities in daily life. Enrollment limited to 20 juniors and seniors. DVPS LILE
Fall ANTH1880 S01 15169 W 3:00-5:20(17) (P. Faudree)

Looks at the way anthropological methods and theories have interfaced throughout history to uncover the dominant concerns in present-day anthropology. What were the important issues that influenced the discipline's history? Who were the significant, and not so well known, historic personalities who shaped anthropological practice and gave it its identity? Enrollment limited to 20.
Fall ANTH1900 S01 16319 TTh 1:00-2:20(10) (D. Kertzner)

ANTH 1901. Anthropology in/of the Museum.
This course provides an introduction to museums from an anthropological perspective. Topics include politics of representation and the construction of the "Other"; objects, identity, and meaning; collecting and cultural property; and collaboration, community engagement, and indigenous self-representation. Assignments involve work with the Haffenreffer Museum of Anthropology's exhibitions and collections. The course focuses on museums dedicated to natural and cultural history, but establishes theoretical and practical grounding for thinking about and working in other disciplines and other kinds of display institutions. It is suitable for both undergraduate and graduate students. There are no prerequisites; but familiarity with anthropology is presumed.
Spr ANTH1901 S01 25861 W 3:00-5:20(14) (J. Stamep)

ANTH 1910A. Anthropological Approaches to World Issues.
Capstone seminar for Anthropology concentrators that explores how anthropology can challenge conventional or dominant wisdom about global social problems. Original research project required. Prerequisite: ANTH 1900
Fall ANTH1910A S01 15543 M 6:30-8:50PM(15) (C. Ludz)

ANTH 1910G. Senior Seminar: Politics and Symbols.
Examination of key role played by symbols, myth, and ritual in politics. We examine symbols, myths, and rituals are used to win support, to create political reality, and form political groups, whether in defense of the status quo or creating movements seeking to overthrow it. The 2012 U.S. presidential and congressional campaigns receive attention. Students, in part working in groups, will engage in original research both on the 2012 American elections and a wide variety of historical and contemporary political developments, from the Arab Spring to the Occupy Wall Street movement. Enrollment limited to 25. Prerequisites: ANTH 1621 or 1900; and either ANTH 1940 or 1950.
Spr ANTH1910G S01 25504 W 3:00-5:20(17) (D. Kertzner)

ANTH 1940. Ethnographic Research Methods.
To understand the different theoretical assumptions that shape research efforts; to examine how hypotheses and research questions are formulated; and to appreciate the ethical and scientific dimensions of research by hands-on experience in fieldwork projects. Prerequisite: One Anthropology course.
Fall ANTH1940 S01 15171 Th 4:00-6:20(16) (L. Fruzzetti)

Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.
ANTH 2000. History of Ethnological Theory. A seminar investigating some themes in the history of anthropological theory. Starting with the delineations of the scope and nature of social science by Marx, Durkheim, and Weber, the seminar then considers various explorations of the concepts of structure, function, and agency, concluding with Bourdieu's reformulation of social anthropology for a new generation in the form of practice theory.

Fall ANTH2000 S01 15172 M 3:00-5:20(15) (W. Simmons)


Spr ANTH2010 S01 24516 W 12:00-2:20(05) (S. Hamdy)

ANTH 2020. Methods of Anthropological Research. A seminar on the methodological problems associated with field research in social and cultural anthropology. Designed to help students prepare for both summer and dissertation research.

Spr ANTH2020 S01 24517 Arranged (M. Hollos)

ANTH 2050. Ethnography. Each week this class will study classic and contemporary ethnographies - as well as studies from sociology, journalism, and history - that achieve ethnographic results, but will require discussion to determine what they "are". We will carefully examine the methods involved in research for the books and how the ethnographies were written. Ethnographies will be chosen for their importance in anthropological and other fields, and will cover a broad range of topical and geographic contexts.

Spr ANTH2050 S01 25787 Th 4:00-6:20(17) (M. Gutmann)

ANTH 2130. Biopolitics. This graduate course will review theoretical positions and anthropological debates concerning biopolitics and life itself, and theoretical frameworks that examine what it means to ‘make live and let die.’ Although biopolitics is taken as a central preoccupation and analytic for this course, it is also understood as one of many ways to conceptualize or theorize about life and its government. The course is organized around several themes related to anthropological and humanistic inquiry about the myriad ways life takes on political, cultural and social significance. Enrollment limited to 15.

Spr ANTH2130 S01 23742 Arranged (A. Benton)

ANTH 2251. Anthropology of Gender and Sexuality. In this course we will engage with writings from the social sciences on sex, gender, and sexuality. We will look at the categories that anthropologists have created to explain bodies, sexual choices, and subjectivities and historicize and interrogate them. We will do close readings of ethnographies to see how sex, sexuality, and gender are theorized and understood as one of many ways to conceptualize or theorize about life and its government. The course is organized around several themes related to anthropological and humanistic inquiry about the myriad ways life takes on political, cultural and social significance. Enrollment limited to 15.

Fall ANTH2251 S01 16072 M 12:00-2:20(05) (M. Hackman)

ANTH 2304. Issues in Anthropology and Population. This seminar is intended for graduate students and postdoctoral fellows interested in anthropological approaches to population issues and is normally taken as the second course in a two-course sequence that begins with ANTH 2300. The overarching theme of the seminar is the contributions that sociocultural anthropology can make to the understanding of population processes.

Fall ANTH2304 S02 16291 F 9:30-11:50(03) (M. Block)

ANTH 2310B. Violence, Governance and Transnationalism. Deals with contemporary anthropological approaches to intersection of violence, human rights, law, and transnationalism. Readings will focus on the development of a new generation of research in the anthropology of human rights and its implication for rethinking legal anthropology. Anthropology has moved beyond the "cultural relativism" paradigm on to new projects which analyze the appropriation and use of human rights discourse and international norms as political tools for a variety of national and local agendas. Anthropologists have produced ethnographies that focus on the institutional grounding of legal discourse and practice in community and neighborhood politics, social movements, and ethnic nationalist projects. They have studied the radical reworking of rights discourse in different parts of the world and debated the ways in which these technologies for legal redress in the face of violence are politically empowering and/or disempowering in particular historical and cultural circumstances.

Fall ANTH2310BS01 15176 W 6:00-8:20PM(16) (K. Warren)

ANTH 2320. Ideology of Development. An examination of different development theories and their relationship to field application. The analysis of project preparation and implementation is used to question the goals and objectives of Western and indigenous notions of progress and change within a social and economic context. Third World countries are utilized as case studies to address related issues, such as the meaning of development.

Fall ANTH2320 S01 24508 W 3:00-5:20(14) (L. Fruzzetti)

ANTH 2321. Coming to Terms with India: Anthropology of Colonialism and Nationalism. This course is designed to look into the impact of colonialism, nationalism and the postcolonial identities of the person in India. In addition to the primacy of the anthropological focus, the seminar will also draw from cultural studies and history. Our engagement will be with topics of nationalism, religion, and caste and class formation during colonial and post colonial rule. Additional topics using the anthropological approach will include orientalism and gender; the location of national minorities within the Indian democracy and the future of fundamentalism; post-colonialism and the emerging new person.

Fall ANTH2321 S01 15173 W 3:00-5:20(17) (L. Fruzzetti)

ANTH 2450. Exchange Scholar Program. Fall ANTH2450 S01 14004 Arranged 'To Be Arranged'

Spring ANTH2450 S01 23523 Arranged 'To Be Arranged'

ANTH 2501. Principles of Archaeology. Examines theoretical and methodological issues in anthropological archaeology. Attention is given to past concerns, current debates, and future directions of archaeology in the social sciences.

Fall ANTH2501 S01 15174 T 6:00-8:20PM(18) (A. Scherer)

ANTH 2540. Historical Archaeology: From Colony to City. Examines historical archaeology as a complex field of inquiry that engages multiple sources of evidence and incorporates a wide range of theoretical and methodological approaches. The seminar will consider the range of evidence available to historical archaeologists, and draw on examples from colonies and cities around the world to explore how the richness and diversity of the evidence is used.

Fall ANTH2540 S01 15179 W 6:00-8:20PM(16) (P. Rubertone)

ANTH 2800. Linguistic Theory and Practice. An introduction to theoretical and methodological issues in the study of language and social life. We begin by examining semiotic approaches to language. We turn to classical research on language as a structured system - covering such topics as phonology and grammatical categories - but we focus on the implications of such work for broader social scientific and humanistic research. We then consider areas of active contemporary research, including cognition and linguistic relativity, meaning and semantics, pronouns and deixis, deference and register, speech acts and performativity, interaction, verbal art and poetics, reported speech, performance, and linguistic ideology.

Fall ANTH2800 S01 24515 T 1:30-3:50(10) (P. Faudree)

ANTH 2970. Preliminary Examination Preparation. For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.

Fall ANTH2970 S01 14005 Arranged 'To Be Arranged'

Spr ANTH2970 S01 23524 Arranged 'To Be Arranged'

ANTH 2980. Reading and Research. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

ANTH 2990. Thesis Preparation. For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.

Fall ANTH2990 S01 14006 Arranged 'To Be Arranged'

Spr ANTH2990 S01 23525 Arranged 'To Be Arranged'
ANTH XLIST. Courses of Interest to Students Concentrating in Anthropology.

Applied Mathematics

APMA 0100. Elementary Probability for Applications.
This course serves as an introduction to probability and stochastic processes with applications to practical problems. It will cover basic probability and stochastic processes such as basic concepts of probability and conditional probability, simple random walk, Markov chains, continuous distributions, Brownian motion and option pricing. Enrollment limited to 20 first year students. FYS
Fall APMA0100 S01 16159 TTh 1:00-2:20(10) (B. Rozovsky)  

For student in any discipline that may involve numerical computations. Includes instruction for programming in MATLAB. Applications discussed include solution of linear equations (with vectors and matrices) and nonlinear equations (by bisection, iteration, and Newton's method), interpolation, and curve-fitting, difference equations, iterated maps, numerical differentiation and integration, and differential equations. Prerequisite: MATH 0100 or its equivalent.
Fall APMA0160 S01 24869 MWF 9:00-9:50(02) (J. Guzman)  

APMA 0330. Methods of Applied Mathematics I, II.
Mathematical techniques involving differential equations used in the analysis of physical, biological and economic phenomena. Emphasis on the use of established methods, rather than rigorous foundations. I: First and second order differential equations. II: Applications of linear algebra to systems of equations; numerical methods; nonlinear problems and stability; introduction to partial differential equations; introduction to statistics. Prerequisite: MATH 0100, 0170, 0180, 0190, 0200, or 0350, or advanced placement.
Fall APMA0330 S01 15628 MWF 12:00-12:50(12) (V. Dobrushkin)  
Spr APMA0330 S01 24870 MWF 12:00-12:50(05) (M. Maxey)  

APMA 0340. Methods of Applied Mathematics I, II.
Mathematical techniques involving differential equations used in the analysis of physical, biological and economic phenomena. Emphasis on the use of established methods, rather than rigorous foundations. I: First and second order differential equations. II: Applications of linear algebra to systems of equations; numerical methods; nonlinear problems and stability; introduction to partial differential equations; introduction to statistics. Prerequisite: MATH 0100, 0170, 0180, 0190, 0200, or 0350, or advanced placement.
Fall APMA0340 S01 15629 MWF 12:00-12:50(12) (J. Mallet-Paret)  
Spr APMA0340 S01 24871 MWF 12:00-12:50(05) (V. Dobrushkin)  

APMA 0350. Methods of Applied Mathematics I, II.
Covers the same material as APMA 0330, albeit of greater depth. Intended primarily for students who desire a rigorous development of the mathematical foundations of the methods used, for those students considering one of the applied mathematics concentrations, and for all students in the sciences who will be taking advanced courses in applied mathematics, mathematics, physics, engineering, etc. Three hours lecture and one hour recitation. Prerequisite: MATH 0100, 0170, 0180, 0190, 0200, or 0350, or advanced placement.
Fall APMA0350 S01 15631 MWF 11:00-11:50(04) (C. Dafermos)  
Spr APMA0350 S01 24872 MWF 1:00-1:50(08) (B. Sandstede)  

APMA 0360. Methods of Applied Mathematics I, II.
Covers the same material as APMA 0340, albeit of greater depth. Intended primarily for students who desire a rigorous development of the mathematical foundations of the methods used, for those students considering one of the applied mathematics concentrations, and for all students in the sciences who will be taking advanced courses in applied mathematics, mathematics, physics, engineering, etc. Three hours lecture and one hour recitation. Prerequisite: MATH 0100, 0170, 0180, 0190, 0200, or 0350, or advanced placement.
Fall APMA0360 S01 15647 MWF 1:00-1:50(06) (D. Lipshutz)  
Spr APMA0360 S01 24873 MWF 11:00-11:50(04) (C. Dafermos)  

Basic mathematical methods commonly used in the neural and cognitive sciences. Topics include: introduction to probability and statistics, emphasizing hypothesis testing and modern nonparametric methods; introduction to differential equations and systems of differential equations, emphasizing qualitative behavior and simple phase-plane analysis. Examples from neuroscience, cognitive science, and other sciences. Prerequisite: MATH 0100 or equivalent.
Fall APMA0410 S01 15633 MWF 2:00-2:50(07) (L. Bienenstock)  

APMA 0650. Essential Statistics.
Spr APMA0650 S01 24874 TTh 9:00-10:20(08) (M. Harrison)  

APMA 1070. Quantitative Models of Biological Systems.
Quantitative dynamic models help understand problems in biology and there has been rapid progress in recent years. The course provides an introduction to the concepts and techniques, with applications to population dynamics, infectious diseases, enzyme kinetics, aspects of cellular biology. Additional topics covered will vary. Mathematical techniques will be discussed as they arise in the context of biological problems. Prerequisites: APMA 0330, 0340 or 0350, 0360, or written permission.
Fall APMA1070 S01 15634 MWF 11:00-11:50(04) (A. Matzavinos Toumasis)  

APMA 1080. Inference in Genomics and Molecular Biology.
Sequencing of genomes has generated a massive quantity of fundamental biological data. We focus on drawing traditional and Bayesian statistical inferences from these data, including: alignment of biopolymer sequences; prediction of their structures, regulatory signals; significances in database searches; and functional genomics. Emphasis is on inferences in the discrete high dimensional spaces. Statistical topics: Bayesian inference, estimation, hypothesis testing and false discovery rates, statistical decision theory. Prerequisite: APMA 1650 or MATH 1610; BIOL 0200 recommended; Matlab or programming experience. Enrollment limited to 20.
Spr APMA1080 S01 24875 TTh 10:30-11:50(09) (C. Lawrence)  

APMA 1170. Introduction to Computational Linear Algebra.
Focuses on fundamental algorithms in computational linear algebra with relevance to all science concentrators. Basic linear algebra and matrix decompositions (Cholesky, LU, QR, etc.), round-off errors and numerical analysis of errors and convergence. Iterative methods and conjugate gradient techniques. Computation of eigenvalues and eigenvectors, and an introduction to least squares methods.
Fall APMA1170 S01 15635 TTh 10:30-11:50(13) (X. Li)  

Basic probabilistic problems and methods in operations research and management science. Methods of problem formulation and solution. Markov chains, birth-death processes, stochastic service and queueing systems, the theory of sequential decisions under uncertainty, dynamic programming. Applications. Prerequisite: APMA 1650 or MATH 1610, or equivalent.
Spr APMA1200 S01 24876 MWF 2:00-2:50(07) (H. Dong)  

An introduction to the basic mathematical ideas and computational methods of optimizing allocation of effort or resources, with or without constraints. Linear programming, network models, dynamic programming, and integer programming.
Fall APMA1210 S01 15636 TTh 9:30-10:20(08) (P. Dupuis)  

Interested students must register for ENGN 1370.
Spr APMA1250 S01 25170 Arranged 'To Be Arranged'  

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
APMA 1360. Topics in Chaotic Dynamics.
Overview and introduction to dynamical systems. Local and global theory of maps. Attractors and limit sets. Lyapunov exponents and dimensions. Fractals: definition and examples. Lorenz attractor, Hamiltonian systems, homoclinic orbits and Smale horseshoe orbits. Chaos in finite dimensions and in PDEs. Can be used to fulfill the senior seminar requirement in applied mathematics. Prerequisites: differential equations and linear algebra.

Fall APMA1360 S01 24877 MWF 1:00-1:50(06) 'To Be Arranged'

APMA 1650. Statistical Inference I
APMA 1650 begins an integrated first course in mathematical statistics. The first half of APMA 1650 covers probability and the last half is statistics, integrated with its probabilistic foundation. Specific topics include probability spaces, discrete and continuous random variables, methods for parameter estimation, confidence intervals, and hypothesis testing. Prerequisite: MATH 0100, 0170, 0180, 0190, 0200, or 0350.

Fall APMA1650 S01 15637 TTh 1:00-2:20(10) (C. Kivlans)

APMA 1660. Statistical Inference II
APMA 1660 is designed as a sequel to APMA 1650 to form one of the alternative tracks for an integrated year’s course in mathematical statistics. The main topic is linear models in statistics. Specific topics include likelihood-ratio tests, nonparametric tests, introduction to statistical computing, matrix approach to simple-linear and multiple regression, analysis of variance, and design of experiments. Prerequisite: APMA 1650 or equivalent, basic linear algebra.

Spr APMA1660 S01 24878 TTh 2:30-3:50(11)(C. Lawrence)

Examination of probability theory and mathematical statistics from the perspective of computing. Topics selected from random number generation, Monte Carlo methods, limit theorems, stochastic dependence, Bayesian networks, dimensionality reduction. Suggested prerequisite: calculus-based probability. Prerequisite: MATH 0100, 0170, 0180, 0190, 0200, or 0350, or equivalent placement.

Fall APMA1690 S01 15638 MWF 1:00-1:50(06) (S. Geman)

APMA 1710. Information Theory.
Information theory is the study of the fundamental limits of information transmission and storage. This course, intended primarily for advanced undergraduates and beginning graduate students, offers a broad introduction to information theory and its applications: Entropy and information, lossless data compression, communication in the presence of noise, channel capacity, channel coding, source-channel separation, lossy data compression. Prerequisite: one course in probability.

Fall APMA1710 S01 15639 MWF 9:00-9:50(02) (M. Harrison)

Description to be announced.
Fall APMA1930LS01 15785 TTh 9:00-10:20(08) (J. Guzman)

Description to be announced.
Spr APMA1940TS01 25029 TTh 1:00-2:20(10) (B. Rozovsky)

Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.


Fall APMA2190 S01 15640 TTh 2:30-3:50(11) (G. Menon)

The theory of the classical partial differential equations, and as well as the method of characteristics and general first order theory. Basic analytic tools include the Fourier transform, the theory of distributions, Sobolev spaces, and techniques of harmonic and functional analysis. More general linear and nonlinear elliptic, hyperbolic, and parabolic equations and properties of their solutions, with examples drawn from physics, differential geometry, and the applied sciences. Generally, semester II of this course concentrates in depth on several special topics chosen by the instructor.

Fall APMA2230 S01 15641 MWF 10:00-10:50(03) (Y. Guo)

The theory of the classical partial differential equations, and as well as the method of characteristics and general first order theory. Basic analytic tools include the Fourier transform, the theory of distributions, Sobolev spaces, and techniques of harmonic and functional analysis. More general linear and nonlinear elliptic, hyperbolic, and parabolic equations and properties of their solutions, with examples drawn from physics, differential geometry, and the applied sciences. Generally, semester II of this course concentrates in depth on several special topics chosen by the instructor.

Spr APMA2240 S01 24880 MWF 10:00-10:50(03) (H. Dong)

APMA 2410. Fluid Dynamics I.
Introduction to the dynamics of complex fluids. Topics covered include: boundary layers and secondary flows, perturbation methods, flow stability and transition phenomena, surface tension effects, mixing and dispersion, overview of suspension flows and non-Newtonian fluids. Prerequisite: APMA 2410, ENGN 2810 or equivalent.

Fall APMA2410 S01 15642 MWF 2:00-2:50(07) (M. Maxey)

APMA 2420. Fluid Dynamics II.
Course covers concepts and techniques relevant to fluid dynamics research for both high and low Reynolds number flows together with an introduction to the dynamics of complex fluids. Topics covered include: boundary layers and secondary flows, perturbation methods, flow stability and transition phenomena, surface tension effects, mixing and dispersion, overview of suspension flows and non-Newtonian fluids. Prerequisite: APMA 2410, ENGN 2810 or equivalent.

Please note: for spring 2014, interested students must register for ENGN 2820.

Spr APMA2420 S01 25171 Arranged 'To Be Arranged'

APMA 2450. Exchange Scholar Program.
Fall APMA2450 S01 14007 Arranged 'To Be Arranged'

Finite difference methods for solving time-dependent initial value problems of partial differential equations. Fundamental concepts of consistency, accuracy, stability and convergence of finite difference methods will be covered. Associated well-posedness theory for linear time-dependent PDEs will also be covered. Some knowledge of computer programming expected.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
APMA 2670. Numerical Solution of Partial Differential Equations II. An introduction to weighted residual methods, specifically spectral, finite element and spectral element methods. Topics include a review of variational calculus, the Rayleigh-Ritz method, approximation properties of spectral and finite element methods, and solution techniques. Homework will include both theoretical and computational problems. Fall APMA2670 S01 15646 Th 4:00-6:20(16) (B. Gidas)

APMA 2810. Topics in Kinetic Theory. Description to be announced. Fall APMA2810 S01 15787 M 12:00-3:00(05) (Y. Guo)

APMA 2811Q. Calculus of Variations. An introduction to modern techniques in the calculus of variations. Topics covered will include: existence of solutions and the direct method, Euler-Lagrange equations and necessary and sufficient conditions, one-dimensional problems, multidimensional nonconvex problems, relaxation and quasiconvexity, Young's measures, and singular perturbations. The emphasis of the course will be equal parts theory and applications with numerous examples drawn from topics in nonlinear elasticity, pattern formation, wrinkling thin elastic sheets, martensitic phase transitions, minimal surfaces, differential geometry and optimal control. Fall APMA2811Q S01 16629 MWF 12:00-12:50(05) (J. Gemmer)

APMA 2821S. Stochastic Epidemic Models in Random Networks. The focus of this course is to introduce and rigorously analyze some stochastic models of disease epidemics in random networks. Topics covered will include an introduction to branching processes, Reed-Frost epidemics and Erdos-Renyi random graphs, susceptible-infected-susceptible and susceptible-infected-removed models in random graphs, and small-world phenomena. Even though our focus will be on disease epidemics, the developed machinery is useful in the context of many diverse applications. Some familiarity with graduate level probability theory is desirable but not necessary. Probabilistic tools such as large deviation inequalities and coupling methods will be introduced in class, and the course will be essentially self-contained. Spr APMA2821S S01 25616 Arranged (A. Matzavinos-Toumasis)

APMA 2970. Preliminary Examination Preparation. For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination. Fall APMA2970 S01 14008 Arranged 'To Be Arranged'
Spr APMA2970 S01 23526 Arranged 'To Be Arranged'

APMA 2980. Research in Applied Mathematics. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Fall APMA2980 S01 14009 Arranged 'To Be Arranged'
Spr APMA2980 S01 23527 Arranged 'To Be Arranged'

Archaeology and Ancient World

ARCH 0033. Discovering the Past: Introduction to Archaeology and Prehistory (ANTH 0500). Interested students must register for ANTH 0500. Spr ARCH0033 S01 25192 Arranged 'To Be Arranged'

ARCH 0100. Field Archaeology in the Ancient World. Always wanted to be Indiana Jones? This course, focusing on the Mediterranean world and its neighbors in antiquity, interprets field archaeology in its broadest sense. In addition to exploring "how to do" archaeology - the techniques of locating, retrieving, and analyzing ancient
remains - we will consider how the nature of these methodologies affects our understanding of the past.

ARCH 0150. Introduction to Egyptian Archaeology and Art.
An introductory survey of the archaeology, art and architecture of ancient Egypt, ranging in time from the prehistoric cultures of the Nile Valley through the period of Roman control. While the course will examine famous features and characters of ancient Egypt (pyramids, mummies, King Tut), it will also provide a wide-ranging review of the archaeology of this remarkable land.

ARCH 0253. Monsters and Demons (AWAS 0350).
Interested students must register for AWAS 0350 (CRN 16489).

ARCH 0270. Troy Rocks! Archaeology of an Epic.
What do Brad Pitt, Julius Caesar, Dante, Alexander the Great, and countless sports teams have in common? The Trojan War! This course will explore the Trojan War not only through the archaeology, art, and mythology of the Greeks and Romans but also through the popular imaginations of cultures ever since, to figure out what "really" happened when Helen ran off and Achilles got angry and the Greeks came bearing gifts. Enrollment limited to 20 first year students. FYS.

ARCH 0293. Postcolonial Matters: Material Culture between Colonialism and Globalization (ANTH 0066T).
Interested students must register for ANTH 0066T.

Interested students must register for HIST 0970A.

ARCH 0322. Classic Mayan Civilization (ANTH 0520).
Interested students must register for ANTH 0520.

Istanbul is one of the largest urban conglomerations in the world, and the only city straddling two continents. It lies on either bank of the Bosphorus, which has been for millennia a bustling maritime thoroughfare. From a boat on the strait one can see not only rising skyscrapers, but also minarets and church-domes, colossal suspension bridges and ancient city walls. This course will explore the rich and turbulent history and archaeology of this enchanting city from the Neolithic to the present. It will offer an in-depth look at urban topography and a survey of the vibrant literature written about Byzantium-Constantinople-Istanbul. Enrollment limited to 50. WRIT

ARCH 0420. Archaeologies of the Greek Past.
The Onion once reported that ancient Greek civilization was a complete modern fraud, since obviously no one culture could have invented so much, not least all that Great Art and Architecture. But they did. This course will explore the material world of ancient Greece, from the monumental (the Parthenon) to the mundane (waste management), and everything in between. Enrollment limited to 50. LILE WRIT

ARCH 0535. Labor and Technology in the Roman World.
Recent television programs like the History Channel's "Engineering an Empire" depict the Romans as geniuses pursuing a "remarkably advanced" lifestyle, but who were the people behind these technological accomplishments and what were the implications for the average Roman? This course investigates the implications of Roman technology on daily life and labor. Topics include transportation and trade, agriculture, crafts production, mining, sanitation, and warfare. We will also explore issues concerning ancient and modern perspectives on Roman technology and labor. Enrollment limited to 20. WRIT

ARCH 0740. Revolutions and Evolutions in Archaeology.
Humankind has had a revolutionary past -- or so archaeology would lead us to believe. The earliest evidence for language, ritual, and the arts -- dating back to the extinction of the Neanderthals -- is known as the "Human Revolution". The time when hunter-gatherers became farmers? The "Neolithic Revolution". And when they started living in cities? The "Urban Revolution". This course will explore the historical reasons for these revolutionary labels, and consider instead these "revolutions" as gradual processes (or evolutions). Enrollment limited to 50. LILE WRIT

ARCH 0770. Food and Drink in Classical Antiquity.
Everybody eats - but patterns of eating (and drinking) vary dramatically from culture to culture. This course traces the mechanics of food production and consumption in the ancient Mediterranean world, considers how diet marked symbolic boundaries and gender differences, and in general explores the extent to which the ancient Greeks and Romans "were what they ate."

ARCH 1054. Indians, Colonists, and Africans in New England (ANTH 1624).
Interested students must register for ANTH 1624.

ARCH 1056. Indigenous Archaeologies (ANTH 1125).
Interested students must register for ANTH 1125.

ARCH 1234. Lost Languages: The Decipherment and Study of Ancient Writing Systems (ANTH 1820).
Interested students must register for ANTH 1820.

ARCH 1436. The Archaeology of Jerusalem: From the Origins to the Ottomans (JUDS 1610).
Interested students must register for JUDS 1610.

Interested students must register for AWAS 1300.

ARCH 1609. Ancient Babylonian Magic and Medicine (AWAS 1500).
Interested students must register for AWAS 1500.

ARCH 1621. History of Egypt I (EGYT 1430).
Interested students must register for EGYT 1430.

ARCH 1627. Daily Life In Ancient Egypt (EGYT 1465).
Interested students must register for EGYT 1465.

ARCH 1630. Fighting Pharaohs: Ancient Egyptian Warfare.
When and why did the ancient Egyptians engage in war? Who was fighting? What were their weapons like and what were their military strategies? What were the political situations that caused them to go to war? How did warfare impact Egyptian society? In studying Egyptian history and society through the pervasive motif of war, we will gain an understanding of the forces that shaped Egyptian culture. Enrollment limited to 55.

The indigenous communities of the Mediterranean Iron Age (the first millennium BC) are typically viewed as a series of stereotypes. This course will critically assess such conventional representations of different Iron Age societies by exploring the region's ever-increasing social complexity, the rise of princely burials and warriors, and the appearance of the urban settlements and monumental architecture that allegedly mark the transfer of 'civilization' from East to West. Enrollment limited to 50.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Instructor(S)</th>
<th>Credits</th>
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<td>ARCH 1703</td>
<td>Water and Architecture (HIAA 1910D)</td>
<td>S01 16100 Arranged</td>
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<td>ARCH 1707</td>
<td>Seven Wonders of the Ancient World (CLAS 1120Q)</td>
<td>S01 25198 Arranged</td>
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<td>ARCH 1715</td>
<td>Building Big! Supervized Architectural and Engineering Structures From Antiquity</td>
<td>S01 14880 TTh 10:30-11:50(13)</td>
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<td>ARCH 1771</td>
<td>Archaeology of Death (ANTH 1623)</td>
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<td>ARCH 1772</td>
<td>The Human Skeleton (ANTH 1720)</td>
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<td>ARCH 1776</td>
<td>Animal Acts (ERLY 1150)</td>
<td>S01 16670 Arranged</td>
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<td>ARCH 1793</td>
<td>Slavery in the Ancient World (CLAS 1120E)</td>
<td>S01 16104 Arranged</td>
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<td>ARCH 1882</td>
<td>Introduction to Geographic Information Systems for Environmental Applications (GEOL 1320)</td>
<td>S01 16101 Arranged</td>
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<td>ARCH 1900</td>
<td>The Archaeology of College Hill.</td>
<td>S01 14878 M 3:00-5:20(15)</td>
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<td>ARCH 1970</td>
<td>Individual Study Project in Old World Archaeology and Art.</td>
<td>Section numbers vary by instructor.</td>
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<td>ARCH 1990</td>
<td>Senior Honors Thesis in Archaeology and the Ancient World.</td>
<td>Section numbers vary by instructor.</td>
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<td>ARCH 2006</td>
<td>Principles of Archaeology (ANTH 2501)</td>
<td>S01 16927 Arranged</td>
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<td>ARCH 2185</td>
<td>Sensing Antiquity: New Approaches to Ancient Aesthetics and Sensibilities</td>
<td>S01 14883 W 3:00-5:20(17)</td>
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For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
ARCH 2982. Individual Reading for Dissertation.
Reading leading to selection of the dissertation subject. Single credit.
Section numbers vary by instructor. Please check Banner for the correct
section number and CRN to use when registering for this course.

ARCH 2983. Dissertation Research.
Section numbers vary by instructor. Please check Banner for the correct
section number and CRN to use when registering for this course.

ARCH 2990. Thesis Preparation.
For graduate students who are preparing a thesis and who have met the
tuition requirement and are paying a registration fee to continue active
enrollment.

Biology and Medicine

Introduces the basic principles of human nutrition, and the application of
these principles to the specific needs of humans, and the role of nutrition
in chronic diseases. Provides an overview of the nutrients and their use by
the human body. Also examines the role of nutrients in specific functions
and disease states of the body. Not for biology concentration credit.
Enrollment limited to 100. LILÉ
Fall BIOL0030 S01 14213 MW 8:30-9:50(02) (M. Flynn)

BIOL 0040. Nutrition for Fitness and Physical Activity.
Reviews the role of nutrition in physical activity and health. It is designed to
provide the student with the information and skills needed to translate
nutrition and physical activity recommendations into guidelines for both
the athlete for maximal performance and the non-athlete to improve both
health and body weight. Students will learn the use of the energy yielding
nutrition in physical activity and how food choices can influence both
athletic performance and long-term health through the effect on risk factors
for chronic diseases. Prerequisite: BIOL 0030. Enrollment limited to 20.
Instructor permission required.
Spr BIOL0040 S01 23663 T 4:00-5:20(16) (M. Flynn)

BIOL080. Biotechnology Management.
An examination of the pharmaceutical, biotechnology, and medical product
industries: what they are, how they function, whence they originate, and
various perspectives on why some succeed and others fail. Pathways from
lab-bench to marketplace are described as are the pervasive influences of
the FDA, patent office, and courts. Extensive reading; emphasis on oral
presentation. Primarily intended for students planning a career in
biomedical industry. Not for biology concentration credit. Students MUST
register for the lecture section and the conference. Enrollment limited to
20.
Fall BIOL080 S01 14823 T 4:00-6:20(18) (B. Bready)

BIOL 0150A. Techniques and Analyses using DNA-Based
Biotechnology.
Students will study and practice a range of methods used in molecular
biology while examining the ways in which those tools are used in
research and in the development of medical treatments. This experience,
combined with the reading and discussion of selected papers from the
primary literature, fosters development of a skill set critically important
for the modern day biology student. Expected background: high school
Biology course. Enrollment limited to 10 first year students. Instructor
permission required. Half-credit course. S/NC. FYS
Spr BIOL0150A S01 23664 Arranged (J. Hall)

BIOL 0150B. Statistical Computing for Biology.
Modern biological research is a data rich endeavor, necessitating strong
quantitative and computational skills to interpret the results of experimental
and observational studies. In this course we will explore the application of
statistics and modeling in biological research and environmental
science. Topics covered will include basic probability, experimental design,
sampling, hypothesis testing and mathematical models for prediction. No
prior statistics knowledge is assumed. Enrollment limited to 10 first
year students and sophomores. Instructor permission required. This is a half-
credit course. S/NC
Spr BIOL0150B S01 25590 Arranged (E. Sudderth)

BIOL 0150C. Methods for Extraction and Analyzing Secondary
Metabolites of Medicinal Plants.
Plant secondary metabolites are currently the subject of much research
interest when investigating new target compounds for potential medicine
from natural products. New leads for drugs and phytomedicines from
plants and plant parts have been increasing at a rapid rate especially
by the pharmaceutical industry. Many plants have been selected and
collected for their specific secondary compounds and healing powers by
ethnobotanists in the field. The final step is the extraction, analyzing and
identification of these plant specimens. Enrollment limited to 10 first
year students. Instructor permission required. Half-credit course. S/NC. FYS
Spr BIOL0150C S01 23665 Arranged (F. Jackson)

BIOL 0150D. Techniques in Regenerative Medicine: Cells, Scaffolds
and Staining.
Regenerative Medicine, also known as Tissue Engineering, is the process of
creating living, functional tissues to repair or replace native tissue or
organ functions that have been lost due to disease or congenital defects.
As such, it is a prominent scientific discipline that can either “stand alone”
or complement material-based research efforts in the areas of device
design, drug delivery, diagnostics and pharmaceuticals. Students will
develop proficiencies in basic cell culture techniques, early stage tissue
regeneration strategies and histochemical characterization of mammalian
cell constructs. Enrollment limited to 10 first year students. Instructor
permission required. Half-credit course. S/NC. FYS
Spr BIOL0150D S01 23809 Arranged (B. Zielinski-
Habershaw)

BIOL 0150E. Botanical Roots of Modern Medicine.
This course will explore a variety of medicinal plants found throughout
the world, the diverse cultures that use them in their daily lives and
the scientific underpinnings of their medicinal uses. In conjunction with
readings, students will gain a hands-on approach in lab, observing,
identifying and growing these plants. Enrollment limited to: 20. Students
MUST register for the lecture section and the lab.
Fall BIOL0150E S01 14217 MW 3:00-4:20(15) (F. Jackson)

BIOL 0150F. Darwinian Medicine.
Explores evolutionary explanations of why we get sick, and how this
can shape, or misshape, our interpretations of medicine. Draws on
evolutionary genetics, population biology, molecular biology and
physiology. This course will build on evolutionary biology and then focus
on disease processes such as infection, aging, cancer, allergy, diabetes,
and obesity. Enrollment limited to 20 first year students. FYS
Fall BIOL0150F S01 14219 Th 1:00-2:20(10) (M. Tatar)

BIOL 0150H. Plants, Food, and People.
Examines the selection, breeding, cultivation and uses of food plants.
Discusses the effects on agriculture of pathogens, climate change, and
loss of biodiversity. Considers whether enough food can be produced for a
A broad overview of biological systems, emphasizing patterns and processes that form the basis of life. Explores essentials of biochemistry, molecular, and cellular biology and their relationship to the larger issues of ecology, evolution, and development. Examines current research trends in biology and their influence on culture. Appropriate for all students interested in biology. Serves as a gateway course to much of the intermediate and advanced curriculum. Placement tests are offered (contact Jody_Hall@brown.edu); AP scores of 4 or 5 are equivalent to BIOL 0200, and place a student out of this course. Students will be assigned to a lab section during the second week of class.

BIOL 0200. The Foundation of Living Systems. 3

BIOL 0280. Introductory Biochemistry. 4

Lectures and recitation sections explore the mechanisms involved in the principles of macromolecular structure and function, the organization and regulation of pathways for intermediary metabolism, and the transfer of information from genes to proteins. It is expected that students have taken CHEM 0350 or are taking it concurrently.

BIOL 0320. Vertebrate Embryology. 4

Introduction to the developmental anatomy of vertebrate embryos, including humans, in an evolutionary context, through lecture, discussion and microscope slide study. Gametogenesis through germ layers and their organ system derivatives. Expected: BIOL 0200, or equivalent placement, or AP Biology score of 4 or 5. Limited to 18 freshmen and 18 sophomores. Students MUST register for the lecture section and the lab.

BIOL 0380. The Ecology and Evolution of Infectious Disease. 4

We will survey the diverse biology of microbes responsible for human infectious disease, develop and apply ecological and evolutionary theory to infectious microbes, and provide practical experience interpreting and synthesizing the peer-reviewed scientific literature. The discovery of infectious microbes, the role of genetic novelty, population structure and transmission mode, and the influence of clinical therapies and host immune response will be considered. Evaluation will be based on preparation, participation, weekly student presentations, brief weekly written assignments, a midterm and a final. Expected: BIOL 0200 or equivalent. Enrollment limited to 25 first year students and sophomores. Instructor permission required. LILE

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
physiological, reproductive and developmental strategies throughout the plant life cycle and in relation to environmental challenges. Discusses the significance of various plant model systems for genetic research and understanding of mechanisms controlling plant growth and development. Prerequisites: BIOL 0200 (or equivalent placement). Students MUST register for the lecture section and a lab.

**BIOL 0470. Genetics.**
Gene regulatory phenomena at the molecular, cellular, organismal, and population levels. Topics include transmission of genes and chromosomes, mutation, structure and regulation of the expression of the genetic material, elements of genetic engineering, and evolutionary genetics. One laboratory session and one discussion session per week. (Students should not plan to take BIOL 0470 after 1540.) Expected: BIOL 0200 (or equivalent placement). Students will be assigned to Lab sections the first week of class.

Fall BIOL0470 S01 14228 TTh 10:30-11:50(13) (M. Johnson)

**BIOL 0480. Evolutionary Biology.**
A broad introduction to the patterns and processes of evolution at diverse levels of biological organization. Topics covered include natural selection, adaptation, speciation, systematics, macroevolution, mass extinction events, and human evolution. Weekly discussion sections involve debates on original research papers. Occasional problem sets involve computer exercises with population genetics and phylogeny reconstruction. Expected: BIOL 0200 (or equivalent placement).

Fall BIOL0480 S01 14230 MWF 9:00-9:50(02) (D. Rand)

**BIOL 0495. Statistical Analysis of Biological Data.**
A first course in probability distributions and the use of statistical methods for biological data. Topics covered will include describing data, statistical inference (hypothesis tests and confidence intervals), analyzing associations, and methods for categorical data (contingency tables and odds ratios). Methods will be applied to data drawn from areas of biological inquiry. For statistics or related science credit in Biology programs. Carries Lab credit. Expected background: BIOL 0200 or equivalent, math equivalent to MATH 0100. This course is for related science credit only in Biological Sciences concentration programs. Enrollment limited to 40 undergraduates.

Spr BIOL0495 S01 23688 TTh 2:30-3:50(11) (S. Ramachandran)

**BIOL 0500. Cell and Molecular Biology.**
This course examines the structure and function of the basic unit of an organism, the cell. An experimental approach is used to examine cellular functions, ranging from gene transcription, cell division and protein secretion, to cell motility, and signal transduction. Relevance to health and disease will be considered. Expected: BIOL 0200 (or equivalent placement).

Spr BIOL0500 S01 23689 MW 8:30-9:50(02) (R. Freeman)

**BIOL 0510. Introductory Microbiology.**
Introduces role of microbes in our understanding of biology at the cellular and molecular level. Focuses on microbial significance for infectious disease, public health, genetics, biotechnology, and biogeochemical cycles. Laboratory involves basic microbiological techniques and selection and manipulation of microbes and their genes. Expected: BIOL 0200 (or equivalent placement); CHEM 0330. Students MUST register for the lecture section and the lab. Enrollment limited to 72. Students should email Samantha_Plouffe@brown.edu to get on the waitlist.

Spr BIOL0510 S01 23690 MW 1:00-2:20(06) (R. Bennett)

**BIOL 0530. Principles of Immunology.**
Introduction to experimental and theoretical foundations of immunology. Focuses on concepts, landmark experiments and recent advances. Topics include innate and adaptive immunity; structure/function of antibody molecules and T cell receptors; regulation of immune responses through cellular interactions. Applications of concepts to medically significant issues (vaccines, transplantation, inflammation, autoimmunity, cancer, HIV/AIDS) are discussed. Interpretative analysis of experimental data is emphasized. Expected background: BIOL 0200 or equivalent placement credit.

Fall BIOL0530 S01 14235 TTh 2:30-3:50(11) (R. Bungiro)

**BIOL 0800. Principles of Physiology.**
Introduction to the function and integration of organ systems with an emphasis on human physiology. Includes basic concepts in cell and organ system physiology as well as fundamentals of modern trends in physiological science. Emphasizes the application of physical and chemical principles to organ function at both the cellular and systemic levels. Expected: BIOL 0200 or equivalent.

Fall BIOL0800 S01 14236 TTh 10:30-11:50(13) (J. Stein)

**BIOL 0920A. Controversies in Medicine.**
How and why do controversies in medicine emerge at specific moments in time? Why do scientists come to different conclusions based on the same data? Does it matter how we interpret controversies? This sophomore-level seminar critically analyzes contemporary controversies in medicine and public health. Using a case study approach, we will examine the social and political assumptions that inform important controversies. Questions related to the relationship between science, the media, activism, and health inequality will be woven into the case studies. Enrollment limited to 20. Instructor permission required. (For theme, not biology, credit in Health and Human Health and Biology only.)

Spr BIOL0920A S01 23698 Th 4:00-6:20(16) (L. Braun)

**BIOL 0940A. Viral Epidemics.**
This sophomore seminar will examine epidemics (outbreaks) of viral infections from a historical perspective. We will also cover current literature and up to the minute news accounts of infectious disease related outbreaks occurring around the globe. The major focus will be on virus related diseases but any microbial outbreak in the news will be explored. The seminar will cover basic aspects of microbial pathogenesis so students can gain an appreciation of microbial host interactions. Essential writing skills will also be developed. Enrollment limited to 20 sophomore students. WRIT S/NC

Fall BIOL0940A S01 16152 Th 4:00-6:20(16) (W. Atwood)

**BIOL 0950B. Topics in Science Communications: Science Journalism Practicum.**
Participants will understand how to read scientific research papers to interpret their findings and communicate these to a broader lay audience; analyze and understand best practices in science writing and the challenges of covering science for mass media; interviewing; fair and balanced coverage in reporting; give and receive peer feedback. Enrollment limited to 10. Instructor permission required. S/NC

**BIOL 0960. Independent Study in Science Writing.**
Incorporates a nontechnical science journalism component into the BioMed curriculum. A series of four to six specific assignments are recommended, based on topics derived from another biology course taken previously by the student, whose instructor has agreed to serve as a BIOL 0960 sponsor. Assignments may include, for example, investigative or analytical reviews, or feature articles on ethical or social impacts of new discoveries. The student and instructor schedule meetings to discuss topics and due dates, review rough drafts, and evaluate completed work. Not for concentration credit in the biological sciences programs. Written permission must be obtained from Dean M. Thompson prior to registering. Section numbers vary by instructor. Half credit.

**BIOL 1050. Biology of the Eukaryotic Cell.**
Examines organelles and macromolecular complexes of eukaryotic cells with respect to structural and functional roles in major cellular activities. Emphasizes experimental basis for knowledge in modern cell biology using original literature, and discusses validity of current concepts. For advanced undergraduates and beginning graduate students. Complementary to BIOL 1270 and 1540. Prerequisites: BIOL 0280, 0470, 0500, or instructor permission. Graduate students register for BIOL 2050.

Fall BIOL1050 S01 14240 TTh 1:00-2:20(10) (S. Gerbi)

**BIOL 1070. Biotechnology and Global Health.**
This course examines contemporary biotechnologies used to combat the predominant, worldwide problems in human health. Global health will be addressed from the scientific and engineering perspectives while integrating public health policy, health systems and economics, medical and research ethics, and technology regulation and management. This course is intended for graduate and advanced undergraduate students.
in biology, engineering, or related fields who have an interest in global health initiatives. Expected background: BIOL 0200 and BIOL 0800, or equivalents. Preference will be granted to graduate students in the Biotechnology and Biomedical Engineering programs. Only for related course credit in Biology, and for theme course credit in Health and Human Biology programs. Enrollment limited to 20. Instructor permission required.

Fall BIOL1070 S01 14978 TTh 4:00-5:20(18) (J. Schell)

**BIOL 1090. Polymer Science for Biomaterials.**

Basic principles of polymer science and its application in medicine. Topics include basic polymerization chemistry, kinetics of polymerization and depolymerization with emphasis on biodegradable polymers, characterization of polymers by physical methods, bulk and surface properties, behavior of polymers in solutions, crystallization, gelation, and liquid crystals. Hands-on experience with polymer characterization. Expected: CHEM 0350. Enrollment limited to 40.

Fall BIOL1090 S01 14244 T 1:00-3:50(10) (E. Mathiowitz)

**BIOL 1100. Cell Physiology and Biophysics.**

Current topics in cell physiology, with an emphasis on membrane-mediated interactions between cells and their environment. Topics may include: ion channel structure, function and regulation; intracellular regulatory molecules; mechanisms of sensory transduction; membrane receptors and second messenger systems; vesicle secretion; and cytoskeletal regulation of cell function. Lectures, discussion, and student presentations of the current literature. Expected: BIOL 0800 or NEUR 0010. Instructor permission required. Registration overrides will not be given out until after the first one or two classes. Enrollment limited to 30, and admission is based on seniority -- graduate students, seniors, then juniors (realistically, first and second-year undergrads have almost no chance of admission). A signup sheet will be passed around on the first day of class.

Spr BIOL1100 S01 23699 F 3:00-5:20(15) (A. Zimmerman)

**BIOL 1110. Topics in Signal Transduction.**

Signal transduction is one of the most rapidly developing fields in biomedical sciences. Defects in signaling pathways can be responsible for diseases such as cancer, diabetes, cardiovascular disorders and psychoses. This course offers students an overview of the molecular pathways that allow cells to receive and process signals from their external environment, with an emphasis on the emerging state-of-the-art techniques used in their study. Expected: BIOL 0200, 0280, 0470, or 0500. Enrollment limited to 20 juniors and seniors. Instructor permission required.

Fall BIOL1110 S01 14247 W 3:00-5:20(17) (E. Oancea)

**BIOL 1120. Biomaterials.**

A biomaterial is defined as a material suitable for use in medical implants that come in direct contact with patients' tissues. These include polymers, metals, and ceramics, and materials obtained from biological sources or through recombinant biotechnology. Goal: to provide comprehensive coverage of biomaterial science and technology. Emphasizes the transition from replacement to repair strategies. For advanced undergraduates and graduate students. Prerequisite: BIOL 0800 or instructor permission.

Spr BIOL1120 S01 23700 MW 12:00-12:50(05) (B. Zielinski-Haberstaw)

**BIOL 1140. Tissue Engineering**

Tissue engineering is an interdisciplinary field that incorporates progress in cellular and molecular biology, materials science, and engineering, to advance the goal of replacing or regenerating compromised tissue function. Using an integrative approach, we will examine tissue design and development, manipulation of the tissue microenvironment, and current strategies for functional reconstruction of injured tissues. Expected: CHEM 0330, plus BIOL 0500 or 0800. Enrollment limited to 20. Instructor permission required.

Fall BIOL1140 S01 14248 Th 3:00-5:20(16) (D. Hoffman-Kim)

**BIOL 1150. Stem Cell Engineering**

Stem cell engineering focuses on using adult, embryonic, and induced stem cells to repair damaged or diseased tissues. This course will examine the role of stem cells in development, tissue homeostasis, and wound healing, as well as how they are being applied in regenerative medicine. A lecture and discussion format for major topic areas. Students will receive hands-on training in how to isolate, culture, and differentiate adult stem cells in a laboratory setting. Expected: CHEM 0330 and BIOL 0500 or an equivalent course in cell biology or physiology. Cell culture experience highly recommended. Enrollment limited to 20. Instructor permission required.

Spr BIOL1150 S01 23701 Th 3:00-5:20(17) (E. Darling)

**BIOL 1160. Principles of Exercise Physiology.**

Application of the basic principles of physiology to the study of the response mechanisms of the human body during exercise. Topics include muscle and neural control, energy metabolism, cardiovascular and respiratory effects, endocrinology, principles of training, and special topics (e.g., diving, high altitude, and microgravity). Student presentations based on scientific articles are included. Expected: BIOL 0800 or written permission of the instructor.

Fall BIOL1160 S01 14249 MW 1:00-1:50(06) (E. Harrigan)

**BIOL 1200. Protein Biophysics and Structure.**

Structural Biology is the science to determine 3-dimensional structures of biomacromolecules (i.e., proteins, RNA, and DNA). These structures enable biologists to understand and explore their function. Since proteins, RNA, and DNA are the primary molecules of life, structural biology enables us to understand and influence these molecular machineries which form the basis of all biological processes. Throughout the class, the students will see examples of biologically important proteins and protein complexes that will allow them to correlate structure and biological function. Prerequisite: BIOL 0280.

Spr BIOL1200 S01 23704 TTh 6:30-7:50(12) (W. Peti)

**BIOL 1260. Physiological Pharmacology.**

Covers the physiology of human disease (e.g., Heart failure and arrhythmia; cancer signaling pathways with a focus on breast cancer; neurological disorders such as schizophrenia and Parkinson’s disease) and discusses the pharmacology of the drugs used to treat disease. A group of the most commonly prescribed drugs is discussed in terms of their fundamental modes of action and clinical importance. Expected: BIOL 0800.

Fall BIOL1260 S01 14252 TTh 10:30-11:50(13) (J. Marshall)

**BIOL 1270. Advanced Biochemistry.**

An advanced course in biochemistry, biochemical methods, and reading of the primary literature, featuring systematic coverage of the biochemistry of the central dogma, including DNA (replication, repair, recombination), RNA (regulation and mechanism of transcription, processing, turnover), and proteins structure, synthesis, modification, degradation, mechanisms of action, function). Expected: BIOL 0280, CHEM 0350, 0360. Graduate students register for BIOL 2270.

Fall BIOL1270 S01 14253 TTh 2:30-3:50(11) (R. Page)

**BIOL 1290. Cancer Biology**

Provides a conceptual understanding of molecular events underlying development of human cancer. Focused on genetic changes leading to malignant transformation of cells. Covers cell cycle control, DNA damage, mutagenesis, cancer predisposition syndromes, oncogenic viruses, tumor immunology, metastasis, cancer chemotherapy and drug resistance. Lecture plus discussion of primary literature. Prerequisites: BIOL 0280, 0470 or 0500.

Fall BIOL1290 S01 14254 MW 3:00-4:20(15) (A. Zhirkovich)

**BIOL 1310. Developmental Biology.**

Covers the molecular and cellular events of development from fertilized egg to adult. Genetic basis of body form, cell fate specification and differentiation, processes controlling morphogenesis, growth, stem cells and regeneration will be examined. Differential gene regulation, intercellular signaling and their evolutionary conservation will be central to discussion of mechanisms governing developmental processes. Additional topics: developmental plasticity, impact of epigenetic and environmental factors, and basis of disease gleaned from developmental biology research. Live embryos will complement and reinforce concepts covered in class. Enrollment limited to 36. Expected: BIOL 0200 (or equivalent), and one course in genetics, cell biology or embryology.

Fall BIOL1310 S01 14255 TTh 9:00-10:20(08) (K. Wharton)
BIOL 1315. Developmental Neurogenetics. We will explore molecular and genetic mechanisms that control nervous system development. Included: state-of-the-art experimental approaches used to investigate nervous system patterning, neuronal cell fate decisions, diversification, and differentiation. Also covered: how neural circuits and synapses are established along with mechanisms of developmental brain disorders, how cellular reprogramming may be used to interrogate disease processes and cell-based therapies for treating neurological disease. The course relies on primary literature. Labs utilize live embryos and stem cells. Expected background: Basic courses in neuroscience, development, or genetics. For advanced undergraduates or graduate students. Register for both the lecture and lab. Enrollment limited to 30.

Spr 201315 S01 24060 MW 8:30-9:50(02) (M. Zervas)

BIOL 1330. Biology of Reproduction. This course is an advanced, seminar-based course. Primary literature is emphasized to complement the form of extensive student seminar presentations. It is essential that students have a strong background in biology in order to gain the most from this course. The emphasis of the course is student seminar presentation and extensive discussion on the material. This is often the first opportunity for students to present/discuss science in a seminar format. Expected background: a course in Cell Biology (e.g. BIOL 0550 or 1050), and two additional Biology courses above the introductory level (BIOL 2020) level. Enrollment limited to 30.

Spr BIOL1330 S01 23705 M 3:00-5:20(13) (G. Wessel)

BIOL 1420. Experimental Design in Ecology. An overview and discussion of the basic principles used to design lab and field experiments in ecology and environmental science. Topics include: replication and statistical power, appropriate use of factorial designs, nonparametric methods, post hoc tests, natural versus manipulative experiments, experimental artifacts and impact study design. Discussions based on primary literature and a new text. Expected: BIOL 0420.

Fall BIOL1420 S01 14256 W 3:00-5:20(17) (J. Witman)

BIOL 1430. The Computational Theory of Molecular Evolution. This course employs intellectual traditions from computer science and biology to investigate the properties and principles of DNA sequence evolution. The roles of mutation, natural selection, population size and subdivision, and genetic recombination are explored. Lectures complemented by web-based computer exercises. Expected: either an introduction to evolution (BIOL 2020, 0480) or to computer science (CSCI 0150, 0160, 0170).

Fall BIOL1430 S01 14257 MWF 11:00-11:50(04) (D. Weinreich)

BIOL 1470. Conservation Biology. Conservation Biology is the scientific study of the phenomena that affect the maintenance, loss, and restoration of biological diversity. Topics covered include: 1) the impacts of global warming, species invasions, and habitat destruction on biodiversity, 2) strategies developed to combat these threats, and 3) a consideration of key economic and ethical tradeoffs. Special attention will be paid to current debate and controversy within this rapidly emerging field of study. Readings will include the primary literature. A term-paper will be required. Prerequisite: BIOL 0420 or instructor permission. Enrollment limited to 30.

Fall BIOL1470 S01 14260 TTH 9:00-10:20(08) (D. Sax)

BIOL 1500. Plant Physiological Ecology. An in-depth look at plant ecological strategy, focusing on the anatomical and physiological adaptations of plants to particular environments. Additional topics include plant-animal interactions, historical biogeography, and community assembly processes. A comparative, phylogenetic approach is emphasized. Lectures present a broad overview of topics, and discussions focus on current outstanding problems. Lab exercises provide hands-on experience in designing experiments, measuring plant performance, and scientific writing. Required laboratory hours to be arranged by the instructor. Expected: BIOL 0430 or BIOL 0440. Enrollment limited to 15.

Fall BIOL1500 S01 14335 MW 10:30-11:50(03) (E. Edwards)

BIOL 1520. Innate Immunity. Innate immunity is the initial response to microbes that prevents infection of the host. It acts within minutes to hours, allowing the development of the adaptive response in vertebrates. It is the sole mechanism of defense in invertebrates such as insects. The components and mechanisms dictating this response are explored. Prerequisite: BIOL 0530. Enrollment limited to 30. Graduate students must obtain instructor permission.

Fall BIOL1520 S01 14262 MW 8:30-9:50(02) (L. Brossay)

BIOL 1540. Molecular Genetics. Covers advanced genetic and molecular methods and their use in analysis of complex biological phenomena such as development, signaling, behavior, and disease. Discusses how these techniques are applied in various organisms, with emphasis on the major Eukaryotic genetic model systems (Drosophila, nematodes, mouse, yeast, Arabidopsis) and on human genetics. Uses primary literature to analyze the design of forward– and reverse– genetic approaches to discover novel gene function. For advanced undergraduates and beginning graduate students. Prerequisite for undergraduates: BIOL 0470 or instructor permission. Expected background: any of BIOL 0280, 0500, 1050, or 1310. Graduate students should register for BIOL 2540.

Spr BIOL1540 S02 23736 TTh 2:30-3:50(11) (E. Morrow)

BIOL 1550. Biology of Emerging Microbial Diseases. Emerging diseases influence the health of human populations in less developed countries and are expected to have similar effects worldwide. Rising incidence of "new" diseases underscores the need for knowledge of infection mechanisms and their outcomes. Focuses on biochemical, genetic, cellular and immunological events of emerging pathogens and host responses. Expected: BIOL 0470 or BIOL 0530.

Spr BIOL1550 S01 23711 MWF 1:00-1:50(08) (A. Campbell)

BIOL 1560. Virology. Emphasizes the understanding of molecular mechanisms of viral pathogenesis. Begins with a general introduction to the field of virology and then focuses on the molecular biology of specific viruses that are associated with human disease. Lectures based on current literature. Prerequisite: BIOL 0280, 0470, or 0530, or instructor permission.

Fall BIOL1560 S01 16379 W 3:00-5:00(17) (P. Shank)

BIOL 1600. Development of Vaccines to Infectious Diseases. Provides background on steps involved in vaccine development, from conceptualization to production to immunization. Considers infectious diseases and their associated vaccines in the context of community health. Appropriate for any student wanting to gain an understanding of vaccine science, and also provides a foundation for other advanced courses in immunology and infectious disease, biomedical research, or medical/graduate studies. Activities include an in-class presentation and a research paper on a topic chosen by the student. Prerequisites: BIOL 0530, plus one of the following: BIOL 2800, 0470, 0500 or 0510.

Spr BIOL1600 S01 23713 MWF 3:00-4:20(13) (R. Bungiro)

BIOL 1820. Environmental Health and Disease. Fundamental concepts relating to the adverse effects of chemical agents on human health. Topics include dose-response relationships, absorption, distribution, metabolism, excretion, mechanisms of toxicity, and the effects of selected environmental toxicants on organ systems. Many of these concepts will be reinforced through the use of a case-study approach where a pertinent environmental issue is incorporated into the ongoing lectures. Expected: BIOL 0500 and BIOL 0800, plus either ENVIS 0490 or BIOL 0420. Advanced students have priority.

Spr BIOL1820 S01 23714 MWF 10:00-10:50(03) (T. Johnston)

BIOL 1870. Techniques in Pathobiology. A methodology course featuring laboratory and lecture instruction in established and leading-edge technologies. Examples: flow cytometry (multi-parameter analysis, cell sorting, DNA analysis, apoptosis analysis); molecular biology (PCR, in situ hybridization, Southern blotting, cytogenetics, gene cloning, bioinformatics); digital imaging (image acquisition, processing and analysis); light microscopy (confocal, immunohistochemistry); transmission electron microscopy (immunolabeling/ enzyme cytochemistry); scanning electron microscopy (including x-ray microanalysis).

Spr BIOL1870 S01 23715 TTh 1:00-3:50(10) (C. Jackson)
BIOL 1880. Comparative Biology of the Vertebrates.
The biology, structure, and evolutionary history of the vertebrates considered phylogenetically, emphasizing evolution of the major body systems. Stresses an evolutionary approach to the correlation of structure and function with environment and mode of life. Labs include dissection of several different vertebrates and comparative osteological material. Emphasis of course is on critical thinking rather than memorization of material. Recommended: BIOL 0320 or 0800. First year students must obtain instructor permission to register. Enrollment limited to 32. Students MUST register for the lecture section and the lab.

BIOL 1920B. Health Inequality in Historical Perspective.
This seminar course takes a historical perspective to explore the fundamental causes of health inequality in the US. We will draw on a series of case studies from the 19th century to the present to examine the socio-political and economic context of health and disease, focusing specifically on how race, class, and gender shape the experience of health, notions of disease causality, and public health responses. Topics include the health consequences of immigration, incarceration, race-based medicine, the Chicago heat wave, and Katrina. BIOL 0200 and previous course work in Africana Studies and/or Science and Technology Studies preferred. Enrollment is restricted to second and third year students and is limited to 20 students. Written permission required. An application for entry will be distributed on the first day of class. Not for concentration credit as a biology course.

BIOL 1920C. Social Contexts of Disease.
What shapes our understandings of disease, and what makes a disease real? How might we explain the demise of formerly prevalent diseases and the arrival of others? How do politics, technologies, and institutions affect conceptions of disease and structure their treatment? Will examine the impact of social context on patients' experiences of disease, including clinical, scientific, and public health approaches. Will consider disease in relation to social relationships, power of the state to regulate disease, and cultural care of the body. Enrollment limited to 20 students; instructor permission required; serves as Capstone in Health and Human Biology. Not for concentration credit.

Directed research/independent study in biological sciences: basic science, social studies of biomedical science, and clinically-oriented projects, mentored by individual faculty members in the Division of Biology and Medicine. Sites include campus and hospital-based facilities. Information on specific opportunities with BioMed faculty is found in an online research database maintained at biology.brown.edu/bug/pages/research.html. Basic science projects are suited for Biological Sciences programs; clinical, behavioral, and human subject-based projects for Health/Human Biology programs, along with opportunities for projects dealing with social studies of biological science and health. Projects can serve as the basis for Honors theses, or to fulfill research requirements in a Bio-Med concentration program; non-concentrators are also welcome. The Honors process is described here: Biology.brown.edu/bug/honors (Note: Faculty outside the Division may supervise projects, with advisor's approval, for bio-med program concentrators, but should do so using their Department's own Independent Study course number.) REGISTRATION requires an agreement and research plan between faculty mentor and student, including a formal, written proposal. The proposal (available at the site biology.brown.edu/bug/ugres) must be submitted to Dean Marjorie Thompson (Rm. 124 Arnold) for review and approval, then an override for registration is issued to the student. Most students do not preregister, but add this course at the start of the semester of the planned project. Required: A completed proposal form, sponsor's and concentration advisor's approval. No more than two (2) semesters of BIOL 1950/1960 may be used toward a concentration program in the biological sciences.

Please see description for BIOL 1950.

BIOL 2010. Quantitative Approaches to Biology.
Graduate level introduction to quantitative and computational methods in modern biology. Topics include Programming, Modeling, Algorithms, Bioinformatics, Applied Statistics, Structural Biology, Molecular Dynamics, Enzyme Kinetics, and Population and Quantitative Human Genetics. Preference is given to graduate students in Molecular Biology, Cell Biology and Biochemistry and Molecular Pharmacology, Physiology, and Biotechnology. Limited to 20 students. Instructor permission required.

BIOL 2030. Foundations for Advanced Study in the Life Sciences.
A double-credit graduate course on multidisciplinary experimental approaches to biological questions. Focusing on primary literature, lectures and discussions cover the mechanisms and regulation of basic cellular processes involving nucleic acids (synthesis, structure, maintenance and transmission) and proteins (synthesis, maturation, function) and their integration into more complex circuits (signaling, organellar biogenesis and inheritance, cell cycle control). Discussion section is required. Required for PhD students in the MCB Graduate Program; all others must obtain instructor permission. Enrollment is limited to graduate students.

BIOL 2050. Biology of the Eukaryotic Cell.
(Undergraduate students should register for BIOL 1050.)

BIOL 2110. Drug and Gene Delivery.
Topics in drug delivery systems including history of the field, advantages of controlled release technology, stabilization and release of proteins, fabrication methods, regulatory considerations, economic aspects, patents and intellectual property rights, and more. Prepares students for research in industry and academia, and offers information for consultants in the field. Expected: BIOL 1090, 1120, CHEM 0350, 0360. Not for concentration credit.

BIOL 2130. Techniques in Molecular and Cell Science.
This course provides hands-on laboratory training in state-of-the-art techniques in molecular and cellular sciences, and reinforces this training with didactic lectures that stress key principles, the quantitative approach and the most exciting applications of these technologies in the context of current research. Areas covered include cell culture, tissue engineering, DNA cloning, gene therapy, quantitative assays, microscopy and image analysis. Enrolment is limited to 12; written permission required. Permission will be granted after the first class. Students MUST register for the lecture section and a lab.

BIOL 2135. Pharmacokinetics and Drug Design.
Consists of the absorption, distribution, metabolism, and elimination of drugs. These factors, including dosage, determine the concentration of drugs at its sites of action, and intensity of effects. Will examine models describing the relationship between plasma drug concentrations and therapeutic drug effect. Will acquire biologic sampling techniques, analytic methods for measurement of drugs and metabolites, and procedures facilitating data used in designing drugs and dosage regimens. Prerequisite: BIOL 0800 or equivalent. Enrollment limited to 20. Preference given to graduate students in Biotechnology and BME, especially Masters students. Graduate students (PhD and ScM) from other programs enroll if permission of instructor is granted.

BIOL 2140. Principles in Experimental Surgery.
An introduction to the principles and practice of surgery, sterile technique, anesthesia, and laboratory animal care. Intended to provide highly supervised, hands-on experience in techniques for humane handling and surgical management of experimental animal subjects. Emphasizes surgical technique, anesthesia technique, and laboratory animal medicine. Prerequisite: BIOL 0800. Limited to five (5) Graduate students only.
Biology, and structural biology. Intensive reading and discussion of the
BIOL 2200C. Central Dogma and Structural Biology
A critical evaluation of contemporary research in biochemistry, molecular
biology, and structural biology. Intensive reading and discussion of the
current literature, critical analysis, and student presentations in seminars.
Advanced undergraduates, graduate students, and the lab.
Spr BIOL2200C S01 24814 T 4:30-5:30(16) (R. Page)

BIOL 2230. Biomedical Engineering and Biotechnology Seminar
Required of all first- and second-year graduate students in the Biomedical
Engineering and Biotechnology Seminar graduate program, and open to
others. Concepts of drug delivery and tissue engineering, implantation
biology, and cellular therapy, as well as the research projects directed by
program faculty. Students present research seminars and participate in
presentations by outside speakers. Includes Journal Club activities. Open
to graduate students only.
Fall BIOL2230 S01 14290 T 4:30-5:30(18) (J. Morgan)

BIOL 2240. Biomedical Engineering and Biotechnology Seminar
See Biomedical Engineering and Biotechnology Seminar (BIOL 2230) for
course description.
Spr BIOL2240 S01 24648 T 4:30-5:30(16) (J. Morgan)

BIOL 2260. Physiological Pharmacology
The objective of this course is to present drugs in the context of the
diseases they are used to treat. A list of the Common medically prescribed
drugs will be discussed in terms of their fundamental modes of action and
clinical importance. Pertinent background biochemistry, physiology, and
pathology is provided, e.g., the electrophysiology of the heart is discussed
as a background to anti-arrhythmic drugs. Course is relevant for students
interested in medicine journalism, law, government, precollege teaching,
biomedical research, and pharmacy. Expected: background in physiology.
For graduate students ONLY register for BIOL 2260 (enrollment limit 15);
all others BIOL 1260.
Fall BIOL2260 S01 15661 TTh 10:30-11:50(13) (J. Marshall)

BIOL 2270. Advanced Biochemistry
(Undergraduate students should register for BIOL 1270.)
Fall BIOL2270 S01 14296 TTh 2:30-3:50(11) (R. Page)

BIOL 2290F. Ribosomes: Molecular Mechanisms in Ribosome
Synthesis and Function.
Protein synthesis is a fundamental cellular process mediated by
ribosomes. Rapid advances in the study of ribosomes have culminated
in its x-ray crystal structure for which the Nobel prize was awarded.
This course will focus on progress in understanding: ribosome structure
and function, ribosome biogenesis and export, quality control, ribosome
degradation, and interface of ribosomes with other cellular pathways
(cell cycle, etc). Topics will be explored using the current literature with
weekly seminars of student-led discussions. Student presenters will give
brief overview of the subtopic field and lead a class discussion on three
research papers. Enrollment limited to 20.
Spr BIOL2290F S01 25313 Arranged (S. Gerbi)

BIOL 2310. Developmental Biology
Covers the molecular and cellular events of development from fertilized
egg to adult. Genetic basis of body form, cell fate specialization and
differentiation, processes controlling morphogenesis, growth, stem cells
and regeneration are examined. Differential gene regulation, signaling
and evolutionary conversation are central to discussion of
developmental processes. Additional topics:
developmental plasticity, impact of genetic and environmental factors,
and basis of disease gleaned from developmental biology research. Live
embryos complement and reinforce concepts covered in class. Expected:
BIOL0200 (or equivalent), and one course in genetics, embryology, cell
biology or molecular biology. Enrollment limited to 36. (Undergraduate
students register for BIOL 1310.)
Fall BIOL2310 S01 14292 TTh 9:00-10:20(08) (K. Wharton)

BIOL 2340. Neurogenetics and Disease
Genetic mutations provide a powerful approach to dissect complex
biologic problems. We will focus on fascinating discoveries from "forward
genetic" studies – moving from nervous system phenotype to genetic
mutation discovery. There will be an emphasis of neurologic disease
phenotypes and the use of novel genomic methods to elucidate the
central molecular and cellular causes for these conditions. The course
will emphasize the use of "reverse genetics" – engineered mutations in
model systems – to dissect nervous system function and disease
mechanisms. Disorders to be covered include autism, intellectual
disability.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
schizophrenia, epilepsy. Enrollment limited to 20. Instructor permission required.

Fall BIOL2340 S01 16385  W  4:00-6:50(17)  (E. Morrow)

BIOL 2350. The Biology of Aging.
Studying the mechanisms underlying the process of aging promises to be one of the next frontiers in biomedical science. Understanding the biology of aging is important for the long-term possibility of increasing life span, and for the immediate benefits it will have on age-related diseases. As demographics of industrialized countries have changed, age-related diseases such as cancer/cardiovascular stroke, osteoporosis/arthritis/Alzheimer’s have assumed epidemic proportions. Understanding the aging process is a pre-requisite for designing interventions for treatment. Focus is on examining the biology of aging through the examination of a molecular/cellular/genetic and demographic nature. Suggested prerequisites: BIOL 0200, 0280, 0470, 0800. Enrollment limited to 20. Advanced undergraduates with permission of instructor.

Spr BIOL2350 S01 24086  Th  2:00-5:00(11)  (S. Heifand)

BIOL 2430. Topics in Ecology and Evolutionary Biology.
Current literature in ecology, behavior, and evolutionary biology is discussed in seminar format. Topics and instructors change each semester. Representative topics have included: structuring of communities, biomechanics, coevolution, quantitative genetics, life history strategies, and units of selection. Expected: courses in advanced ecology and genetics.

Fall BIOL2430 S01 14282  Arranged(17)  (D. Rand)
Fall BIOL2430 S03 14665  M  3:00-5:20(17)  (S. Ramachandran)
Fall BIOL2430 S04 14822  Arranged  (E. Brained)
Fall BIOL2430 S05 15790  Arranged  (K. Smith)
Fall BIOL2430 S06 16378  Arranged  (C. Janis)
Fall BIOL2430 S07 16634  Arranged  (E. Edwards)

BIOL 2440. Topics in Ecology and Evolutionary Biology.
See Topics In Ecology And Evolutionary Biology (BIOL 2430) for course description.

Spr BIOL2440 S01 23731  Arranged  (D. Rand)
Spr BIOL2440 S03 24115  Arranged  (S. Swartz)
Spr BIOL2440 S04 24116  Arranged  (C. Neill)
Spr BIOL2440 S05 24118  Arranged  (D. Weinreich)

BIOL 2450. Exchange Scholar Program.
Fall BIOL2450 S01 16813  Arranged  'To Be Arranged'

BIOL 2540. Molecular Genetics.
(Undergraduate students should register for BIOL 1540.)

Spr BIOL2540 S01 23737  TTh  2:30-3:50(11)  (E. Morrow)

BIOL 2640A. Molecular Pharmacology and Physiology Seminar.
Professional development seminar required of all first year graduate students in the Molecular Pharmacology and Physiology Graduate Program, and open to graduate students in other programs. Topics include grants and funding, effective oral presentation skills, alternative careers in science, and others. All students will be required to present a research seminar during the scheduled class time. Instructor permission required for graduate students outside the Molecular Pharmacology and Physiology Graduate Program. Not intended for undergraduate students.

Spr BIOL2940A S01 23735  W  9:30-10:50(02)  (D. Horiqan)

BIOL 2970. Preliminary Examination Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.

Fall BIOL2970 S01 14011  Arranged  'To Be Arranged'
Spr BIOL2970 S01 23529  Arranged  'To Be Arranged'

BIOL 2980. Graduate Independent Study.
Independent study projects at the graduate level. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

BIOL 2985. Graduate Seminar.
Section numbers vary by instructor. Please see the registration staff for the correct section number to use when registering for this course.

BIOL 2990. Thesis Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.

Fall BIOL2990 S01 14012  Arranged  'To Be Arranged'
Spr BIOL2990 S01 23530  Arranged  'To Be Arranged'

BIOL 2995. Thesis.
Section numbers vary by instructor. Please see the registration staff for the correct section number to use when registering for this course.

BIOL XLIST. Courses of Interest to Biology Concentrators.
Fall 2013
The following courses may be taken for concentration credit. Please see the sponsoring department for the time and location of each course.

Environmental Studies
ENVS 0455 Coastal Ecology and Conservation
ENVS 0460 Environmental Science in a Changing World

BioMed-Neuroscience

NEUR 0010. The Brain: An Introduction to Neuroscience.
Introduction to the mammalian nervous system with emphasis on the structure and function of the human brain. Topics include the function of nerve cells, sensory systems, control of movement and speech, learning and memory, emotion, and diseases of the brain. No prerequisites, but knowledge of biology and chemistry at the high school level is assumed.

Fall NEUR0010 S01 15679  TTh  1:00-2:20(10)  (M. Paradiso)

Examines the sensory and perceptual system for hearing: the external, middle, and inner ears; the active processes of the cochlea; sound transduction and neural coding; neural information processing by the auditory system; and the nature of auditory perception and its biological substrate. Prerequisite: an introductory course in Neuroscience, Cognitive Science, Physics, Engineering or Psychology.

Spr NEUR0650 S01 24942  MWF  1:00-1:50(06)  (J. Simmons)

NEUR 0700. Psychoactive Drugs and Society.
Will examine psychoactive drugs from two perspectives: (1) biological mechanisms of drug action and (2) the impact of psychoactive drug use on society and society attitudes towards psychoactive drug usage. Drugs to be discussed will include alcohol, opiates, cocaine, marijuana, LSD, nicotine and caffeine, as well as drugs used therapeutically to treat psychiatric disorders. This course will benefit students who are interested in exploring both the biological and social aspects of psychoactive drug use. Prerequisite: NEUR 0010 or equivalent.

BIOL 2940A. Molecular Pharmacology and Physiology Seminar.
Professional development seminar required of all first year graduate students in the Molecular Pharmacology and Physiology Graduate Program, and open to graduate students in other programs. Topics include grants and funding, effective oral presentation skills, alternative careers in science, and others. All students will be required to present a research seminar during the scheduled class time. Instructor permission required for graduate students outside the Molecular Pharmacology and Physiology Graduate Program. Not intended for undergraduate students.
NEUR 1020. Principles of Neurobiology. A lecture course covering fundamental concepts of cellular and molecular neurobiology. Topics include structure of ion channels, synaptic transmission, synaptic development, molecular mechanisms of synaptic plasticity, learning and memory and neurological diseases. Prerequisite: NEUR 0010. Strongly recommended: BIOL 0200 or equivalent.

Spr NEUR1020 S01 24943 TTh 9:00-10:20(08) (C. Aizenman-Stern)

NEUR 1030. Neural Systems. This lecture course examines key principles that underlie the function of neural systems ranging in complexity from peripheral receptors to central mechanisms of behavioral control. Prerequisite: NEUR 0010 or the equivalent. First year students require instructor approval.

Fall NEUR1030 S01 15690 TTh 10:30-11:50(13) (M. Linden)

NEUR 1440. Neuro Dynamics. Neurons and systems of neurons vary in their activity patterns on millisecond to second time scales, commonly referred to as "neural dynamics." This course addresses mechanisms underlying this flexibility and its potential meaning for information processing in the brain. The course integrates biophysical, single neuron and human studies. Examples topics include the impact of attention on neural firing rates, oscillations and sensory representation in neocortex, and the origins and potential meaning of the dynamics during sleep. Students will be introduced to computational modeling as a method to gain insight into dynamics, but no prior mathematics or programming background is required.

Fall NEUR1440 S01 16675 TTh 2:30-4:00(11) (C. Moore)

NEUR 1520. Data Analysis for Neuroscience. Application of quantitative techniques to neural data sets including traditional and state-of-the-art approaches. Topics include spike train, EEG, and image analysis. Additional types of data sets may be included based on student interest. Hands-on experience working with real data sets, and students are welcome to provide their own data for analysis. Emphasis on basic computer programming skills in MATLAB. Prerequisite: one of APMA 0650, APMA 1650, CLPS 0900, EDUC 1110, PHP 2500, PHP 2510, or SOC 1100. Enrollment limited to 18.

Spr NEUR1520 S01 25067 Arranged (M. Linden)

NEUR 1540. Neurobiology of Learning and Memory. Exploration of learning and memory from the molecular to the behavioral level. Topics will include declarative and procedural memory formation and storage, associative and non-associative learning, cellular and molecular mechanisms for learning, and disorders affecting learning and memory. Examples will be drawn from numerous brain areas and a variety of model systems, including humans. Students will gain experience interpreting experiments from primary literature. Prerequisite: NEUR 1020.

Spr NEUR1540 S01 24935 MWF 2:00-2:50(07) (M. Linden)

NEUR 1600. Experimental Neurobiology. Intensive laboratory experience in neuroscience appropriate for students with basic background in Neurobiology. Learn and employ the classical neurophysiological techniques of extracellular recording, intracellular recording and receptive field mapping using a variety of animal species. Experiments will include recording of sensory signals in the cockroach leg; frog sciatic nerve and sciatic nerve/muscle preparation; intracellular recording of neurons in Aplysia; receptive field mapping in frog skin; and visual field mapping in the frog tectum. Labs are supplemented by informal lectures. Prerequisites: NEUR 0010, 1020, and PHYS 0030; or equivalent. Instructor permission required; enrollment limited to 18. Sign-up sheet in Sidney Frank Hall, Room 315 beginning November 5, 2013.

Spr NEUR1600 S01 25061 Arranged (J. Stein)

NEUR 1650. Structure of the Nervous System. Combined lecture and laboratory course on the anatomy of the central nervous system. Lectures survey the circuitry of the major neural systems for sensation, movement, cognition, and emotion. Laboratory exercises (Mon. 10:30-12:30) include brain dissections, microscopy of nervous tissue, and discussion of clinical cases. Prerequisites: NEUR 0010, 1020, and 1030. Sign-up sheet in Sidney Frank Hall, Room 315 beginning April 16, 2013. Instructor permission required.

Fall NEUR1650 S01 15800 TTh 2:30-3:50(11) (D. Berson)

NEUR 1670. Neuropharmacology and Synaptic Transmission. Synaptic transmission will be studied from a biochemical and pharmacological point of view. We will explore the factors regulating neurotransmitter synthesis, storage, release, receptor interaction, and termination of action. Proposed mechanisms of psychoactive drugs and biochemical theories of psychiatric disorders will be examined. Prerequisites: NEUR 0010 and BIOL 0200 or the equivalent.

Fall NEUR1670 S02 15715 TTh 9:00-10:20(08) (R. Patrick)

NEUR 1680. Computational Neuroscience. A lecture and computing lab course providing an introduction to quantitative analysis of neural activity and encoding, as well as modeling of neurons and neural systems. Emphasizes Matlab-based computer simulation. Prerequisites: NEUR 0010, 1020 or 1030; APMA 0410 or 1650, or equivalent. Sign-up sheet in Sidney Frank Hall, Room 315 beginning November 5, 2013. Instructor permission required.

Spr NEUR1680 S01 25060 Arranged (L. Bienenstock)

NEUR 1740. The Diseased Brain: Mechanisms of Neurological and Psychiatric Disorders. The goals of this course are to illustrate what basic science can teach us about neurological disorders and how these pathologies illuminate the functioning of the normal nervous system. Consideration will be given to monoallelic disorders (e.g. Fragile X Syndrome, Duchenne Muscular Dystrophy and Tuberous Sclerosis) as well as genetically complex disorders, such as Autism, Schizophrenia and Alzheimer’s Disease. Emphasis will be on the cellular and molecular basis of these disorders and how insights at these levels might lead to the development of therapies. Prerequisites: NEUR 1020. BIOL 0470 suggested.

Spr NEUR1740 S01 25073 TTh 10:30-11:50(09) (J. Fallon)

NEUR 1930G. Disease, Mechanism, Therapy: Harnessing Basic Biology for Therapeutic Development. The recent surge in understanding the cellular and molecular basis of neurological disease has opened the way for highly targeted drug discovery and development. In this course we will use several case studies to illuminate how mechanistic insights are being translated into novel therapeutic approaches. Instructors permission required. Enrollment limited to 15. Sign-up Sheet in Sidney Frank Hall 315 beginning April 16, 2013.

Fall NEUR1930C S01 15841 Arranged (J. Fallon)

NEUR 1930I. Neural Correlates of Consciousness. This course will consider the neuroscience of consciousness from a variety of perspectives, using examples from behavior, neurophysiology, neuroimaging and neurology. The course content will focus on primary literature, using review articles for background. Students will lead discussions. Sign-up required by Google Docs. Strongly Recommended: NEUR 1030. Enrollment limited to 15. Instructor permission required.

Fall NEUR1930I S01 16647 Arranged (J. Sanes)

NEUR 1930N. Region of Interest: An In-Depth Analysis of One Brain Area. In-deep exploration of one region of the brain. Topics will include: cell types and properties; synaptic properties; plasticity; connections to other brain areas; sub-divisions within the area; the region’s role in sensation and perception; the region’s role in action and behavior; the region’s role in learning and memory; and diseases and disorders associated with the region. By studying one brain area closely, students will gain a deeper understanding of concepts and principles that apply throughout the brain. Students will gain experience with primary literature and learn about tools and techniques for studying the brain. Topic for Fall 2013: The Thalamus. Prerequisite: NEUR 1020 and 1030. Enrollment limited to 15. Sign-up sheet in Sidney Frank Hall, Room 315 beginning April 16, 2013.

Fall NEUR1930N S01 15825 Arranged (M. Linden)

NEUR 1940B. Neuroethology. Neuroethology is concerned with the neural systems serving such naturally occurring behaviors as orientation in the environment, finding food, predator detection, social communication, circadian and seasonal rhythms, and locomotion and tracking. This seminar will examine selected examples of the neuroethological approach to analysis of brain function, which sometime leads to conclusions different from those of laboratory-
based experiments on traditional animal models. Sign-up sheet in Sidney Frank Hall, room 315 beginning November 5, 2013. Instructor permission required.

**NEUR 1940G. Drugs and the Brain.**

This is a seminar course devoted to the reading and analyzing of original research articles dealing with the interaction between drugs and the brain. This will include drugs used to analyze normal brain function, as well as drugs of abuse and drugs used for therapeutic purposes. This course is intended for undergraduate and graduate students with a strong background in neuropharmacology. Sign-up sheet in Sidney Frank hall, Room 315 beginning November 1, 2011. Prerequisites: NEUR 0010, 1020, and 1030. Enrollment limited to 15. Instructor permission required.

Spr NEUR1940G S01 25402 Arranged (G. Bamea)

**NEUR 1950. Advanced Systems Neuroscience.**

This course continues the investigation of molecular and cellular approaches used to study the CNS from the level of individual genes to the study of medicine in the 21st century. The course will use a case-based approach to relevant and contemporary subjects in medicine and health care, such as: biological systems and their interactions; diagnosis and therapy optimization; and the humanistic aspects of patient care. The course is intended for seniors interested in attending medical school but will preferentially enroll PLME students. Prerequisite: PLME competency course is intended for seniors interested in attending medical school but will preferentially enroll PLME students. Prerequisite: PLME competency in Biology, Chemistry (inorganic and organic), Physics, and introductory calculus. Enrollment limited to 40. S/NC

Fall NEUR2930E S01 15717 MW 8:30-9:50(02) (J. Ip)

**Program in Liberal Medical Education**

**PLME 1000. PLME Senior Seminar in Scientific Medicine.**

This course is an interdisciplinary and integrative science course that will supplement the preparation of both PLME and pre-medical students for the study of medicine in the 21st century. The course will use a case-based approach to relevant and contemporary subjects in medicine and health care, such as: biological systems and their interactions; diagnosis and therapy optimization; and the humanistic aspects of patient care. The course is intended for seniors interested in attending medical school but will preferentially enroll PLME students. Prerequisite: PLME competency in Biology, Chemistry (inorganic and organic), Physics, and introductory calculus. Enrollment limited to 40. S/NC

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
CheM 0380. Organic Chemistry. 
Sequel to CHEM 0360. Investigates the constitution and properties of the different classes of organic compounds, with considerable attention to reaction mechanisms. The laboratory work involves an introduction to microscale preparative and analytical techniques of organic chemistry and the preparation of representative organic compounds. Three hours of lecture and five hours of prelab and laboratory. Prerequisite: CHEM 0360. 

Students MUST register for a common meeting, a lecture section, a lab and a conference. 
If you previously completed CHEM 0360 laboratory but received a grade of no credit in the course, please register for lab section 11. 

Spr CHEM0380 M01 23734 Arranged "To Be Arranged" 
Spr CHEM0380 S01 23744 Th 10:30-11:50(09) (M. Hershberger Kilyanek)

CHEM 0350. Organic Chemistry. 
Sequel to CHEM 0330. Investigates the constitution and properties of the different classes of organic compounds, with considerable attention to reaction mechanisms. The laboratory work involves an introduction to microscale preparative and analytical techniques of organic chemistry and the preparation of representative organic compounds. Three hours of lecture and five hours of prelab and laboratory. Prerequisite: CHEM 0330. 

Students MUST register for a common meeting, a lecture section, a lab and a conference. 
If you previously completed CHEM 0350 laboratory but received a grade of no credit in the course, please register for lab section 11. 

Spr CHEM0350 M01 23750 Arranged "To Be Arranged" 
Spr CHEM0350 S01 23746 MF 9:00-9:50(01) (P. Williard) 
Spr CHEM0350 S02 23749 Th 9:00-10:20(01) (J. Suggs)

CHEM 0360. Organic Chemistry. 
Sequel to CHEM 0350. Investigates the constitution and properties of organic compounds at a fundamental level with an introduction to physical organic, bioorganic, and synthetic organic chemistry. Laboratory work is concerned with the identification and characterization of organic compounds, including modern instrumental methods. Three hours of lecture and five hours of prelab and laboratory. Prerequisite: CHEM 0350. 

Students MUST register for a lecture section, a lab and a conference. 
If you previously completed CHEM 0360 laboratory but received a grade of no credit in the course, please register for lab section 11. 

Fall CHEM0360 M01 14509 Arranged "To Be Arranged" 
Fall CHEM0360 S01 14318 F 9:00-9:50(01) (M. Zimm) 
Fall CHEM0360 S01 14318 MW 9:00-9:50(01) (M. Zimm) 
Fall CHEM0360 S02 14319 Th 9:00-10:20(01) (C. Seto)

CHEM 0400. Biophysics and Bioinorganic Chemistry. 
Examines aspects of physical and inorganic chemistry relevant to biochemistry: thermodynamics of hydrophobic and hydrophilic interactions, electrically charged membranes, coordination chemistry, active and passive transport, enzyme kinetics and mechanisms, metal-based drugs, and physical methods. Three hours of lecture and five hours of laboratory. Prerequisite: CHEM 0360 and MATH 0110 or 0170. Prerequisite or corequisite: PHYS 0040 or 0060. 

Students MUST register for a lecture section and a lab. 
Spr CHEM0400 S01 23754 MF 11:00-11:50(04) (E. Kim)

CHEM 0500. Inorganic Chemistry. 
Examines the chemistry of main group and transition metal elements with treatment of covalent bonding and molecular structure along with the methods of studying inorganic compounds and reactions. Three hours of lecture and five hours of prelabatory and laboratory attendance. Prerequisite: CHEM 0360. 

Students MUST register for a lecture section and a lab. 
Spr CHEM0500 S01 23757 MF 11:00-11:50(04) (W. Bernskoetter)

CHEM 0970. Undergraduate Research. 
Prerequisite: permission of the staff. Permission should be requested before the end of the preceding semester. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. 

CHEM 0980. Undergraduate Research. 
See Undergraduate Research (CHEM 0970) for course description. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. 

CHEM 1060. Advanced Inorganic Chemistry. 
Covers the physical and chemical properties of transition metal compounds as well as current research topics in inorganic chemistry. Laboratory is designed for the practice of modern inorganic chemistry through the synthesis and spectroscopic characterization of air-sensitive transition metal compounds. Prerequisite: CHEM 0500. 

Fall CHEM1060 S01 14323 MF 9:00-9:50(02) (E. Kim)
CHEM 1140. Physical Chemistry: Quantum Chemistry
An introduction to the quantum theory of chemical systems. Elements of quantum mechanics; electronic structure of atoms and molecules; study of molecular structure and behavior by spectroscopy; chemical bonding are explored. Prerequisites: CHEM 0330, MATH 0180 or equivalent, PHYS 0040 or 0060 or equivalent. Recommended but not required: MATH 0520 or equivalent.
Fall CHEM1140 S01 14325 MW 10:00-10:50(03) (L. Wang)

CHEM 1150. Physical Chemistry: Thermodynamics and Statistical Mechanics
Examines the question: Where does chemical equilibrium come from? Focuses on macroscopic perspectives on chemical systems and the molecular origins of macroscopic behavior along with elements of statistical mechanics, the laws of thermodynamics, and the relationships between the two. Prerequisite: CHEM 1140 or written permission of the instructor.
Spr CHEM1150 S01 23761 MW 10:00-10:50(03) (L. Wang)

CHEM 1160. Physical Chemistry Laboratory
An introduction to modern instrumentation and experimental techniques as applied to physical chemistry. Experiments will emphasize application of the ideas of spectroscopy, kinetics, statistical mechanics, and thermodynamics to systems of chemical and biochemical interest. Required course for concentrators in chemistry. One to two afternoons of laboratory per week. Prerequisites: CHEM 1140 or permission of the instructor.
Spr CHEM1160 S01 25538 MW 1:00-5:20 (G. Diebold)

CHEM 1230. Chemical Biology
This course covers topics at the interface of chemistry and biology and, specifically, the use of chemical tools to probe biological systems. Using examples from the recent literature, we will discuss using the central methods of chemistry, namely the ability to design and synthesize compounds with a particular set of properties, to analyze biological problems. Specific topics include molecular recognition of DNA, artificial enzymes, small molecule sensors, and in vivo imaging of proteins, nucleic acids, and cell-surface carbohydrates. Prerequisites: CHEM 0350, CHEM 0360, and BIOL 0280. If enrollment exceeds the limit, permission to enroll will be allotted in the order: 1) first year graduate students, 2) senior concentrators in Chemistry or Biochemistry 3) junior concentrators 4) other students. Students who have registered or have permission to enroll must attend the first three classes or risk losing their places to someone on the waiting list.
Fall CHEM1230 S01 14326 MW 8:30-9:50(02) (S. Delaney)

CHEM 1240. Biochemistry
Examines the chemical, mechanistic, and structural basis for enzymatic catalysis. Uses examples from the recent literature to examine how the experimental and conceptual tools of chemical synthesis, isotopic labeling, stereochemistry, enzymology, kinetics, and protein structure can be brought to bear to unravel the chemical and physical principles underlying the enormous catalytic acceleration and exquisite structural specificity of enzyme-catalyzed reactions. Prerequisites: Strong background in organic chemistry (CHEM 0330-0360, A or B performance preferable) plus at least one semester of Biochemistry (BIOL 0280, BIOL 1270). Enrollment limited to: 25 students, written permission required.
If enrollments exceed the limit of 25 students, permission to enroll for students who meet the course prerequisites will be allotted in the order: a) first year Chemistry graduate students, b) undergraduate senior concentrators in Chemistry, Biochemistry or Chemical Biology, c) junior concentrators in Chemistry, Biochemistry or Chemical Biology, d) other students. Students who have permission to enroll must attend the first three classes or risk losing their places to someone on the Course waiting list.
Spr CHEM1240 S01 23762 TTh 9:00-10:20(08) (D. Cane)

CHEM 1450. Advanced Organic Chemistry
Lectures cover topics of current interest in organic reaction mechanisms, synthesis, and structure determination. Laboratory emphasizes spectroscopic and separation techniques and modern synthetic methods. Prerequisite: CHEM 0360. Students MUST register for a lecture section and a lab.
Spr CHEM1450 S01 23763 MW 8:30-9:50(02) (A. Basu)

CHEM 1540. Nuclear Magnetic Resonance
These special topics courses cover the basics of modern NMR spectroscopy. Topics to be included are as follows: modern Fourier transform methodology, modern NMR instrumentation, and a comprehensive discussion of one and two dimensional experiments that are routinely performed. Topics such as coherence transfer and pulsed field gradients will also be included. Experimental methods covered in detail include COSY, TOCSY, HSQC, HMBC, NOESEY, ROSEY, EXSY and DOSY methodology. This course will not focus on structure determination or spectral interpretation but rather on experimental methodology.
Spr CHEM1540 S01 24724 MW 10:00-10:50(03) 'To Be Arranged'

CHEM 1560M. Applied Materials Chemistry
Materials chemistry is the study of the synthesis, structure, properties, and application of solid materials. Our technology-driven world is fueled by advances in materials chemistry with examples of application in areas such as microelectronics, polymers, and energy technology. This course will explain the application of materials chemistry through the materials properties and characterization, detailing how the crystalline and molecular structure of materials can be related to electronic, optical, thermal, and mechanical properties. WRIT
Fall CHEM1560M S01 16405 TTh 9:00-10:20(08) (K. Koski)

CHEM 1620B. Spectroscopy
Prerequisite: CHEM 1140 or equivalent.
Spr CHEM1620B S01 25506 TTh 9:00-10:20(08) (C. Rose-Petruck)

CHEM 1700. Nanoscale Materials: Synthesis and Applications
Focuses on synthesis, properties, and applications of nanoscale materials. It begins with the introduction to size-dependent properties and to general characterization methods of nanomaterials. It then outlines the synthesis, surface chemistry and self-assembly of nanomaterials. It further reviews catalytic, optical and magnetic properties of nanomaterials. Finally, the course highlights the applications of nanomaterials in information storage, energy conversion, and biomedical.
Fall CHEM1700 S01 14327 MW 11:00-11:50(04) (S. Sun)

CHEM 2010. Advanced Thermodynamics
Fundamental principles of macroscopic equilibrium thermodynamics. The three laws of thermodynamics, the thermodynamic potentials, temperature scales, heat engines and refrigerators, entropy, kinetic theory, and transport phenomena. Applications to solids, fluids, and magnetic systems; Gibbs relations, first and second order phase transitions, thermal radiation, gas expansions.
Fall CHEM2010 S01 14328 TTh 10:30-11:50(13) (C. Rose-Petruck)

CHEM 2020. Statistical Mechanics
Introduction to modern equilibrium statistical mechanics, including the classical and quantum descriptions of ideal gases, the molecular basis of thermodynamics, the concepts of ensembles and fluctuations, and the implications of quantum mechanical indistinguishability. Applications include chemical and phase equilibria, the transition-state theory of chemical reaction rates, and the theory of liquids.
Spr CHEM2020 S01 23765 MW 8:30-9:50(02) (R. Stratford)

CHEM 2310. Advanced Inorganic Chemistry
Comprehensive survey of topics in synthetic and mechanistic organometallic chemistry.
Fall CHEM2310 S01 14329 TTh 10:30-11:50(13) (J. Suggs)

CHEM 2320. Physical Inorganic Chemistry
The bonding and structures of inorganic compounds, including transition metal containing compounds and organometallics, and their spectroscopic properties are covered along with the group theoretical, quantum chemical, and physical methods employed. Prerequisites: CHEM 0500 and 1140 or equivalents or written permission. Recommended for seniors and first-year graduate students.
Spr CHEM2320 S01 23766 TTh 10:30-11:50(09) (S. Sun)

CHEM 2410. Physical Organic Chemistry
Detailed examination of organic reaction mechanisms, reactive intermediates, and the methods employed for their characterization (e.g., kinetics, free energy relationships, isotope effects, molecular orbital theory, spectroscopy, and product distributions). Topics may include...
free radical, elimination, and photochemical reactions, and the chemistry of radicals, carbocations, carbonanes, and carbenes. Prerequisites: CHEM 0500, CHEM 1140.

CHEM 2420. Organic Reactions.
Study of organic reactions and reaction mechanisms. Discussion and analysis of organic transformations. Topics can include arrow pushing strategies and synthetic methods.
Fall CHEM2420 S01 14331 TTh 9:00-10:20(08) (P. Williard)

CHEM 2430. Synthetic Organic Chemistry.
Methods, strategies, and mechanisms. Topics may include the chemistry of anions, cations, and radicals, concerted reactions, conformational analysis, and stereochemistry.
Spr CHEM2430 S01 23767 TTh 10:30-11:50(09) 'To Be Arranged'

CHEM 2770. Quantum Mechanics.
Semester I: Time independent quantum mechanics and its application to atomic and molecular problems. Discussions of modern theories of electronic structure, chemical bonding, and molecular spectroscopy. Prerequisite: CHEM 1140 or equivalent.
Fall CHEM2770 S01 14332 MWF 9:00-9:50(02) (J. Geiser)

CHEM 2780. Quantum Mechanics.
Semester II: Lectures consider the theory and application of time-dependent quantum mechanical methods in chemical physics. Both few and many-body methods are described and discussions include the correlation function formulation of chemical dynamics. Numerical path integral methods for equilibrium and dynamical problems are introduced. Prerequisite: CHEM 2770.
Spr CHEM2780 S01 23768 MWF 11:00-11:50(04) (J. Doll)

CHEM 2870. Departmental Colloquia.
No description available. Open to graduate students only.
Fall CHEM2870 S01 14333 F 4:00-5:50(05) (M. Zimmt)

CHEM 2880. Departmental Colloquia.
No description available. Open to graduate students only.
Spr CHEM2880 S01 23771 F 4:00-5:50(15) 'To Be Arranged'

CHEM 2970. Preliminary Examination Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.
Fall CHEM2970 S01 14013 Arranged 'To Be Arranged'
Spr CHEM2970 S01 23531 Arranged 'To Be Arranged'

CHEM 2980. Research.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

CHEM 2990. Thesis Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.
Fall CHEM2990 S01 14014 Arranged 'To Be Arranged'
Spr CHEM2990 S01 23532 Arranged 'To Be Arranged'

CHEM XLIST. Courses of Interest to Students wishing to Study Chemistry.

Classics

Classics

CLAS 0010. The Greeks.
For centuries Western civilizations have seen the Greeks as their intellectual and spiritual ancestors. The ‘Greek miracle’ is explored by reviewing its major achievements and discoveries: poetry (heroic epic, tragedy, political comedy), philosophy, historical research, political analysis and institutions, science. All texts read in English. LILE WRIT
Fall CLAS0010 S01 15388 MWF 11:00-11:50(04) (S. Kidd)

CLAS 0210B. Death in Ancient Greece.
Examines how ancient Greeks understood, described, and experienced death. Making use of sources in translation, considers how death is anticipated, imagined, feared, and sometimes sought. Also contrasts classical ideas with current experiences in our own society in order to see whether and how our assumptions concerning death are culturally determined. Enrollment limited to 20 first year students. FYS LILE WRIT
Fall CLAS0210B S01 15378 MWF 2:00-2:50(07) (P. Nieto Hernandez)

CLAS 0210P. Dead and Loving It: The Cult of the Saints in the Eastern Mediterranean.
This course introduces students to the literature, history, and religious life of the late ancient and medieval Mediterranean through the lens of a highly significant socio-cultural phenomenon: the Christian cult of the saints. Students will have the opportunity to engage with a variety of primary source texts in translation, while examining the subject from the perspectives of anthropology, religious studies, material culture, history and literary studies, to approach this rich topic through an interdisciplinary framework. Enrollment limited to 20 first year students. FYS
Fall CLAS0210P S01 16302 MWF 9:00-9:50(02) (S. Insley Say)

CLAS 0400. Ancient Comedy and its Influence.
This course examines the origins and developments of comedy in ancient Greece (early iambic poetry, Aristophanes, Menander), its later offshoots in Rome (Plautus, Terence), England (Shakespeare), and the continued influence these ancient forms have on comedy today. Secondary readings include ancient and modern thoughts on humor and laughter, and writings on the historical contexts in which these plays were produced.
Spr CLAS0400 S01 24674 MWF 11:00-11:50(04) (S. Kidd)

CLAS 0660. The World of Byzantium.
Caught between the East and West, the culture of Byzantium inherited the ancient worlds of Greece, Rome, and Jerusalem, nurturing many a modern ideology, conflict, and identity. Byzantium is explored through its history, texts, and art. We examine the foundation and history of Constantinople, Iconoclasm, the Crusades, medieval Christianity and Islam, Byzantine court life, concepts of gender, self, and sexuality.
Fall CLAS0660 S01 15392 TTh 1:00-2:20(10) (E. Papaoianou)

CLAS 0850. Mythology of India.
Reviews major myths from religions of India in order to understand how the peoples of India imagined their relation to the divine world, to nature, and to other human beings. Considers connections between myths and religious practices, social structures, historical events, and psychological and aesthetic dimensions of Indian cultural life. Reading of mythic narratives will be accompanied by analysis from selected theoretical perspectives. DVPS
Spr CLAS0850 S01 24669 MWF 10:00-10:50(03) (J. Fitzgerald)

CLAS 0855. The Bhagavad Gītā.
This course will study and discuss the teachings of the Bhagavad Gītā in the context of its literary, theological, and philosophical origins in ancient India. We will read the text itself (in English, not Sanskrit), parts of the epic Mahābhārata in which the Gītā is situated, and collateral texts, such as Upanisads, Indian myths, Buddhist sermons, or even modern novels, that may shed light on why and how this text has exercised such far-reaching influence across the ages, inside India and beyond. DVPS
Fall CLAS0855 S01 15429 TTh 2:30-3:30(11) (J. Fitzgerald)

CLAS 1120E. Slavery in the Ancient World.
Examines the institution of slavery in the ancient world, from Mesopotamia and the Near East to the great slave societies of classical Greece and (especially) imperial Rome; comparison of ancient and modern slave systems; modern views of ancient slavery from Adam Smith to Hume to Marx to M.I. Finley. Readings in English.
Fall CLAS1120E S01 15389 TTh 10:30-11:50(13) (J. Bodel)

CLAS 1120Q. Seven Wonders of the Ancient World.
"Everyone has heard of the Seven Wonders of the World," wrote Philo of Byzantium two millennia ago, and it's still true today. But what is a "Wonder"? And why seven of them? Why make such a list anyway, then or now? This class will use ancient texts, explorers' accounts, and archaeological investigations to travel through several thousand years of history in the Mediterranean and Near Eastern world. We will consider how
the Seven Wonders captured past imaginations; the aura of technological achievements; the intersections of history, memory, invention, and myth; and how members of one culture view another culture’s monuments. LILE 1120Q

CLAS 1120U. The American Presidency and the Western Tradition

We are accustomed to engaging the American presidency as a public office best approached through the prism of government or political science, but this course studies the ways in which the presidents in thought and action are part of a larger continuum of humanistic expression in the western tradition. It is organized around five categories: memory, language, consolation, farewell, and self-reflection. Our work involves reading and viewing/listening to various materials, including videos and original documents. The words we study, both by and about presidents, will be compared to various masterworks of Greco-Roman antiquity and the western Middle Ages. LILE WRIT

Fall CLAS1120U S01 15394 MWF 1:00-1:50(06) (J. Pucci)

CLAS 1140. Classical Philosophy of India

This course introduces the classical traditions of philosophy in India. After presenting a general overview of this discourse and its basic Brahminic, Buddhist, and Jain branches, the course will examine selected traditions and themes from the most influential schools of thought. Several schools concerned entirely with gaining ultimate beatitude (the Highest Good) (the schools known as Sāmkhya, Yoga, Theravada Buddhism, Mahāyāna Buddhism, Jainism, and Vedānta) and the schools that concentrate on issues of logic, metaphysics, and language and hermeneutics (Nyāya, Vaiśeshika, and Pūrva Mimāṃsā, respectively). DVPS

Spr CLAS1140 S01 24667 TTh 9:00-10:20(08) (D. Buchta)

CLAS 1210. The History of Greece from Archaic Times to the Death of Alexander

A detailed examination of the history of the Greeks-political, economic, and social-from Homer’s time to the establishment of the Hellenistic monarchies by the successors of Alexander the Great. The ancient sources are closely and critically studied (in translation).

Fall CLAS1210 S01 15366 MWF 10:00-10:50(03) (G. Oliver)

CLAS 1220. The History of Greece from Archaic Times to The Death of Alexander

See The History Of Greece From Archaic Times To The Death Of Alexander (CLAS1210) for course description.

Spr CLAS1220 S01 24671 MWF 10:00-10:50(03) ‘To Be Arranged’

CLAS 1420. The Culture of Death in Ancient Rome

This course examines the way that death and dying were perceived and managed in ancient Roman culture. Primary source readings will include selections from philosophers, poets, inscriptions, and a variety of prose literature (consolations, epistolography, historiography, novels). Secondary literature will focus on demography and social relations, the anthropology of funerary ritual, and material culture, which will be integrated systematically throughout the course, and which will include consideration of artistic representations and iconography, as well the archaeology of Roman mortuary practices.

Spr CLAS1420 S01 24670 TTh 10:30-11:50(09) (J. Bode)

CLAS 1750D. Philosophy of Socrates

In this class we will read and discuss various ancient portraits of Socrates (in Aristophanes’ Clouds, Plato’s Apology and Symposium, and Xenophon’s Apology) and several Platonic dialogues representing Socrates in action discussing moral questions, including the Crito, Laches, Charmides, Lesser Hippias, Protagoras, and Gorgias. We will focus on questions about the historical Socrates (as distinct from the portraits), his avowals of ignorance, irony, methods of argument, and interest in definition, as well as the moral questions explored in the dialogues. All readings will be in English translation. Enrollment limited to 20.

Fall CLAS1750D S01 15380 M 3:00-5:20(15) (M. Gill)

CLAS 1770. Ancient Law, Society and Jurisprudence

After a brief survey of modern legal systems (USA, common and civil law systems), we return to Athens and Rome. Topics: sources of law, its evolution, (e.g., feuding societies); procedural law (e.g., how to bring cases); legal reasoning; rhetoric; substantive law (e.g., regarding marriage, religion, homicide). Different approaches are used: historical, comparativist, anthropological, case-law study.

Spr CLAS1770 S01 24687 TTh 2:30-3:50(11) (A. Scafuro)

CLAS 1930A. Introduction to Greek and Latin Meters

We will survey the major metrical systems of Greek and Roman verse by reading a wide range of short poems and brief extracts. The main concerns will be, first, how to scan poems correctly, and second, how to evaluate metrical and rhythmical choices. Prerequisite: GREK/LATN 0400, or demonstration of equivalent ability in Greek and Latin.

Spr CLAS1930A S01 24685 TTh 2:30-3:50(11) (K. Haynes)

CLAS 1970. Special Topics

Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

CLAS 1990. Conference: Especially for Honors Students

Section numbers vary by instructor. Please check banner for the correct section number and CRN to use when registering for this course.

CLAS 2000. Proseminar in Classics

Introduction to standard research methods and tools in major subdisciplines of classical philology and ancient history. Required of entering graduate students. Survey of various subdisciplines in order to become familiar with field and scholarly principles.

Fall CLAS2000 S01 15382 TTh 9:00-10:20(08) (J. Debroux)

CLAS 2110H. Before Literature: Writing the History of Premodern Literary Cultures

Literature is a modern concept—a Western European 19th-century invention, along with such notions as nation or individuality. Yet, we speak of ancient and medieval literatures and write their histories. This seminar has a double aim. We explore the ways in which modern historiography has treated premodern discursive traditions which defy expectations for what literature should be (creative, original, entertaining). We also survey modern literary theory, from New Criticism to Post-structuralism, in order to identify approaches that could illuminate the reading of pre-modern texts. The focus will be on Mediterranean literatures: Greek and Latin, ancient and medieval; Arabic; Ottoman; Western vernaculars.

Spr CLAS2110H S01 24729 F 3:00-5:20(15) (E. Papaloiannu)

CLAS 2970. Preliminary Examination Preparation.

For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.

Fall CLAS2970 S01 14016 Arranged ‘To Be Arranged’

Spr CLAS2970 S01 23533 Arranged ‘To Be Arranged’

CLAS 2980. Reading and Research.

Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Instructor permission required.

CLAS 2990. Thesis Preparation.

For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.

Fall CLAS2990 S01 14017 Arranged ‘To Be Arranged’

Spr CLAS2990 S01 23534 Arranged ‘To Be Arranged’

CLAS XLIST. Courses of Interest to Classics Concentrators.

Fall 2013

The following courses may be taken for concentration credit. Please see the sponsoring department for the time and location of each course.

Archaeology and the Ancient World
ARCH 0270 Troy Rock: Archaeology of an Epic
ARCH 0535 Labor and Technology in the Roman World
ARCH 0770 Food and Drink in Classical Antiquity
ARCH 1680 Exploring Different Iron Ages: Of Chiefs, Princesses and Warriors
Philo
PHIL 0350 Ancient Philosophy
Religious Studies
RELS 0325 Judaism, Christianity and the Bible
Spring 2014

The following courses may be taken for concentration credit. Please see the sponsoring department for the time and location of each course.

Archaeology and the Ancient World
ARCH 0420 Archaeologies of the Greek Past
GREEK 0100. Essentials of the Greek Language. A two-semester approach to ancient Greek with special emphasis on developing facility in rapid reading of Greek literature. Selections from Attic Greek authors. No previous knowledge of Greek is required.

- Fall GREEK0100 S01 15367 TTh 12:00-12:50(03) (D. Machado)
- Fall GREEK0100 S01 15367 MWF 10:00-10:50(03) (D. Machado)

GREEK 0110. Introduction to Ancient Greek. Intensive, one-semester introduction to Greek. No previous knowledge of Greek is required.

- Spr GREEK0110 S01 24665 TTh 12:00-12:50(02) 'To Be Arranged'
- Spr GREEK0110 S01 24665 MWF 9:00-9:50(02) 'To Be Arranged'

GREEK 0200. Essentials of the Greek Language. Second half of a two-semester approach to ancient Greek with special emphasis on developing facility in rapid reading of Greek literature. Selections from Attic Greek authors. No previous knowledge of Greek is required.

- Spr GREEK0200 S01 24672 TTh 12:00-12:50(03) 'To Be Arranged'
- Spr GREEK0200 S01 24672 MWF 10:00-10:50(03) 'To Be Arranged'

GREEK 0300. Introduction to Greek Literature. Introduction to Greek literature through intensive reading. Prerequisite: GREEK 0200, GREEK 0110, or the equivalent. We will work on grammar skills while reading extensively in the Histories of Herodotus, who is not only the "father of history" but also a great (and delightful) artist in prose.

- Fall GREEK0300 S01 15370 MWF 11:00-11:50(04) (A. Rabe)

GREEK 0310. Grammar Review and Composition. Half-credit course with attention to student's individual needs.

- Fall GREEK0310 S01 15384 Th 9:00-10:20(08) (D. Janzen)

GREEK 0400. Introduction to Greek Literature. Prerequisite: GREEK 0300 (or the equivalent). Review of grammar of the Attic dialect through rapid reading of texts by Lysias, Plato, or Xenophon. Emphasis on syntax and style.

- Spr GREEK0400 S01 24675 MWF 11:00-11:50(04) 'To Be Arranged'

GREEK 1010. Introduction to Greek Drama. Both for students who have recently finished GREEK 0300 and 0400 and for those who have little or no experience of translating Greek drama. Begins with a brief review of Attic grammar with readings in Plato. Then turns to Greek drama with students reading a play of one of the dramatists and focusing on philological analysis and meters.

- Spr GREEK1010 S01 24728 TTh 10:30-11:50(09) (A. Scafuro)

GREEK 1100. Advanced Homer: The Odyssey. It is hard to imagine a more joyful way to acquire excellent control of Homeric Greek than by reading, in its entirety (if possible), Homer’s wonderful and captivating work, the Odyssey. Though it can be a little time-consuming initially, students quickly become familiar with the syntax and the vocabulary, and find great pleasure in immersing themselves in this thrilling masterpiece.

- Fall GREEK1100 S01 15369 MWF 11:00-11:50(04) (P. Nieto Hernandez)

GREEK 1110B. Plato, Phaedrus. We will read in Greek Plato’s dialogue Phaedrus on love and rhetoric. We will attempt to understand the dialogue as a unified whole, discussing such questions as the link between love and the art of persuasion, Plato’s denigration of writing, and the relationship between rhetoric and philosophy.

- Spr GREEK1110BS01 24681 TTh 1:00-2:20(10) (M. Gill)

GREEK 1110Y. Greek Letter-Writing. This class surveys the practice and theory of letter-writing in the Greek literary tradition, with an emphasis on post-classical and medieval epistolography. We look at fictional letters as well as real letters, the formation of letter-collections, and the creation of theories, canons, and models of letter-writing. Prerequisite: four semesters of Greek.

- Fall GREEK1110Y S01 15511 TTh 10:30-11:50(13) (E. Papaloannou)

GREEK 1111A. Lucian. Improves students’ knowledge of ancient Greek by reading selections from the brilliant satirist Lucian. We will discuss the nature of his genius, the historical context in which he was writing, and the lasting influence of his wit.

- Spr GREEK1111A S01 25024 MWF 1:00-1:50(06) (S. Kidd)

GREEK 1111B. Polybius. We will read selections from Polybius’ Histories in Greek. Specific texts to be determined.

- Fall GREEK1111B S01 15776 MWF 1:00-1:50(06) (G. Oliver)

GREEK 1820. Fifth Century Survey. We begin with Pindar and read poetry and prose literature composed throughout the fifth century, with attention to its historical development styles, and the intellectual ideas that drive it.

- Fall GREEK1820 S01 15395 TTh 2:30-3:50(11) (A. Scafuro)

GREEK 1910. Special Topics. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

GREEK 1990. Conference: Especially for Honors Students. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

GREEK 2000A. Aristophanes. No description available.

- Fall GREEK2000A S01 15381 W 3:00-5:20(17) (S. Kidd)

GREEK 2970. Preliminary Exam Preparation. For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.

- Fall GREEK2970 S01 14041 Arranged 'To Be Arranged'
- Spr GREEK2970 S01 23557 Arranged 'To Be Arranged'

GREEK 2980. Reading and Research. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Instructor permission required.

GREEK 2990. Thesis Preparation. For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.

- Fall GREEK2990 S01 14042 Arranged 'To Be Arranged'
- Spr GREEK2990 S01 23558 Arranged 'To Be Arranged'

Latin

LATN 0100. Essentials of the Latin Language. An intensive two-semester approach to Latin with special emphasis on developing facility in the rapid reading of Latin literature. No previous knowledge of Latin is required.

- Fall LATN0100 S01 15384 TTh 12:00-12:50(02) (C. Donahoe)
- Fall LATN0100 S01 15384 MWF 9:00-9:50(02) (C. Donahoe)

LATN 0110. Introduction to Latin. Intensive, one-semester introduction to Latin. No previous knowledge of Latin is required.

- Spr LATN0110 S01 24683 MWF 1:00-1:50(06) 'To Be Arranged'
- Spr LATN0110 S01 24683 TTh 12:00-12:50(06) 'To Be Arranged'

LATN 0200. Essentials of the Latin Language. Second course in an intensive two-semester approach to Latin. Special emphasis on developing facility in the rapid reading of Latin literature. No previous knowledge of Latin is required.
LATN 0300. Introduction to Latin Literature.
Introduction to Latin literature through intensive reading of major authors in prose and poetry with careful attention to grammar and style. Prerequisite: LATN 0100, 0200 or 0110 (or equivalent).
Fall LATN0300 S01 15365 MWF 2:00-2:50(07) (R. Philbrick)

LATN 0310. Grammar Review and Composition.
Half-credit course with attention to student's individual needs.
Fall LATN0310 S01 15383 T 9:00-10:20(08) (D. Janzen)

LATN 0400. Introduction to Latin Literature.
Introduction to Latin literature through intensive reading of major authors in prose and poetry with careful attention to grammar and style. Prerequisite: LATN 0100, 0200 or 0110 (or equivalent).
Spr LATN0400 S01 24682 MWF 1:00-1:50(06) 'To Be Arranged'

LATN 1040B. Virgil: Aeneid.
Close reading of selections from all twelve books of Virgil's epic.
Spr LATN1040B S01 24689 TTh 1:00-2:20(10) (J. Reed)

LATN 1050. Horace Satires, Epistles and 'Ars Poetica'.
We will read selections from each of these collections of Horace's hexameter poetry, in which we learn much about the poet's life and education, his friendships with Vergil and others, his relationship with his patron Maecenas and eventually with Augustus, and his theories about the "Art of Poetry" as it should best be practiced and appreciated. We will also consider the place of Horace's poems in the development of the satirical and epistolary genres at Rome as well as the influence of these works on the later poetic (and literary-critical) tradition.
Fall LATN1050 S01 15512 MWF 2:00-2:50(07) (J. Debrouhun)

LATN 1060F. Ovid.
Reading of selections from Ovid's poetry, with emphasis placed both on close reading and on the texts' engagement with poetic issues (genre and intertextuality) and with the wider political and cultural issues of Augustan Rome.
Spr LATN1060F S01 24689 TTh 9:00-10:20(08) (J. Reed)

LATN 1110E. Comedy.
No description available.
Fall LATN1110E S01 15391 TTh 10:30-11:50(13) (A. Scafuro)

LATN 1120D. Alcuin.
Alcuin lived a life of wide variety and accomplishment, not least as an important member of Charlemagne's inner circle and, like many at court, he wrote widely in and in multiple genres. From his enormous output this course will focus on the large collections of poetry and letters. We will attend in both gatherings to theme, tone, style, and allusivity and, where appropriate, we will ponder alternate readings in a collection that has not been edited since the late nineteenth century.
Spr LATN1120D S01 24688 MWF 2:00-2:50(07) (J. Pucci)

LATN 1120E. Writing Lives in Late Antiquity: Jerome and Augustine.
This course will explore the development of new forms of biographical and autobiographical writing in Latin in the fourth and fifth centuries CE. We will focus on two monumental late ancient authors, Jerome and Augustine, and examine the way that these Christian intellectuals conceive of and express ideal lives in a newly Christian Empire. Texts will include selections of Jerome's Lives of Paul the Monk and Hilarion, his letters, and Augustine's Confessions.
Fall LATN1120E S01 16303 W 1:00-1:50(06) (S. Insley Say)
Fall LATN1120E S01 16303 MWF 1:00-1:50(06) (S. Insley Say)

LATN 1150. Latin Prose Composition.
Review of the basic tenets of Latin syntax, composition, and style. English to Latin translation exercises will shore up composition skills, as we study the stylistic traits of seven Roman authors: Cato, Caesar, Cicero, Sallust, Livy, Seneca, and Tacitus. The course will proceed chronologically according to author. Class time will be spent on translation exercises and review, as well as the identification of the stylistic and syntactic characteristics of the seven authors under study.
Fall LATN1150 S01 15393 Th 4:00-5:20(16) (J. Bodel)

LATN 1810. Survey of Republican Literature.
Our purposes in this survey of Latin literature are to acquire a comprehensive historical perspective on Latin poetry and prose until the end of the Republic and a sense of its phases and the dynamics of its tradition; and to read different styles of Latin poetry and prose with confidence and ease.
Spr LATN1810 S01 24676 MWF 11:00-11:50(04) (J. Debrohun)

LATN 1970. Special Topics.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

LATN 2080E. Seminar: Fortunatus and Alcuin.
We will read closely in the poetry of Fortunatus and Alcuin, paying attention to the ways in which the two poets integrate and develop the Augustan inheritance, especially (the supposedly lost) Catullus. In addition to attending to the normal accoutrements of literary reading, we will focus on the role of ambiguity in both poet's projects, the conception and function of allusivity, and shifts in literary culture and their implications for how we historicize Latin poetry. A reading knowledge of French is required.
Fall LATN2080E S01 15778 M 3:00-5:20(15) (J. Pucci)

LATN 2120D. Petronius.
Detailed consideration of the Satyricon of Petronius, with special attention to the manuscript tradition, form, style, and literary intentions of the work. Prerequisite: advanced Latin reading ability.
Spr LATN2120D S01 25025 M 3:00-5:20(13) (J. Bodel)

LATN 2970. Preliminary Exam Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.
Fall LATN2970 S01 14057 Arranged 'To Be Arranged'
Spr LATN2970 S01 23572 Arranged 'To Be Arranged'

LATN 2980. Reading and Research.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Instructor permission required.

LATN 2990. Thesis Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.
Fall LATN2990 S01 14058 Arranged 'To Be Arranged'
Spr LATN2990 S01 23573 Arranged 'To Be Arranged'

Modern Greek

MGRK 0100. Introduction to Modern Greek.
Designed for students with little or no prior knowledge of Modern Greek. The aim is to introduce students to basic linguistic structures and develop the ability to comprehend and produce text, as well as to speak and understand speech, in a variety of contexts and registers. The course objectives are to enable students to perform a range of tasks, master a minimum core vocabulary and acquire knowledge and understanding of various forms of Greek culture.
Fall MGRK0100 S01 15371 MTWTh 12:00-12:50(12) (E. Amanatidou)

MGRK 0200. Introduction to Modern Greek.
A continuation of MGRK 0100. New students may place into it, after special arrangement with the instructor. The course continues on an integrative skills approach and aims to develop language skills, within a framework of specific topics and functions. The course objectives are to enable students to perform a range of tasks, master a minimum core vocabulary and acquire knowledge and understanding of various forms of Greek culture.
Spr MGRK0200 S01 24679 MTWTh 12:00-12:50(05) (E. Amanatidou)
**MGRK 0300. Intermediate Modern Greek.**
Develops linguistic and cultural competence and may be taken by anyone who has completed MGRK 0200 or after consultation with the instructor and/or a placement exam. It focuses on further development of the four language skills as well as knowledge and understanding of various aspects of Greek society. It employs a variety of materials, including film, digital stories, internet based sources, music, art, and literature.

Fall MGRK0300 S01 15372 TTh 10:30-11:50(13) (E. Amanatidou)

**MGRK 0400. Intermediate Modern Greek.**
A continuation of MGRK 0300. New students may place into it, after special arrangement with the instructor. It aims to enhance language skills within a variety of registers and themes; enable the students to master, use and understand effectively essential linguistic structures; examine a variety of expressive forms within an authentic cultural context.

Spr MGRK0400 S01 24678 Arranged (E. Amanatidou)

**MGRK 0500. Advanced Modern Greek.**
May be taken by students who have completed the previous sequences or by anyone who places successfully into the course. The course places emphasis on the improvement of writing and oral skills, via presentations, collaborative projects, conversations and assignments based on topics and texts, drawn from a variety of sources and cultural forms of expression.

Fall MGRK0500 S01 15373 Arranged (E. Amanatidou)

**MGRK 0600. Advanced Modern Greek.**
A continuation of MGRK 0500. Students who have not taken the previous sequence may take a placement test, after consultation with the instructor. The course aims to promote range, accuracy and fluency and enable students to develop ease and spontaneity with the language. Authentic materials drawn from a range of sources inform the content of the course and include films, literature, media, testimonies, music and internet based sources. The development of transcultural competence will be an essential component of the course.

Spr MGRK0600 S01 24892 Arranged (E. Amanatidou)

**MGRK 1910. Special Topics in Modern Greek.**
No description available.

**Sanskrit**

**SANS 0100. Elementary Sanskrit I.**
This course introduces Sanskrit to students who have no prior knowledge of any language other than English. Students quickly learn to read the Devanagārī script and study the basics of the sound-system of Sanskrit. The course rapidly surveys the basics of Sanskrit grammar while using adaptations of classical Indian myths and stories as reading exercises.

Fall SANS0100 S01 15374 TTh 12:00-12:50(12) (D. Buchta)
Fall SANS0100 S01 15374 MWF 12:00-12:50(12) (D. Buchta)

**SANS 0200. Elementary Sanskrit II.**
This course continues the survey of grammar and the reading exercises of SANS 100. The second half of this course reads selected passages of the Bhagavad Gītā and the beginning of the classic story of Nala and Damayantī from the Mahābhārata. Prerequisite: SANS 0100.

Spr SANS0200 S01 24680 TTh 12:00-12:50(05) (D. Buchta)
Spr SANS0200 S01 24680 MWF 12:00-12:50(05) (D. Buchta)

**SANS 0300. Sanskrit Epic Narrative.**
Consolidates and extends the knowledge of Sanskrit grammar introduced in first year Sanskrit; acquaints students first-hand with basic themes of ancient Indian culture, and cultivates the reading and interpretive skills necessary to read epic and closely related Sanskrit narrative with comprehension and increased fluency. Prerequisite: SANS 0200.

Fall SANS0300 S01 15377 MW 1:30-2:20(08) (D. Buchta)
Fall SANS0300 S01 15377 Th 11:00-11:50(06) (D. Buchta)

**SANS 0400. Classical Sanskrit Story Literature.**
Introduces students to the more challenging Sanskrit of classical story literature and continues to extend the knowledge of Sanskrit grammar introduced in first year Sanskrit and developed in SANS 0300, as well as present basic Indian cultural themes. Prerequisite: SANS 0300.

Spr SANS0400 S01 24684 MWF 9:00-9:50(02) (D. Buchta)

**SANS 1080. The Critical Episodes of the Mahābhārata.**
A guided tour of the structure of the Mahābhārata, "The Great Epic of India," through the reading in Sanskrit of selected critical passages.

Spr SANS1080 S01 24684 MWF 2:00-2:50(07) (J. Fitzgerald)

**SANS 1600. Sanskrit Belles Lettres.**
Introduction to kävya (classical Sanskrit belles lettres)—poetry, drama, and prose narrative—through the reading of authors of the Classical Period as well as works on aesthetics and commentaries upon them.

Fall SANS1600 S01 15432 TTh 1:00-2:20(10) (D. Buchta)

**SANS 1990. Conference: Especially for Honors Students.**
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Instructor’s permission required.

**SANS 2120. The Development of Yoga and Sāṃkhya in Early Indian Thought.**
This seminar will read selections from the old Sanskrit Upanisads, Dharma Literature, Mahābhārata, Purāṇas, and early darsāna literature (pre 500 CE) to trace the development of some of the characteristic themes of the cosmology and psychology of Yoga and the emergence of Sāṃkhya philosophy from them. Advanced knowledge of Sanskrit and permission of the instructor is required.

Fall SANS2120 S01 15779 F 3:00-5:20(05) (J. Fitzgerald)

**SANS 2970. Sanskrit Preliminary Exam Preparation.**
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.

Fall SANS2970 S01 14084 Arranged 'To Be Arranged'
Spr SANS2970 S01 23596 Arranged 'To Be Arranged'

**SANS 2980. Sanskrit Reading and Research.**
Section numbers will vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Instructor permission required.

**Cognitive, Linguistic and Psychological Sciences**

**Cognitive, Linguistic and Psychological Sciences**

**CLPS 0010. Elementary Psychology: An Introduction to Mind and Behavior (formerly PSYC 0010).**
A survey covering the roles of inherited and environmental determinants of human behavior. Topics include sensation, perception, learning, memory, motivation, emotion, neural processes, language, social development, personality assessment, obedience, interpersonal attraction, and the diagnosis, origins, and treatment of mental illness. Laboratory sections illustrate methodologies used to study these issues. Topic selection varies with instructor.

Spr CLPS0010 S01 24784 MWF 12:00-12:50(05) (E. Festa)

**CLPS 0020. Approaches to the Mind: Introduction to Cognitive Science (formerly COGS 0010).**
Cognitive science is the study of the mind from an interdisciplinary perspective. It focuses on such questions as how do we process information to recognize objects and faces, to know that a cup is not a bowl, to remember and learn, and to speak and understand? How can studying the brain inform us about the mind? This course will examine the above questions and discuss major themes in cognitive science including nature-nurture, categories and representations, and the nature of computations. WRIT

Fall CLPS0020 S01 15565 MWF 12:00-12:50(12) (S. Blumstein)

**CLPS 0030. Introduction to Linguistic Theory (formerly COGS 0410).**
The ability to speak and understand a language involves having mastered (quite unconsciously) an intricate and highly structured rule-governed system. Linguists seek to model that rule system. This course introduces (quite unconsciously) an intricate and highly structured rule-governed system. Linguists seek to model that rule system. This course introduces
CLPS 0040. Mind and Brain: Introduction to Cognitive Neuroscience (formerly COGS 0720).
This course provides an introduction to the neuroscientific study of cognition. Topics surveyed in the course include the neural bases of perception, attention, memory, language, executive function, emotion, social cognition, and decision making. In covering these topics, the course will draw on evidence from brain imaging (MRI, EEG, MEG), transcranial magnetic stimulation, electrophysiology, and neuropsychology. The course will also consider how knowledge about the brain constrains our understanding of the mind.

Spr CLPS0040 S01 24795 MWF 11:00-11:50(04) (D. Amso)

CLPS 0050A. Computing as Done in Brains and Computers (formerly COGS 0100A).
Brains and computers compute in different ways. We will discuss the software and hardware of brains and computers and with introduction to the way brains are organized, the way computers are organized, and why they are good at such different things. We will talk about our current research, the Ersatz Brain Project, an attempt to design a first-class second-class brain. Enrollment limited to 15 first year students. FYS Fall CLPS0050A S01 15567 MWF 10:00-10:50(03) (J. Anderson)

In a series of theoretical articles, Melvyn Goodale and his collaborators have proposed that separate, but interacting visual systems have evolved for the perception of objects on the one hand and the control of actions directed at those objects on the other hand. This seminar will cover the basic literature addressing this problem with studies involving human and animal studies. Enrollment limited to 20 first year students. FYS Fall CLPS0050B S01 15568 TTh 1:00-2:20(10) (F. Domini)

CLPS 0050I. Art and Science of Learning.
The course will emphasize normal adult learning, in comparison with learning of special populations, nonhuman animals, and computers. Topics will include perceptual learning, memorization, search, conditioning in changing environments, and motor learning. The role of types and amount of practice, motivation, and talent in the development of expertise in art, music, dance, science, sports, and games will be examined. Readings will be based on laboratory experiments and case histories of experts in a range of fields. Enrollment limited to 20 first year students. FYS Spr CLPS0050I S01 24796 MWF 2:00-2:50(07) (R. Church)

CLPS 0050J. Psychology of Creativity.
This course is a first year seminar intended to introduce students to the lively word of creativity and the science thereof. Classic and contemporary readings will be discussed covering topics ranging from theory and assessment to applications in education, product design, organizational behavior, the arts, and science itself. Students will also be nudged to become more mindful of the role of creativity in their everyday lives. The course will emphasize class discussion and the production of tangible projects. Enrollment limited to 20 first year students. FYS Fall CLPS0050J S01 16265 MWF 12:00-12:50(12) (J. Krueger)

CLPS 0100. Learning and Conditioning (formerly PSYC 0900).
Presents classical and contemporary approaches to the study of the prediction and control of behavior. Emphasizes theories and data derived from studies of Pavlovian conditioning and instrumental learning with nonhuman animals, but also considers implications for human behavior (e.g., drug-dependent behaviors, eating disorders, behavior modification and psychopathologies). No prerequisites.
Spr CLPS0100 S01 24798 MWF 1:00-1:50(06) (R. Colwill)

An examination of physiological and evolutionary mechanisms underlying species-specific behavior in both vertebrate and invertebrate animals. Topics include: evolution and mechanisms of sensory systems, modes of locomotion, orientation and navigation, communication, and cognitive capacities of animals.
Spr CLPS0110 S01 24799 MWF 12:00-12:50(05) (A. Simmons)

CLPS 0120. Introduction to Sleep (formerly PSYC 0550).
Uses sleep as the focal point for describing complex behavioral phenomena. How is sleep measured and defined? How does sleep differ across species? What accounts for the timing of sleep? How does sleep change with age? What are the behavioral, physiological, and cognitive concomitants of different states of sleep? How can dreaming be understood? What can go wrong with sleep? Recommended prerequisite: CLPS 0100, CLPS 0200 or NEUR 0010; or an AP course in psychology or physiology.
Fall CLPS0120 S01 15574 M 3:00-5:20(15) (M. Carskadon)

CLPS 0200. Human Cognition (formerly COGS 0420).
Introduction to theoretical issues and empirical findings motivating controversies in human cognition. Basic issues in cognition - including attention, memory, categorization, reasoning, decision making and problem solving will be examined. Emphasis will be on experimental methods and formal theories.
Spr CLPS0200 S01 24800 TTh 2:30-3:50(11) (D. Sobel)

CLPS 0210. Human Thinking and Problem-Solving (formerly COGS 0480).
An inter-disciplinary introduction to adult human thinking and reasoning. Covers logical thinking, computational models, reasoning and the scientific method, creativity, intelligence, visual thinking, problem solving in a group setting, and methods of teaching "thinking skills." Students will learn about research findings on these topics and will practice methods for improving their own skills.
Fall CLPS0210 S01 16285 MWF 11:00-11:50(04) (K. Speehr)

CLPS 0400. Brain Damage and the Mind (formerly PSYC 0470).
Brain damage in human subjects can produce dramatic and highly selective impairments in cognitive functioning. This course provides an overview of the major neuropsychological disorders of perception, language, memory, thought, and action. Emphasizes the development of human information processing models for understanding the cognitive deficits observed in brain-damaged patients and the implications of neuropsychological findings for models of normal cognition.
Spr CLPS0400 S01 24801 TTh 9:00-10:20(08) (E. Festa)

CLPS 0500. Perception and Mind (formerly COGS/PSYC 0440).
How do the mind and the brain take physical energy such as light or sound and convert it into our perception of the world? This course examines the behavioral and biological bases of human and animal perceptual systems, including vision, audition, smell, taste, and touch. Particular emphasis is placed on high-level perception and how it relates to other cognitive systems.
Spr CLPS0500 S01 24802 TTh 10:30-11:50(09) (J. Song)

Visual art can be viewed as an exploration of perceptual questions. This course considers the representation of space and time in painting and film from the viewpoint of the science of visual perception. Topics include Renaissance linear perspective, picture perception across cultures, color, form, shape, abstraction, how film editing constructs events, and why Godzilla looks phony. Slide lectures and visual exercises.
Spr CLPS0510 S01 24803 MWF 11:00-11:50(04) (W. Warren)

An examination of children's thinking and cognitive development from infancy to middle childhood. Considers a range of topics including memory, reasoning, categorization, perception, and children's understanding of concepts such as space, time, number, mind, and biology. Major theories of cognitive development are described and evaluated in light of the available psychological data. LILE Fall CLPS0610 S01 15578 MWF 11:00-11:50(04) (D. Sobel)

CLPS 0700. Social Psychology (formerly PSYC 0210).
Examines the theories, findings, and methods of social psychology. Topics include: social cognition (person perception, attitudes), social influence (cultural sources of attitudes, conformity), and social relations (aggression, altruism, prejudice). Students become better informed consumers of
empirical research and acquire a new framework for interpreting social behavior. Applications to historic and current events.

Spr CLPS0700 S01 24804 TTh 1:00-2:20(10) (F. Cushman)

CLPS 0701. Personality (formerly PSYC 0300).
A survey of the major perspectives (psychoanalytic, behavioral, humanistic, etc.) within theories of personality. Particular emphasis is placed on the integration of research and theory.

Spr CLPS0701 S01 24805 TTh 9:00-10:20(08) (B. Hayden)

CLPS 0900. Quantitative Methods in Psychology (formerly COGS/PSYC 0090).
A survey of statistical methods used in the behavioral sciences. Topics include graphical data description, probability theory, confidence intervals, principles of hypothesis testing, analysis of variance, correlation, and regression, and techniques for categorical data. Emphasizes application of statistical methods to empirical data.

Fall CLPS0900 S01 15579 MWF 9:00-9:50(02) (L. Welch)
Spr CLPS0900 S01 24806 MWF 10:00-10:50(03) (J. Wright)

CLPS 1150. Memory and the Brain.
This class is for undergraduate and beginning graduate students of psychology, cognitive neuroscience, and biology interested in to biological research on memory. There are four parts: 1) how neurons are connected and communicate, 2) fundamental issues in the psychology of memory, 3) memory localization in the brain, and 4) consolidation of memory into a permanent store. The course is designed to be accessible to students in a variety of disciplines, but requires background in psychology, cognitive science, or neuroscience. The class will include lecture, writing assignments, and presentations of primary research articles. Prerequisite: CLPS 0010, 0020, 0040, 0200, or NEUR 0010.

Fall CLPS1150 S01 15807 TTh 1:00-2:20(10) (R. Runwell)

CLPS 1180A. Canine Behavior (formerly PSYC 1750B).
Topics include canine perception, cognition, vocalization and socialization. The behavior of wolves and other wild canids is also explored to facilitate our understanding of the domestic dog. This is an advanced seminar for concentrators in Psychology. It is also intended for anyone interested in animal behavior, especially Biology and Neuroscience concentrators. Prerequisites: CLPS 0050E (PSYC 0190A), CLPS 1191 (PSYC 1450), or BIOL 0450. Not open to first year students.

Spr CLPS1180A S01 25669 F 3:00-5:00(15) "To Be Arranged"

CLPS 1191. Animal Behavior Laboratory (formerly PSYC 1450).
This course is designed for students with a serious interest in animal behavior research. Topics include methods in lab and field research, enrichment programs for captive species and conditioning procedures for managing zoo and shelter animals. Prerequisites: CLPS 0900 (COGS/PSYC 0090). Enrollment limited to 12; not open to first year students.

Fall CLPS1191 S01 15583 W 1:00-3:50(06) (R. Colwill)

A laboratory course on the prediction, control, and explanation of the behavior of animals in simple environments. Prerequisite: CLPS 0900 (PSYC/COGS 0090).

Fall CLPS1192 S01 15585 TTh 10:30-11:50(13) (R. Church)

CLPS 1200. Thinking (formerly COGS 1520).
An investigation of conceptual structure, judgment, and inferential processes. The focus is on the relation between empirical evidence, theories, and models of cognitive process and structure. Prerequisite: CLPS 0200 (COGS 0420).

Fall CLPS1200 S01 15588 MWF 1:00-1:50(06) (J. Austerweil)

CLPS 1211. Human and Machine Learning (formerly COGS 1680).
How is human memory like a search engine? Is human knowledge like the internet? What can artificial intelligence and machine learning tell us about the mind? This seminar explores parallels between human cognition and contemporary research in computer science, emphasizing common problems. In addition to the above, topics include simplicity, randomness, coincidences, and causality.

Spr CLPS1211 S01 25741 TTh 2:30-3:50(11) (J. Austerweil)

CLPS 1241. Causal Reasoning (formerly COGS 1860C).
This seminar will concern the principles and processes by which people learn causal knowledge and engage in causal inference, including prediction, explanation, and counterfactual reasoning. Some emphasis will be on probabilistic models of causal inference and on the development of causal reasoning in young children. Enrollment limited to 20 juniors, seniors, and graduate students.

Fall CLPS1241 S01 16423 Th 4:00-6:20(16) (G. Soman)

CLPS 1290. Laboratory in Cognitive Processes (formerly COGS 1530).
Present the experimental way of thinking by pursuing several topics in an interactive computer-based laboratory. Students run experiments as a class and, by the end of the course, run their own experiment. Focus is on experimental design, procedure, analysis, and reporting. Topics include attention, visual imagery, memory, and reasoning. Prerequisites: CLPS 0900 (COGS/PSYC 0090), and either CLPS 0200 (COGS 0420) or CLPS 0500 (COGS 0440); or permission of the instructor.

Fall CLPS1290 S01 15690 TTh 1:00-2:20(10) (K. Speeher)

Provides an introduction to computational modeling of cognition, summarizing traditional approaches and providing experience with state-of-the-art methods. Covers pattern recognition and connectionist networks as well as Bayesian probabilistic models, and illustrates how they have been applied in several key areas in cognitive science, including visual perception and attention, object and face recognition, learning and memory as well as decision-making and reasoning. Focuses on modeling simple laboratory tasks from cognitive psychology. Connections to contemporary research will be emphasized highlighting how computational models may motivate the development of new hypothesis for experiment design in cognitive psychology. Prerequisite: comfort with basic linear algebra and at least one introductory course in Computer Science or programming, or instructor permission.

Spr CLPS1291 S01 24807 MWF 9:00-9:50(02) (T. Serre)

CLPS 1310. Introduction to Phonological Theory (formerly COGS 1210).
Examines some of the classic and current issues regarding sound structure in the world's languages and introduces the theoretical tools needed to solve them. After an introduction to articulatory phonetics and phonemic analysis, it focuses on phonological analysis of different languages, and discusses rule-based and constraint-based approaches to phonology. Implications for language learning and language change are discussed. Prerequisite: CLPS 0030.

Fall CLPS1310 S01 15597 MWF 12:00-12:50(12) (L. Cohen Priva)

CLPS 1330. Introduction to Syntax (formerly COGS 1310).
An in-depth investigation of natural language syntax, an intricate yet highly organized human cognitive system. Focuses primarily on the syntax of English as a means of illustrating the structured nature of a grammatical system, but the broader question at issue is the nature of the rule system in natural language syntax. Prerequisite: CLPS 0030 (COGS 0410).

Spr CLPS1330 S01 24808 TTh 2:30-3:50(11) (L. Kertz)

CLPS 1342. Formal Semantics (formerly COGS 1130).
Model-theoretic approaches to the study of the semantics of natural languages. Develops the tools necessary for an understanding of "classical" formal semantics (the lambda calculus, intensional logic; Montague's treatment of quantification, etc.); then applies these tools to the analysis of natural language semantics; and finally turns to recent developments in formal semantic theory. Prerequisite: some familiarity with syntax or semantics or basic set theory and logic.

Fall CLPS1342 S01 15598 TTh 2:30-3:50(11) (P. Jacobson)

CLPS 1360. Introduction to corpus linguistics.
The study of Linguistics relies on language production data. Language corpora contain various sources of such data, often annotated to include additional information such as syntactic, semantic and phonological properties. Such databases often complement or even replace data sources used in other disciplines. This class aims to train students in the use of some of the tools that are commonly used to access and evaluate data in linguistic corpora. Prerequisite: CLPS 0030. Enrollment limited to 25.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
CLPS 1383B. Issues in Current Syntactic Theory.
This course explores alternatives to "standard" (transformational, "Minimalist" etc.) theories of syntax, especially alternatives that posit that the syntax can be simplified by a rich understanding of semantics. Topics include the analysis of Control, the distribution of pronouns and reflexives, and phenomena such as passive and wh-movement which are typically thought to require movement rules (and hence levels of representation). We will also examine the premises behind X-bar theory. Various constructions will be examined from the point of view of "Categorial Grammar" and related theories. Prerequisite: CLPS 1350.
Fall CLPS1383B S01 15781 M 3:00-5:20(15) (P. Jacobson)

CLPS 1400. The Neural Bases of Cognition (formerly PSYC 1880).
Research using animal models has informed and guided many of the recent advances in our understanding of the brain mechanisms underlying cognition. This seminar course will address topics related to animal models of human cognition. Students learn about how different aspects of the neural bases of cognition are modeled in animals by reviewing the primary research literature. The course is divided into three sections, each addressing one animal model in one cognitive domain. Selected papers will emphasize learning, memory, and attention, but may also address other aspects of cognition, for example decision-making, or cognitive impairment associated with neuropathology or aging. Prerequisite: CLPS 0040 (COGS 0720), CLPS 0400 (PSYC 0470), or NEUR 0010; and CLPS 1190 (PSYC 1030), CLPS 1191 (PSYC 1450), CLPS 1192 (PSYC 1200), or NEUR 1600; or instructor permission. Enrollment limited to 20. Not open to first year students.
Spr CLPS1400 S01 24810 M 2:00-4:50(07) (R. Burwell)

CLPS 1480B. Cognitive Aging and Dementia (formerly PSYC 1830).
This seminar examines the cognitive changes associated with normal aging and age-related dementia (e.g., Alzheimer’s Disease). Topics covered will include changes in the neurocognitive systems mediating memory, perception, and attention. The course is primarily intended as an advanced seminar for junior and senior concentrators in Psychology, but is also intended for other students interested in aging and the neuropsychology of cognition. Recommended prerequisites: Any one of the introductory course in cognitive neuroscience (CLPS 0040 (COGS 0720), CLPS 0400 (PSYC 0470)) or permission of the instructor. Preference will be given to senior concentrators in Psychology and related areas.
Enrollment limited to 20.
Fall CLPS1480B S01 16421 TTh 1:00-2:20(10) (E. Festa)

CLPS 1480C. Cognitive Control Functions of the Prefrontal Cortex.
The prefrontal cortex has long been known to support higher cognitive functions, including working memory, planning, reasoning, and decision making. This seminar offers an in-depth review of recent empirical and theoretical approaches to understanding prefrontal cortex function. This year the course will focus on prefrontal contributions to the cognitive control of declarative memory. Enrollment limited to 20.
Fall CLPS1480CS01 15599 M 3:00-5:20(15) (D. Badre)

This course will train students in the practice and use of functional magnetic resonance imaging (fMRI) as a cognitive neuroscience methodology. Topics covered include MRI physics, the physiological basis of the BOLD signal, experimental design, data collection, statistical analysis, and inference. A practical component of the course includes the opportunity to collect and analyze fMRI data at the Brown MRF. Prerequisites: CLPS 0040 (COGS 0720), CLPS 0400 (PSYC 0470), or NEUR 0010; and CLPS 0900 (PSYC/COGS 0900), or instructor permission. Enrollment limited to 20.
Fall CLPS1490 S01 15600 TTh 9:00-10:20(08) (T. Serre)

CLPS 1491. Neural Modeling Laboratory (formerly COGS 1020).
Numerical simulations of cognitively oriented nervous system models. Discussion of parallel, distributed, associative models: construction, simulation, implications, and use. Prerequisites: MATH 0090, 0100, or equivalent; knowledge of a computer language; some background in neuroscience or cognitive science is helpful.
Spr CLPS1491 S01 24813 MWF 11:00-11:50(04) (J. Anderson)

CLPS 1492. Computational Cognitive Neuroscience (formerly COGS 1460).
We explore neural network models that bridge the gap between biology and cognition. Begins with basic biological and computational properties of individual neurons and networks of neurons. Examines specialized functions of various brain systems (e.g., parietal cortex, frontal cortex, hippocampus, ganglia) and their involvement in various phenomena, including perception, attention, memory, language and higher-level cognition. Includes a lab component in which students get hands on experience with computational neural software, allowing deeper appreciation for how these systems work. Prerequisites: CLPS 0020 (COGS 0010) or CLPS 0200 (COGS 0420); and CLPS 0410 (PSYC 0750) or NEUR 0010.
Fall CLPS1492 S01 15601 TTh 10:30-11:50(13) (M. Frank)

CLPS 1500. Ecological Approach to Perception and Action (formerly COGS 1380).
The ecological approach treats perceiving and acting as activities of agent-environment system rather than an isolated "mind," and offers an alternative to the prevailing computational/representational view. Topics include intentional and direct perception, perception of the 3D environment, visual control of action, dynamics of motor coordination, and self-organization of behavior. Lecture and discussion. Prerequisite (any one of the following): CLPS 0010 (PSYC 0010), CLPS 0020 (COGS 0720), CLPS 0500 (COGS 0740), or NEUR 0190 (PSYC 0790). Prerequisite: CLPS 0510 (PSYC 0110).
Fall CLPS1500 S01 15602 TTh 10:30-11:50(13) (W. Warren)

CLPS 1510. Psychology of Hearing (formerly PSYC 1190).
How do we hear the world around us? In this course, we will examine basic phenomena underlying human auditory perception, focusing on topics such as masking, pitch perception, sound localization, and auditory scene analysis. We will discuss theories of hearing, experimental techniques to evaluate hearing, and the impact of age-related declines in hearing on human psychology. Open to juniors and seniors. Prerequisite: NEUR 0650 or equivalent, or instructor permission.
Fall CLPS1510 S01 15603 MW 8:30-9:50(02) (A. Simmons)

CLPS 1520. Computational Vision.
An introduction to computational models of biological vision summarizing traditional approaches and providing experience with state-of-the-art methods. We will sample topics from low- and mid-level vision including fundamental aspects of image, stereo, motion, surface and color processing to high-level vision including object and action recognition as well as scene understanding. Connections to contemporary research in computer vision and computational neuroscience will be emphasized highlighting how computational models may motivate the development of new hypothesis for the design of experiments in visual perception. Prerequisite: comfort with basic linear algebra and at least one introductory course in Computer Science or programming, or instructor permission.
Spr CLPS1520 S01 24815 TTh 9:00-10:20(08) (T. Serre)

CLPS 1530. 3D Shape Perception (formerly COGS 1860B).
Our ability to move in the environment, recognize and grasp objects, depends enormously on the capacity that the brain has in organizing the visual stimulation in the perceived 3D layout. 3D objects in the world project on the human retina flat images. How does the brain re-transform these flat images into a 3D representation? Enrollment limited to 40.
Spr CLPS1530 S01 24816 Th 4:00-5:20(17) (F. Domin)

One of the main purposes of encoding visual information is to perform visually-guided actions to directly interact with the external world. This seminar will shed light on the behavioral and underlying neural mechanisms involved in integrating perception and cognitive processes, and converting them into action. We will also explore how visuo-motor behavior can provide a useful tool to study a wide range of conscious and unconscious cognitive processes including the current locus of attention, the nature of language representation, spatial representation of number, and high-level decision-making. Prerequisite: CLPS 0010, CLPS 0020, or NEUR 0010. Enrollment limited to 40.
Spr CLPS1560 S01 24817 M 3:00-5:20(13) (J. Song)
CLPS 1570. Perceptual Learning.
This course will focus on perceptual learning and visual plasticity. The goal of this course is to understand the mechanisms of visual perceptual learning and visual and brain plasticity. Perceptual learning is defined as long-term performance improvement as a result of visual experiences. Enrollment limited to 20. Recommended prerequisites: CLPS 1291, 1500, and 1520.
Spr CLPS1570 S01 25054 F 3:00-5:20(15) (T. Watanabe)

CLPS 1571. Visual Consciousness.
This course will focus on consciousness related to visual perception. The goal of this course is to understand the neural correlates of visual consciousness. 1) We will learn about basic neural mechanisms of visual processing and other brain functions. 2) We will discuss philosophical and neuroscientific models of visual consciousness. 3) We will examine the roles of attention, reward, and memory in visual consciousness. 4) We will evaluate recent neuroscientific experiments with animals and humans and their potential to advance the research of consciousness.
Fall CLPS1571 S01 16623 F 3:00-5:20(05) (T. Watanabe)

CLPS 1580B. Visual Attention.
In daily life, most visual scenes are complex and crowded so that our visual systems face a daunting task of processing an enormous amount of information at a given moment. Thus, attentional mechanisms are crucial to select relevant objects/events and guide actions. In this seminar, we will understand behavioral and underlying neural mechanisms involved in visual attention and their interaction with visual cognition such as memory and learning and goal-directed actions. We will also study investigations of spared and impaired patterns of attention-based performances following brain injury. Prerequisite: CLPS 0010 or 0020.
Fall CLPS1580B S01 15604 TTh 10:30-11:50(13) (J. Song)

CLPS 1590. Visualizing Vision (formerly COGS 1440).
This course provides hands-on experience in studying vision using computer graphics combined with visual psychophysics. Students will gain a better understanding of how images are formed, how one employs properties of image formation in the experimental study of vision, and how the perception of complex images function in biological systems. Labs will rely on matlab and several computer graphics packages (e.g. Lightwave). Enrollment limited to 20.
Spr CLPS1590 S01 24818 TTh 1:00-2:20(10) (F. Domini)

CLPS 1610. Cognitive Development (formerly COGS 1180).
How do infant and preschoolers learn about the world? We will examine children’s understanding of the physical world, psychological kinds, biological entities, number, objects, and space. Students are expected to read and comment on both empirical and theoretical primary source articles, to participate in weekly discussions, and to complete a set of writing assignments. Prerequisites: CLPS 0600 (PSYC0810), CLPS 0610 (COGS0630), or EDUC0800.
Spr CLPS1610 S01 24821 M 3:00-5:20(13) (D. Sobel)

CLPS 1620. Developmental Cognitive Neuroscience (formerly COGS 1190).
This course will examine fundamental topics in cognitive development from the point of view of the developing brain. Topics of interest will include developing abilities in perception, attention, action, object concepts, memory, learning, planning, language, and social cognition. Typical and atypical brain development will be considered. Prerequisite: One of CLPS 0600 (PSYC0810), CLPS 0610 (COGS0630), or EDUC0800, or permission of the instructor. Enrollment limited to 40.
Fall CLPS1620 S01 15605 TTh 6:30-7:50(14) (D. Amso)

CLPS 1621. The Developing Brain (formerly PSYC 1750C).
An analysis of brain development, focusing on neural substrates of psychological processes in both animals and humans. Prerequisites: CLPS 0010 (PSYC 0010) or NEUR 0010. Not open to first year students or sophomores. Instructor permission required.
Spr CLPS1621 S01 24826 TTh 2:30-3:50(11) (A. Simmons)

CLPS 1700. Abnormal Psychology (formerly PSYC 1330).
The study of anxiety, stress, and neurotic disorders, psychosomatic disorders, deviant social behavior, affective disorders, and schizophrenia. Considered theories of etiology (causes) and methods of therapeutic treatment, case studies, experimental research, and clinical research.
Fall CLPS1700 S01 15606 TTh 9:00-10:20(08) (B. Hayden)

CLPS 1730. Psychology in Business and Economics.
The goal of this course is to explore emerging themes at the intersection of psychological science, business, and behavioral economics. Psychologists are primarily interested in detecting limits to human rationality, whereas economics tends to proceed with the rational-actor model. In business, questions arise of how theoretical models and empirical findings related to the practice of managerial decision-making. Investigations of power and the psychological impact of money are relatively recent additions to the suite of research topics. New methodologies, such as neuro-imaging have led to advances not represented in the traditional framework of organizational psychology. Enrollment limited to 20 junior and senior Psychology concentrators.
Fall CLPS1730 S01 15608 MW 9:00-9:50(02) (J. Krueger)

CLPS 1790. Personality and Clinical Assessment (formerly PSYC 1110).
Examines methods used in the study of child and adult personality, including microanalysis of social interactions, observer report, self report, test data, and life outcome data. Standardized personality assessment instruments will be examined in the context of their reliability, predictive and construct validity. Students will design research projects using these methods, collect and analyze data, give oral presentations, and prepare a written report of their research. Prerequisites: CLPS 0701 (PSYC 0300), and CLPS 0900 (PSYC/COGS 0090) or equivalent. Enrollment limited to 27.
Fall CLPS1790 S01 15609 WF 2:00-3:20(07) (J. Wright)

CLPS 1791. Laboratory in Social Cognition (formerly PSYC 1540).
Examines principles of experimental design and analysis in the context of classic and contemporary research in social cognition. Students replicate and extend several studies on topics such as person perception, social stereotyping, or judgment and decision making. Students will participate in the design of these studies, gather their own data, analyze them, and report the findings in oral presentations and written reports. Prerequisites: CLPS 0010 (PSYC 0010), CLPS 0700 (PSYC 0210), and CLPS 0900 (PSYC/COGS 0090). Enrollment limited to 27.
Spr CLPS1791 S01 24824 TTh 10:30-11:50(09) (J. Krueger)

CLPS 1820. Language and the Brain (formerly COGS 1480).
This course will examine the neural systems underlying language processing. Major focus will be on effects of brain injury on speaking and understanding in left hemisphere-damaged patients who have aphasia, right hemisphere-damaged patients, and split-brain patients. Behavioral, electrophysiological and neuroimaging evidence will be investigated.
Spr CLPS1820 S01 24825 MWF 10:00-10:50(03) (S. Blumstein)

Examines general philosophical and theoretical issues that cut across cognitive science. Each student writes a substantial paper on a topic in cognitive science. Required of cognitive science concentrators. Enrollment limited to concentrators in the 7th semester or beyond, and, by permission, to others who have significant course background in cognitive science.
Spr CLPS1900 S01 24828 MWF 1:00-1:50(06) (J. Anderson)

Independent study or directed research in cognitive science. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Instructor permission required.

Required of all ScB concentrators and Honors students in psychology. Instructor permission required. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Introduces students to the CLPS Department and the University; provides a brief history of the disciplines, philosophical foundations, and ethical treatment of human subjects; provides professional training, such as...
CLPS 2901. Graduate First Year Project Research (formerly PSYC 2000).
Please check Banner for the correct section number and CRN to use when registering for this course.

CLPS 2902. Graduate First Year Project Research (formerly PSYC 2010).
Please check Banner for the correct section number and CRN to use when registering for this course. Instructor permission required.

CLPS 2905. Practicum in Teaching (formerly COGS/PSYC 2050).
Each student will assist a designated faculty member in teaching a course in cognitive science or related discipline. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Instructor permission required.

CLPS 2906. Directed Graduate Research (formerly COGS 2980/2981, PSYC 2930).
No description available. Instructor permission required.

CLPS 2100. Core Topics in Animal and Comparative Behavior (formerly PSYC 2070).
No description available. Instructor permission required.

CLPS 2200. Core Topics in Cognition (formerly COGS 2200A).
No description available.

CLPS 2450. Exchange Scholar Program (formerly COGS 2450).

CLPS 2800D. Core Topics in Developmental Psychology.
This Core is an overview of issues in the study of cognitive and social development. The goals are to: (1) provide breadth by reviewing the major theoretical approaches, classic tasks, and paradigms for studying and understanding development (constructivist, nativist, biological, information processing, and systems approaches) and (2) provide depth by considering the strengths and shortcomings of each theory and the pros and cons of different research strategies for investigating the central questions of cognitive and social development (3) provide a background on goals of developmental studies (characterizing change, underlying change mechanisms, generality of change, and stability of behaviors across individuals and circumstances).

CLPS 2906. Experimental Design (formerly PSYC 2060).
The course designed for students at the intermediate level or above and will cover t-tests, power analysis, correlation, simple and multiple linear regression, logistic regression, analysis or variance, non-parametric tests, randomization and bootstrapping, among others. Instructor permission required. Open to graduate students only.

CLPS 2908. Multivariate Statistical Techniques (formerly PSYC 2080).
This course covers the basic multivariate techniques currently used in psychology and related sciences: multiple regression, logistic regression, principal components and factor analysis, multivariate analysis of variance, discriminant function analysis, and log-linear analysis. Students will learn these techniques' conceptual foundations, their proper selection for a given data set, and the interpretation of computer output from statistical analysis packages (primarily SPSS). Enrollment limited to 20 graduate students.

CLPS 2970. Preliminary Examination Preparation (formerly COGS/PSYC 2970).
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.

CLPS 2990. Thesis Preparation (formerly COGS/PSYC 2990).
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.

Linguistics

LING 0030. Introduction to Linguistic Theory (CLPS 0030).
Interested students must register for CLPS 0030.

LING 1310. Introduction to Phonological Theory (CLPS 1310).
Interested students must register for CLPS 1310.

LING 1330. Introduction to Syntax (CLPS 1330).
Interested students must register for CLPS 1330.

LING 1342. Formal Semantics (CLPS 1342).
Interested students must register for CLPS 1342.

LING 1360. Introduction to corpus linguistics (CLPS 1360).
Interested students must register for CLPS 1360.

LING 1383B. Issues in Current Syntactic Theory (CLPS 1383B).
Interested students must register for CLPS 1383B.

Humanities

In an arguably “post-secular” age, conflicts over the relationship between religion and law have moved to the forefront of international debate. In our multicultural/globalized world, such conflicts often provoke contestation over the very possibility of universal definitions of either “religion” or “law,” let alone their proper relationship. Our interdisciplinary inquiries on these questions will include concrete legal disputes in domestic/international courts; theoretical debates over the construction of “religion” in fields such as anthropology, religious studies, and philosophy; and historiographical controversies about the relationship between “secularization” and sovereignty, particularly in light of the legacy of colonialism. Enrollment limited to 20 juniors, seniors, and graduate students.

Many of today’s dissident movements adopt leaderless/self-managed practices presenting us with radically different notions of what it means to self-determine. We will situate these movements within historical struggles for autonomy. By “autonomy" we understand the quality or state of being self-governing/self-determining. By "self," we understand not the self-originating/self-determining/rational individual constructed by Enlightenment liberal humanism, but rather, a diversity of self-defined collectivities made up of social individuals. We will consider runaway slave societies (Western Hemisphere), Operaismo (Italy), Zapatistas (Mexico), Tahrir Square’s protesters (Egypt), Occupy Movement (US), Shackdwellers (South Africa), refugee/migrant movements. Readings include Marx/ Cleaver/Linebaugh/Rediker/Negri/Trenti/Vimo/Berardi/ Hardaway/others, and documents from movements we engage. Enrollment limited to 20 juniors and seniors.

Pragmatism is a distinctive American school of thought that sees the goal of philosophy not as the apprehension of timeless truths but as a practical project of bettering individual lives and society as a whole. Pragmatists such as William James and John Dewey were devoted to deepening America’s commitment to democracy. Both saw an important place for an unconventional sort of religion in democratic life. This course explores the pragmatist thought of James, Dewey, and others, looking especially
at their views on religion and politics. We also will explore the influence
of anti-semitism on Barack Obama. Enrollment limited to 20 juniors and
seniors.

Fall HMAN1970F S01 16162 Th 4:00-6:20(16) (S. Bush)

Concepts are usually thought of as cognitive tools, constituents of thought
used for categorization, inference, memory, learning, and decision-making.
We shall think about them rather as effects of a language game of a
special kind whose rules change across genres, media, and discursive
regimes. Looking for these rules and analyzing them comparatively, we
shall ask how concepts are formed, displayed, and performed, when do
we need them and can we do without them. We shall read philosophers
(Piato, Descartes, Kant, Heidegger, Wittgenstein, Foucault, Derrida,
and Deleuze), intellectual historians (Koselleck, Skinner), literary works (Kleist,
Kafka, Musil), and look at some conceptual art. Enrollment limited to 20.
Spr HMAN1970Q S01 25414 Th 4:00-6:20(17) (A. Ophir)

HMAN 1971A. City Spaces, City Memories.
Since 9/11, New York City has become a site of collective memory, in
which a variety of disciplines have asked how we can memorialize people
and the buildings that house them. The city, however, has been a space
of memory for much of the twentieth century. This course will discuss
20th and 21st century New York City to consider the ways people have
located personal and the communal pasts in the city’s spaces, especially
in its buildings. We will examine novels, journalism, memoirs, architectural
criticism and photography, along with memorials and tourist attractions.
Enrollment limited to 20 juniors and seniors.

Fall HMAN1971A S01 16696 W 3:00-5:20(17) (E. Katz)

HMAN 1971B. Paris Archive: The Capital of the Nineteenth Century,
1848-1871.
We will take as our starting-point Walter Benjamin’s notes for his
unfinished masterwork "The Arcades Project." The Passagenwerke
comprise a massive index of citations/observations on the nature/form of
the city of Paris in every aspect of its cultural/political life in the 19th/20th
centuries. We will read works from which he culled his aphorisms/
investigate the present status of each of his assertions/citations, with
historical/contemporary readings. We will discuss the nature of historical/
archival interpretation and try to bring together artifacts – textual/visual/
sensorial - that might constitute a "Museum" of 19th Century Paris.
Taught by Prof. Anthony Vidler. Graduate students encouraged to register.
Enrollment limited to 20.

Fall HMAN1971B S01 16477 T 4:00-6:20(18) (A. Vidler)

HMAN 2970B. And What About the Human?.
This course will think about the question posed by radical anti-colonial
thought: and what about the Human? Through the writings of Foucault,
Arendt, Heidegger, Fanon, Wynter and Cesaire, as well as the novels of
Lamming and Vera, we will examine the meaning of the "death of Man" in
contemporary critical thought and theory, and the ways in which western
anti-humanism thought claims to replace the figure of the human with
discourse and language, while also contrasting the ways in which radical
anti-colonial thought has constructed the figure of the human. Enrollment
limited to 20.
Spr HMAN2970B S01 25314 T 4:00-6:20(16) (B. Bogues)

HMAN 2970F. Nationalism, Colonialism, and International Law.
This seminar explores the internationalism of the past century in terms
of its relationship to separatist nationalism, anti-colonialism, and religious
radicalism. It takes as its point of departure the dramatic political, cultural,
and intellectual transformations that followed in the wake of World War I.
A guiding hypothesis of the seminar is that internationalism cannot be
understood apart from its complex relationship to "identity" broadly
conceived – identity of local/transnational groups as well as the identity
of internationalists themselves. Readings will be drawn from law/cultural
studies/politics/postcolonial theory. Enrollment limited to 20 graduate
students. Advanced juniors/seniors by permission only.

Fall HMAN2970F S01 15994 M 3:30-5:50(15) (N. Berman)

HMAN 2970J. Realism, Idealism, and Modernity (II).
This course continues discussion of realism and idealism as alternative
responses to the challenges of modernity. We begin with Schelling’s
System of Transcendental Idealism and selections from Hegel;
subsequent authors include Nietzsche, a Neo-Hegelian such as F.H.
Bradly, a Neo-Kantian such as Ernst Cassirer, a pragmatist such as
John Dewey or C.I. Lewis, and more recent philosophers such as Rudolf
Carnap, Thomas Kuhn, Jurgen Habermas, and others. We will especially
consider how recent versions of conceptual relativism such as Kuhn’s
draw on both the realist/idealist traditions to model the modern scientific
outlook. Undergraduates with instructor permission. HMAN 2970H helpful
but not required. Enrollment limited to 20.

Fall HMAN2970J S01 15484 W 3:00-5:20(17) (P. Guyer)

HMAN 2970L. History and Theory of Catastrophes.
This seminar proposes a philosophical history of catastrophes (large-scale
disasters) and uses it as a vantage point for questioning contemporary
critiques of modernity/secularization. Starting from Biblical narratives of
God-made disasters, we will follow God’s role in the way north-western
societies interpret/cope with catastrophes. Reading/viewing documentation
of catastrophes from Defoe’s Journal of the Plague Year to Cooper’s/
Block’s/Spike Leo’s reports on Hurricane Katrina, we will examine the
emergence of the state as a major actor responsible for preparing for
catastrophes/mitigating their effects, but often also for their generation,
and discuss the globalization of catastrophes and with catastrophes as
special sites of globalization. Enrollment limited to 20.

Fall HMAN2970L S01 16107 Th 1:00-3:20(10) (A. Ophir)

HMAN 2970M. Race, Space, and Struggle.
This seminar will examine the stark realities of spatial racialization:
ghettoes, slave plantations, prisons, refugee camps, and border walls,
situating the creation of these spaces as violent responses to broader
social/economic crises. At the same time, this course will highlight the
the always already existing practices of resistance by exploring how
inhabitants these spaces responded to their marginalization. Because
these spaces are also lived, our understanding of anti-racist struggle will
encompass a broad array of everyday practices, the appropriation
of space, artistic expressions of resistance, and everyday forms of
cooperation/creativity, alongside more traditional forms of organized
interventions. (Course prerequisites: none) Enrollment limited to 20.
Spr HMAN2970M S01 25396 T 4:00-6:20(16) (L. Quiquivix)

Comparative Literature

COLT 0510K. The 1001 Nights.
Explores the origins, performance, reception, adaptation, and translation of
the 1001 Nights, one of the most beloved and influential story collections in
world literature. We will spend the semester in the company of genie,
princes, liars, slaves, mass murderers, orientalists, and Walt Disney, and
will consider the Nights in the context of its various literary, artistic, and
cinematic afterlives.
Spr COLT0510K S01 25212 TTh 2:30-3:50(11) (E. Muhanna)

COLT 0610D. Rites of Passage.
Examines a seemingly universal theme-coming of age-by focusing on
texts from disparate periods and cultures. Proposes that notions of
"growing up" are profoundly inflected by issues of class, gender and race,
and that the literary representation of these matters changes drastically
over time. Texts from the Middle Ages to the present; authors drawn from
Chretien de Troyes, Quevedo, Prevoit, Balzac, Bronte, Twain,
Faulkner, Vesaas, Rhy, Satrapi and Foer. Enrollment limited to 20 first
year students. FYS

Fall COLT0610D S01 14342 TTh 1:00-2:20(10) (A. Weinstein)

Examines the narrative of detection, beginning with the great dramatic
whodunit (and mystery of identity) Oedipus Rex. Literary texts which
follow a trail of knowledge, whether to establish a fact (who killed
Laura?) or reveal an identity (who is Oedipus?) follow in Sophocles’
footsteps. We read Sophocles’ intellectual children. Readings include: Hamlet,
The Murders in the Rue Morgue, The Woman in White, and other classic
texts, plays, and novels. We also analyse seminal films of the genre, including
Laure and Vertigo. Will include the twentieth-century detective story, with
particular attention to women writers and the genre of the female private
eye.

Fall COLT0610L S01 14400 MWF 2:00-2:50(07) (M. Lerulli)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
COLT 0710W. Cultures of Colonialism: Palestine/Israel.
Examines the history and literary production of the Israeli-Palestinian colonial encounter from 1948 to the present. Aims to delineate the deep links between domestic culture and colonialism in Israel-Palestine by raising questions about statehood, dispossession, and exclusion in the imaginaries of both peoples and by examining novels in relation to the ethical and political imperatives of settler-colonial dynamics. Authors include: David Grossman, Emile Habibi, Jabra I. Jabra, Sahar Khalifah, Kana’an Amoo Qz. and A. B. Yehoshua. Sophomore seminar. Enrollment limited to 20 sophomores.
Fall COLT0710W S01 16212 T 4:00-6:20(18) (A. Abu-Manneh)

COLT 0810I. Tales and Talemakers of the Non-Western World.
Examines many forms of storytelling in Asia, from the Epic of Gilgamesh and the Arabian Nights Entertainments to works of history and fiction in China and Japan. The material is intended to follow the evolution of non-western narratives from mythological, historical and fictional sources in a variety of cultural contexts. Topics will include myth and ritual, the problem of epic, tales of love and the fantastic, etc.
Fall COLT0810I S01 14343 MWF 12:00-12:50(12) (D. Levy)

COLT 0810O. Civilization and Its Discontents.
Investigates the age-old tension between order and chaos as a central dynamic in the making and interpretation of literature. Texts will be drawn from drama, fiction and poetry from Antiquity to the present. Authors include Sophocles, Shakespeare, Racine, Beckett, Prevost, Bronte, Faulkner, Morrison, Blake, Whitman, Dickinson, and Rich.
Fall COLT0810O S01 14344 TTh 10:30-11:50(13) (A. Weinstein)

COLT 0811B. Believers, Agnostics, and Atheists in Contemporary Fiction (JUDS 0050A).
Interested students must register for JUDS 0050A.
Fall COLT0811B S01 15908 Arranged 'To Be Arranged'

COLT 0811L. Catastrophic Communities (ENGL 0710K).
Interested students must register for ENGL 0710K.
Spr COLT0811L S01 28167 Arranged 'To Be Arranged'

COLT 0811N. Poetics of Madness: Aspects of Literary Insanity.
Surveys a wide range of literary texts aimed primarily to trace the long process of transition from pre-modern to modern conceptions of madness, and to codify the symbolic logic and discursive modalities underlying its respective representations. Spanning several centuries of artistic process of transition from pre-modern to modern conceptions of madness, the way we talk about human questions in a work of art. Secondary readings include David Graeber, Marc Shell, and Richard Seaford. Works of art may include: David Grossman, Emile Habibi, Jabra I. Jabra, Sahar Khalifah, Kana’an Amoo Qz. and A. B. Yehoshua. Sophomore seminar. Enrollment limited to 20 sophomores.
Fall COLT0811N S01 23800 MW 2:00-2:50(07) (P. Saval)

COLT 0811O. Desire and Sexuality in Arabic Literature.
Explores representations of desire and sexuality in classical and modern Arabic literature. We will also look at visual and literary texts from the European orientalist tradition. Themes include religion and gender relations, homosexuality, marriage and the family, and the legacy of medieval Arabic poetic, folkloric, legal, and medical engagements with the body. Readings by Salih, Darwish, Djebbar and others.
Fall COLT0811O S01 14473 TTh 1:00-2:20(10) (R. Creswell)

COLT 0811P. Stigma.
Some people must navigate through life with damaged or spoiled identities, or with identities that are liable at any moment to be exposed as damaged or spoiled. To understand more deeply the diverse forms of stigmatizing and stigmatized behavior, we will read classic works of social science (Du Bois, Goffman, Cobb and Sennett, Chow) in conjunction with significant works of fiction (Hawthorne, Eliot, Hardy, Fontane, Hughes, Faulkner).
Fall COLT0811P S01 14501 TTh 6:30-7:50(14) (K. Haynes)

COLT 0811Q. Mediterranean Cities.
Athens, Istanbul, Alexandria: three iconic cities of the Levant that will serve as points of reference in a focused exploration of East Mediterranean history and culture. Reads and discusses a number of texts that span several decades and a wide range of styles and genres – from realism to postmodernism and from autobiography to thriller – but exhibit a common interest in the urban landscape and its relationship to basic aspects of human existence: identity and ideology, memory and desire, isolation and connection, hope and fear, life and death. Authors include Theotokas, Seferis, Taksitis, Durrell, Mahfouz, Kharrat, Tanpinar, Shafak, Altun.
Fall COLT0811Q S01 15345 TTh 2:30-3:50(11) (N. Panou)

COLT 0811R. Comedy in Arabic Literature.
Modern Arabic literature is often thought of as a literature of resistance, defined by its relation to a history of conflict. But there is an equally deep tradition in Arabic with its roots in the comic, the grotesque, and the absurd. This course will serve as an introduction to ancient and contemporary theories of comedy, as well as an investigation of comic texts and films in Arabic. We will pay special attention to the relations between the Russian and Arabic comic traditions. With readings by Gogol, Bakhtin, al-Hakim, Habibi, Cossery, and others.
Spr COLT0811R S01 23887 TTh 1:00-2:20(10) (R. Creswell)

Interested students must register for MCM 0901K.
Fall COLT0811T S01 16036 Arranged 'To Be Arranged'

COLT 1210. Introduction to the Theory of Literature.
An historical introduction to problems of literary theory from the classical to the postmodern. Issues to be examined include mimesis, rhetoric, hermeneutics, history, psychoanalysis, formalism and ideological criticism (questions of race, gender, sexuality, postcolonialism). Primarily for advanced undergraduates. Lectures, discussions; several short papers.
Fall COLT1210 S01 14345 MW 1:00-1:50(06) (S. Bernstein)

COLT 1310D. Between Gods and Beasts: The Renaissance Ovid (ENGL 1360S).
Interested students must register for ENGL 1360S.
Fall COLT1310D S01 15894 Arranged 'To Be Arranged'

COLT 1410M. Shakespeare and Philosophy.
Explores the relationship between Shakespeare and philosophy. Readings include philosophers who have written about Shakespeare (Hegel, Nietzsche, Cavell, and others), as well as philosophers who may illuminate interpretive problems in Shakespeare (Plato, Seneca, Spinoza, and others).
Fall COLT1410M S01 15342 MWF 11:00-11:50(04) (P. Saval)

COLT 1410S. Classical Tragedy.
This course will read the great Greek tragedies of Aeschylus, Sophocles, and Euripides, and some Saracenic tragedy. We will then read Renaissance versions of these plays, often in a contemporary context. We will also study tragic monologues, especially those of Shakespeare, and some Senecan tragedy. We will then read Renaissance and later tragedies that use the classical world as a setting, such as Antony and Cleopatra, Julius Caesar, and tragedies that rewrite classical themes, including O’Neill’s Mourning Becomes Electra.
Spr COLT1410S S01 23801 MWF 1:00-1:50(06) (M. Ierulli)

COLT 1410X. Drama and Debt.
Explores the representation of debt in drama. The way we talk about debt is difficult to disentangle from the way we talk about other social obligations. For this reason the category of debt can illuminate profound human questions in a work of art. Secondary readings include David Graeber, Marc Shell, and Richard Seafood. Works of art may include Sophocles, Shakespeare, and Ibsen. Enrollment limited to 20.
Fall COLT1410X S01 15343 M 3:00-5:20(15) (P. Saval)

COLT 1410Y. Shakespeare and Embodiment (ENGL 1360Z).
Interested students must register for ENGL 1360Z.
Spr COLT1410Y S01 28168 Arranged 'To Be Arranged'

In East Asian Buddhist culture, the mirror is a symbol of the mind in both its intellectual and emotional aspects. These masterworks detail the lives and loves of Prince Genji, cygnus of the medieval Japanese court, and Jia Baoyu, the last hope of an influential Chinese clan during the reign of Manchus. We examine both works as well as the sources of Genji and literary aesthetics of the Tang dynasty. Prerequisites: CO 71, RS 83 or 88, or permission of the instructor.
Spr COLT1420B S01 23802 TTh 2:30-3:50(11) (D. Levy)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
COLT 1421W. Blast from the Past: The Historical Novel. Focuses on a popular literary genre known as the historical novel. We will discuss its defining characteristics, cultural meanings, and basic differences from other types of fiction. We will also explore larger theoretical issues that are intricately related to the development and scope of the genre: the representation of the past and its relationship to the present; the creative integration of the gaps between factual history and lived experience; and finally the complex interaction between authenticity and fictionality, exemplarity and specificity, temporality and detachment. Authors include Flaubert, Yourencar, Kadare, Pamuk, Calvino, Lampedusa, Roidis, and Galanaki.

Spr COLT 1421W S01 25214 MWF 11:00-11:50(04) (N. Panou)

COLT 1421X. Fairy Tales and Culture (FREN 1330A). Interested students must register for FREN 1330A.

Fall COLT 1421X S01 16419 Arranged 'To Be Arranged'

COLT 1430D. Critical Approaches to Chinese Poetry. Examination of works of Chinese poetry of several forms and periods in the context of Chinese poetic criticism. Knowledge of Chinese not required, but provisions for working with original texts will be made for students of Chinese language.

Spr COLT 1430D S01 23903 TTh 10:30-11:50(09) (D. Levy)

COLT 1430I. Poetry of Europe: Montale, Celan, Hill. The fifty years between the Second World War and the formation of the European Union was a period in which the meaning of “Europe” was placed under great strain. The class will examine the strains and debates about Europe within the lyric poetry of several literary traditions. It will take the form of close historical, formal, and critical readings of three books of poems in their entirety: Montale’s The Storm and Others (1956), Celan’s No-One’s Rose (1963), and Hill’s Canaan (1997). Enrollment limited to 25.

Fall COLT 1430I S01 15388 W 3:00-5:20(17) (K. Haynes)

COLT 1430L. Voices of Romanticism. Readings of lyric poetry in the European Romantic tradition. Focus on problems of lyric subjectivity and representation, and the rhetoric of "voice." Emphasis on formal features of poetry. The course will be based on close reading and frequent writing assignments. Readings from Wordsworth, Shelley, Keats, Goethe, Novalis, Hugo, Nerval, Lamartine, Baudelaire and others. Knowledge of French or German required, or by permission.

Fall COLT 1430L S01 14402 MWF 11:00-11:50(04) (S. Bernstein)

COLT 1430X. The Poetry of Decolonization. What is the role of poetry in the struggle for decolonization? How does this poetry re-communicate the native landscape and retell the story of the nation? This course will be centrally concerned with poets from the Americas, Ireland, and the Middle East. We will ask how these poets propose to speak for a wider community, what sorts of solidarities they imagine, and what room they leave for critique. With readings by Whitman, Neruda, Yeats, Heaney, and Davis; critical readings by Said, Butler, and Hoffman.

Fall COLT 1430X S01 14502 TTh 9:00-10:20(08) (R. Creswell)

COLT 1430Y. Forms of Life. Do poetic forms and forms of life bear a resemblance? How do Ovid, Rilke, and Vicky Heann form the animal and the human? How is love formed in Petrarch, Shakespeare, and Berryman? What is city life in Catullus, Baudelaire, or John Ashbery? What is nature for Vergil, Wordsworth, Robert Frost or Mary Oliver? What makes poems formal objects? Are they also forms of nature, thought, being? Weekly writing workshop in criticism. Enrollment limited to 20.

Spr COLT 1430Y S01 24632 TTh 9:00-10:20(08) (S. Foley)

COLT 1430Z. The Platonicism of Shakespeare’s Sonnets. It is well-known that Shakespeare’s Sonnets exhibit a variety of Platonic concerns, including the erotic desire for the beautiful, the problem of being and seeming, and the relationship between madness and poetry. This course will attempt an explicit engagement with those Platonic themes by reading the Sonnets together with Plato’s dialogues, particularly the Symposium and Phaedrus. Enrollment limited to 20.

Spr COLT 1430Z S01 24634 Th 4:00-6:20(17) (P. Saval)

COLT 1440B. Killer Love: Passion and Crime in Fiction and Film. Discusses textual and cinematic representations of criminal passion and its ambiguous relationship to religious, moral, and social norms. We will focus on extreme forms of intimacy both as a thematic choice of cultural production and as a symbolic medium of communication. Why is it that art so often explores unsanctioned emotions and deviant behaviors? What is at stake when narratives capitalize on violent manifestations of desire? In what ways is the semantics of excessive love related to conceptions of subjectivity, sociability, and sexuality? What role does it play in the creative process itself?

Fall COLT 1440B S01 14403 TTh 6:30-7:50(14) (N. Panou)

COLT 1440F. 1948 Photo Album: From Palestine To Israel. Why do we name the "Israeli-Palestinian conflict" as we do? The purpose of this class is to use photographs -- alongside historical and literary documents—to question the framework of a “national conflict” and study its emergence as a given, unquestioned and axiomatic scheme for any historical narrative of that period. Reading archival material and post-colonial and photography theories, each week we shall study one photograph taken in 1948, reconstructing the photography event as well as its myriad relations among the protagonists involved and its after life as an archived image, to include photographed persons, photographers, editors, journalists, politicians, and more.

Fall COLT 1440F S01 15979 MWF 12:00-12:50(12) (A. Azoulay)

COLT 1440G. Islam and Liberalism. The social and political upheavals collectively known as the Arab Spring have provoked a new installment in the centuries-old debate about the relationship of Islam to liberal thought. This course explores the philosophical and political genealogies of that debate through the lens of contemporary literature, film, television, graphic art, radio, social media, and the press. Knowledge of Arabic encouraged but not required.

Spr COLT 1440G S01 25324 TTh 10:30-11:50(09) (E. Mhanna)

COLT 1610I. Getting Emotional: Passionate Theories (ENGL 1560W). Interested students must register for ENGL 1560W.

Spr COLT 1610I S01 25164 Arranged 'To Be Arranged'

COLT 1610J. Holocaust Literature (JUDS 1820). Interested students must register for JUDS 1820.

Spr COLT 1610J S01 25169 Arranged 'To Be Arranged'

COLT 1710B. Advanced Translation (LITR 1010F). Interested students must register for LITR 1010F.

Spr COLT 1710B S01 25320 Arranged 'To Be Arranged'

COLT 1810G. Fiction and History. How the historical fiction that has flourished over the past three decades challenges the notions of objectivity and totalization, while providing alternative viewpoints for the reconstruction and reinterpretation of the past. Authors considered include Grass, Doctorow, Delillo, Garcia-Márquez, Allende, Danticat and Agualusa. Theoretical texts by White, LaCapra, Benjamin, Ricoeur, and Chartier. Films such as The Official Story and Europa, Europa will be viewed and incorporated into the discussions. Conducted in English. Prerequisite: two previous courses in literature. Enrollment limited to 30. Instructor permission required.

Spr COLT 1810G S01 23878 W 3:00-5:20(14) (L. Valente)

COLT 1810N. Freud: Writer and Reader. A broad survey of Freud’s writings, with particular emphasis on psychoanalysis’ relevance to literary theory and cultural analysis. Readings include Freud’s major works, as well as secondary sources focused on applications to literary studies.

Fall COLT 1810N S01 14404 Th 4:00-6:20(16) (S. Stewart-Steinberg)

COLT 1811D. Reading Revolution, Representations of Cuba, 1959-The Present. Considers the cultural and ideological impact of the Cuban revolution inside and outside Cuba. Starting in the 1960s, reads Latin American "boom" novels, European theorists and U.S. civil rights activists. Moving to today, addresses post-Soviet Cuba’s literary production and the impact
of new technologies on culture, as well as political change under Raúl Castro. Fiction, film and essays by Castro, Sartre, García Márquez, Reinaldo Arenas, Antonio José Ponte, Fernando Pérez and others. Excellent preparation for the Brown-in-Cuba program. DVPS

Fall COLT1811D S01 14503 TTh 9:00-10:20(08) (E. Whitfield)

COLT 1811L. Travel and Tourism through the Ages. The travel diary, whether prompted by pleasure, pilgrimage, official duty, scientific exploration, or profit, emerges as a prominent genre in virtually all times and cultures. Readings include literary accounts of actual travels, such as the autobiographical “slave narratives” recounting involuntary displacement - typified by The Life of Olaudah Equinao - and purely fictive work, such as the medieval Mandeville’s Travels, and metaphorical narratives of spiritual quests.

Spr COLT1811L S01 23806 MWF 10:00-10:50(03) (M. Viswanathan)

COLT 1811U. Literature and the Arts. Readings in the apparitions and articulations of the arts in fiction, philosophy, criticism and poetry. Focus on the interaction between language and other media, the figure of the artist, problems of expression and performance. Readings from Diderot, Hegel, Balzac, Hoffmann, Baudelaire, Poe, Nietzsche, Wagner and Mann.

Spr COLT1811U S01 25403 MWF 11:00-11:50(04) (S. Bernstein)

COLT 1812H. “Women’s Literary Make-up”: Mirrors, Maquillage and the Tenth Muse. Focuses on the problem of creative inspiration for women writers and how the pursuit of aesthetic perfection, both somatic and literary as well as their interrelation, becomes a recurring motif in women’s writing from various traditions. Readings will include fiction and poetry from the English, Japanese, and Arab traditions, both modern and pre-modern. This is an undergraduate seminar open to juniors and seniors. Prerequisite: coursework in literature and at least one course in gender studies/women’s studies. Instructor permission required.

Spr COLT1812HS01 23807 F 3:00-5:20(15) (M. Viswanathan)

COLT 1812U. Queer Relations: Aesthetics and Sexuality (ENGL 1900R). Interested students must register for ENGL 1900R.

Fall COLT1812US01 15895 Arranged “To Be Arranged”

COLT 1813L. The Colonial and the Postcolonial Marvelous. A celebration and critique of the marvelous in Spanish American and related literatures (French Caribbean, Brazilian). We follow the marvelous from European exoticizing of the New World during the colonial period to its postcolonial incarnations in “magical realism” and beyond. We attend particularly to the politics and marketing of the marvelous in writers including Columbus, Sor Juana Inés de la Cruz, Espinuel, Carpentier, García Márquez, and Chamoiseau. Readings in English, though you may read texts in the original French, Spanish, or Portuguese.

Fall COLT1813L S01 14517 TTh 2:30-3:50(11) (S. Merrim)

COLT 1813J. Berlin: Dissonance, Division, Revision. In the twentieth century, Berlin was the city where Western political conflict took its most dramatically visible form. This course studies the history, culture, and literature of Berlin, focusing in particular on the seven decades between the failed 1919 revolution and the fall of the Wall in 1989. Literature and cinema will be emphasized (Benjamin, Döblin, Isherwood, Kästner, and other authors; several films from the silent era onward), but attention will also be paid to political history, to the history of art and cabaret, and to Berlin’s architecture and urban space.

Fall COLT1813J S01 14518 MWF 10:00-10:50(03) (M. Redfield)

COLT 1813K. The Problem of the Vernacular. It has been said that a language is a dialect with an army and a navy. Under what conditions do dialects, vernaculars, creoles, and slangs become mediums for literary and artistic expression? How have writers in different cultures managed the relationship between their “official” national languages and their more intimate mother tongues? This course will explore this problem in a variety of literary traditions, including Chinese, Arabic, Hindi-Urdu, Greek, Hebrew, Brazilian Portuguese, Latin and the Romance vernaculars, and a variety of modern European languages.

Fall COLT1813K S01 14519 TTh 10:30-11:50(13) (E. Muñana)

COLT 1813M. Making a List. There is a list of one of the most ancient and enduring figures of rhetoric and one of the most versatile means of organizing literary works. From the catalogues of Homeric epic to the postmodern fables of Borges to new digital media, from medieval encyclopedism to Renaissance copia, from the descriptive realism of novels to modernist techniques of collage, the simple list has produced an astonishing variety of effects in a wide range of genres and authors. We will read widely in this course, from many periods, literatures, authors, and genres.

Fall COLT1813M S01 23891 TTh 6:30-7:50(12) (K. Haynes)

COLT 1813N. Early Modern Women’s Writing. Interested in women writers, feminism? If so, it’s vital to understand their early modern origins. This course explores the rich feminist tradition enacted in the often edgy texts of women writing on the cusp of modernity. We study writers from England, France, Latin America, North America, and Spain, focusing on self-fashioning, gender and sexuality, love and marriage, imagined worlds, religion, eccentricity, and writing history. Authors include Anne Bradstreet, Margaret Lucas Cavendish, Sor Juana Inés de la Cruz, Mme de Lafayette, María de Zayas. Enrollment limited to 30. Texts and class in English.

Spr COLT1813NS01 24631 M 3:00-5:20(13) (S. Merrim)

COLT 1813O. Adventures of the Avant-Garde. In the early years of the twentieth century, a series of artistic movements rippled across the Western hemisphere, exploding conceptions of art and culture while reconfiguring international relations. This course explores those movements, from their predecessors (Baudelaire, Rimbaud, Mallarmé), through overlapping –isms (Cubism, Futurism, Constructivism, Vorticism, Expressionism, Dada, Surrealism), to avatars in the Americas. In keeping with the avant-garde’s cross-pollinating spirit, we study texts from a variety of traditions, forms, and genres: from poetry through prose to manifestoes, from painting and photography to film, music, and dance, touching on questions of translation and translatability between languages, cultures, and art-forms. Enrollment limited to 20.

Spr COLT1813OS01 23892 MWF 12:00-12:50(05) (M. Clayton)

COLT 1813P. Captive Imaginations: Writing Prison in the Middle Ages. Many great works of the Middle Ages were written in prison or about the experience of imprisonment. Reading some of these masterpieces, we will discover why the medieval prison was such a fruitful space for poetic creation, and how the perspective of incarcerated writers helped to shape a diversity of literary traditions. Topics will include fortune and free will, sexual and cultural difference, and the construction of the individual. We will also explore the nature of medieval systems of captivity, which differed greatly from those of modern society. Selected authors: Boethius, Mas’ud Sa’d Salman, Juan Ruiz, Chaucer, François Villon.

Spr COLT1813PS01 25213 TTh 1:00-2:20(10) (J. Moreau)

COLT 1813Q. Literature and Judgement. There exists a close but complex relationship between the acts of making literature and making judgments. This course will explore some of these relationships and ask, for instance: how does judgment weigh upon the literary act? how do literary considerations bear on our making judgments? This course will explore some of these relationships and ask, for instance: how does judgment weigh upon the literary act? how do literary considerations bear on our making judgments?

Spr COLT1813QS01 23893 MWF 2:00-2:50(07) (S. Stewart-Steinberg)

COLT 1813R. The Ekphrastic Mode in Contemporary Literature (ENGL 1762B). Interested students must register for ENGL 1762B.

Spr COLT1813RS01 25165 Arranged “To Be Arranged”

COLT 1813S. Thinking Friendship, from Plato to Derrida (GRMN 25403). Interested students must register for ENGL 25403.

COLT 1813T. Thinking Friendship, from Plato to Derrida (GRMN 25403). Interested students must register for ENGL 25403.

COLT 1813U. Literature and the Arts. Readings in the apparitions and articulations of the arts in fiction, philosophy, criticism and poetry. Focus on the interaction between language and other media, the figure of the artist, problems of expression and performance. Readings from Diderot, Hegel, Balzac, Hoffmann, Baudelaire, Poe, Nietzsche, Wagner and Mann.

Spr COLT1813US01 25403 MWF 11:00-11:50(04) (S. Bernstein)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Cultural production

Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Group Independent Study

Section numbers vary by instructor. Please see the registration staff for the correct section number to use when registering for this course.

Senior Thesis Preparation

Special work or preparation of honors theses under the supervision of a member of the staff. Open to honors students and to others. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Exchange Scholar Program

Fall COLT2450 S01 14020 Arranged 'To Be Arranged'
Spr COLT2450 S01 23537 Arranged 'To Be Arranged'

Rethinking the Bildungsroman

Studies the history and theoretical complications of the idea of the Bildungsroman and "Bildung". The first meetings will unpack the notion of aesthetic education through close readings of Schiller's aesthetics and Goethe's novel Wilhelm Meister. We'll then go on to examine some classic 19th-century German, French, and English novels (Père Goriot, Middlemarch, L'éducation sentimentale), plus one or two less well-known novels such as Der grüne Heinrich, and one or two 20th century novels such as Der Zauberberg. Secondary readings will engage a variety of theoretical issues and approaches (deconstructive, feminist, Foucauldian, postcolonial).

Modernism in the Age of Comparison

Though modernism is often considered a uniquely European and American phenomenon, we will read literary and theoretical texts from Mexico City, Beirut, and Beijing. Among the questions we will ask are these: Where and when did modernism happen? What is the relation of modernism to politics? What is the role of translation in modernism's origins and development? Readings by Baudelaire, Paz, Adonis, Perloff, Kenner, Jameson, and others.

Spr COLT2540G S01 23894 Th 12:30-2:50(17) (R. Creswell)

Freud and Lacan (ENGL 2900T)

Interested students must register for ENGL 2900T.

Spr COLT2540HS S01 25168 Arranged 'To Be Arranged'

Deleuze, Rancière, Literature, Film: The Logic of Connection (ENGL 2900S)

Interested students must register for ENGL 2900S.

Fall COLT2650K S01 15899 Arranged 'To Be Arranged'

Inheriting (in) Modernity (GRMN 2660S)

Interested students must register for GRMN 2660S.

Fall COLT2650L S01 16349 Arranged 'To Be Arranged'

Cultural Literature: Early Modern London and Paris

We will consider the problem of cultural capital in the two most important western capitals of the seventeenth century, early modern London and Paris. What was the impact of changing demographic, spatial and economic practices on literary representation? How do cities function as capitals and as sites of conflicting political, economic, religious and cultural communities? How was urban space represented? What did metropolitan readers read? How did urbanization change notions of status, gender, and sexuality in the early modern city and how were those changes manifested in cultural production?

Fall COLT2821D S01 14522 W 3:00-5:20(17) (K. Newman)

Metaphor

Explores the role of metaphor in literary writing, the mind and public policy. Reads philosophical and literary analyses of metaphor alongside poetry, fiction and cognitive science research on metaphor's centrality to human thought processes. Moves from these readings to a consideration of war metaphors in political speech in the Americas, including the "War on Drugs," the "War on Terror" and Argentina's "Dirty War." Authors include Aristotle, de Man, Sontag, Piatt, Eliard, Garcia Marquez, Lakoff, Pinker and Faustowitz. Open only to graduate students.

Spr COLT2821E S01 23895 W 3:00-5:20(14) (E. Whitleff)

"This is what you were born for": Optimism and Futurity (ENGL 2561F)

Interested students must register for ENGL 2561F.

Fall COLT2821F S01 15896 Arranged 'To Be Arranged'

Precarity, Vulnerability, Sovereignty: Worldliness and the work of Hannah Arendt.

On the 50th anniversary of Eichmann in Jerusalem, this seminar asks: How did Hannah Arendt's experience as a Jewish refugee from Hitler's Germany shape her democratic theory? Do her democratic theory and suggestive category worldliness provide a distinctive way to look at post-Holocaust diasporic conditions? We review main categories of political philosophy such as state, sovereignty, nation, violence, vulnerability and power, also using Butler, Kafka and more.

Spr COLT2821G S01 24697 M 3:00-5:20(13) (A. Azoulay)

Reading and Research

Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Thesis Preparation

For graduate students who have met the tuition requirement and are paying the Registration Fee to continue active enrollment while preparing a thesis.

Fall COLT2990 S01 14021 Arranged 'To Be Arranged'
Spr COLT2990 S01 23538 Arranged 'To Be Arranged'

Computer Science

CSCI 0020. The Digital World

Removes the mystery surrounding computers and the ever-growing digital world. Introduces a range of topics including the World Wide Web and many aspects of multimedia, along with the underlying digital technology and its relevance to our society. Other topics include artificial intelligence, IT security, ethics and economics of computing as well as the effects of its pervasiveness in today's world. Introductory programming and analytic skills are developed through HTML, Photoshop, Access and Python assignments.

Fall CSCI0020 S01 15222 Th 9:00-10:20(08) (D. Stanford)

CSCI 0040. Introduction to Scientific Computing and Problem Solving

An introduction to computer programming and software design in a high-level language. Emphasizes fundamental techniques and strategies for solving scientific problems with computers. Illustrates abstract concepts with a wide range of exemplary applications from engineering, the sciences, and the humanities. Intended for students who want a single application-oriented programming course. This course is not intended for computer science concentrators. No prerequisites.

Spr CSCI0040 S01 24732 Th 3:00-5:50(11) 'To Be Arranged'

CSCI 0080. An Overview of Computer Science

Introduces non-CS concentrators to the academic discipline of computer science and its relevance to other fields and modern life more generally. The target audience is students who are interested in learning more about what computer science is about and the ideas it has to offer tomorrow's citizens and scholars. Topics include the basics of computation and programming, a taste of theoretical computer science and algorithms, and an introduction to computing architectures and artificial intelligence. Although students will learn to read and understand short programs, the course will not teach or require advanced programming skills. LILE
CSCI 0081. TA Apprenticeship: Full Credit.
Being an undergraduate TA is a learning experience: one not only gets a deeper understanding of the course material, but gains management and social skills that are invaluable for one’s future. Students taking this course must first be selected as an undergraduate TA for a Computer Science course, a course the student has taken and done well in. Students will work with the course’s instructor on a variety of course-related topics, including preparation of material and development of assignments. Whether CSCI 0081 or its half-credit version (CSCI 0082) is taken is up to the professor of the course being TAd. Instructor permission required.

Fall CSCI0081 S01 15223 TTh 9:00-9:50(02) (T. Doepner)
Spr CSCI0081 S01 24903 TTh 6:30-7:50(12) (T. Doepner)
Spr CSCI0081 S03 24905 TTh 5:30-6:20(15) (T. Doepner)

CSCI 0082. TA Apprenticeship: Half Credit.
Being an undergraduate TA is a learning experience: one not only gets a deeper understanding of the course material, but gains management and social skills that are invaluable for one’s future. Students taking this course must first be selected as an undergraduate TA for a Computer Science course, a course the student has taken and done well in. Students will work with the course’s instructor on a variety of course-related topics, including preparation of material and development of assignments. Whether CSCI 0082 or its full-credit version (CSCI 0081) is taken is up to the professor of the course being TAd. Instructor permission required.

Fall CSCI0082 S01 15224 Arranged (T. Doepner)
Spr CSCI0082 S03 24906 Arranged 'To Be Arranged'

CSCI 0150. Introduction to Object-Oriented Programming and Computer Science.
Emphasizes object-oriented design and programming in Java, an effective modern technique for producing modular, reusable, internet-aware programs. Also introduces interactive computer graphics, user interface design and some fundamental data structures and algorithms. A sequence of successively more complex graphics programs, including Tetris, helps provide a serious introduction to the field intended for both potential concentrators and those who may take only a single course. No prerequisites.

Fall CSCI0150 S01 15225 TTh 2:30-3:50(11) (A. van Dam)

CSCI 0160. Introduction to Algorithms and Data Structures.
Introduces fundamental techniques for problem solving by computer that are relevant to most areas of computer science, both theoretical and applied. Algorithms and data structures for sorting, searching, graph problems, and geometric problems are covered. Programming assignments conform with the object-oriented methodology introduced in CSCI 0150. Prerequisite: CSCI 0150 or written permission.

Spr CSCI0160 S01 24733 TTh 10:30-11:50(09) (D. Laidlaw)

CSCI 0170. Computer Science: An Integrated Introduction.
CSCI0170/0180 is an introductory sequence that helps students begin to develop the skills, knowledge, and confidence to solve computational problems elegantly, correctly, efficiently, and with ease. The sequence is unique in teaching both the functional and imperative programming paradigms—the first through the languages Scheme and ML in CSCI0170; the second through Java in CSCI0180. The sequence requires no previous programming experience. Indeed, few high school students are exposed to functional programming; hence even students with previous programming experience often find this sequence an invaluable part of their education. Although students are taught to use programming languages as tools, the goal of CSCI0170/0180 is not merely to teach programming. On the contrary, the goal is to convey to students that computer science is much more than programming! All of the following fundamental computer science techniques are integrated into the course material: algorithms, data structures, analysis, problem solving, abstract reasoning, and collaboration. Concrete examples are drawn from different subareas of computer science: in 0170, from arbitrary-precision arithmetic, natural language processing, databases, and strategic games; in 0180, from discrete-event simulation, data compression, and client/server architectures.

Fall CSCI0170 S01 15226 MWF 11:00-11:50(04) (A. Greenwald)
Fall CSCI0180 S01 24734 MWF 10:00-10:50(03) (J. Hays)

CSCI 0180. Computer Science: An Integrated Introduction.
A continuation of CSCI 0170. Students learn to program in Java while continuing to develop their algorithmic and analytic skills. Emphasis is placed on object-oriented design, imperative programming, and the implementation and use of data structures. Examples are drawn from such areas as databases, strategy games, web programming, graphical user interfaces, route finding, and data compression. Lab work done with the assistance of TAs. Prerequisite: CSCI 0170.

CSCI 0190. Accelerated Introduction to Computer Science.
his course is a one-semester introduction to computer science for students with strong prior computer science background. It covers core data structures, algorithms, and analysis techniques similar to those of the two-course introductory sequences (CSCI 0150-0160 and CSCI 0170-0180), integrated with programming. Students who wish to take CSCI 0190 must begin in CSCI 0170 and complete additional work in that course. CSCI 0190 will branch off from CSCI 0170 after approximately one month. Students will be permitted to enroll by permission of the instructor. See please http://cs.brown.edu/courses/csci0190/2012/ for information on registering for this class.

Fall CSCI0190 S01 15227 MWF 11:00-11:50(04) (S. Krishnamurthy)

CSCI 0220. Introduction to Discrete Structures and Probability.
Seeks to place on solid foundations the most common structures of computer science, to illustrate proof techniques, to provide the background for an introductory course in computational theory, and to introduce basic concepts of probability theory. Introduces Boolean algebras, logic, set theory, elements of algebraic structures, graph theory, combinatorics, and probability. No prerequisites.

Spr CSCI0220 S01 24735 MWF 11:00-11:50(02) (C. Klivans)

CSCI 0320. Introduction to Software Engineering.
Advanced programming techniques including Java, threads, web-applications, user interfaces and XML. Covers software design including object-oriented design, systems design, web application design and user interface design. Software engineering including modeling, analysis, testing, debugger reuse, the software lifecycle, tools and project management. Prerequisite: CSCI 0160, CSCI 0180 or CSCI 0190. CSCI 0220 is recommended.

Spr CSCI0320 S01 24736 TTh 9:00-10:20(08) 'To Be Arranged'

CSCI 0330. Introduction to Computer Systems.
High-level computer architecture and systems programming. The course covers the organization of computer systems (in terms of storage units, caches, processors, and I/O controllers) and teaches students assembly-language programming and C-language programming. Extensive programming exercises introduce students to systems-level programming on Linux systems, as well as to multi-threaded programming with POSIX threads. Students will learn the basics of how compilers work and will be introduced to the functions of operating systems. Prerequisite: CSCI 0150, 0180, or 0190.

Fall CSCI0330 S01 15793 MWF 2:00-2:50(07) (T. Doepner)

CSCI 0510. Models of Computation.
The course introduces basic models of computation including languages, finite-state automata and Turing machines. Proves fundamental limits on computation (incomputability, the halting problem). Provides the tools to compare the hardness of computational problems (reductions). Introduces computational complexity classes (P, NP, PSPACE and others). Prerequisite: CSCI 0220 or 0450.

Fall CSCI0510 S01 15401 TTh 1:00-2:20(10) (J. Savage)

CSCI 0530. Directions: The Matrix in Computer Science.
Introduces vectors, matrices and their role in computer science in three components: (1) concepts, theorems, and proofs, (2) procedures and programs, (3) applications and working with data. Weekly lab sessions where students apply concepts to a real task with real data. Example labs: transformations in 2-d graphics, error-correcting codes, image compression using wavelets, synthesizing a new perspective in a photo, face recognition, news story categorization, cancer diagnosis using machine learning, matching airplanes to destinations, Google’s PageRank.
method. Other topics as time allows. Skills in programming and prior exposure to related and writing mathematical proofs required. Fall CSCI0530 S01 16044 MW 1:00-1:50(06) (P. Klein)

CSCI 0931. Introduction to Computation for the Humanities and Social Sciences. Introduces students to the use of computation for solving problems in the social sciences and the humanities. We will investigate a series of real-world problems taken from the news, from books such as Freakonomics, and from current research. Topics covered include data gathering, data analysis, web-based interfaces, security, algorithms, and scripting. Enrollment limited to 25. Instructor permission required. To be added to the class waitlist, please sign up here: https://docs.google.com/a/brown.edu/spreadsheet/viewform?formkey=igSGT3hid21YRHRNFvZ59EMHfisFE6MQ#gid=0 Note: you must use your Brown login. Requests for access for other email addresses will be ignored. Spr CSCI0931 S01 25047 "To Be Arranged"

CSCI 1230. Introduction to Computer Graphics. Fundamental concepts in 2D and 3D computer graphics, e.g., 2D raster graphics techniques, simple image processing, and user interface design. Focuses on geometric transformations, and 3D modeling, viewing and rendering. A sequence of assignments in C++ culminates in a simple geometric modeler and ray tracer. Prerequisite: CSCI 0160, CSCI 0180, or CSCI 0190. Concurrent prerequisites: CSCI 0310 or CSCI 0330, and one of CSCI 0530, MATH 0520 and MATH 0540. Strong programming ability is required. Fall CSCI1230 S01 15403 TTh 10:30-11:50(13) (A. van Dam)

CSCI 1234. Computer Graphics Lab. CSCI 1234 is a half-credit course intended to be taken concurrently with CSCI 1230 and provides students with a greater understanding of the material by having them extend each of 1230's assignments to greater depth. Fall CSCI1234 S01 16590 Arranged (A. van Dam)

CSCI 1250. Introduction to Computer Animation. Introduction to 3D computer animation production including story writing, production planning, modeling, shading, animation, lighting, and compositing. Students work independently to learn basic skills, then in groups to create a polished short animation. Emphasis is on in-class critique of ongoing work, which is essential for learning the cycle of evaluating work, determining improvements, and implementing them for further evaluation. Students should attend first class to receive instructor's written permission. Fall CSCI1250 S01 15405 WF 12:00-1:50(12) (B. Meier)

CSCI 1270. Database Management Systems. Introduction to database structure, organization, languages, and implementation. Relational model, query languages, query processing, query optimization, normalization, file structures, concurrency control and recovery algorithms, and distributed databases. Coverage of modern applications such as the Web, but with emphasis on Database Management Systems internals. Prerequisites: CSCI 0160, CSCI 0180, or CSCI 0190. One of CSCI 0330 or CSCI 0320 is strongly recommended. Fall CSCI1270 S01 15406 MW 3:00-4:20(15) (S. Zdonik)

CSCI 1280. Intermediate 3D Computer Animation. Continues work begun in CSCI 1250 with deeper exploration of technical and artistic aspects of 3D computer animation including more sophisticated shading and lighting methods and character modeling, rigging, animation, and dynamics. After a series of individual exercises, students pursue an independent topic and then, working alone or in pairs, create a polished demonstration. Emphasis is on in-class critique of ongoing work. Prerequisite: CSCI 1250. Students may contact the instructor in December for permission. Spr CSCI1280 S01 24737 WF 12:00-1:50(05) (B. Meier)

CSCI 1320. Creating Modern Web Applications. This course covers all aspects of web application development, including the initial concept, user-centric design, development methodologies, front and back end development, databases, security, testing, load testing, accessibility, and deployment. There will be a substantial team project. The course is designed for students with a programming background (either CSCI 0320/CSCI 0330) who want to learn how to build web applications, and for students with a background in web design, including HTML and Javascript, who are interested in learning how to extend design techniques to incorporate the technologies needed in modern web applications. Project teams will consist of students with both backgrounds. Spr CSCI1320 S01 25936 MW 11:00-11:50(04) (S. Reiss)

CSCI 1370. Virtual Reality Design for Science. Explores the visual and human-computer interaction design process for scientific applications in Brown's immersive virtual reality Cave. Joint with RISD. Computer Science and design students learn how to work together effectively; study the process of design; learn about scientific problems; create designs applications; critique, evaluate, realize and iterate designs; and demonstrate final projects. Instructor permission required. Fall CSCI1370 S01 15493 TTh 10:00-11:50(08) (D. Laidlaw)

CSCI 1410. Introduction to Artificial Intelligence. Theoretical and practical approaches to designing intelligent systems. Example tasks range from game playing to hardware verification. Core topics include knowledge representation, search and optimization, and automated reasoning. Application areas include natural language processing, machine learning, and robotics. Prerequisites: CSCI 0160, CSCI 0180 or CSCI 0190; and either CSCI 0220 or CSCI 0450. Spr CSCI1410 S01 24738 TTh 10:30-11:50(09) (S. Tellex)

CSCI 1420. Introduction to Machine Learning. How can artificial systems learn from examples, and discover information buried in massive datasets? We explore the theory and practice of statistical machine learning, focusing on computational methods for supervised and unsupervised data analysis. Specific topics include Bayesian and maximum likelihood parameter estimation, regularization and sparsity-promoting priors, kernel methods, the expectation maximization algorithm, and models for data with temporal or hierarchical structure. Applications to regression, categorization, clustering, and dimensionality reduction problems are illustrated by examples from vision, language, bioinformatics, and information retrieval. Prerequisites: CSCI 0040 or 0150 or 0180 or 0190; and CSCI 0450 or APMA 1650 or MATH 1610; and CSCI 0530 or MATH 0520 or 0540; or instructor permission. Fall CSCI1420 S01 16172 TTh 2:30-3:50(11) (E. Sudderth)

CSCI 1430. Introduction to Computer Vision. How can we program computers to understand the visual world? This course treats vision as inference from noisy and uncertain data and emphasizes probabilistic and statistical approaches. Topics may include perception of 3D scene structure from stereo, motion, and shading; segmentation and grouping; texture analysis; learning, object recognition; tracking and motion estimation. Strongly recommended: basic linear algebra, calculus, and probability. Fall CSCI1430 S01 15494 MWF 1:00-1:50(06) (J. Hays)

CSCI 1450. Introduction to Probability and Computing. Probability and statistics have become indispensable tools in computer science. Probabilistic methods and statistical reasoning play major role in machine learning, cryptography, network security, communication protocols, web search engines, robotics, program verification, and more. This course introduces the basic concepts of probability and statistics, focusing on topics that are most useful in computer science applications. Topics include: modeling and solution in sample space, random variables, simple random processes and their probability distributions, Markov processes, limit theorems, and basic elements of statistical inference. Fall CSCI1450 S01 16171 TTh 2:30-3:50(11) (E. Upfal)

CSCI 1460. Introduction to Computational Linguistics. Introduction to computational linguistics (also known as natural-language processing) including the related mathematics and several programming projects. Particular topics include: language modeling (as used in e.g., speech recognition, machine translation), machine translation, part-of-speech labeling, syntactic parsing, and pronoun resolution. Mathematical techniques include basic probability, noisy channel models, the EM (Expectation-Maximization) algorithm, hidden Markov models, probabilistic context-free grammars, and the forward-backward algorithm. Not open to first year students.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
CSCI 1480. Building Intelligent Robots.
How do robots function autonomously in dynamic, unpredictable environments? This course focuses on programming mobile robots, such as the Robot Roomba, to perceive and act autonomously in real-world environments. The major paradigms for autonomous control and robot perception are examined and compared with robotic notions in science fiction. Prerequisite: CSCI 0150, CSCI 0170 or CSCI 0190. Recommended: CSCI 1410 or CSCI 1230. Enrollment limited to 20.
Spr CSCI1480 S01 24739 MWF 1:00-1:50(06) (O. Jenkins)

CSCI 1510. Introduction to Cryptography and Computer Security.
This course studies the tools for guaranteeing safe communication and computation in an adversarial setting. We develop notions of security and give provably secure constructions for such cryptographic objects as ciphersystems, signature schemes and pseudorandom generators. We also review the principles for secure system design. Prerequisites: CSCI 0220 and CSCI 0510.
Spr CSCI1510 S01 25367 TTh 10:30-11:50(09) (A. Lysyanskaya)

CSCI 1520. Theory of Computation.
Covers the technologies supporting the Internet, from Ethernet and the web technologies that are generating most of it. A major concern is to understand the protocols used on the Internet: what the issues are, how they work, their shortcomings, and what improvements are on the horizon. Prerequisite: CSCI 0330 or consent of instructor.
Fall CSCI1520 S01 16589 TTh 9:00-10:20(08) (C. Avin)

This course introduces students to applications of probabilistic and statistical methods to the design and analysis of algorithms, in particular randomized algorithms and probabilistic analysis of algorithms. The course covers basic probabilistic techniques such as tail bounds, martingales, coupling, etc., and presents applications of randomized and probabilistic analysis techniques in areas such as graph algorithms, data structures, communication, and Monte Carlo simulations. No prior knowledge of probability theory is assumed. CSCI 1570 recommended but not required.
Spr CSCI1550 S01 24740 TTh 2:30-3:50(11) (E. Upfal)

CSCI 1570. Design and Analysis of Algorithms.
A single algorithmic improvement can have a greater impact on our ability to solve a problem than ten years of incremental improvements in CPU speed. We study techniques for designing and analyzing algorithms. Typical problem areas addressed include numerical computing, hashing, searching, dynamic programming, graph algorithms, network flow, and string parsing and matching. Prerequisites: CSCI 0160, CSCI 0180, or CSCI 0190, and one of CSCI 0220 or CSCI 0450.
Fall CSCI1570 S01 15775 MWF 2:00-2:50(07) (P. Valiant)

This course teaches principles of computer security from an applied viewpoint and provides hands-on experience on security threats and countermeasures. Topics include mode execution vulnerabilities (buffer overflow, sandboxing, mobile code), malware (trojans, viruses, and worms), access control (users, roles, policies), ciphersystems (hasing, signatures, certificates), network security (firewalls, TLS, intrusion detection, VPN), and human and social issues. Prerequisites: one of CSCI 0160 or CSCI 0180 or CSCI 0190; and CSCI 0320 or 0330.
Spr CSCI1660 S01 24741 TTh 1:00-2:20(10) ‘To Be Arranged’

Covers not just the principles of operating systems but the intricacies of how they work. Topics include multithreaded programming, managing threads and interrupts, managing storage, processor scheduling, operating-system structure, virtualization, security, and the design of file systems (both local and distributed). Extensive examples are taken from actual systems, including Linux and Windows. Students are expected to complete both problem sets and programming assignments (in C). Prerequisite: CSCI 0320 or 0330.
Spr CSCI1670 S01 24742 MWF 2:00-2:50(07) (T. Doepener)

CSCI 1680. Computer Networks.
Covers the technologies supporting the Internet, from Ethernet and WiFi through the routing protocols that govern the flow of traffic and the web technologies that are generating most of it. A major concern is understanding the protocols used on the Internet: what the issues are, how they work, their shortcomings, and what improvements are on the horizon. Prerequisite: CSCI 0330 or consent of instructor.
Fall CSCI1680 S01 16589 TTh 9:00-10:20(08) (C. Avin)

CSCI 1690. Operating Systems Laboratory.
Half-credit course intended to be taken with CSCI 1670. Students individually write a simple operating system in C. Serves to reinforce the concepts learned in 1670 and provides valuable experience in systems programming. Corequisite: CSCI 1670.
Spr CSCI1690 S01 24743 TTh 6:30-7:50(12) ‘To Be Arranged’

CSCI 1729. Programming Languages Lab.
Half-credit course intended to be taken concurrently with CSCI 1730. Students individually implement a full programming language chosen by the course. Reinforces the concepts learned in CSCI 1730 and provides valuable experience in implementing programming languages. Corequisite: CSCI 1730.
Fall CSCI1729 S01 16170 TTh 6:30-7:50(14) (S. Krishnamurthi)

CSCI 1730. Introduction to Programming Languages.
Explores the principles of modern programming languages by implementation. Examines linguistic features, especially control operators such as first-class functions, exceptions, and continuations. Studies data and their types, including polymorphism, type inference, and type soundness. Examines compiler and run-time system topics: continuation-passing style and garbage collection. Prerequisite: CSCI 0160, CSCI 0180 or CSCI 0190. Preferred: CSCI 0220, either CSCI 0320 or CSCI 0330, and CSCI 0510.
Fall CSCI1730 S01 15495 MWF 10:00-10:50(03) (S. Krishnamurthi)

CSCI 1760. Introduction to Multiprocessor Synchronization.
This course examines the theory and practice of multiprocessor synchronization. Subjects covered include multiprocessor architecture, mutual exclusion, wait-free and lock-free synchronization, spin locks, monitors, load balancing, concurrent data structures, and transactional synchronization.
Fall CSCI1760 S01 16078 TTh 1:00-2:20(10) (M. Herlihy)

CSCI 1800. Cybersecurity and International Relations.
The global Internet shortens distances, makes businesses more efficient and facilitates greater social interaction. At the same time, it exposes vital national resources to exploitation and makes it easier for the international criminal element to prey on innocent Internet users. Cybersecurity is concerned with making the Internet a more secure and trustworthy environment. In this course we study this topic from the technological and policy points of view. The goal is to facilitate communication across the divide that normally characterizes the technological and policy communities. Enrollment limited to 30. LILE WRIT.
Spr CSCI1800 S01 24744 TTh 2:30-3:50(11) ‘To Be Arranged’

CSCI 1810. Computational Molecular Biology.
Processing molecular biology data (DNA, RNA, proteins) has become central to biological research and a challenge for science research. Important objectives are molecular sequence analysis, recognition of genes and regulatory elements, molecular evolution, protein structure, comparative genomics. This course models the underlying biology in the terms of computer science and presents the most significant algorithms of molecular computational biology. Prerequisites: CSCI 0160, CSCI 0180 or CSCI 0190, and CSCI 0220, or consent of instructor.
Fall CSCI1810 S01 16042 TTh 10:30-11:50(13) (B. Raphael)

The course is devoted to computational and statistical methods as well as software tools for DNA, RNA, and protein sequence analysis. The focus is on understanding the algorithmic and mathematical foundations of the methods, the design of associated genomics software tools, as well as on their applications. Topics include: sequence alignment, genome assembly, gene prediction, regulatory genomics, and SNP's variation. The course is open to computer and mathematical sciences students as well as biological and medical students.
Spr CSCI1820 S01 25575 TTh 1:00-2:20(10) (S. Istrail)

CSCI 1950E. Human-Robot Interaction Seminar.
Covers current research in Human-Robot Interaction. Course topics span the mechanical, computational, and empirical aspects of developing robot technology to improve human productivity and quality of life. Course participation includes presentation and analysis of research publications in Human-Robot Interaction and implementation of a group project. Prerequisites: CSCI 1410, 1480, or instructor permission.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
We will study various algorithmic problems that arise in the study of topological phenomena, such as winding number, turning number, knot polynomials, topology of covering spaces (especially Riemann surfaces), and discrete Morse theory. The mathematical topics will be briefly introduced before we move to computations, but some a priori mathematical sophistication will make the course more valuable to the student. Prerequisite: CSCI 0160, 0180, or 0190.
Spr CSCI1950H S01 25370 TTh 1:00-2:20(10) (J. Hughes)

CSCI 1950I. Designing, Developing, and Evaluating User Interfaces.
This course will cover basic concepts in human-computer interaction including understanding how people view and interact with interfaces, what types of computer interfaces are practical and possible, modeling and representing user interaction, eliciting requirements and feedback from users, tools for prototyping and building interfaces, and user interface evaluation. The course will be primarily project-based and will involve a significant amount of design and evaluation. Prerequisites: CSCI 0150, 0180, or 0190, or permission of instructor.
Fall CSCI1950I S01 16064 MWF 11:00-11:50(04) (S. Reiss)

CSCI 1950N. 2D Game Engines.
2D Game Engines covers core techniques used in the development 2D game engines. Projects involve building different varieties of 2D games as well as games that require use of the features implemented in the engines. Topics include high-level engine design, vector and raster graphics, animation, collision detection, physics, content management, and game AI. Prerequisite: CSCI 0160, 0180, or 0190.
Fall CSCI1950N S01 15997 W 3:00-5:20(17) (M. Littman)

CSCI 1950W. Topics in Data Science.
Data is the new soil of business and (soon) at the core of essentially all domains from material science to healthcare. Mastering big data not only requires skills in a variety of disciplines from distributed systems over statistics to machine learning, but also requires an understanding of a complex ecosystem of tools and platforms. This seminar will try to shed some light into the complex space of data science covering aspects from data management, distributed algorithms, virtualization, data mining, machine learning, and statistics. We will discuss how these techniques complement each other to make sense of data at massive scale. Prerequisites: CSCI 0320 and 1270, or equivalents, or instructor permission.
Fall CSCI1950WS01 16098 W 3:00-5:20(17) (U. Cetintemel)

CSCI 1950Y. Logic for Hackers.
The course will focus on proving properties about systems and programs. We will study the distinction between programs and specifications, and check for whether the former obey the latter. We will work with tools that have extensive automation such as model constructors, model checkers, and proof assistants. Problems and projects will apply to real-world systems. Prerequisite: CSCI 0160, CSCI 0180, or CSCI 0190. Preferred but not required: CSCI 0220 and CSCI 0510, or instructor’s permission.
Spr CSCI1950Y S01 25632 MWF 10:00-10:50(03) (S. Krishnamurthy)

Independent study in various branches of Computer Science. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Important current topics in computer graphics. Course includes reading and discussing current research papers, multiple assignments and preliminary projects in which students implement recent papers, and a demanding final integrative project done in small groups. Prerequisite: CSCI 0330 or CSCI 0360, and CSCI 1230.
Spr CSCI2240 S01 24748 TTh 10:30-11:50(09) ‘To Be Arranged’

CSCI 2270. Topics in Database Management.
In-depth treatment of advanced issues in database management systems. Topics vary from year to year and may include distributed databases, mobile data management, data stream processing and web-based data management. Prerequisite: CSCI 1270.
Spr CSCI2270 S01 25366 M 3:00-5:20(13) (S. Zdonik)

CSCI 2750. Topics in Parallel and Distributed Computing.
CSCI 2750 is a graduate seminar that will consider an advanced topic (to be determined) in distributed computing. May be repeated for credit.
Spr CSCI2750 S01 25369 TTh 1:00-2:20(10) (M. Herlihy)

CSCI 2820. Medical Bioinformatics.
Devoted to computational problems and methods in the emerging field of Medical Bioinformatics where genomics, computational biology and bioinformatics impact medical research. We will present challenging problems and solutions in three areas: Disease Associations, Protein Folding and Immunogenomics. This course is open to graduate students and advanced undergraduates with Computational or Life Science backgrounds. Prior background in Biology is not required.
Fall CSCI2820 S01 15497 TTh 2:30-3:50(11) (S. Istrail)

CSCI 2890. Comprehensive Examination Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.
Fall CSCI2890 S01 14022 Arranged ‘To Be Arranged’

Spr CSCI2890 S01 23539 Arranged ‘To Be Arranged’

CSCI 2950R. Special Topics in Advanced Algorithms.
We will study an advanced topic in the design and analysis of algorithms. Prerequisite: CSCI 1570 or the equivalent.
Spr CSCI2950R S01 25576 W 3:00-5:20(14) (P. Klein)

CSCI 2950U. Special Topics on Networking and Distributed Systems.
Explores current research topics in networking, distributed and operating systems. Specific topics may include wireless and sensor networking, Internet-scale distributed systems, cloud computing, as well as the core problems, concepts, and techniques underlying these systems. The course has two components: reading and discussion of current and classical research papers, and a research project related to the topic but ideally drawn from students’ own research interests. This is a graduate-level course, undergraduates can join with the consent of the instructor.
Spr CSCI2950U S01 25368 Th 10:30-11:50(09) (R. Fonseca)

CSCI 2951E. Topics in Computer Systems Security.
This course explores advanced topics and highlights current research in computer security from a systems perspective. Topics include vulnerabilities and defenses for automotive, computing, medical, and industrial control devices, intrusion detection, botnets, secure network protocols, web spam, tracking of web users, JavaScript sandboxing, attacks and defenses for web applications, and security and privacy issues in cloud computing. Research papers and industry reports will be presented and discussed. Also, hands-on experiments and system demonstrations will be performed. CSCI 1660 or equivalent background is essential. Enrollment limited to 12. Instructor permission required.
Spr CSCI2951E S01 24749 M 3:00-5:20(13) ‘To Be Arranged’

CSCI 2951F. Learning and Sequential Decision Making.
The course explores automated decision making from a computer-science perspective. It examines efficient algorithms, where they exist, for single agent and multiagent planning as well as approaches to learning near-optimal decisions from experience. Topics will include Markov decision processes, stochastic and repeated games, partially observable Markov decision processes, and reinforcement learning. Of particular interest will be issues of generalization, exploration, and representation. Each student will be expected to present a published research paper and will participate in a group programming project. Prerequisite: a graduate-level computer science course and some exposure to reinforcement learning from a previous computer-science class or seminar.
Fall CSCI2951F S01 16877 TTh 1:00-2:20(10) (M. Littman)

CSCI 2951K. Topics in Grounded Language for Robotics.
We will study the problem of endowing robots with the ability to interact with humans using natural language. The course will cover foundational material in artificial intelligence, computational linguistics, and robotics, as well as a survey of recent conference and journal papers. A collaborative final project will provide an opportunity to more deeply engage with the material and provide a jumping-off point for future research. Familiarity with computational linguistics or robotics is helpful. Background in machine learning and artificial intelligence also be useful. We hope that students with diverse backgrounds can learn from each other in this...
multi-disciplinary research area. Prerequisite: CSCI 1420, 1460, 1480, or 1950F; or instructor permission.

Fall CSCI2951K S01 16538 TTh 10:30-11:50(13) (S. Tellex)

CSCI 2980. Reading and Research.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

CSCI 2990. Thesis Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.

Fall CSCI2990 S01 14023 Arranged "To Be Arranged"
Spr CSCI2990 S01 23540 Arranged "To Be Arranged"

CSCI XLIST. Courses of Interest to Concentrators in Computer Science.

Development Studies

DEVL 1500. Methods in Development Research.
An introduction to the various techniques of research in Development Studies, with a focus on qualitative and field methods. Open to all Development Studies concentrators.
Spr DEVL1500 S01 25651 T 4:00-6:20(16) (J. Costanza)

DEVL 1801. Participatory Development.
This core Development Studies seminar will provide students with the opportunity to think critically about power relations within various contexts of development; more specifically, in relation to the condition of how development projects work in practice. The course will take a multilevel approach to the analysis of developmental interactions. We'll look at the power relations between the global south and the global north. We will examine crucial issues having to do with local communities, gender, the state/citizen paradigm and interaction between NGOs and communities. We will connect PD to other concepts, such as empowerment, civic engagement and inequality. WRIT
Spr DEVL1801 S01 25650 W 3:00-5:20(14) (P. Agupusi)

An integrative seminar designed for concentrators working on senior theses. Others with comparable backgrounds may enroll with written permission. Begins with a review of theoretical and methodological literature on development studies. Written and oral presentations of thesis research will be the central focus of the latter part of the course. Reserved for Development Studies seniors.
Fall DEVL1980 S01 16327 M 3:00-5:20(15) (J. Costanza)

Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Reserved for Development Studies seniors.

Explores a range of substantive debates in development by drawing on empirical and theoretical work from the disciplines of economics, political science, sociology and anthropology. The course aims to provide students with a broad understanding of current debates and research on development, evaluate both the differences and complementarities in disciplinary perspectives and develop a toolkit of interdisciplinary analytic skills that can be applied to concrete research questions.
Fall DEVL2000 S02 16138 M 12:00-2:50(12) (P. Heller)

DEVL 2990. Thesis Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.
Fall DEVL2990 S01 14024 Arranged "To Be Arranged"
Spr DEVL2990 S01 23541 Arranged "To Be Arranged"

DEVL XLIST. Courses of Interest to Concentrators in Development Studies.

Early Cultures

From the blood-soaked amphitheaters of the Roman Empire to tattooing and other forms of body modification, this course will explore how people, ancient and modern, view animals and what looking at animals reveals about what it means to be human. Examining evidence from a variety of disciplines (archaeology, religious studies, history, philosophy, art, and literature), we will investigate the problematic boundary between “man” and “animal” and challenge the presumed superiority of the “human”. WRIT LILE
Fall ERLY1150 S01 16653 MWF 1:00-1:50(06) (S. Curry)

Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Required of seniors in the honors program. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

East Asian Studies

Chinese

CHIN 0100. Basic Chinese.
A year-long introduction to Standard Chinese (Mandarin). Speaking, reading, writing, and grammar. Five classroom meetings weekly. This is the first half of a year-long course whose first semester grade is normally a temporary one. Neither semester may be elected independently without special written permission. The final grade submitted at the end of course work in CHIN 0200 covers the entire year and is recorded as the final grade for both semesters.
Fall CHIN0100 S01 14093 MWF 9:00-9:50(15) (Y. Wang)
Fall CHIN0100 S01 14093 TTh 9:30-10:20(15) (Y. Wang)
Fall CHIN0100 S02 14094 MWF 10:00-10:50(15) (Y. Wang)
Fall CHIN0100 S02 14094 TTh 10:30-11:20(15) (Y. Wang)
Fall CHIN0100 S03 14095 MWF 1:00-1:50(15) (Y. Wang)
Fall CHIN0100 S03 14095 TTh 1:30-2:20(15) (Y. Wang)
Fall CHIN0100 S04 14096 MWF 2:00-2:50(15) (Y. Wang)
Fall CHIN0100 S04 14096 TTh 2:30-3:20(15) (Y. Wang)

CHIN 0150. Advanced Beginning Chinese.
A year-long intensive course designed for students with some prior knowledge of Chinese. Designed to enhance listening, speaking, reading, and writing skills. Five classroom meetings weekly. Placement interview required. This is the first half of a year-long course whose first semester grade is normally a temporary one. Neither semester may be elected independently without special written permission. The final grade submitted at the end of the course work in CHIN 0250 covers the entire year and is recorded as the final grade for both semesters.
Fall CHIN0150 S01 14108 MWF 12:00-12:50(12) (J. Huang Hsieh)

CHIN 0200. Basic Chinese.
A year-long introduction to Standard Chinese (Mandarin). Speaking, reading, writing, and grammar. Five classroom meetings weekly. This is the second half of a year-long course. Students must have taken CHIN 0100 to receive credit for this course. The final grade for this course will become the final grade for CHIN 0100. If CHIN 0100 was taken for credit then this course must be taken for credit; if taken as an audit, this course must also be taken as an audit. Exceptions to this policy must be approved by both the academic department and the Committee on Academic Standing.
Spr CHIN0200 S01 23610 MWF 9:00-9:50(13) (Y. Wang)
Spr CHIN0200 S01 23610 TTh 9:30-10:20(13) (Y. Wang)
Spr CHIN0200 S02 23611 MWF 10:00-10:50(13) (Y. Wang)
Spr CHIN0200 S02 23611 TTh 10:30-11:20(13) (Y. Wang)
Spr CHIN0200 S03 23612 MWF 1:00-1:50(13) (Y. Wang)
At the end of the year, students should be able to express their ideas with sophistication and nuance. Drills on complex sentence patterns will be conducted when necessary. Prerequisite: CHIN 0600 or permission of instructor.

Fall  CHIN0700  S01  14103  TTh  9:00-10:20(15)  (W. Chen)
Fall  CHIN0700  S02  14104  MW  10:00-10:50(15)  (W. Chen)
Fall  CHIN0700  S02  14104  MW  2:00-2:50(15)  (W. Chen)
Fall  CHIN0700  S02  14104  TTh  2:30-3:50(15)  (W. Chen)

CHIN 0800. Advanced Modern Chinese II
See Advanced Modern Chinese II (CHIN 0700) for course description.
Prerequisite: CHIN 0700 or permission of instructor.

Spr  CHIN0800  S01  23620  TTh  9:00-10:20(16)  (L. Hu)
Spr  CHIN0800  S02  23621  MW  10:00-10:50(16)  (L. Hu)
Spr  CHIN0800  S02  23621  MW  2:00-2:50(16)  (L. Hu)
Spr  CHIN0800  S02  23621  TTh  2:30-3:50(16)  (L. Hu)

CHIN 0910B. Introduction to Classical Chinese.
A course aiming to provide the basics of reading Classical Chinese, its grammar, syntax, vocabulary, and word usage. As much as possible, we will use modern Chinese to explicate and discuss classical texts. Readings are original passages from texts dating from the Eastern Zhou to Former Han, 770 BCE to 25 AD, that introduce students to the cultural world of early China. Prerequisite: CHIN 0600 or permission of the instructor.
Spr  CHIN0910B  S01  23622  MW  10:00-10:50(03)  "To Be Arranged"

In order to develop advanced reading proficiency and formal oral and written communication skills, students will listen to and read current news reports and commentaries from various Chinese media sources, such as TV broadcasts, newspapers, magazines, and websites. Through reading and discussion, students will gain a better understanding of a wide range of current issues in a rapidly changing China, including: economics, politics, education, and popular culture. General knowledge of Chinese newspapers, Chinese journalistic writing styles and basic vocabulary and grammatical structures used in the press will also be introduced throughout the course. Class format varies from lecture, discussion, and debate, to interviews and group or individual presentations. Prerequisites: CHIN0800 or the equivalent. Enrollment limited to 18.
Fall  CHIN0920C  S01  16368  TTh  1:00-2:20(10)  (Y. Wang)

CHIN 1040. Modern Chinese Literature.
Introduces students to the most representative writers in 20th century China. Emphasizes textual and historical analyses. Major issues include Westernization, nationalism, revolution, class, gender, and literary innovations. Designated primarily as a literature course, rather than language class, and conducted entirely in Mandarin Chinese. Prerequisite: CHIN 0800. Instructor permission required.
Fall  CHIN1040  S01  14120  TTh  2:30-3:50(11)  (W. Chen)

CHIN 1910. Independent Study.
Reading materials for research in Chinese. Sections numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

CHIN 2450. Exchange Scholar Program.
Fall  CHIN2450  S01  14015  Arranged  "To Be Arranged"

East Asian Studies

EAST 0950C. Reading China: Texts and Contexts.
An introduction to Chinese lit., focusing on its translation and circulation outside of China from the 17th c. to the present. A variety of texts are examined, considering the various ways translation shapes Western conceptions of China. Begins by discussing how Chinese lit. has been construed as particularly difficult to translate, explores ways in which the translation and circulation of early Chinese classics was animated by interests in ancient Chinese wisdom, and considers the recent emergence of a global notion of Chinese literature and culture. Concludes by comparing histories: translations of Chinese drama into European languages and their adaptation within China. Enrollment limited to 20 first year students. FYS
EAST 1070. China Modern: An Introduction to the Literature of Twentieth-Century China.
A general introduction to modern and contemporary Chinese literature from the May Fourth Movement to contemporary Taiwan and the People’s Republic of China. Emphasizes reading of literary works in relation to topics such as cultural tradition, modernity, nationalism, revolution, class, gender, region, cultural commodification, and literary innovations. Readings in English. No previous knowledge of Chinese required.
Spr EAST1070 S01 23636 TTh 1:00-2:20(10) (L. Wang)

EAST 1420. The Confucian Mind.
This course explores the Neo-Confucian tradition, a pervasive influence in the intellectual, educational, and political life of China, Korea, and Japan from late medieval through early modern times. Emphasis is on conceptions of the mind and their implications for moral cultivation and social action; the legacy of Confucian values in modern East Asia may also be considered. Readings are primary texts in translation and selected secondary works; the format is primarily discussion. Recommended prerequisite: RELS 0040. Not open to first year students. Enrollment limited to 20.
Spr EAST1420 S01 23638 W 3:00-5:20(14) (J. Sawada)

EAST 1910. Independent Study.
Sections numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

EAST 1930. Reading and Writing of the Honors Thesis.
Prior admission to honors candidacy required. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

EAST 1940. Reading and Writing of the Honors Thesis.
Prior admission to honors candidacy required. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Course focuses on mainland Chinese cultural and media production since the mid 1980’s, when China began transforming itself culturally and economically into a capitalist society with socialist characteristics. Traditional values, socialist legacy, commercial forces, and globalization have all played significant roles in the ongoing transformation. The goal of the course is to examine the complex interactions among diverse historical forces in a rapidly changing China. Course taught in Mandarin Chinese.
Spr EAST1950GS01 23641 TTh 2:30-3:50(11) (L. Wang)

EAST 1950K. Losing Yourself in Love in Pre-Modern Chinese Poetry, Fiction and Drama.
A seminar focused on larger-than-life loves in Chinese drama, fiction, and poetry. The course will explore how passion, feeling, and subjectivity was increasingly viewed as essential to human nature and society from the 15th century onward.
Spr EAST1950KS01 23639 W 3:00-5:20(14) "To Be Arranged"

EAST 1950V. Contemporary Film and Media Cultures in East Asia.
This course visits postwar film and television cultures in East Asia as a part of a larger narrative of contemporary media production and consumption. How can thinking about films’ relationship with other media enhance our understanding of contemporary popular culture? How does it help us re-imagine narrative issues such as textuality, production, and representation? How does understanding the rich contexts of audience interaction with media affect our approaches to reading and meaning-making? To explore these questions, we will consider postwar Chinese and Japanese films, popular fiction, literature, television dramas, as well as manga/anime.
Fall EAST1950VS01 16599 M 3:00-5:20(15) (C. Lee)

Fall 2013
East Asian Studies is a highly interdisciplinary concentration. The following courses in other departments can be taken for concentration credit. Please check the listing of the appropriate department for the time and location of each course.

Comparative Literature
COLT 0810I Tales and Talemakers of the Non-Western World

History
HIST 1530 Modern Korea: Contending with Modernity
HIST 1571 The Making of Modern East Asia
HIST 1973M Outside the Mainstream
HIST 1978I The Social Lives of Dead Bodies in China and Beyond

Modern Culture and Media
MCM 1503U Post ’80’s Asian Cinemas: From New Waves to the Digital Generations

Political Science
POLIS 1821O Politics of Economic Development in Asia

Religious Studies
RELS 0040 Great Comtemporaty Traditions of Asia
RELS 1440 Themes in Japanese Buddhism
RELS 2300B Houai-nan Tzu

Theatre Arts and Performance Studies
TAPS 1270 Performances in the Asia

Spring 2014
East Asian Studies is a highly interdisciplinary concentration. The following courses in other departments can be taken for concentration credit. Please check the listing of the appropriate department for the time and location of each course.

Religious Studies
RELS 0100 Introduction to Buddhism

Japanese

JAPN 0100. Basic Japanese.
Introduction to Japanese language. Emphasizes the attainment of good spoken control of Japanese and develops a foundation of literacy. No prerequisites. This is the first half of a year-long course whose first semester grade is normally a temporary one. Neither semester may be elected independently without special written permission. The final grade submitted at the end of the course work in JAPN 0200 covers the entire year and is recorded as the final grade for both semesters. The East Asian Studies department wishes to provide language instruction to all interested students. If you are unable to register for this course due to enrollment limits but are dedicated to learning Japanese, please contact the instructor via email.
Fall JAPN0100 S01 14100 MWF 9:00-9:50(17) (K. Yamashita)
Fall JAPN0100 S01 14100 TTh 9:00-10:20(17) (K. Yamashita)
Fall JAPN0100 S02 14101 MWF 10:00-10:50(17) (K. Yamashita)
Fall JAPN0100 S02 14101 TTh 10:30-11:50(17) (K. Yamashita)
Fall JAPN0100 S03 14102 MWF 1:00-1:50(17) (K. Yamashita)
Fall JAPN0100 S03 14102 W 1:00-1:50(17) (K. Yamashita)
Fall JAPN0100 S03 14102 TTh 1:00-2:20(17) (K. Yamashita)
Fall JAPN0100 S04 16740 MWF 9:00-9:50(02) (K. Yamashita)
Fall JAPN0100 S04 16740 TTh 9:00-10:20(02) (K. Yamashita)

JAPN 0200. Basic Japanese.
Introduction to Japanese language. Emphasizes the attainment of good spoken control of Japanese and develops a foundation of literacy. This is the second half of a year-long course. Students must have taken JAPN 0100 to receive credit for this course. The final grade for this course will become the final grade for JAPN 0100. If JAPN 0100 was taken for credit then this course must be taken for credit; if taken as an audit, this course must also be taken as an audit. Exceptions to this policy must be approved by both the academic department and the Committee on Academic Standing. The East Asian Studies department wishes to provide language instruction to all interested students. If you are unable to register for this course due to enrollment limits but are dedicated to learning Japanese, please contact the instructor via email.
Fall JAPN0200 S01 23617 MWF 9:00-9:50(08) (K. Yamashita)
Fall JAPN0200 S01 23617 TTh 9:00-10:20(08) (K. Yamashita)
Fall JAPN0200 S02 23618 MWF 10:00-10:50(09) (K. Yamashita)
Fall JAPN0200 S02 23618 TTh 10:30-11:50(09) (K. Yamashita)
Fall JAPN0200 S03 23619 MWF 1:00-1:50(10) (K. Yamashita)
Fall JAPN0200 S03 23619 TTh 1:00-2:20(10) (K. Yamashita)
Further introduces patterns of structure and the language. Readings are
introduced in aspects of Japanese culture and society to develop reading
and writing skills, enhance vocabulary, and provide points of departure for
conversation in Japanese. Prerequisite: JAPN 0200 or equivalent. The
East Asian Studies department wishes to provide language instruction to
all interested students. If you are unable to register for this course due to
enrollment limits but are dedicated to learning Japanese, please contact
the instructor via email.

See Intermediate Japanese (JAPN 0300) for course description.
Prerequisite: JAPN 0300 or equivalent. Enrollment limited to 18.

Continued practice in reading, writing, and speaking. Emphasizes the
development of reading proficiency and speaking in cultural contexts.
Students read actual articles and selections from Japanese newspapers.
Course includes translation, with writing and discussion in Japanese.
Films and video tapes are shown as supplementary materials. Prerequisite:
JAPN 0400 or equivalent.

See Advanced Japanese (JAPN 0500) for course description.

Reading of articles from Japan's press with discussion in Japanese.
Focuses on explanations and drills on the fine points in grammar and
vocabulary as well as on the practice of writing in various styles. Movies
and video tapes are used as supplementary materials. Prerequisite: 
JAPN 0600 or equivalent.

The goal of this course is to develop the ability to use Japanese source
materials for research in social sciences. Course covers lifestyles in
two contrasting cities, Tokyo and Kyoto. Topics include topography,
environmental issues, houses, urban life-styles, and natural habitation.
We will ask questions: why houses are so compact in cities; why crows
and boars pick on garbage, etc. Information sources are films, videos,
and websites in addition to textbooks. Prerequisite: JAPN 0600 or equivalent.
Enrollment limited to 20.

JAPN 1310. Japanese Linguistics: Communication and
Understanding Utterances.
Introduces a linguistic analysis of Japanese language to attain an overview
of structure and a foundation for understanding how grammar relates
to various modes of communication. Topics include discourse analysis,
pragmatics, communicative intention, communication strategies, and
intercultural communication gaps. Linguistic data is drawn from films and
fiction. Prerequisite: basic knowledge of Japanese grammar, vocabulary,
and linguistics. Enrollment limited to 20.

JAPN 1910. Independent Study.
Reading materials for research in Japanese. Section numbers vary by
instructor. Please check Banner for the correct section number and CRN
to use when registering for this course.

Korean
KREA 0100. Korean.
Begins with an introduction to the Korean writing system (Hangul) and
focuses on building communicative competence in modern Korean in
the four language modalities (listening, speaking, reading, writing).
Provides a foundation for later work in spoken and written Korean. Six classroom
hours per week. No prerequisite. Enrollment limited to 18. This is the first half of a year-long course whose first semester grade is normally a temporary one. Neither semester may be elected independently without special written permission. The final grade submitted at the end of the course work in KREA 0200 covers the entire year and is recorded as the final grade for both semesters.

KREA 0200. Korean.
Begins with an introduction to the Korean writing system (Hangul) and
focuses on building communicative competence in modern Korean in
the four language modalities (listening, speaking, reading, writing). Provides
a foundation for later work in spoken and written Korean. Six classroom
hours per week. Enrollment limited to 18. This is the second half of a year-
long course. Students must have taken KREA 0100 to receive credit for
this course. The final grade for this course will become the final grade for
KREA 0100. If KREA 0100 was taken for credit then this course must be
taken for credit; if taken as an audit, this course must also be taken as an
audit. Exceptions to this policy must be approved by both the academic
department and the Committee on Academic Standing.

KREA 0300. Intermediate Korean.
An intermediate course in Korean designed to further communicative
competence in spoken Korean and to provide additional reading practice
in stylistically higher level materials that are progressively integrated into
the given dialogues. Discussions on various aspects of Korean culture
and society. Four classroom hours per week. Prerequisite: KREA 0200 or
instructor permission.

Reading of articles from Japan's press with discussion in Japanese.
Focuses on explanations and drills on the fine points in grammar and
vocabulary as well as on the practice of writing in various styles. Movies
and video tapes are used as supplementary materials. Prerequisite: 
JAPN 0600 or equivalent.

KREA 0600. Advanced Korean.
See Advanced Readings in Japanese (JAPN 0500) for course description.

Reading of articles from Japan's press with discussion in Japanese.
Focuses on explanations and drills on the fine points in grammar and
vocabulary as well as on the practice of writing in various styles. Movies
and video tapes are used as supplementary materials. Prerequisite: 
JAPN 0600 or equivalent.

The goal of this course is to develop the ability to use Japanese source
materials for research in social sciences. Course covers lifestyles in
two contrasting cities, Tokyo and Kyoto. Topics include topography,
environmental issues, houses, urban life-styles, and natural habitation.
We will ask questions: why houses are so compact in cities; why crows
and boars pick on garbage, etc. Information sources are films, videos,
and websites in addition to textbooks. Prerequisite: JAPN 0600 or equivalent.
Enrollment limited to 20.

KREA 1310. Korean Linguistics: Communication and
Understanding Utterances.
Introduces a linguistic analysis of Japanese language to attain an overview
of structure and a foundation for understanding how grammar relates
to various modes of communication. Topics include discourse analysis,
pragmatics, communicative intention, communication strategies, and
intercultural communication gaps. Linguistic data is drawn from films and
fiction. Prerequisite: basic knowledge of Japanese grammar, vocabulary,
and linguistics. Enrollment limited to 20.

Economics
ECON 0110. Principles of Economics.
Extensive coverage of economic issues, institutions, and vocabulary,
plus an introduction to economic analysis and its application to current
social problems. Required for all economics concentrators. Prerequisite
for ECON 1110, 1130, 1210 and 1620. Serves as a general course for students who will take no other economics courses and want a broad introduction to the discipline. Weekly one-hour conference required (conferences are not held during the summer session).

Fall ECON0110 S01 14911 MWF 9:00-9:50(02) (R. Friedberg)
Spr ECON0110 S01 24190 MWF 10:00-10:50(03) (R. Friedberg)

A course designed primarily for students who do not plan to concentrate in economics but who seek a basic understanding of the economics of less developed countries, including savings and investment, health and education, agriculture and employment, and interactions with the world economy, including trade, international capital flows, aid, and migration. Prerequisite: ECON 0110 or advanced placement. Enrollment limited to 100.

Spr ECON0510 S01 24211 MWF 2:00-2:50(07) (L. Puttermann)

Basic accounting theory and practice. Accounting procedures for various forms of business organizations.

Fall ECON0710 S01 14932 MW 6:00-7:20(16) (F. Scitolo)
Fall ECON0710 S02 14933 TTh 6:00-7:20(14) (T. Lonardo)
Spr ECON0710 S01 24212 MW 6:00-7:20(15) (F. Scitolo)
Spr ECON0710 S02 24213 TTh 6:00-7:20(12) (T. Lonardo)

ECON 1110. Intermediate Microeconomics.
Tools for use in microeconomic analysis, with some public policy applications. Theory of consumer demand, theories of the firm, market behavior, welfare economics, and general equilibrium. Prerequisite: MATH 0060, 0070, 0090, 0100, 0170, 0180, 0190, 0200, or 0350; and ECON 0110; or advanced placement.

Fall ECON1110 S01 14934 MW 11:00-11:50(05) (P. Dal Bo)
Fall ECON1110 S02 14935 MWF 1:00-1:50(15) (P. Dal Bo)
Fall ECON1110 S03 14936 TTh 9:00-10:20(15) (M. Gradstein)
Spr ECON1110 S01 24214 TTh 9:00-10:20(08) (R. Vohra)
Spr ECON1110 S02 24215 TTh 1:00-2:20(10) (G. DeCippel)
Spr ECON1110 S03 24216 MWF 11:00-11:50(04) (To Be Arranged)

ECON 1130. Intermediate Microeconomics (Mathematical).
Microeconomic theory: Theories of the consumer and firm, competitive equilibrium, factor markets, imperfect competition, game theory, welfare economics, general equilibrium. May not be taken in addition to ECON 1110. Prerequisite: MATH 0100, 0170, 0180, 0190, 0200, or 0350; and ECON 0110; or advanced placement.

Fall ECON1130 S01 14937 MW 8:30-9:50(02) (R. Vohra)
Spr ECON1130 S01 24217 TTh 10:30-11:50(09) (J. Eaton)

ECON 1210. Intermediate Macroeconomics.
The economy as a whole: Level and growth of national income, inflation, unemployment, role of government policy. Prerequisite: MATH 0060, 0070, 0090, 0100, 0170, 0180, 0190, 0200, or 0350; and ECON 0110; or advanced placement.

Fall ECON1210 S01 14938 TTh 9:00-10:20(15) (S. Michalopoulos)
Fall ECON1210 S02 14939 TTh 10:30-11:50(15) (S. Michalopoulos)
Fall ECON1210 S03 14940 MWF 2:00-2:50(15) (A. Rahman)
Spr ECON1210 S01 24218 MWF 9:00-9:50(15) (To Be Arranged)
Spr ECON1210 S02 24219 MWF 10:00-10:50(15) (To Be Arranged)
Spr ECON1210 S03 24220 TTh 1:00-2:20(10) (N. Mehrotra)

The course is concerned with macroeconomic policy in the United States, with special focus on the recent economic crisis. The main objective of the course is to introduce students to the type of models and methods used in current research in macroeconomics both in the scholarly literature but also in the practice of central banks and major policy institutions. Events of the financial crisis and the economic recession of 2007-2009 will serve to illustrate the challenges confronted by macroeconomic analysis. Prerequisites: ECON 1110 or 1130; and MATH 0090, 0100, 0170, 0180, 0190, 0200, or 0350; or advanced placement. Enrollment limited to 30.

Spr ECON1225 S01 24508 T 4:00-6:20(16) (G. Egertson)

ECON 1275. History of Economic Thought.
Seminar explores economic thought from the classical Greek philosophers to mid-twentieth-century economists, including John Maynard Keynes and F. A. Hayek. It is not a course in economic history. Rather, the course deals with the content of economic writings such as Adam Smith's Wealth of Nations and Karl Marx's Capital. This course seeks to provide you with an overview of the history of economic ideas as well as undertake an in-depth exploration of six of major figures in the history of economics: Adam Smith, Thorstein Veblen, Alfred Marshall, Karl Marx, F. A. Hayek, and John Maynard Keynes. Prerequisites: ECON 1110 or 1130; 1210; and 1620 or 1630. Enrollment limited to 30. WRIT

Spr ECON1275 S01 25520 TTh 4:00-6:20(17) (R. van Horn)

ECON 1300. Education, the Economy and School Reform (EDUC 1150).
Interested students must register for EDUC 1150.

Spr ECON1300 S01 25805 Arranged 'To Be Arranged'

ECON 1301. Economics of Education I.
This course teaches students how to use microeconomics to analyze a broad array of education policy issues. The departure of this course from ECON 1110 is the emphasis on studying microeconomics in applied settings, and in particular, using microeconomic concepts to think about, analyze, and solve policy questions in education. Prerequisite: ECON 1110 or 1130.

Fall ECON1301 S01 16155 MWF 12:00-12:50(12) (J. Tyler)

ECON 1305. Economics of Education: Research.
This course will cover academic research in the Economics of Education. Topics include production of student achievement, measuring student achievement, funding of public education, and school choice and school vouchers. Prerequisites: ECON 1110 or 1130; and APMA 1650 or ECON 1620 or 1630. Enrollment limited to 25 juniors, seniors, and graduate students. WRIT

Spr ECON1305 S01 24222 TTh 10:30-11:50(09) (J. Hastings)

ECON 1310. Labor Economics.
Labor supply, human capital, income inequality, discrimination, immigration, unemployment. Prerequisite: ECON 1110 or 1130; and APMA 1650 or ECON 1620 or 1630. Enrollment limited to 100.

Spr ECON1310 S01 24223 TTh 9:00-10:20(08) (K. Chay)

Interested students must register for ENVS 1350.

Fall ECON1350 S01 16535 Arranged 'To Be Arranged'

ECON 1355. Environmental Issues in Development Economics (ENVS 1355).
Interested students must register for ENVS 1355.

Spr ECON1355 S01 25604 Arranged 'To Be Arranged'

ECON 1360. Health Economics.
This course introduces students to the issues, theory and practice of health economics in the US. Topics include the economic determinants of health, the market for medical care, the market for health insurance and the role of the government in health care. Course work includes data analyses using the program STATA. Prerequisites: ECON 1110 or 1130; and ECON 1620, 1630, or APMA 1650 or other statistics background. Enrollment limited to 24.

Fall ECON1360 S01 16156 TTh 10:30-11:50(13) (M. Marcus)

ECON 1375. Inequality of Opportunity in the US.
This course examines empirical evidence on inequality of opportunity in the US. We cover recent work in economics and other social sciences that measures the importance of parents, schools, health care, neighborhoods, income, and race in determining children’s long-term labor market success, and implications of these findings for US policy. We will also place the empirical work in historical and philosophical context and cover a variety of statistical issues. Prerequisites: ECON 1110 or 1130; and ECON 1620, 1629, or 1630. Enrollment limited to 30 seniors.

Fall ECON1375 S01 16366 T 4:00-6:20(18) (N. Higer)

ECON 1410. Urban Economics.
The first part of the course covers the set of conceptual and mathematical models widely used to understand economic activity both between and within cities. The second part of the course examines various urban policy
issues including urban transportation, housing, urban poverty, segregation and crime. The course makes extensive use of empirical evidence taken primarily from the United States. Prerequisites: ECON 1110 or 1130, and APMA 1650 or ECON 1620 or 1630. Enrollment limited to 100. Fall ECON1410 S01 14942 TTh 1:00-2:20(10) (N. Baum-Snow)

**ECON 1450. Economic Organizations and Economic Systems.** Positive and normative study of the organizations that comprise and the institutional structures that characterize a modern mixed market economy. Theoretical efficiency and potential limitations of private enterprises and markets including (a) why some market actors are organizations (e.g., companies), (b) effort elicitation problems in organizations, (c) the problem of cooperation in traditional versus behavioral economics, and (d) alternative kinds of organization (including proprietorships, corporations, nonprofits, government agencies). Roles of government, and problems of government failure, including the collective action problem of democracy. State-market balance and contemporary controversies over the economic system in light of the 2008 financial crisis. Enrollment limited to 100 juniors and seniors. Prerequisite: ECON 1110 or 1130.

**ECON 1460. Industrial Organization.** A study of industry structure and firm conduct and its economic/antitrust implications. Theoretical and empirical examinations of strategic firm interactions in oligopolistic markets, dominant firm behaviors, and entry deterrence by incumbents. Also economics of innovation: research and development activities and government patent policies. Prerequisite: ECON 1110 or 1130. Some knowledge of calculus required. Enrollment limited to 100. Spr ECON1460 S01 25223 MWF 11:00-11:50(04) (L. Puterman)

**ECON 1480. Public Economics.** An analysis of the role of government in the allocation of resources. Topics include welfare economics (a review), problems of social choice, the evaluation of public expenditures, and taxation. Prerequisite: ECON 1110 or 1130.

**ECON 1485. Social Security Reform.** The course looks at the economics of social security reform with particular focus on possible policy responses to the increasing fraction of the population that is elderly in OECD countries. Among the topics that will be considered are pay as you go funding, defined benefits versus defined concentrations, privatization, labor market effects of pensions, retirement decisions, labor supply by couples, and macroeconomic effects. Prerequisite: ECON 1110 or 1130. Enrollment limited to 30. Not open to first-year students. Fall ECON1485 S01 16867 W 3:00-5:20(17) (E. Sheshinsky)

**ECON 1500. Current Global Macroeconomic Challenges.** Analysis of current global economic challenges in the U.S. and China. Topics include fiscal and monetary policies, international trade, capital flows and exchange rate policy, and policies for long-run growth. Emphasis on macroeconomic policies in China and the U.S., including their global impact. Prerequisites: ECON 1210. Also recommended: ECON 1550 and 1850. Enrollment limited to 100. Fall ECON1500 S01 16011 TTh 6:30-7:50(14) (D. Wyss)

**ECON 1510. Economic Development.** The economic problems of less developed countries and the theory of economic development, with emphasis on the roles played by agriculture, industry, and foreign trade. Also: education, health, employment, and migration; capital accumulation; income distribution; institutional aspects; the role of price distortions; trade policies; social discount rates, investment criteria, and the general issue of state intervention. Prerequisite: ECON 1110 or 1130; and APMA 1650 or ECON 1620 or 1630. Enrollment limited to 100. Spr ECON1510 S01 24229 MW 8:30-9:50(02) "To Be Arranged"

**ECON 1530. Health, Hunger and the Household in Developing Countries.** Microeconomic analysis of household behavior in low income societies emphasizing the economic determinants of health and nutrition and the evaluation of policy. The relationship among health, nutrition, fertility, savings, schooling, labor productivity, wage determination, and gender-based inequality. Emphasizes theoretically-based empirical research. Prerequisite: ECON 1110 or 1130. Enrollment limited to 100. Fall ECON1530 S01 14943 TTh 2:30-3:50(11) (A. Foster)

**ECON 1540. International Trade.** Theory of comparative advantage, trade, and income distribution. Welfare analysis of trade: gains from trade, evaluation of the effects of trade policy instruments-tariffs, quotas, and subsidies. Trade under imperfect competition. Strategic trade policy. Trade, labor markets, preferential trade agreements, and the world trading systems. Prerequisite: ECON 1110 or 1130. Enrollment limited to 100. Fall ECON1540 S01 14944 MW 8:30-9:50(02) (J. Blaum)

**ECON 1550. International Finance.** The balance of payments; identification and measurement of surpluses and deficits; international monetary standards; the role of gold and paper money; government policies; free versus fixed exchange rates; international capital movements; war and inflation; the International Monetary Fund. Prerequisite: ECON 1210. Enrollment limited to 100. Spr ECON1550 S01 25252 TTh 2:30-3:50(12) "To Be Arranged"

**ECON 1560. Economic Growth.** A theoretical and empirical examination of economic growth and income differences among countries. Focuses on both the historical experience of countries that are currently rich and the process of catch-up among poor countries. Topics include population growth, accumulation of physical and human capital, technological change, natural resources, income distribution, geography, government, and culture. Prerequisite: ECON 1110 or 1130; and MATH 0060, 0070, 0090, 0100, 0170, 0180, 0190, 0200 or 0350; or advanced placement. Enrollment limited to 100. Fall ECON1560 S01 14945 TTh 9:00-10:20(08) (D. Weil)

**ECON 1620. Introduction to Econometrics.** Probability and statistical inference. Estimation and hypothesis testing. Simple and multiple regression analysis. Applications emphasized. Prerequisite: ECON 0110 or advanced placement, and ECON 1110 or 1130. Weekly one-hour computer conference required. Fall ECON1620 S01 14946 TTh 1:00-2:20(10) (B. Brenner)

**ECON 1629. Applied Research Methods for Economists.** This class will cover the basics of applied research in economics. We will cover how we use economic theory to formulate a hypothesis to test and how we use data to test our hypothesis. As part of the coursework, students will be exposed to topics across multiple fields of applied economic research (e.g., health, labor, political economy, urban economics, development, etc) that can be explored in greater detail in more advanced classes. Students will read and discuss papers published in professional journals and perform data analysis as part of the course requirements. Prerequisites: ECON 1110 or 1130; and ECON 1620 or APMA 1650.

Spring ECON1629 S01 24239 MW 8:30-9:50(02) (R. Friedberg)

**ECON 1630. Econometrics I.** Advanced introduction to econometrics with applications in finance and economics. How to formulate and test economic questions of interest. The multivariate linear regression model is treated in detail, including tests of the model’s underlying assumptions. Other topics include: asymptotic analysis, instrumental variable estimation, and likelihood analysis. Convergence concepts and matrix algebra are used extensively. Prerequisites: ECON 0110 or advanced placement; and ECON 1110 or 1130; and APMA 1650, MATH 1620, or ECON 1620; or equivalent. Fall ECON1630 S01 14953 MW 8:30-9:50(02) (S. Centorrino)

Spring ECON1630 S01 25329 MW 8:30-9:50(02) "To Be Arranged"

**ECON 1640. Econometrics II.** Continuation of ECON 1630 with an emphasis on econometric modeling and applications. Includes applied topics from labor, finance, and macroeconomics. Prerequisite: ECON 1630. Enrollment limited to 100. Spring ECON1640 S01 25327 TTh 10:30-11:50(09) "To Be Arranged"

**ECON 1650. Financial Econometrics.** Financial time series, for example, asset returns, options and interest rates, possess a number of stylized features that are analyzed using a specific set of econometric models. This course deals with an introduction for complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
to such models. It discusses time series models for analyzing asset returns and interest rates, (GARCH) models to explain volatility, models to explain extreme events which are used for the Value at Risk and models for options prices. Prerequisite: ECON 1630 or instructor permission. Enrollment limited to 100.

Fall ECON1650 S01 16017 TTh 2:30-3:50(11) (E. Renault)

**ECON 1710. Investments I.**

The function and operation of asset markets; the determinants of the prices of stocks, bonds, options, and futures; the relations between risk, return, and investment management; the capital asset pricing model, normative portfolio management, and market efficiency. Prerequisite: ECON 1110 or 1130; and ECON 1620 or 1630 or APMA 1650.

Fall ECON1710 S01 14956 MWF 11:00-11:50(15) (S. Kuo)
Fall ECON1710 S02 14957 MWF 1:00-1:50(15) (S. Kuo)
Spr ECON1710 S01 24240 MWF 1:00-1:50(06) (S. Kuo)

**ECON 1720. Corporate Finance.**

A study of theories of decision-making within corporations, with empirical evidence as background. Topics include capital budgeting, risk, securities issuance, capital structure, dividend policy, compensation policy, mergers and acquisitions, real options, financial engineering, securitization. Prerequisite: ECON 1110 or 1130; and ECON 1620 or 1630 or APMA 1650.

Fall ECON1720 S01 15073 MWF 2:00-2:50(18) (D. Brenner)
Fall ECON1720 S02 16052 MWF 1:00-1:50(18) (D. Brenner)
Spr ECON1720 S01 24338 TTh 6:30-7:50(16) (N. Mehrota)

**ECON 1730. Economics of Creativity, Entrepreneurship & Innovation.**

In this advanced and reading intensive seminar, students will study forces that drive the process of innovation. These forces consist of creativity and creative destruction; the innovator’s dilemma; incentives to innovate, competitive advantage; industry evolution; venture capital, and intellectual property. This course is ideal for those who are interested in pursuing investment banking, investment management, strategic consulting, nonprofit management, public policy, venture capital/private equity, and entrepreneurship.

Spr ECON1730 S01 25670 W 6:00-8:20PM(18) (T. Nguyen)

**ECON 1750. Investments II.**

Individual securities: forwards, futures, options and basic derivatives, pricing conditions. Financial markets: main empirical features, equity premium and risk-free rate puzzles, consumption based asset pricing models, stock market participation, international diversification, and topics in behavioral finance. Prerequisites: ECON 1110 or 1130; ECON 1620 or 1630 or APMA 1650; ECON 1710. Enrollment limited to 100.

Fall ECON1750 S01 16014 MWF 12:00-12:50(12) (C. Bejan)

**ECON 1760. Financial Institutions.**

This course analyzes the role of financial institutions in allocating resources, managing risk, and exerting corporate governance over firms. After studying interest rate determination, the risk and term structure of interest rates, derivatives, and the role of central banks, it takes an international perspective in examining the emergence, operation, and regulation of financial institutions, especially banks. Prerequisites: ECON 1110 or 1130; and 1210. Enrollment limited to 100.

Fall ECON1760 S01 16012 TTh 1:00-2:20(10) (D. Wyss)

**ECON 1765. Finance, Regulation, and the Economy: Research.**

Analyzes the role of financial markets and institutions in allocating resources and exerting governance over firms, how regulation shapes finance, and how finance influences the enactment and impact of financial regulation. The class will use: economic theory to develop a solid conceptual framework for understanding how finance affects economic growth, income distribution, and stability; empirical evidence to assess theory; and history to put the role of finance into a long-term framework. Current events will be continuously used to keep the class relevant. Prerequisites: ECON 1110 or 1130; and ECON 1210; and ECON 1720 or 1760. Enrollment limited to 30 senior concentrators in Economics, BEO, Applied Math-Economics, Computer Science-Economics, and Math-Economics.

Spr ECON1765 S01 25350 M 6:00-8:20PM(13) (T. Nguyen)

**ECON 1790. Corporate Governance and Management.**

A corporation’s economic success depends on access to human capital and other resources, effective management of these resources, and a governance system that ensures effective decision making. The course offers policy prescriptions in economic incentives and regulatory rules that attempt to align management with investors. Prerequisites: ECON 1110 or 1130; and ECON 1620 or 1630 or APMA 1650; and ECON 1720; and ECON 0710. Enrollment limited to 40.

Fall ECON1790 S01 16013 TTh 6:30-7:50(14) (T. Nguyen)

**ECON 1820. Behavioral Economics.**

This course provides a grounding in the main areas of study within behavioral economics, including temptation and self control, fairness and reciprocity, reference dependence, bounded rationality, happiness and neuroeconomics. For each area of study we begin with the standard model of rational decision making, and discuss what behavior this model can explain. We then discuss the experimental evidence that indicates that the standard model is missing something important, and the models that have sprung up to account for these violations. Finally, we will look at the implications of these new models for our understanding of how the economy operates. Prerequisite: ECON 1110 or 1130; and MATH 0060, 0070, 0090, 0100, 0170, 0180, 0190, 0200, 0350, or advanced placement.

Spr ECON1820 S01 24242 TTh 1:00-2:20(10) (M. Dean)

**ECON 1850. Theory of Economic Growth.**

Analysis of the fundamental elements that determine economic growth. It examines the role of technological progress, population growth, income inequality, and government policy in the determination of (a) the pattern of economic development within a country, and (b) sustainable differences in per capita income and growth rates across countries. Prerequisites: ECON 1210 and either APMA 0330, 0350 (or equivalent), MATH 0180, 0200, or 0350 (or equivalent). Enrollment limited to 100.

Fall ECON1850 S01 14964 TTh 6:30-7:50(14) (O. Galor)

**ECON 1860. The Theory of General Equilibrium.**

Existence and efficiency of equilibria for a competitive economy; comparative statics; time and uncertainty. Prerequisite: ECON 1110 or 1130. Enrollment limited to 100.

Fall ECON1860 S01 16015 MWF 10:00-10:50(03) (C. Bejan)

**ECON 1870. Game Theory and Applications to Economics.**

Study of the elements of the theory of games. Non-cooperative games. Cooperative games. Applications include bargaining and oligopoly theory. Prerequisites: ECON 1110 or 1130; and MATH 0100, or 0170, or 0180, or 0190, or 0200, 0350, or advanced placement; and ECON 1620 or 1630 or APMA 1650, or MATH 1610. Enrollment limited to 100.

Spr ECON1870 S01 24505 TTh 2:30-3:50(11) (G. DeClippel)

**ECON 1940. Current Economic Research: Undergraduate Seminar.**

The purpose of this seminar is to bring to the undergraduates concentrating in economics, applied math-economics, mathematical economics and computer science-economics a taste of the first-rate research that is being done in the economics department at Brown. Prerequisites: ECON 1110 or 1130; ECON 1210; ECON 1620 or APMA 1650 or MATH 1610 or 1620; ECON 1629 or 1630. Enrollment limited to 30.

Spr ECON1940 S01 25222 W 3:00-5:20(14) (R. Serrano)

**ECON 1960. Honors Tutorial for Economics Majors.**

Students intending to write an honors thesis in economics must register for this class. The goal is to help students with the process of identifying and defining feasible topics, investigating relevant background literature, framing hypotheses, and planning the structure of their thesis. Each student must find a thesis advisor with interests related to their topic and plan to enroll in ECON 1970 during the final semester of senior year.

Fall ECON1960 S01 14959 TTh 10:30-11:50(13) (K. Chay)

**ECON 1970. Independent Research.**

Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.
Techniques of mathematical analysis useful in economic theory and econometrics. Linear algebra, constrained maximization, difference and differential equations, calculus of variations.
Fall ECON2010 S01 14960 TTh 9:00-10:20(08) (M. Dean)

This course provides students with skills needed to integrate economic theory, econometric methods, and data management in the analysis of economic problems. Provides a hands-on perspective including assignments designed to derive testable propositions from simple economic models, illustrate the loading, cleaning and merging of complex survey data, and provide experience in the selection and interpretation of basic econometric methods.
Spr ECON2020 S01 24244 MW 10:30-11:50(03) (A. Foster)

ECON 2030. Introduction to Econometrics I.
The probabilistic and statistical basis of inference in econometrics.
Fall ECON2030 S01 14961 MW 10:30-11:50(03) (E. Renault)

ECON 2040. Econometric Methods.
Applications of mathematical statistics in economics. The nature of economic observations, cross-section and time series analysis, the analysis of variance and regression analysis, problems of estimation.
Spr ECON2040 S01 24245 TTh 2:30-3:50(11) (S. Schennach)

ECON 2050. Microeconomics I.
Decision theory: consumer’s and producer’s theory; general competitive equilibrium and welfare economics: the Arrow-Debreu-McKenzie model; social choice and implementation.
Fall ECON2050 S01 14962 MW 1:00-2:20(10) (R. Vohra)

ECON 2060. Microeconomics II.
Economics of imperfect information: expected utility, risk and risk aversion, optimization under uncertainty, moral hazard, and self-selection problems. Economics of imperfect competition: monopoly; price discrimination; monopolistic competition; market structure in single shot, repeated and stage games; and vertical differentiation.
Spr ECON2060 S01 24246 MW 8:30-9:50(02) (G. Loury)

ECON 2070. Macroeconomics I.
Consumption and saving, under both certainty and uncertainty; theory of economic growth; real business cycles; investment; and asset pricing.
Fall ECON2070 S01 14963 TTh 10:30-11:50(13) (O. Galor)

ECON 2080. Macroeconomics II.
Money, inflation, economic fluctuations and nominal rigidities, monetary and fiscal policy, investment, unemployment, and search and coordination failure.
Spr ECON2080 S01 24247 TTh 10:30-11:50(09) (J. Blaum)

ECON 2090. Topics in Microeconomics: Decision Theory and Evidence.
Decision theory is the use of axiomatic techniques to understand the observable implications of models of choice. It is central to the incorporation of psychological insights into economics, and provides a vital link between theory and experimental economics. This course covers standard economic models of choice in different domains - choice under risk, choice under uncertainty and intertemporal choice. It looks at key topics from behavioral economics: choice with incomplete information, reference dependent preferences, temptation and self control, the Allais paradox, ambiguity aversion and neuroeconomics. In each case it relates the predictions of theory to experimental data on behavior.
Spr ECON2090 S01 24250 T 5:30-7:50(16) (M. Dean)

ECON 2160. Risk, Uncertainty, and Information.
Advanced topics in the theories of risk, uncertainty and information, including the following: Decision making under uncertainty: expected and non-expected utility, measures of risk aversion, stochastic dominance. Models with a small number of agents: optimal risk-sharing, the principal-agent paradigm, contracts. Models with a large number of agents: asymmetric information in centralized and decentralized markets. Implementation theory.
Fall ECON2160 S01 14965 M 9:00-11:20(02) (G. DeClippel)

ECON 2180. Game Theory.
Spr ECON2180 S01 24248 MW 9:00-10:20(02) (P. Dal Bo)

ECON 2320. Economics of Labor and Population.
This course examines identification issues in empirical microeconomics. Focus on the sensible application of econometric methods to empirical problems in economics and policy research -- particularly labor and population economics. The course examines issues that arise when analyzing non-experimental data and provides a guide for tools that are useful for applied research. The course also emphasizes how a basic understanding of theory and institutions can help inform the analysis. By the end of the course, students should have a firm grasp of the types of research designs and methods that can lead to convincing analysis and be comfortable working with large-scale data sets.
Fall ECON2320 S01 14966 TTh 1:00-2:20(10) (K. Chay)

ECON 2360. Economics of Health and Population.
An introduction to current research in the economics of health and population. Focuses on studies of empirically-tractable and tested models of individual, household, and firm behaviors and how these behaviors interact through markets and other institutions. Among the subjects considered are the economics of fertility and marriage, the operation of the health services sector, and the implications of population aging.
Spr ECON2360 S01 24249 M 1:00-3:20(06) (A. Aizer)

ECON 2370. Inequality: Theory and Evidence.
This course uses economic theory to study the problems of inequality. The emphasis is two-fold: (1) to explain persistent resource disparities between individuals or social groups; and, (2) to assess the welfare effects of various equality-promoting policies. Topics include racial stereotypes, residential segregation, distributive justice, incentive effects of preferential policies, dysfunctional identity, and endogenous inequality due to the structure of production and exchange.
Spr ECON2370 S01 24251 W 1:00-3:20(06) (G. Loury)

ECON 2420. The Structure of Cities.
This course covers standard urban land use theory, urban transportation, sorting across political jurisdictions, hedonics, housing, segregation and crime. Empirical examples are taken primarily from the United States. After taking the course, students will have an understanding of standard urban theory and of empirical evidence on various important applied urban topics. In addition, students will gain practical experience in manipulating spatial data sets and simulating urban models.
Fall ECON2420 S01 14967 TTh 9:00-10:20(08) (N. Baum-Snow)

ECON 2450. Exchange Scholar Program.
Fall ECON2450 S01 14025 Arranged 'To Be Arranged'
Spr ECON2450 S01 23542 Arranged 'To Be Arranged'

ECON 2470. Industrial Organization.
Monopolistic competition, market structure and entry, nonprice competition, economics of information.
Spr ECON2470 S01 24253 Th 1:00-3:20(10) (J. Hastings)

ECON 2480. Public Economics.
Theoretical and empirical analysis of the role of government in private economies. Topics include welfare economics, public goods, externalities, income redistribution, tax revenues, public choice, and fiscal federalism.
Fall ECON2480 S01 16066 TTh 10:30-11:50(13) (G. Knight)

ECON 2510. Economic Development I.
This course covers issues related to labor, land, and natural resource markets in developing countries, in partial and general equilibrium settings. Topics covered include: The agricultural household model, under complete markets in developing countries, in partial and general equilibrium settings. After taking the course, students will have an understanding of standard economic growth; real business cycles; investment; and asset pricing.
Spr ECON2510 S01 14968 W 9:30-11:50(02) (S. Nagavarampu)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
ECON 2580. International Trade. 
General equilibrium analysis of the theory of international trade and trade policy under perfect competition; trade under imperfect competition; strategic trade policy; trade and growth; and the political economy of trade policy determination. Empirical analysis of trade theories and policy. Additional topics include the theory of preferential trading areas, trade and labor, and the analytics of trade policy reform. Fall ECON2580 S01 16363 MW 2:30-3:50(07) (J. Eaton)

ECON 2630. Econometric Theory. 
Standard and generalized linear models, simultaneous equations, maximum likelihood, Bayesian inference, panel data, nonlinear models, asymptotic theory, discrete choice, and limited dependent variable models. Fall ECON2630 S01 14969 T 5:30-7:50(18) (S. Schennach)

Method of Moments (GMM) and Empirical Likelihood (EL). Kernel methods for density and regression estimation. Optimal instruments and local EL. Applications to non-linear time series models, Euler equations and asset pricing. Spr ECON2660 S01 24255 W 1:00-3:20(06) (E. Renault)

ECON 2830. Dynamic Optimization and Economic Growth. 
The role of human capital, income distribution, population growth, technological progress, and international trade in the determination of differences in growth performance across countries. Inequality and economic growth. Technological progress and wage inequality. The transition from stagnation to sustained growth. Evolution and growth. Fall ECON2830 S01 14970 F 9:30-12:00(02) (O. Galor)

ECON 2840. Empirical Analysis of Economic Growth. 
Examines economic growth, focusing on the effects of technological change, fertility, income inequality, and government policy. ECON 2830 is strongly recommended. Spr ECON2840 S01 24256 TTh 9:00-10:20(08) (D. Weil)

ECON 2890A. Topics in Macroeconomics, Development and Trade. 
This is a graduate class that covers selected topics at the intersection of macroeconomics, economic development and trade, for students in the second year of the PhD and above. The leading theme of the class is the determinants of the observed cross-country differences in income per capita and growth rates, with a focus on the long run. We start by reviewing theories where factor markets function perfectly and only aggregates matter. We then move to non-aggregative theories, placing special emphasis on theories of financial frictions. We spend some time studying the stochastic growth model with partially uninsurable idiosyncratic risk. Fall ECON2890A S01 16074 MW 1:00-2:20(06) (J. Blau)
EDUC 1020. The History of American Education. This course is an introduction to the history of American education with an emphasis on K-12 public schooling. Using primary and secondary sources, we will explore the development of public schools and school systems, debates over aims and curriculum, conflicts over school governance and funding, and struggles for equity and inclusion over time. We will analyze the relationship between schooling, capitalism, and democracy. Finally, in exploring how different generations have defined and tried to solve educational dilemmas, we’ll consider how this history might help us approach education today.

Fall  EDUC1020 S01 14784  TTh  1:00-2:20(10)  (T. Steffes)

EDUC 1060. Politics and Public Education. Who exercises power in public education? This course examines the key institutions (e.g. school districts, states, Congress, and the courts) and actors (e.g. parents, teachers, interest groups, and the general public) shaping American K-12 education in order to understand recent policy trends and their consequences for students. Major policies discussed include school finance, textbook adoption, school accountability, and school choice. Particular attention is given to the federal No Child Left Behind Act of 2001 and debates over its reauthorization. Previous coursework in American politics or public policy is suggested but not required.

Fall  EDUC1060 S01 14776  MWF  10:00-10:50(03)  (J. Papay)

EDUC 1070A. Student Teaching: English. S/NC.

Fall  EDUC1070A S01 14900  Arranged  (L. Snyder)

EDUC 1070B. Student Teaching: History and Social Studies. S/NC.

Fall  EDUC1070B S01 14901  Arranged  (E. Shed)

EDUC 1070C. Student Teaching: Science. S/NC.

Fall  EDUC1070C S01 14902  Arranged  (D. Bisaccio)

EDUC 1080A. Analysis of Teaching: English. S/NC.

Fall  EDUC1080A S01 14903  W  4:00-6:20(17)  (L. Snyder)

EDUC 1080B. Analysis of Teaching: History and Social Studies. S/NC.

Fall  EDUC1080B S01 14904  T  4:00-6:20(18)  (E. Shed)

EDUC 1080C. Analysis of Teaching: Science. S/NC.

Fall  EDUC1080C S01 14905  W  4:00-6:20(17)  (D. Bisaccio)

EDUC 1100. Introduction to Qualitative Research Methods. Designed for sophomores or juniors concentrating in education studies, but also open to other undergraduates interested in qualitative research methods. Through readings, class exercises and discussions, and written assignments, examines issues related to the nature of the qualitative research methods that are commonly used in education, psychology, anthropology, and sociology. Enrollment limited to 20.

Spr  EDUC1100 S02  25639  M  3:00-5:20(13)  (M. Martin)


Spr  EDUC1110 S01  25412  TTh  10:30-11:50(09)  (M. Kraft)

EDUC 1130. Economics of Education I. How do we attract good teachers to public schools? What are the economic returns to early-childhood intervention programs? These are just two examples of important education policy questions. This course introduces key concepts of microeconomic theory and uses them to analyze these and other policy questions. Organized around a structured sequence of readings. First year students require instructor permission. Fall  EDUC1130 S01 14779  MWF  12:00-12:50(12)  (J. Tyler)

EDUC 1150. Education, the Economy and School Reform. Changes in the economy have had dramatic negative consequences for those without a college degree. This seminar explores the impact of these changes on workplace organization and the demand for skills, on what is taught in schools, and on school reform. Prerequisites: Education and PP concentrators, EDUC 1130 and EDUC 1110 (or equivalent); Economics concentrators, ECON 1110 or ECON 1130, and ECON 1620. Enrollment limited to 20.

Spr  EDUC1150 S01 24063  TTh  2:30-3:50(11)  (M. Kraft)

EDUC 1200. History of American School Reform. Examines a century of efforts to improve schooling in the U.S., from John Dewey to Theodore Sizer and E.D. Hirsch, from "social efficiency" to charter schools and No Child Left Behind. How have these movements been affected by the historical contexts in which they operated? Have they produced any lasting results? How, if at all, should current reform movements be informed by the experiences of the past? Enrollment limited to 40.

Spr  EDUC1200 S01 24064  MWF  11:00-11:50(04)  (L. Spoehr)

EDUC 1270. Adolescent Psychology. Provides systematic treatment of the psychological, biological, and sociocultural nature of the adolescent. Both an individual and a collective perspective on the nature of the adolescent and adolescence are used to provide an analytical and comprehensive understanding of the complex environment and psyche of the adolescent. Readings include theoretical and empirical papers from such areas as psychology, sociology, anthropology, and education.

Spr  EDUC1270 S01 24068  TTh  9:00-10:20(08)  (E. Shed)

EDUC 1290. From Theory to Practice in Engaged Scholarship: Creating Community Based Learning Courses. This course will explore theories of community-based learning and engaged scholarship within the context of higher education. The course is designed to provide students with an understanding of the possibilities in the teaching and learning exchange to address significant social concerns. Enrollment limited to 20.

Spr  EDUC1290 S01 24075  T  4:00-6:20(16)  (K. Heffernan)

EDUC 1430. The Psychology of Race, Class, and Gender. Focuses on the social construction of race, class, and gender and how this construction influences an individual’s perception of self and other individuals. Topics include identity development, achievement, motivation, and sociopolitical development. Enrollment limited to 30. WRIT

Fall  EDUC1430 S01 14752  TTh  9:00-10:20(08)  (M. Abo-Zena)

EDUC 1450. The Psychology of Teaching and Learning. Seeks both to demystify the process of teaching and to illuminate its complexities. Assists students with such questions as: What shall I teach? How shall I teach it? Will my students respond? What if I have a discipline that is not taught in schools, and on school reform. Prerequisites: Education and PP concentrators, EDUC 1130 and EDUC 1110 (or equivalent); Economics concentrators, ECON 1110 or ECON 1130, and ECON 1620. Enrollment limited to 20.

Fall  EDUC1450 S01 14792  T  4:00-6:20(16)  (M. Martin)

EDUC 1500. Philosophy of Education: Educational Thought and Practice. Consideration of different philosophies of education (classical, progressive, radical, feminist, multicultural). This iterative inquiry-based collaboration locates knowledge constructively and relationally, emphasizing classroom discussion and presentation, careful reading and writing (including on-line), school-site observation, and midterm and final projects on our philosophies and praxes of education. Enrollment limited to 20. DVP/ LILE WRIT

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
EDUC 1580. Cross-Cultural Perspectives on Child Development. An examination of child development from a historical and theoretical perspective, including key historical figures such as Darwin, Hall, Baldwin, Binet, Freud, Watson, Piaget, Vygotsky, Gesell, McGraw, Bowlby, and Bayley. Explores theoretical conceptualizations of children and adolescents and investigates the representations of children in popular culture, governmental legislation, education, and public policy. Fall EDUC1700 S01 16177 MW 1:00-2:50(02) (L. Caria-Ga-Lo)

EDUC 1710. History and Theories of Child Development. An examination of child development from a historical and theoretical perspective, including key historical figures such as Darwin, Hall, Baldwin, Binet, Freud, Watson, Piaget, Vygotsky, Gesell, McGraw, Bowlby, and Bayley. Explores theoretical conceptualizations of children and adolescents and investigates the representations of children in popular culture, governmental legislation, education, and public policy. Fall EDUC1710 S01 14780 MW 1:00-2:50(08) (M. Abo-Zena)

EDUC 1720. Urban Schools in Historical Perspective. Why did urban schools, widely viewed as the best in the nation in the early twentieth century, become a "problem" to be solved by its end? How have urban schools been shaped by social, economic, and political transformations in cities and by other public policies? How have urban schools changed over time? This course will ask these and other questions to explore how historical perspective can help us better understand urban schools today. We will analyze the impact of changes in demographics, urban renewal and suburban development, the political economy of cities, educational expectations, and demands for equity. Fall EDUC1720 S01 16176 M 3:00-5:20(15) (T. Steffes)

EDUC 1730. American Higher Education in Historical Context. A study of 350 years of American higher education. The first part traces the growth and development of American higher education from premodern college to the modern research university. The second part examines issues facing higher education today and places them in historical context. Particular attention is given to: the evolution of curriculum; professionalization; student life; and the often competing priorities of teaching, research and service. Fall EDUC1730 S01 24067 MWF 1:00-2:50(07) (L. Spoehr)

EDUC 1850. Moral Development and Education. Examines contending approaches to moral development and its fostering in the home, school and peer group. Topics include philosophical underpinnings of moral theory, cognitive and behavioral dynamics of moral growth, values climate of contemporary American society, the role of schooling, and variations attributable to culture and gender. Prerequisites: EDUC 0800, 1270, or 1710, or CLPS 0610 (COGS 0630), or CLPS 0600 (PSYC 0810). Enrollment limited to 30. WRIT Fall EDUC1850 S01 14790 W 3:00-5:20(17) (J. Li)

EDUC 1860. Social Context of Learning and Development. Focuses on the social environment that contributes to the development of children’s minds, language, self-understanding, relations with others, affect, and attitudes toward learning. Examines the period from birth through young adulthood. Topics include children’s social interactions, parental expectations and socialization practices, and the influences of family, peers, school, and media. Prerequisites: EDUC 0800, EDUC 1270, EDUC 1430, EDUC 1580, EDUC 1710, CLPS 0610 (COGS 0630), or equivalent. Enrollment limited to 30. Fall EDUC1860 S01 24076 Th 4:00-6:20(17) (J. Li)

EDUC 1970. Independent Study. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

EDUC 1990. Independent Reading and Research. Supervised reading and/or research for education concentrators who are preparing an honors thesis. Written permission from the honors advisor required. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

EDUC 2070A. Student Teaching: English. S/NC. Fall EDUC2070A S01 14894 Arranged (L. Snyder)
Spr EDUC2070A S01 25332 Arranged (L. Snyder)

EDUC 2070B. Student Teaching: History and Social Studies. S/NC. Fall EDUC2070B S01 14895 Arranged (E. Shed)
Spr EDUC2070B S01 25333 Arranged (E. Shed)

EDUC 2070C. Student Teaching: Science. S/NC. Fall EDUC2070C S01 14896 Arranged (O. Bisaccio)
Spr EDUC2070C S01 25334 Arranged (O. Bisaccio)

EDUC 2080A. Analysis of Teaching: English. No credit course. Fall EDUC2080A S01 14897 W 4:00-6:20(17) (L. Snyder)
Spr EDUC2080A S01 25335 W 4:00-6:20(14) (L. Snyder)

EDUC 2080B. Analysis of Teaching: History and Social Studies. No credit course. Fall EDUC2080B S01 14898 T 4:00-6:20(18) (E. Shed)
Spr EDUC2080B S01 25336 W 4:00-6:20(14) (E. Shed)

EDUC 2080C. Analysis of Teaching: Science. No credit course. Fall EDUC2080C S01 14899 W 4:00-6:20(17) (O. Bisaccio)
Spr EDUC2080C S01 25337 W 4:00-6:20(14) (O. Bisaccio)

EDUC 2120. Practicum in Elementary Education. Students participate in an elementary classroom for 2 1/2 days a week for 12 weeks, participating in all aspects of the school day. Students assume responsibility for individualized instruction, small groups and some daily routines. Examines topics in child development; race, class, ethnic and linguistic diversity; assessment; teaching and learning as well as topics arising from the experiences in classrooms. S/NC.
**EDUC 2350. Economics of Education II**

Introduces students to the main economic theories and related applied work that inform education policy analysis. In so doing, the course combines economic theory, econometric studies, and education and institutional literature in an examination of current issues in U.S. education, particularly those issues that are most relevant to urban education. The course begins with examinations of key concepts and theories from microeconomics, labor economics, and public economics that are most relevant for studying questions in education. After laying this theoretical foundation the course then examines how these theories can illuminate and aid policy analysis around key topics in U.S. education. Open to graduate students only.

Spr EDUC2350 S01 24173 W 4:00-6:20(14) (J. Tyler)

**EDUC 2360. Policy Analysis and Program Evaluation for Education.**

Informed education policymaking requires reliable information about the causal effects of government programs and other factors shaping educational outcomes. This course offers an overview of education policy analysis with an emphasis on econometric strategies for measuring program impacts. It aims to make students critical consumers of policy evaluations and to equip them with tools to conduct their own research. Topics covered include the political context for policy research, social experiments, alternative strategies for making causal inferences, and cost-benefit analysis. Prerequisites: EDUC 1110, POLS 1600, SOC 1100, or written permission of the instructor.

Spr EDUC2360 S01 25398 Th 4:00-6:20(17) (J. Papay)

**EDUC 2370. Internship.**

Students in the Urban Education Policy Master’s Program participate in year-long internships in organizations that focus on urban education policy. Each student works with his or her site supervisor to develop a job description for the internship that allows the student to learn from and contribute to the work of the host organization.

Fall EDUC2370 S01 14887 Arranged (K. Wong)

**EDUC 2380. Internship.**

Students in the Urban Education Policy Master’s Program participate in year-long internships in organizations that focus on urban education policy. Each student works with his or her site supervisor to develop a job description for the internship that allows the student to learn from and contribute to the work of the host organization.

Spr EDUC2380 S01 24174 Arranged (K. Wong)

**EDUC 2450. Exchange Scholar Program.**

**EDUC 2980. Studies in Education.**

Independent study; must be arranged in advance. Section numbers vary by instructor. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

**EDUC 2990. Thesis Preparation.**

No description available.

Fall EDUC2990 S01 14027 Arranged ‘To Be Arranged’

Spr EDUC2990 S01 23544 Arranged ‘To Be Arranged’

**EDUC XLIST. Courses of Interest to Concentrators in Education.**

**Egyptology and Ancient Western Asian Studies**

**AWAS 0350. Haunted Universe: Monsters and Demons at the Dawn of Civilization.**

This seminar explores the relationship between monsters and civilization, considering what exactly it is that monsters do for us; why we create, deploy, and ultimately destroy them; and what they tell us about the peoples among whom they sprang up and roamed. Emphasized is the developing civilization in Mesopotamia, and the place and functioning of monsters and demons in the visual arts and literary contexts, as well as in the worldview, of the early cities of that region. Enrollment limited to 20 first year students. FYS

Fall AWAS0350 S01 16489 W 3:00-5:20(17) (K. Sonik)

**AWAS 1300. The Age of Empires: The Ancient Near East in the First Millennium BC.**

The first millennium BC saw a series of empires arising to control the Near East: the Assyrians, the Babylonians, the Persians, and the Greeks of Alexander the Great and his successors. The course will explore the political, social and cultural history of Mesopotamia and the Ancient Near East under these empires, using evidence drawn from archaeology and ancient texts (in translation).

Spr AWAS1300 S01 24364 TTh 10:30-11:50(09) (J. Steele)

**AWAS 1400. Introduction to Sumerian.**

Over five thousand years ago the first cities emerged in southern Iraq, and around that same time writing was invented, most likely to record the language we now call Sumerian. Even after it was no longer spoken,
Sumerian became a powerful conduit for the region’s cultural heritage, preserving its literature and religious traditions for millennia. In this course students will learn the fundamentals of Sumerian grammar, develop a basic working vocabulary, and explore the cuneiform script through weekly readings in original texts. Selections will come from royal inscriptions, court cases, myths, magical incantations, and even ancient schoolwork. No prerequisites. Enrollment limited to 20.

**AWAS 2990. Thesis Preparation.**
Section numbers and CRN to use when registering for this course. Section numbers vary by instructor. Please check Banner for the correct admittance at the instructor’s discretion.

Although intended for graduate students, undergraduate students who have taken EGYT 1600 or AWAS 1600 or a similar course may be admitted at the instructor’s discretion. As omens became an important political activity. In this course, we will explore how and why astronomical events were used politically in ancient Mesopotamia, the Greco-Roman world, and ancient and medieval China. No prior knowledge of astronomy is necessary for this course. WRIT

**AWAS 2310A. Ancient Scientific Texts: Akkadian.**
Readings and analysis of a major scientific text in Akkadian. Prerequisite: AWAS 0200 or 0210. Open to graduate students only. WRIT

**AWAS 2700. Special Topics in Ancient Sciences.**
This course will be a topics course containing a detailed technical and cultural study of an area of science in a culture of the ancient world. Although intended for graduate students, undergraduate students who have taken EGYT 1600 or AWAS 1600 or a similar course may be admitted at the instructor’s discretion.

**AWAS 2980. Reading and Research.**
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

**AWAS 2990. Thesis Preparation.**
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.

**AWAS 2XLIST. Courses of Interest to Concentrators in Ancient Western Asian Studies.**

**Western Asian Studies**

**AWAS XLIST. Courses of Interest to Concentrators in Ancient Western Asian Studies.**

**AWAS 1500. Ancient Babylonian Magic and Medicine.**
A survey of ancient magic and medicine focusing on Mesopotamia (present-day Iraq, ca. 2500-300 BCE), with an emphasis on beliefs about the body, health, illness, and the causes of disease, such as witchcraft or angry gods. Topics will include the training of healers, exorcists, and herbalists; concepts of contagion and plague, modalities of treatment, incantations, prayers, and empirical remedies like prescriptions; ancient perceptions of problems like sexual dysfunction, the perils of pregnancy, tooth decay, epilepsy, and mental illness. Readings will be drawn from ancient texts (in translation, archaeology, and parallels with ancient Egypt, Greece, Rome, and the Bible). No prerequisites. Not open to first year students. WRIT

**AWAS 1700. Astronomy, Divination and Politics in the Ancient World.**
This course will explore the relationship between astronomy, divination and politics in the ancient world. The sky provided ancient cultures with many possibilities for observing occurrences that could be interpreted as omens. In many cultures, celestial omens were directed towards the king and his government. As a result, interpreting and controlling celestial omens became an important political activity. In this course, we will explore how and why astronomical events were used politically in ancient Mesopotamia, the Greco-Roman world, and ancient and medieval China. No prior knowledge of astronomy is necessary for this course. WRIT

**AWAS 2310A. Ancient Scientific Texts: Akkadian.**
Readings and analysis of a major scientific text in Akkadian. Prerequisite: AWAS 0200 or 0210. Open to graduate students only. WRIT

**Egyptology**

**EGYT 1310. Introduction to Classical Hieroglyphic Egyptian Writing and Language (Middle Egyptian I).**
Much of this two-semester sequence is spent learning the signs, vocabulary, and grammar of one of the oldest languages known. By the end of this introductory year, students read authentic texts of biographical, historical, and literary significance. The cornerstone course in the Department of Egyptology—essential for any serious work in this field and particularly recommended for students in archaeology, history, classics, and religious studies. No prerequisites.

**EGYT 1320. Introduction to Classical Hieroglyphic Egyptian Writing and Language (Middle Egyptian II).**
Continuation of a two-semester sequence spent learning the signs, vocabulary, and grammar of one of the oldest languages known. By the end of this introductory year, students read authentic texts of biographical, historical, and literary significance. The cornerstone course in the Department of Egyptology—essential for any serious work in this field and particularly recommended for students in archaeology, history, classics, and religious studies. Prerequisite: EGYT 1310.

**EGYT 1330. Selections from Middle Egyptian Hieroglyphic Texts.**
Readings from the various genres of classical Egyptian literature, including stories and other literary texts, historical inscriptions, and religious compositions. Students are expected to translate and discuss assigned texts. Prerequisite: EGYT 1310, 1320.

**EGYT 1430. History of Egypt I.**
A survey of the history and society of ancient Egypt from prehistoric times to the end of the Eighteenth Dynasty (ca. 5000-1300 BC). Readings include translations from the original documents that serve as primary sources for the reconstruction of ancient Egyptian history. WRIT

**EGYT 1440. History of Egypt II.**
A survey of the history and society of ancient Egypt from the Ramesseide Period to the Roman conquest (ca. 1300-30 BC). Readings include translations from the original documents that serve as primary sources for the reconstruction of ancient Egyptian history.

**EGYT 1465. Daily Life In Ancient Egypt.**
Ancient Egypt is remembered for its grand temples and enduring tombs. Histories too often favor these examples of grandeur, forgetting the daily lives of non-royal ancient Egyptians. This class will investigate the daily lives of these underrepresented ancient Egyptians - craftsmen, servants, women, children - and address concerns such as illness, status, economy, magic and death. Additionally, we will look at the individual and discuss sexuality, love, style and fashion, religious practice and the family. Class format will include lectures and discussions, presentations, and tours through virtual temples which will enable us to reconstruct the daily lives of Ancient Egyptians.

**EGYT 1910. Senior Seminar.**
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

**EGYT 1920. Senior Seminar.**
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
is perhaps the best represented of the Coptic dialects. Sahidic grammar is explained, and some texts, mainly of a biblical and patristic nature, are read. Open to undergraduates with the consent of the instructor. No prerequisites, but a knowledge of Middle Egyptian or Greek would be helpful.

EGYT 2410. Late Egyptian.
Introduction to the grammar of the third historical phase of ancient Egyptian and readings from its various genres, including literary texts, letters, historical inscriptions, and tomb-robbing papyri. Students will be expected to translate and discuss assigned texts. Prerequisites: EGYT 1310, 1320.

Spr EGYT2410 S01 24370 TTh 9:00-10:20(08) (J. Allen)

EGYT 2420. Nubian Texts.
Translation and discussion of texts from the period of Nubian rule in Egypt. Open to students concentrating in Egyptology. Prerequisites: EGYT 1310, 1320, 1330 and 2410, or instructor permission.

Spr EGYT2420 S01 25572 TTh 1:00-2:20(10) (J. Allen)

EGYT 2810. Old Egyptian.
Introduction to the grammar of the first historical phase of ancient Egyptian and readings from its two primary genres, the Pyramid Texts and autobiographical inscriptions. Students will be expected to translate and discuss assigned texts. Prerequisites: EG 131, 132 (EGYT 1310, 1320).

Fall EGYT2810 S01 18153 MW 8:30-9:50(02) (J. Allen)

EGYT 2970. Preliminary Examination Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.

Fall EGYT2970 S01 14028 Arranged 'To Be Arranged'
Spr EGYT2970 S01 23545 Arranged 'To Be Arranged'

EGYT 2980. Reading and Research.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

EGYT 2990. Thesis Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.

Fall EGYT2990 S01 14029 Arranged 'To Be Arranged'
Spr EGYT2990 S01 23546 Arranged 'To Be Arranged'

EGYT XLIST. Courses of Interest to Concentrators in Egyptology.
Fall 2013
The following courses may be of interest to Egyptology concentrators. Please see the sponsoring department for the time and location of each course.

Anthropology
ANTH 1820 Lost Languages: The Decipherment and Study of Ancient Writing
Systems
Archaeology and the Ancient World
ARCH 0150 Introduction to Egyptian Archaeology and Art
ARCH 2740 Social Life in Ancient Egypt

Spring 2014
The following courses may be of interest to Egyptology concentrators. Please see the sponsoring department for the time and location of each course.

Archaeology and the Ancient World
ARCH 0365 Byzantium-Constantinopole-Istanbul: A City in Deep Time
ARCH 1630 Fighting Pharaohs: Ancient Egyptian Warfare

Classics
CLAS 1120Q Seven Wonders of the Ancient World

Engineering

This course will address the impact that technology has on society, the central role of technology on many political issues, and the need for all educated individuals to understand basic technology and reach an informed opinion on a particular topic of national or international interest. The course will begin with a brief history of technology.

Spr ENGN0020 S01 25093 MWF 11:00-11:50(04) (E. Powell)

ENGN 0030. Introduction to Engineering.
An introduction to various engineering disciplines, thought processes, and issues. Topics include computing in engineering, engineering design, optimization, and estimation. Case studies in engineering are used to illustrate engineering fields and scientific principles, including in-depth studies of statics and optics. Laboratories and design projects are included. Prerequisite: one of the following: APMA 0330, 0340, 0350, 0360, MATH 0100, 0170, 0180, 0190, 0200, 0350, 0520, 0540, which may be taken concurrently.

Students MUST register for the course lecture (M01) and one of the sections during the SAME registration session. Banner will not allow a student to register for one component without registering for the other at the same time. Further, if you drop one component of the course on Banner, both components will be dropped.

Fall ENGN0030 M01 15440 F 9:00-9:50 (K. Haberstroh)
Fall ENGN0030 S01 15435 Th 9:00-10:20(02) (K. Haberstroh)
Fall ENGN0030 S01 15435 MW 9:00-9:50(02) (K. Haberstroh)
Fall ENGN0030 S02 15436 MW 9:00-9:50(02) (P. Felzenszwalb)
Fall ENGN0030 S02 15436 T 2:30-3:30(02) (P. Felzenszwalb)
Fall ENGN0030 S03 15437 MW 9:00-9:50(02) (B. Briant)
Fall ENGN0030 S03 15437 Th 9:00-10:20(02) (B. Briant)
Fall ENGN0030 S04 15438 Th 2:30-3:30(02) (K. Breuer)
Fall ENGN0030 S04 15438 MW 9:00-9:50(02) (K. Breuer)
Fall ENGN0030 S05 15439 MW 9:00-9:50(02) (H. Gao)
Fall ENGN0030 S05 15439 Th 4:00-5:20(02) (H. Gao)

ENGN 0040. Dynamics and Vibrations.
Study of the kinematics and dynamics of particles and rigid bodies. Principles of motion of mechanical systems. Concepts of inertia, work, kinetic energy, linear momentum, angular momentum, and impact. Applications to engineering systems, satellite orbits, harmonic vibrations of one and two degree of freedom systems. Lectures, recitations, and laboratory. Prerequisite: ENGN 0030. Corequisite: MATH 0200 or 0180.

Spr ENGN0040 M01 25098 Th 9:00-10:20 (A. Bower)
Spr ENGN0040 S02 24957 MWF 9:00-9:50(08) (A. Bower)
Spr ENGN0040 S03 24958 MWF 10:00-10:50(08) (A. Bower)
Spr ENGN0040 S04 24959 MWF 11:00-11:50(08) (A. Bower)
Spr ENGN0040 S05 24960 MWF 1:00-1:50(08) (A. Bower)
Spr ENGN0040 S06 25101 MWF 2:00-2:50(08) (A. Bower)

ENGN 0090. Management of Industrial and Nonprofit Organizations.
Exposes students to the concepts and techniques of management. Topics include marketing, strategy, finance, operations, organizational structure, and human relations. Guest lecturers describe aspects of actual organizations. Lectures and discussions.

Fall ENGN0090 S01 15718 TTh 1:00-2:20(14) (B. Hazeltine)
Fall ENGN0090 S02 15719 TTh 2:30-3:50(14) (B. Hazeltine)
Fall ENGN0090 S03 15720 TTh 6:30-7:50(14) (B. Hazeltine)

ENGN 0120A. Crossing the Consumer Chasm by Design.
Technologies have shaped human life since tools were sticks and flints to today’s hydrocarbon powered, silicon managed era. Some spread throughout society; bread, cell phones, airlines, but most never do; personal jet packs, Apple Newton, freeze dried ice cream.

Space Tourism, the Segway, electric cars: Can we predict which ones will succeed? Which ones will we confront the cross-disciplinary barriers to realizing benefits from technology.

Enrollment limited to 18 first year students. Instructor permission required. FYS WRIT

Spr ENGN0120 S01 24997 MWF 11:00-11:50(04) (R. Fleeter)
ENGN 0120B. Crossing the Space Chasm Through Engineering Design.
Five decades of human activity in space has provided the world community with benefits including instant global communications and positioning, human and robotic exploration of the moon, planets and sun, and a perspective of earth which continues to inform and influence our relationship with our environment.

Unlike other technical revolutions of the 20th century space has not transitioned to a commercial, consumer market commodity. Rather its users and applications remain primarily large and institutional.

To experience the challenges of engineering design and of changing an industrial paradigm, we will work in one or several groups to identify a use of space, and a plan for its implementation, that could help transition space from its status as a niche technology. Through the process of design, we will confront the technical, economic, societal and political barriers to obtaining increased benefits from technologies in general, and space in particular, and to making new technologies beneficial to a wider range of users. Enrollment is limited to 18 first year students. Instructor permission required. FYS WRIT.

ENGN 0260. Mechanical Technology.
A basic machine shop course that, with the help of an instructor, teaches students how to fabricate a few simple objects using hand tools and some basic machines. This course is designed to introduce the student to the machining process and environment. Audit only.
Fall ENGN0260 S01 154883 Arranged (C. Bull)
Spr ENGN0260 S01 250000 Arranged (C. Bull)

Mechanical behavior of materials and analysis of stress and deformation in engineering structures and continuous media. Topics include concepts of stress and strain; the elastic, plastic, and time-dependent response of materials; principles of structural analysis and application to simple bar structures, beam theory, instability and buckling, torsion of shafts; general three-dimensional states of stress; Mohr’s circle; stress concentrations. Lectures, recitations, and laboratory. Prerequisite: ENGN 0030.
Fall ENGN0310 M01 16063 MWF 9:00-9:50 (C. Franck)
Fall ENGN0310 S03 16055 T 12:00-12:50(02) (C. Franck)
Fall ENGN0310 S04 16056 T 4:00-4:50(02) (C. Franck)

ENGN 0410. Materials Science.
Relationship between the structure of matter and its engineering properties. Topics: primary and secondary bonding; crystal structure; atomic transport in solids; defects in crystals; mechanical behavior of materials; phase diagrams and their utilization; heat treatment of metals and alloys; electrical, optical, and magnetic properties of materials; strengthening mechanisms in solids and relationships between microstructure and properties; corrosion and oxidation. Lectures, recitations, laboratory.
Fall ENGN0410 M01 15754 TTh 9:00-10:20 (S. Kumar)
Fall ENGN0410 M01 15754 M 1:00-1:50 (S. Kumar)
Fall ENGN0410 S02 15753 W 1:00-1:50(08) (S. Kumar)
Fall ENGN0410 S03 15879 W 3:00-3:50(08) (S. Kumar)

ENGN 0510. Electricity and Magnetism.
Fundamental laws of electricity and magnetism and their role in engineering applications. Concepts of charge, current, potential, electric field, magnetic field. Resistance, capacitance, and inductance. Electric and magnetic properties of materials. Electromagnetic wave propagation. Lectures, recitation, and laboratory. Prerequisites: ENGN 0030 or PHYS 0070; ENGN 0040 or PHYS 0160 (previously 0080); MATH 0180 or 0200; and APMA 0330 or 0350 (may be taken concurrently).
Fall ENGN0510 M01 15823 MWF 10:00-10:50 (A. Zaslavsky)
Fall ENGN0510 S02 15819 T 10:30-11:50(03) (A. Zaslavsky)
Fall ENGN0510 S03 15820 T 1:00-2:20(03) (A. Zaslavsky)
Fall ENGN0510 S04 15821 Th 10:30-11:50(03) (A. Zaslavsky)
Fall ENGN0510 S05 15822 Th 1:00-2:20(03) (A. Zaslavsky)

ENGN 0520. Electrical Circuits and Signals.
An introduction to electrical circuits and signals. Emphasizes the analysis and design of systems described by ordinary linear differential equations. The frequency domain is introduced, including the effects of sampling and windowing in computer simulations. Other topics include transient analysis, Fourier series, and Laplace transform. Laboratories apply concepts to real problems in audio and controls. Lectures, recitation, and laboratory. Prerequisite: MATH 0180 or MATH 0200, courses may be taken concurrent to ENGN 0520.
Spr ENGN0520 M01 25103 MWF 10:00-10:50 (H. Silverman)
Spr ENGN0520 S02 24962 T 9:00-10:20(03) (H. Silverman)
Spr ENGN0520 S03 24963 T 1:00-2:20(03) (H. Silverman)
Spr ENGN0520 S04 24964 Th 9:00-10:20(03) (H. Silverman)
Spr ENGN0520 S05 24965 Th 1:00-2:20(03) (H. Silverman)

ENGN 0720. Thermodynamics.
An introduction to macroscopic thermodynamics and some of its engineering applications. Presents basic concepts related to equilibrium, and the zeroth, first and second laws for both closed and open systems. Examples include analysis of engines, turbines, and other engineering cycles, phase equilibrium and separation processes, chemical reactions, surface phenomena, magnetic and dielectric materials. Lectures, recitations, and laboratory. Prerequisites: ENGN 0030 or ENGN 0040. Recommended: ENGN 0410 or CHEM 0330.
Spr ENGN0720 M01 25105 Thh 10:30-11:50 (A. Peterson)
Spr ENGN0720 S02 24967 W 3:00-5:00(09) (A. Peterson)
Spr ENGN0720 S03 24968 W 2:00-5:00(09) (A. Peterson)

Fall ENGN0810 M01 15830 MWF 1:00-1:50 (J. Franck)
Fall ENGN0810 S02 15464 Th 4:00-5:40(06) (J. Franck)
Fall ENGN0810 S03 15465 Th 12:00-12:50(06) (J. Franck)

ENGN 0900. Managerial Decision Making.
Ways of making effective decisions in managerial situations, especially situations with a significant technological component; decision analysis; time value of money; competitive situations; forecasting; planning and scheduling; manufacturing strategy; corporate culture. Lectures and discussions. Prerequisite: ENGN 0090 or MATH 0100.
Spr ENGN0900 S01 25001 TTh 1:00-2:20(10) (H. Hazeltine)

ENGN 0930A. Appropriate Technology.
Our goal for this course is that you leave it with the ability to think and act rationally and concretely on issues of technology and the human condition. We will provide background on useful technologies (e.g. wind, solar, hydro), techniques to fabricate them, and an opportunity to explore the obstacles to their implementation.
Spr ENGN0930S S01 25030 TTh 10:30-11:50(09) (B. Hazeltine)

ENGN 0930C. DesignStudio.
DESIGNSTUDIO is a course open to students interested in learning through making. Working in a studio environment, we will iteratively design, build, and test projects, as we imaginatively frame design problems, and develop novel strategies for addressing those problems. We will explore design thinking, creative collaboration, exploratory play, ideation, iteration, woodworking, prototyping, CNC milling and laser cutting – in addition to other strategies that enhance our creative processes - as we establish a technical and conceptual foundation for the design and fabrication of objects and experiences. Enrollment limited to 16. Instructor permission required.
Spr ENGN0930C S01 25002 TTh 9:00-12:00(08) (C. Gonsher)

ENGN 1000. Projects in Engineering Design.
Projects in design for concentrators in chemical, electrical, materials, and mechanical engineering. Students generally work in teams on projects that are defined through discussions with the instructor. An assembled product or detailed design description is the goal of the semester’s effort.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Prerequisite: completion of engineering core program. Written permission required.

Fall ENGN1000 S01 15482 Th 4:00-6:20(16) (C. Gosner)
Spr ENGN1000 S01 24999 Th 4:00-6:20(17) (C. Gosner)

Entrepreneurship is innovation in practice: transforming ideas into opportunities, and, through a deliberate process, opportunities into commercial realities. These entrepreneurial activities can take place in two contexts: the creation of new organizations; and within existing organizations. This course will present an entrepreneurial framework for these entrepreneurial processes, supported by case studies that illustrate essential elements. Successful entrepreneurs and expert practitioners will be introduced who will highlight practical approaches to entrepreneurial success. Enrollment limited to 35. WRIT
Fall ENGN1010 S01 15724 Thh 10:30-11:50(13) (D. Warshay)
Fall ENGN1010 S02 15725 M 6:00-8:30PM(17) (J. Cohen)
Spr ENGN1010 S01 25008 Thh 2:30-3:50(11) "To Be Arranged"
Spr ENGN1010 S02 25009 Thh 10:30-11:50(09) (D. Warshay)

ENGN 1110. Transport and Biotransport Processes.
Aim: To develop a fundamental understanding of mass transport in chemical and biological systems. The course includes: mechanism of transport, biochemical interactions and separations; mass transport in reacting systems; advection; membrane and transvascular transport; electrophoretic separations; pharmacokinetics and drug transport; equilibrium stage processes; distillation and extraction. Other features: design concepts; modern experimental and computing techniques; laboratory exercises.
Spr ENGN1110 S01 24969 MWF 1:00-1:50(06) (A. Shukla)

ENGN 1130. Phase and Chemical Equilibria.
Application of the first and second laws of thermodynamics and conservation of mass to the analysis of chemical and environmental processes, phase and chemical equilibria and partitioning of species in multiphase, nonreactive and reactive systems. Thermodynamic properties of fluid mixtures-correlation and estimation. Applications and examples drawn from chemical processing and environmental problems.
Prerequisite: ENGN 0720.
Fall ENGN1130 S01 15466 Thh 2:30-3:50(11) (R. Hurt)

ENGN 1140. Chemical Process Design.
Chemical process synthesis, flow charting, and evaluation of design alternatives. Process equipment sizing as determined by rate phenomena, economics, and thermodynamic limitations. Introduction to optimization theory. Applications of these principles to case studies. Prerequisites: ENGN 1110, 1130; ENGN 1120 (may be taken concurrently).
Spr ENGN1140 S01 24970 Thh 6:30-7:50(12) (G. Hadidi)

ENGN 1210. Biomechanics.
Spr ENGN1210 S01 24972 MWF 2:00-2:50(07) (T. Powers)

ENGN 1220. Neuroengineering.
Course Goals: To develop an advanced understanding of how signals are generated and propagated in neurons and neuronal circuits, and how this knowledge can be harnessed to design devices to assist people with neurologic disease or injury. Fundamental topics in neuronal and neural signal generation, recording methods, and stimulation methods. Clinical/Translational topics include multiple clinically available and emerging neurotechnologies. Prerequisites: NEUR 0010 and ENGN 0510; or instructor permission, which may be provided after discussion with course faculty.
Spr ENGN1220 S01 24974 Thh 1:00-2:20(10) (A. Nummikko)

ENGN 1230. Instrumentation Design.
Sensors for temperature, flow rate, and experimental stimuli. Intended as a design course primarily for biomedical engineers. Lab times to be arranged. WRIT
Fall ENGN1230 S01 15467 MWF 10:00-10:50(03) (J. Daniels)

ENGN 1300. Structural Analysis.
A unified study of truss, beam, frame, plate, and shell structures. Emphasis on principles of virtual work and numerical methods of elastic structural analysis by matrix methods. Includes calculation of deflections and reactions in beam structures, beam vibrations, and column buckling. Theorems of plastic limit analysis. Plate bending. Membrane stresses and local bending effects in axially symmetric shells. Prerequisite: ENGN 0310.
Spr ENGN1300 S01 24988 MWF 9:00-9:50(02) (K. Kim)

ENGN 1340. Water Supply and Wastewater Treatment.
The hydrological cycle, surface water hydrology, ground water hydrology. Emphasis on the formulation of mathematical models of various flow problems and their solution by analytical or numerical means. Typical problems: open channel and river flows; flood routing; ground water flow in aquifers and into wells. Topics in wastewater treatment plant design: mixing, residence time, aeration, and, bacteriological and chemical treatment processes. Prerequisites: ENGN 0810. Enrollment limited to 40.
Spr ENGN1340 S01 24971 W 3:00-5:20(14) (L. Kulaots)

Classification and identification of geological materials; mechanical and physical properties and methods of testing. Elements of the analysis of stress and strain in rock and soil masses; theories of failure, theory of seepage. Problems of building foundations; consolidation and settlement; stability of earth slopes and embankments. Includes geotechnical laboratory. Prerequisite: ENGN 0310.
Spr ENGN1360 S01 24975 M 3:00-5:20(13) (D. Carchedi)

A unified study of the dynamics of particles, rigid bodies, and deformable continua. Generalized coordinates and Lagrange's equations; variational principles; stability of equilibrium; vibrations of discrete systems and of elastic continua, and wave propagation. Prerequisites: ENGN 0040, APMA 0340, or equivalent.
Spr ENGN1370 S01 24989 Thh 9:00-10:20(08) (H. Kesari)

ENGN 1380. Design of Civil Engineering Structures.
This course provides an introduction to the design of steel and reinforced concrete structures using ultimate strength methods. Lectures will cover key concepts of design theory, building codes, and standards using examples from real structures. Students will apply concepts through computer labs, homework problems, and a design project. Lectures plus lab. Prerequisite: ENGN 1300.
Fall ENGN1380 S01 15471 Thh 6:30-7:50(14) (O. Odhe)

ENGN 1410. Physical Chemistry of Solids.
Application of physical chemistry and solid state chemistry to the structure and properties of engineering solids as used in solid state devices, ceramics, and metallurgy. Equilibrium and free energy of heterogeneous systems, thermodynamics of solutions, chemical kinetics, diffusion, catalysis and corrosion, solid state transformations. Case studies taken from industrial practice. Prerequisites: ENGN 0410, 0720.
Fall ENGN1410 S01 16057 W 4:00-5:20(15) (D. Paine)
Fall ENGN1410 S01 16057 M 4:00-5:20(15) (D. Paine)

This course introduces the basic principles and formulations that describe kinetic processes in materials science and engineering. These are divided into the following principle types of mechanisms: solid state diffusion, reactions at surfaces and interfaces, and phase transformations. The final section of the course applies these principles to several relevant materials processing systems. Prerequisites: ENGN 0410, 0720, 1410 or equivalent.
Spr ENGN1420 S01 24977 Thh 9:00-10:20(08) (B. Sheldon)

Begins with basic concepts of mechanical properties common to all materials, with some emphasis on dislocation theory. Particular attention is given to the relationship between mechanical properties and microstructures. The different types of mechanical tests that are used in

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
ENGN 1480. Metallic Materials. The microstructure of metals, microstructural evolution during processing, and the relationships between the microstructure and the physical properties of the material. Crystallography and x-ray diffraction. Crystalline defects, dislocations, grain boundaries, and their effects on mechanical and other properties. Solid state diffusion and solid state phase transformations. Oxidation and corrosion. Laboratory. Prerequisite: ENGN 0410, 1410.

Spr ENGN1480 S01 24978 TTh 2:30-3:50(11) (N. Padture)

ENGN 1490. Biомaterials. Biomaterials science, the study of the application of materials to problems in biology and medicine, is characterized by medical needs, basic research, and advanced technological development. Topics covered in this course include materials used in bone and joint replacement, the cardiovascular system, artificial organs, skin and nerve regeneration, implantable electrodes and electronic devices, drug delivery, and ophthalmology.

Fall ENGN1490 S01 15470 MWF 12:00-12:50(12) (I. Wong)
ENGN 1570. Linear System Analysis. Analysis of discrete and continuous electrical signals and systems in both time and frequency domains. Modulation, sampling, spectral analysis, analog and digital filtering. Fourier, Laplace and z-transforms, the state-space approach, stability of linear systems. Prerequisite: ENGN 0520.
Fall ENGN1570 S01 15473 MWF 1:00-1:50(06) (B. Kimia)

ENGN 1580. Communication Systems. Analysis and design of modern digital communication systems. Includes: sampling theorem; entropy measure of signal information content; pulse code modulation; amplitude and single sideband modulation; review of probability theory; stochastic processes and their use in communication systems; detection of signals buried in noise; communication channel capacity; coding principles; communication networks. Laboratory projects. Prerequisite: ENGN 1570. APMA 1650 or MATH 1610 helpful but not required.
Spr ENGN1580 S01 24981 MW 8:30-9:50(02) (D. Durfee)

ENGN 1590. Introduction to Semiconductors and Semiconductor Electronics. An introduction to the physics of fundamental electronic processes that underlie the operation of semiconductor devices on a microscopic scale. Basic electronic properties of semiconductors and effects at interfaces: heterogeneous media, such as pn junctions and hetero-structure barriers and quantum wells. These junctions, barriers and wells are used as building blocks for devices, focusing on bipolar and field-effect transistors. Modern trends in micro- and opto-electronic devices are discussed. A brief fabrication lab will introduce pn junction fabrication technology. Prerequisites: ENGN 0410 and 0510.
Fall ENGN1590 S01 15474 MWF 10:00-10:50(03) (J. Xu)

ENGN 1620. Analysis and Design of Electronic Circuits. Elementary device physics and circuit characteristics of semiconductor diodes, bipolar junction transistors (BJTs), and field effect transistors (FETs). Analysis and design of practical circuits using discrete semiconductor devices. Constraint on and techniques for linear integrated circuit (IC) design and the use of linear ICs as circuit building blocks. Laboratory. Prerequisites: ENGN 0510, 0520 or equivalent.
Spr ENGN1620 S01 24862 MWF 2:00-2:50(07) (J. Rosenstein)

ENGN 1630. Digital Electronics Systems Design. Fundamentals of digital logic design including: Boolean algebra, gates, truth tables, logic families, flip-flops, finite state machines, memory, and timing. More advanced topics include A-D conversion, binary arithmetic, CPU organization, programmable logic (CPLDs and FPGAs), and VHDL. Extensive laboratory requirement. Not open to first year students; permission required for sophomores.
Fall ENGN1630 S01 15475 MW 3:00-4:20(15) (W. Patterson)

ENGN 1640. Design of Computing Systems. This course introduces the main concepts and techniques for designing computing systems. Topics covered include assembly language, instruction set design, pipelining, superscalar and VLIW processor design, memory subsystem design, and I/O interfacing. Laboratory topics include programmable logic devices, hardware definition languages, and implementation of a bootable version of the pipelined MIPS processor. Laboratory emphasizes design optimizations with respect to speed and design area. Prerequisites: ENGN 1630 or passing of a quiz on basic digital logic concepts, or instructor permission.
Spr ENGN1640 S01 24983 TTh 1:00-2:20(10) (S. Reda)

ENGN 1650. Embedded Microprocessor Design. This is a combined lecture and design project course offering experience in the open-ended design of an electronic product or system employing an embedded microprocessor by small-group design teams. Activity includes product specification, circuit design, programming, printed circuit layout, construction, packaging, and economic assessment. Teams are expected to produce functional products. Lecture topics will be adjusted to reflect the chosen design problems. Emphasis is placed on the criteria for choosing processors and on the interfaces and programming requirements of the system. Primarily for senior concentrators. Experience with C programming is helpful but not required. Prerequisite ENGN 1630 or permission of the instructor.
Fall ENGN1650 S01 15476 Arranged (W. Patterson)

ENGN 1690. Photonics and Applications. Science and engineering principles of photonics and optoelectronics, that provide foundation to a broad range of technologies from internet to lighting, from lasers to DVD, from satellite images to computer display, from solar cells to single molecule detection. topical content: light as waves in media, on surface, and through holes; interference and waveguiding; light generation by spontaneous emission or by stimulation; LED, Laser, Photodetector, Optical amplifier and modulator, etc. Prerequisite: ENGN 0510 or equivalent.
Spr ENGN1690 S01 24895 TTh 2:30-3:50(11) (R. Zia)

ENGN 1700. Jet Engines and Aerospace Propulsion. Dynamics and thermodynamics of compressible internal flows with applications to jet engines for both power and propulsion, rocket engines and other propulsion systems. Thermodynamic analyses of engine cycles with and without afterburners. Fluid dynamics of high Mach number systems. Structural and Materials considerations for engine design. Team projects for analysis and design of novel jet engine concepts. Prerequisite: ENGN 0720 and 0810.
Fall ENGN1700 S01 15477 MWF 11:00-11:50(04) (J. Liu)

Spr ENGN1710 S01 24990 TTh 10:30-11:50(09) (I. Kulaeot)

ENGN 1740. Computer Aided Visualization and Design. Provides instruction in the application of computers to the design methods in engineering. Hands-on experience in use of CAD/CAM software packages for geometric modeling, visualization, and drafting. Emphasis on applications to solids and structural problems. Independent design projects are carried out. Course counts as an ABET upper-level design course for mechanical and civil engineering concentrators. Prerequisite: ENGN 0310.
Spr ENGN1740 S01 24992 TTh 6:30-7:50(12) (B. Burke)

Design of mechanical devices utilizing techniques developed in ENGN 1750. Additional subjects include material failure criteria, vibration of multivax systems, and control systems. Corequisite: ENGN 1370. Please contact Professor Rick Fleeter for special permission. Please see this video describing the course in more detail: http://www.youtube.com/watch?v=CYVshHzMQ9dY&feature=mfu_in_order&list=UL Spr ENGN1780 S01 24994 MWF 1:00-1:50(06) (R. Fleeter)

Aims to give mechanical engineering students a deeper and more thorough grounding in principles and basic applications. Topics include review of the conservation principles; inviscid flow; viscous flow, including aerodynamics lubrication theory; laminar boundary layers: wave motions and wave drag. Lectures, assignments, computational projects, and laboratory. Prerequisites: ENGN 0720 and 0810. Spr ENGN1860 S01 24995 MWF 11:00-11:50(04) (S. Mandre)

ENGN 1930B. Photonics and Biophotonics.
Biophotonics deals with interactions between light and biological matter that combine lasers, photonic, nanotechnology, and biotechnology. The course will introduce the biology/photonic interface and discuss topics like photobiology, bioimaging techniques, light activated therapy, microarray technology, tissue engineering with light, and bionanophotonics. Prerequisites: science and engineering background. Spr ENGN1930B S01 24973 MWF 12:00-12:50(05) (S. Deoni)

ENGN 1930D. Large Scale Engineering Design Project.
Provides a major design experience for civil, mechanical, and, with approval, environmental engineering students. This experience involves an open-ended design problem that requires teamwork and the integration of understanding developed in upper-level courses in the engineering concentrations. Intended for students in their senior year. Spr ENGN1930D S01 24976 Arranged (J. Marton)

ENGN 1930G. Entrepreneurship I.
Teams of students from Engineering, COE and other technical and non-technical disciplines form simulated high tech startup companies working on mentor-defined opportunities, from conception to commercialization. Intellectual property, marketing, definition of a product requirements document, human factors (including team building), safety and environmental concerns, and legal concerns are emphasized. Students in the COE Technology Management Track should complete ENGN 1010 prior to this course. Enrollment in the course is limited and students must fill out a formal application (though COE tech track seniors are automatically approved). The course meets TR from 2:30-3:50, and other outside meeting hours will be arranged. WRIT Fall ENGN1930G S01 16545 Arranged (S. Petteruti)

ENGN 1930L. Biomedical Engineering Design, Research and Modeling.
This course introduces students to design, modeling and analysis of biological systems. The first portion of the course focuses on linear systems. Research projects in design will be analyzed. The course also introduces students to the Matlab programming language, which allows them to implement the design models discussed in class. For seniors only. Fall ENGN1930L S01 15486 MW 8:30-9:50(02) (A. Tripathi)

ENGN 1930M. Industrial Design.
Brown engineering and RISD industrial design faculty lead product development teams through a design cycle. Engineers explore industrial design, designers gain some insight into engineering, and both groups can apply their skills to challenging problems. Frequent presentations, field trips, critiques, and labs. Preference given to seniors. Prerequisites: completion of engineering core. Enrollment limited to 15 students. Fall ENGN1930M S01 15481 Arranged (C. Bull)

ENGN 1930N. Introduction to Magnetic Resonance Imaging and Neuroimaging.
Magnetic resonance imaging (MRI) is a powerful tool for investigating the biological structure and functional dynamics across an incredibly broad spatial and temporal scale. This course will provide an understanding of the basic physical principles of magnetic resonance; including signal generation, detection and contrast mechanisms; as well as image acquisition techniques and reconstruction methods. This course is aimed at undergraduate and graduate students from a variety of disciplines, including: Engineering, Computer Science, Applied Mathematics, Physics, Cognitive Science and Neuroscience as well as medical students and residents. Students should have a basic understanding of matrix mathematics and familiarity with the concepts of magnetism and waves. Fall ENGN1930N S01 15469 MWF 2:00-2:50(07) (S. Deoni)

ENGN 1930S. Land Use and Built Environment: An entrepreneurial view.
Through the use of readings, group discussions, students presentations and guest lectures, students examine and challenge the analytical and structural frameworks which underlie and support public and private land and use the urban and suburban built environments. Students build an understanding and theory of how social, political, governmental and economic forces interact with society’s present and future physical space needs. Fall ENGN1930S S01 15723 W 9:00-11:50(02) (J. Mittlemann)

ENGN 1930U. Renewable Energy Technologies.
Analysis of the thermodynamics, physics, engineering and policy issues associated with renewable and non-renewable energy technologies with applications appropriate to both the developed and the developing world. Specific technologies that will be studied include Fossil fuels, Wind, Solar, Hydro, Biomass and Nuclear. Energy consumption technologies, such as power generation and transportation will also be studied. Some technical background, such as ENGN 0030, 0040 and 0720, is strongly recommended. Spr ENGN1930U S01 24996 TTh 2:30-3:50(11) (C. Bull)

ENGN 1931A. Photovoltaics Engineering.
This seminar course will provide an overview of the operation, design, characterization, and manufacturing of photovoltaic solar cells and panels. The course will span a range from the fundamental physics of solar cell operation to highly applied, industrially relevant engineering topics. Recommended prerequisites: Good knowledge of basic physics and electromagnetism concepts; proficiency in ENGN 0510 or PHYS 0470; this course is designed for undergraduate and graduate students in Physics, Chemistry and Engineering interested in the field of alternative energy with a focus in photovoltaics. Enrollment limited to 20. Spr ENGN1931A S01 24987 W 3:00-5:20(14) (A. Gabor)

ENGN 1931D. Design of Mechanical Assemblies.
An introduction to the design and development of mechanical assemblies suitable for production over a range of volumes, from prototypes to high volume manufacture. The course is intended to present an overview of basic machine components and manufacturing processes from the perspective of a design engineer in a contemporary industrial setting. The objective of which being to provide students the background necessary to create mechanical assemblies from blank-page concepts through to production ready designs. Coursework will include both theoretical and experimental exercises as well as two group projects working on a mechanical assembly produced via high volume manufacture. Prerequisite: ENGN 0310, 1740. Enrollment limited to 20. Fall ENGN1931D S01 15479 Th 6:30-7:50(14) (B. Burke)

ENGN 1931E. Writing Science.
This seminar focuses on communicating scientific and technical information to a lay audience in ways that engage and inform. The focus is on writing about new findings, scientific disputes and policy debates, along with producing profiles, feature articles, op-eds and blog posts. Students who complete this seminar will learn how to turn a collection of facts into a story, ways of explaining complex topics in simple terms, and how to differentiate between crucial technical details and clutter. Proficiency in English is assumed. Permission from the instructor is required. Preference will be given to seniors and graduate students. Enrollment limited to 15. WRIT Fall ENGN1931E S01 15722 W 3:00-5:20(17) (C. Dean)

The course will explore where the majority of “useful” energy originates today. Main fossil energy sources (e.g., coal, crude oil, gas, shale oil, tar sands) and their chemical characteristics will be considered.
Environmental aspects of fuel production (mining, drilling), fuel conversion technologies, both for delivering heat and power, and why there are limitations on the conversion to the latter. Calculations of "carbon footprint" will be illustrated. Common examples of emissions control technologies, including carbon capture and sequestration, will be presented. Policy and social implications of these energy issues will be discussed. Prerequisites: CHEM 0330 and ENGN 0720.

Fall ENGN1931F S01 16080 TTh 10:30-11:50(13) (I. Kulaots)

ENGN 1970. Independent Studies in Engineering. Independent Study in Engineering. Instructor permission required after submitting online proposal (http://brown.edu/academics/engineering/content/independent-study). Section numbers vary depending on concentration. Please check Banner for the correct section number and CRN to use when registering for this course.

ENGN 1971. Independent Study in Engineering. Independent Study in Engineering. Instructor permission required after submitting online proposal (http://brown.edu/academics/engineering/content/independent-study). Section numbers vary depending on concentration. Please check Banner for the correct section number and CRN to use when registering for this course.

ENGN 2010. Mathematical Methods in Engineering and Physics I. An introduction to methods of mathematical analysis in physical science and engineering. The first semester course includes linear algebra and tensor analysis, analytic functions of a complex variable, integration in the complex plane; potential theory. The second semester course includes probability theory; eigenvalue problems; calculus of variations and extremum principles; wave propagation; other partial differential equations of evolution.

Fall ENGN2010 S01 15727 TTh 10:30-11:50(13) (J. Liu)

ENGN 2020. Mathematical Methods in Engineering and Physics II. An introduction to methods of mathematical analysis in physical science and engineering. The first semester course includes linear algebra and tensor analysis, analytic functions of a complex variable, integration in the complex plane; potential theory. The second semester course includes probability theory; eigenvalue problems; calculus of variations and extremum principles; wave propagation; other partial differential equations of evolution.

Spr ENGN2020 S01 25011 TTh 10:30-11:50(09) (H. Gao)

ENGN 2110. Business Engineering Fundamentals I. The course examines core concepts in distinct areas through three modules: (1) intellectual property and business law, (2) technical marketing, and (3) finance. All aspects of intellectual property will be treated, models on how to analyze markets will be discussed, culminating in a finance module which utilizes accounting fundamentals and models to perform financial analysis.

Fall ENGN2110 S01 15739 W 3:00-5:20(17) (E. Suuberg)

ENGN 2120. Business Engineering Fundamentals II. The course examines core concepts in distinct areas through three modules: (1) organizations, leadership, and human capital, (2) implementing radical technology change, and (3) engineering ethics. Organization, leadership and human capital focuses on the attributes of effective leadership and the tactical operation of start-up companies, implementing radical technological change centers on disruptive technologies and their adaptation in the marketplace, and ethics treats the issues that arise in small start-up organizations with an emphasis on the interface of ethics and environmental, health and safety issues.

Spr ENGN2120 S01 25021 W 3:00-5:50(14) (J. Harry)

ENGN 2130. Innovation and Technology Management I. Examines core concepts through four modules: (1) Industry Dynamics of Technological Innovation, (2) Formulating Technological Innovation Strategy, (3) Implementing Technological Innovation Strategy, and (4) Early Commercialization and Deployment. Industry Dynamics of Innovation will explore some of the drivers of technology innovation. Implementing Technological Innovation Strategy explores execution issues concerning the flow of technology and innovation from concept to physical product or service. Early Commercialization and Deployment will focus on more salient strategic and operational issues related to commercial readiness and roll-out of a technology-based product or service. Emphasis will be on technology oriented entrepreneurial enterprises, but exploration will also include larger more established organizations.

Fall ENGN2130 S01 15740 T 3:00-5:50(18) (R. Petteruti)

ENGN 2140. Innovation and Technology Management II. Explores concepts relevant to the management of operations in industrial enterprises with an emphasis on technology-oriented firms. Topics fall into three basic modules: (1) Capacity Planning, (2) Industrial Engineering, and (3) Materials & Resource Engineering. Capacity Planning will focus on capacity considerations in manufacturing and service organizations. Industrial Engineering will examine optimizing plant and process layouts. Materials & Resource Engineering will cover various aspects of planning and scheduling material, labor, and work center capacity. Inventory management techniques will also be introduced and examined as will concepts such as materials requirements planning and aggregate planning.

Spr ENGN2140 S01 25022 T 3:00-5:50(16) (R. Petteruti)

ENGN 2150. Technology Entrepreneurship and Commercialization I. ENGN 2150 and the spring ENGN 2160 form a sequence that develops the skills for technology-based entrepreneurship. It teaches creation of viable high-growth-potential new ventures from emerging science and technology. It is from emerging S&T that a high percentage of new jobs are created, both by existing large companies and through the formation of new companies. You will examine S&T for new opportunities, create novel product or service concepts from these sources and determine whether these concepts truly represent new business opportunities. Pedagogy is a combination of lectures and "entrepreneurial learning", with work undertaken as a two-semester project. Enrollment limited to 30 graduate students in the IMEE program.

Fall ENGN2150 S01 15741 M 3:00-5:50(15) (A. Kinong)

ENGN 2160. Technology Entrepreneurship and Commercialization II. ENGN 2160 and the prerequisite fall course 2150 form a course sequence that develops the knowledge of, and embeds the skills for, technology-based entrepreneurship. While 2150 has helped you to examine science and technology sources, and create a portfolio of opportunities from these, this course continues by developing selected opportunities into a compelling business case for the creation of a high-growth potential new venture. Once again, learning is by a combination of lectures and "entrepreneurial learning", with work undertaken as a guided two-semester project. Prerequisite: ENGN 2150. Enrollment limited to 30 graduate students in the IMEE program.

Spr ENGN2160 S01 25023 M 3:00-5:50(13) (A. Kinong)

ENGN 2180. Globalization Immersion Experience and Entrepreneurship Laboratory. In this course, students will gain a better understanding of the political, social and cultural dynamics that influence entrepreneurial enterprises in different world regions. Meetings will be arranged with high technology companies and their venture arms, academic incubators, investment professionals, legal professionals, government officials, entrepreneurs, and other university faculty and students. The semester becomes a global entrepreneurship and innovation "laboratory" where students experience and take part in guest lectures from experts working in other countries. Classroom discussions, student presentations, papers and readings will be used to focus and further understand the globalization dynamic and its relationship to entrepreneurship. Prerequisite: ENGN 2110. Enrollment limited to graduate students in the PRIME program.

Fall ENGN2180 S01 15742 Th 3:00-5:50(16) (P. McHugh)


Fall ENGN2210 S01 15728 MWF 12:00-12:50(12) (H. Kesari)

and principal values. Principle of virtual work. Formulation of stress-strain relations in elasticity, plasticity, and viscoelasticity. Uniqueness. Extremum and minimum principles, including energy methods.

**ENGN 2290. Plasticity.**
Theory of the inelastic behavior of materials with negligible time effects. Experimental background for metals and fundamental postulates for plastic stress-strain relations. Variational principles for incremental elastic-plastic problems, uniqueness. Upper and lower bound theorems of limit analysis and shakedown. Slip line theory. Representative problems in structural analysis, metal forming, indentation, strain and stress concentrations at notches, and ductile failure.

Spr ENGN2290 S01 25012 MW 2:00-2:50(07) (D. Henann)

**ENGN 2340. Computational Methods in Structural Mechanics.**

Fall ENGN2340 S01 15729 MW 8:30-9:50(02) (A. Bower)

**ENGN 2400. Electron Microscopy in Materials Science.**
Theory of electron optics and principles of transmission electron microscopy, including dynamical theory of electron diffraction and image contrast. Applications to materials analysis including defect, boundary, and phase analysis. Analytical electron microscopy including convergent beam diffraction, energy dispersive x-ray analysis, and energy loss spectroscopy. Intensive laboratory exercises.

Spr ENGN2400 S01 25015 MW 10:00-10:50(03) (D. Pain)

**ENGN 2420. Kinetic Processes and Mechanisms in Materials Science.**
Continuum and atomistic descriptions of diffusion in solids. Reactions involving surfaces and interfaces, including evaporation, adsorption, grain growth, and coarsening. Phase transition kinetics, including nucleation, growth, solidification, spinodal decomposition, and martensitic transformations. Analysis of systems with multiple kinetic mechanisms (typical examples include oxidation, crystal growth, and sintering). Prerequisite: background in basic thermodynamics. Recommended: ENGN 1410 or 2410 or equivalent.

Spr ENGN2420 S01 25016 MW 8:30-9:50(02) (E. Chason)

**ENGN 2490A. Crystal Structures and Crystallography.**
The study and experimental analysis of solid structures from crystallography and crystal chemistry viewpoints. Electronic structure of the atom as related to core level chemical analysis techniques in material science, atomic arrangements in solids, form crystallography, crystal symmetry and symmetry of finite objects, and experimental techniques in x-ray diffraction.

Fall ENGN2490S01 16133 TTh 9:00-10:20(08) (E. Chason)

**ENGN 2501. Digital Geometry Processing.**
Three-dimensional geometric models are fundamental for applications in computer vision, computer graphics, medical imaging, computer aided design, visualization, multimedia, and many other related fields. This course includes the study of basic data structures and algorithms for representing, creating, manipulating, animating, editing, and analyzing digital geometry models, such as point clouds and polygon meshes, as well as state-of-the-art material from the current scientific literature. This is a project oriented course with several programming assignments and a final project. Students are expected to have successfully completed an introductory computer graphics/vision course or have an equivalent background. Instructor permission required. Open to seniors and graduate students.

Fall ENGN2501 S01 15734 MW 3:00-5:50(17) (T. Tabei)

**ENGN 2520. Pattern Recognition and Machine Learning.**
This course covers fundamental topics in pattern recognition and machine learning. We will consider applications in computer vision, signal processing, speech recognition and information retrieval. Topics include: decision theory, parametric and non-parametric learning, dimensionality reduction, graphical models, exact and approximate inference, semi-supervised learning, generalization bounds and support vector machines. Prerequisites: basic probability, linear algebra, calculus and some programming experience.

Fall ENGN2520 S01 16297 TTh 2:30-3:50(11) (E. Sudderth)

**ENGN 2530. Digital Signal Processing.**
An introduction to the basics of linear, shift invariant systems and signals. Quantization and sampling issues are introduced. Discrete time and DFT properties, fast DFT algorithms, and spectral analysis are discussed. IIR and FIR digital filter design is a focus; stochastic and deterministic signals are introduced. MATLAB exercises are a significant part of the course.

Fall ENGN2530 S01 15735 MWF 11:00-11:50 (H. Silverman)

**ENGN 2600. Electronic Processes in Semiconductors.**
Electronic processes primarily in semiconductors with tetrahedral bonding (Si, Ge, GaAs compounds). Topics include phonon spectra, band structure, impurity states, electron and hole distributions, optical properties, electron plasma, scattering processes, excess and hot carriers, semiconductor-metal transitions, one-and two-dimensional electron gas, and amorphous semiconductors. Prerequisite: PHYS 2410 or equivalent.

Spr ENGN2600 S01 25017 Arranged (J. Xu)

**ENGN 2770. Catalyst Design and Atomistic Reaction Engineering.**
Covers the principles of operation of heterogeneous catalysis and advanced reaction engineering with an emphasis on catalyst theory. Includes electronic structure calculations, linear scaling relations, free energy relations, surface reactivity, rate theory, and electrocatalytic concepts. Applications of study in this course will focus on catalysts for energy conversion. Students should have a background in chemical reactions and thermodynamics.

Fall ENGN2770 S01 16120 TTh 1:00-2:20(10) (A. Peterson)

**ENGN 2820. Fluid Mechanics II.**
Introduction to concepts basic to current fluid mechanics research: hydrodynamic stability, the concept of average fluid mechanics, introduction to turbulence and to multiphase flow, wave motion, and topics in inviscid and compressible flow.

Spr ENGN2820 S01 25020 MW 8:30-9:50(02) (P. Vlahovska)

**ENGN 2910A. Advanced Computer Architecture.**
This class focuses on advanced computer architecture concepts, including super-scalar processor design, out-of-order execution, branch prediction, multi-core processors, memory hierarchy consistency, GPU architectures, and architecture of large-scale systems such as data centers and supercomputers. Class work expected to include HWs, Labs, and projects. Prerequisite: ENGN 1640 or permission of instructor.

Fall ENGN2910A S01 15877 TTh 1:00-2:20(10) (E. Reda)

**ENGN 2910Z. Small Wonders: The Science, Technology, and Human Health Impacts of Nanomaterials.**
Survey course focusing on nanomaterials as enabling components in emerging nanotechnologies. Covers scaling laws for physicochemical properties, synthesis routes, manipulation and characterization tools, and example applications in sensors, composites, advanced energy devices, and nanomedicine. Impacts of nanomaterials on environment and health, including the interactions between nanoscale structures and biological molecules, cells, and whole organisms. Undergraduate enrollment by permission.

Spr ENGN2910Z S01 25587 M 3:00-5:20(13) (R. Hurt)

**ENGN 2911F. Topics in Emerging and Breakthrough Technologies.**
No description available.

Spr ENGN2911F S01 25028 Th 3:00-5:50(17) (E. Suuberg)

**ENGN 2912B. Scientific Programming in C++.**
Introduction to the C++ language with examples from topics in numerical analysis, differential equations and finite elements. As a prerequisite, some programming knowledge, e.g., MATLAB projects. The course will cover the main C++ elements: data types; pointers; references; conditional expressions; streams; templates; Standard Template Library (STL); design and debugging techniques.

Fall ENGN2912B S01 16058 TTh 10:30-11:50(13) (J. Mundy)

**ENGN 2912E. Low Power VLSI System Design.**
This course deals with the design of digital systems for low power dissipation. Issues that will be addressed include CMOS power.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
dissipation, analysis and design tools used for lower power digital circuits, design methodologies for low power CMOS circuits, low power architecture designs, and a discussion on future challenges in low power digital design. Prerequisites: familiarity with basic MOSFET structure and computer architecture principles; some circuit analysis helpful.

ENGN 2912H. Interfacial Phenomena.
This course is an introduction to mechanics of material interfaces. Particular cases considered are liquid surfaces (surface tension, contact line slip, electro-wetting, etc.), lipid membranes, and thin elastic plates and shells. The course will cover detailed analyses of statics and dynamics of these interfaces. Classical and modern research papers related to these topics will form the motivation for the discussion. A unified treatment of these apparently disparate interfaces is presented to conclude the course. Prerequisites: ENGN 2010, 2020, 2210, or 2810.

Fall ENGN2912H S01 16650 MW 8:30-9:50(02) (J. Readey)

ENGN 2912K. Mixed-Signal Electronic Design.
ACDs, DACs, switched-capacitor circuits, noise and distortion. Circuit simulation and system design projects. Examples will be used from various biological sensing and instrumentation applications and recent scientific literature. Prerequisites: ENGN 1620 and 1630, or instructor permission. Enrollment limited to 20.

Fall ENGN2912K S01 16343 MWF 2:00-2:50(07) (J. Rosenstein)

ENGN 2912P. Topics in Optimization.
This course will cover various topics in discrete and continuous optimization. Topics include graph algorithms, dynamic programming, linear programming, convex optimization and coarse-to-fine methods. Prerequisites: CSCI 1570 and one of MATH 0520 or CSCI 0530. Undergraduate students require instructor permission to register.

Spr ENGN2912PS01 25519 MWF 11:00-11:50(04) (P. Felzenszwalb)

This class describes the fundamentals of statistical mechanics with a focus on both traditional analytic methods and modern atomic simulations methods. The class is divided in two parts. (i) Techniques used to calculate interactions at the atomic level are first covered, from simple interatomic potentials to quantum mechanical first-principles methods. (ii) Simulations techniques to sample atomic degrees of freedom for obtaining macroscopic quantities are then discussed, such as Monte Carlo and Molecular Dynamics. The tools presented in class are illustrated with ongoing examples that illustrate how these methods work in concert. Enrollment limited to 40 graduate students.

Fall ENGN2930 S01 16442 M 3:00-5:50(15) (A. van de Walle)

ENGN 2970. Preliminary Examination Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.

Fall ENGN2970 S01 14033 Arranged 'To Be Arranged'
Spr ENGN2970 S01 23549 Arranged 'To Be Arranged'

ENGN 2980. Special Projects, Reading, Research and Design.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

ENGN 2990. Thesis Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.

Fall ENGN2990 S01 14034 Arranged 'To Be Arranged'
Spr ENGN2990 S01 23550 Arranged 'To Be Arranged'

English

ENGL 0110. Critical Reading and Writing I: The Academic Essay.
An introduction to university-level writing. Students produce and revise multiple drafts of essays, practice essential skills of paragraph organization, and develop techniques of critical analysis and research. Readings from a wide range of texts in literature, the media, and academic disciplines. Assignments move from personal response papers to formal academic essays. Fall 2013 sections 01, 02, 03, 08, 09, and 12; and spring 2014 section 01 are reserved for first year students. Enrollment limited to 17. Banner registrations after classes begin require instructor approval. S/NC.

Fall ENGL0110 S01 14603 MWF 9:00-9:50(02) (A. Golaski)
Fall ENGL0110 S03 14605 MWF 12:00-12:50(12) (A. Golaski)
Fall ENGL0110 S04 14606 TTh 10:30-11:50(13) (A. Lack)
Fall ENGL0110 S05 14607 MWF 2:00-2:50(07) (A. Solomon-Greenbaum)
Fall ENGL0110 S06 14608 MW 8:30-9:50(02) (R. Ward)
Fall ENGL0110 S07 14609 Th 2:30-3:50(11) (J. Murillo)
Fall ENGL0110 S08 14610 Th 2:30-3:50(11) (J. Readey)
Fall ENGL0110 S09 14611 MWF 9:00-9:50(02) (L. Stanley)
Fall ENGL0110 S10 14612 MWF 10:00-10:50(03) (K. Schapira)
Fall ENGL0110 S11 14613 MWF 1:00-1:50(06) (K. Schapira)
Fall ENGL0110 S12 14614 MWF 11:00-11:50(04) (C. Imbriglio)
Fall ENGL0110 S13 14615 TTh 9:00-10:20(08) (M. Stewart)
Spr ENGL0110 S01 24259 MWF 12:00-12:50(05) 'To Be Arranged'
Spr ENGL0110 S02 24260 MWF 10:00-10:50(03) (R. Ward)
Spr ENGL0110 S03 24261 MWF 2:00-2:50(07) (A. Solomon-Greenbaum)
Spr ENGL0110 S04 24262 MWF 1:00-1:50(06) (J. Readey)

ENGL 0130. Critical Reading and Writing II: The Research Essay.
For the confident writer. Offers students who have mastered the fundamentals of the critical essay an opportunity to acquire the skills to write a research essay, including formulation of a research problem, use of primary evidence, and techniques of documentation. Topics are drawn from literature, history, the social sciences, the arts, and the sciences. Enrollment limited to 17. Writing sample may be required. Banner registrations after classes begin require instructor approval. S/NC.

Fall ENGL0130 S01 14562 MWF 9:00-9:50(18) (E. Taylor)
Spr ENGL0130 S01 24263 MWF 10:00-10:50(03) (C. Deboer-Langworthy)
Spr ENGL0130 S02 24264 MWF 11:00-11:50(04) (M. Stewart)
Spr ENGL0130 S03 24265 MWF 2:00-2:50(07) (R. Ward)

ENGL 0160. Journalistic Writing.
An introduction to journalistic writing that focuses on techniques of investigation, reporting, and feature writing. Uses readings, visiting journalists, and field experience to address ethical and cultural debates involving the profession of journalism. Writing assignments range from news coverage of current events to investigative feature articles. Writing sample required. Class list will be reduced to 17 after writing samples are reviewed during the first week of class. Enrollment limited to 17. Banner registrations after classes begin require instructor approval. S/NC.

Fall ENGL0160 S01 14564 MWF 3:00-4:20(15) (T. Breton)
Fall ENGL0160 S02 14565 TTh 9:00-10:20(15) (T. Breton)
Spr ENGL0160 S01 24266 MWF 8:30-9:50(02) 'To Be Arranged'

ENGL 0180. Introduction to Creative Nonfiction.
Designed to familiarize students with the techniques and narrative structures of creative nonfiction. Reading and writing focus on personal essays, memoir, science writing, travel writing, and other related subgenres. May serve as preparation for ENGL 1180. Writing sample may be required. Fall 2013 sections 02 and 04; and spring 2014 sections 01, 03, and 05 are reserved for first-year students. Spring 2014 section 06 is reserved for first year students and sophomores. Enrollment limited. Banner registrations after classes begin require instructor approval. S/NC.

Fall ENGL0180 S01 14575 MWF 10:00-10:50(17) (E. Hardy)
Fall ENGL0180 S02 14576 MWF 12:00-12:50(17) (S. Resnick)
Fall ENGL0180 S03 14577 MWF 2:00-2:50(17) (S. Resnick)
Fall ENGL0180 S04 14578 TTh 9:00-10:20(17) (L. Stanley)
Spr ENGL0180 S01 24268 TTh 1:00-2:20(18) (E. Taylor)
Spr ENGL0180 S02 24269 MWF 9:00-9:50(18) (E. Hardy)
Spr ENGL0180 S03 24270 MWF 11:00-11:50(18) (J. Greenbaum)
Spr ENGL0180 S04 24271 TTh 9:00-10:20(18) (K. Schapira)
Spr ENGL0180 S05 24272 MWF 1:00-1:50(18) (C. Deboer-Langworthy)
Spr ENGL0180 S06 24273 MWF 12:00-12:50(18) (S. Resnick)
For American authors, the crime novel has provided a critique of capitalism, a vision of queer desire, a record of racial violence and an experiment in modernist form. This course uses the detective genre to examine major movements in American literary and political history, ranging from prohibition to postmodernism. Authors: Hammett, Chandler, Highsmith, Himes, Nabokov, Auster. Films: Rear Window, Chinatown. Enrollment limited to 17. WRIT.
Spr ENGL0201YS01 25551 MWF 9:00-9:50(02) (K. Fitzpatrick)

ENGL 0201Y. The Great American Campus Novel.
Attracting some of the finest authors of 20th-century American literature, the "campus novel" presents a vision of university life, by turns comic and tragic, that also critiques society beyond its walls. The course explores how the genre is bound up with questions posed by liberalism, the Cold War, and popular culture. Authors include Fitzgerald, Nabokov, DeLillo, Roth, Bellow, Chabon, and Eugenides. Enrollment limited to 17. WRIT.
Spr ENGL0201YS01 25265 MWF 9:00-9:50(02) (A. Lack)

ENGL 0201Z. Dark Matter: Black Literature in the 20th Century.
We live in the "afterlife of slavery," an age in which Black lives remain terrorized by slavery's specter. Reading works by Cornelius Eady, Dionne Brand, Toni Morrison, Ralph Ellison, Richard Wright, and others, this course examines how 20th century African-American writing and thinking about blackness struggles within and against a world haunted by the afterlife of slavery. Enrollment limited to 17. DVPS WRIT.
Spr ENGL0201ZS01 25266 MWF 12:00-12:50(05) (J. Murillo)

ENGL 0202A. Poetry and Things: From Romanticism to the Contemporary.
Poetry often deals with the private human self, but it also depicts inanimate objects that spring to life in the background. We will study poetic backdrops from the Romantic lyric to the contemporary avant-garde, exploring the aesthetic, social, and ecological modes through which poets have envisioned the nonhuman world. Authors include Wordsworth, Keats, Byron, Poe, Thoreau, Dickinson, Stein, and Beckett. Enrollment limited to 17. LILE WRIT.
Spr ENGL0202AS01 25283 MWF 12:00-12:50(05) (I. Sampson)

ENGL 0300J. Altered States.
A course about rupture, captivity, mysticism, transport, travel, metamorphosis, and magic in pre- and early modern poetry, plays, and prose, including: Ovid (Metamorphoses), Shakespeare (A Midsummer Night's Dream; Othello), Marlowe (Dr. Faustus), Mandeville's Travels; Bacon's The New Atlantis; The Book of Margery Kempe; and ecstatic sacred and erotic poems by Donne, Crashaw, Rochester, and Behn. Enrollment limited to 30.
Fall ENGL0300JS01 14808 MWF 11:00-11:50(04) (R. Rambuss)

ENGL 0300K. Love and Hate: Medieval to Early Modern.
In this course we trace permutations of love and hate, in sexual, familial, and more broadly social contexts. How, for instance, do Gawain's forms of attachment compare to Hamlet's? How can we compare portrayals of what is loathsome in Beowulf and in Paradise Lost? What happens to love and hate when these texts are adapted for the screen? Enrollment limited to 30. LILE.
Spr ENGL0300KS01 25341 MWF 2:00-2:50(07) (J. Kuzner)

ENGL 0310A. Introduction to Shakespeare.
This course will explore issues of concern to Shakespeare's audiences from his time to ours—love, war, race, sex, good and evil—through a representative selection of plays. Lectures will discuss historical contexts, theatrical conditions, and critical strategies. Designed for students beginning college-level study of Shakespeare. Two lectures and one discussion meeting weekly. Students should register for ENGL 0310A S01 and may be assigned to conference sections by the instructor during the first week of class. LILE WRIT.
Fall ENGL0310AS01 14840 MWF 10:00-10:50(03) (C. Kahn)
Spr ENGL0310AS01 25340 MWF 11:00-11:50(04) (J. Kuzner)

ENGL 0310C. Matters of Romance.
Narratives (1100-1500) of men, women, and elves seeking identity on the road, in bed, and at court. Readings (in modern English) include Arthurian romances, Havelok, Isidora by Marie de France, and Chaucer's "Wife of Bath's Tale." Primarily for freshmen and sophomores. Students should register for ENGL 0310C S01 and may be assigned to conference sections by the instructor during the first week of class.
Spr ENGL0310CS01 24275 TTh 9:00-10:20(08) (E. Bryan)

ENGL 0360E. The Medieval King Arthur.
Where did stories of King Arthur come from and how did they develop in the Middle Ages? We will read the earliest narratives of King Arthur and his companions, in histories and romances from Celtic, Anglo- Norman, and Middle English sources, to examine Arthur's varying personas of warrior, king, lover, thief. Enrollment limited to 20 first-year students.
Fall ENGL0360ES01 14513 TTh 2:30-3:50(11) (E. Bryan)

ENGL 0360F. Shakespeare's Present Tense.
Shakespeare in Love suggests how Shakespeare was clued in to elite and popular cultures. Current adaptations like O and 10 THINGS I HATE ABOUT YOU demonstrate how Shakespeare provides anachronistic clues to issues of the present. This course will trace such clues by examining the cultural origins and ongoing adaptations of Romeo and Juliet, Hamlet, Othello, Twelfth Night, Henry V, and the sonnets. Enrollment limited to 20 first-year students. FY.
Fall ENGL0360FS01 14514 TTh 10:30-11:50(13) (S. Foley)

ENGL 0500G. Literature and Revolutions, 1640-1840.
Key developments in British and American literature understood in relation to the historical and cultural forces that produced the English Revolution, the American Revolution, the French Revolution, and the Industrial Revolution. Readings in major writers such as Milton, Paine, Blake, Wollstonecraft, Emerson, Barrett Browning, and Dickens, and in some of their non-canonical contemporaries. Focus on the emergence of a transatlantic literary culture. Enrollment limited to 30. WRIT.
Spr ENGL0500GS01 24276 TTh 2:30-3:50(11) (W. Keach)

ENGL 0500N. The Romantic Imagination.
The idea of the imagination's creative power acquired great literary, philosophical, and political significance over the course of the eighteenth century. This course begins with extracts from Milton and from eighteenth-century theories of the "sublime," studies Romantic-era poetry and prose (1789-1824), and closes with a look at later writers such as Matthew Arnold and George Eliot. Enrollment limited to 30.
Spr ENGL0500NS01 24335 MWF 11:00-11:50(04) (M. Redfield)

ENGL 0510D. Mark Twain's America.
A course for all kinds of readers of Twain and his contemporaries. Close readings of fiction and essays that focus on race, slavery, capitalism, and the development of "modern" literature. Works include Puddinhead Wilson, Huck Finn, and Connecticut Yankee. Enrollment limited to 30.
Fall ENGL0510DS01 14842 TTh 2:30-3:50(11) (P. Gould)

ENGL 0510E. British Romanticism.
Readings in British Romantic writing, canonical and noncanonical, emphasizing how historical and political change, philosophical disposition, and subjective consciousness become articulated in verse and prose. Literary representations of and responses to the French Revolution, the Industrial Revolution, the struggle against black slavery. Blake, Wollstonecraft, Olaudah Equiano, William Wordsworth, Dorothy Wordsworth, Coleridge, Percy Shelley, Mary Shelley, Byron, Keats, Clare.
LILE.
Fall ENGL0510ES01 14590 TTh 10:30-11:50(13) (W. Keach)

ENGL 0510R. American Renaissance.
This course examines major and lesser known writers of nineteenth-century America, emphasizing the works of Emerson, Melville, and Catharine Sedgwick. The focus is on Romantic literature and culture, with particular emphasis on the following subjects: Nature and transcendence; capitalism and its discontents; utopianism and reform; slavery and antislavery; the problem of history and national culture; and transatlantic relations. Readings include Transcendentalist essays, slave narratives, romance novels, autobiography, fiction, and lyric and epic poetry. Improved student writing is a main goal of the course.
Spr ENGL0510RS01 24336 TTh 1:00-2:20(10) (P. Gould)

ENGL 0560E. Inventing America.
One of the distinguishing features of American literature may be its seemingly constant struggle with the idea of America itself. For what,
these authors wonder, does/should America stand? We will examine the rhetorical battles waged in some major works over the meaning and/or meanings of America's national identity. Authors may include Franklin, Hawthorne, and Fitzgerald. Limited to 20 first-year students. Instructor permission required. FYS LILE WRIT
Fall ENGL0560ES01 14516 W 3:00-5:20(17) (J. Egan)

ENGL 0700E. Postcolonial Literature.
Examines fiction, drama, poetry, travel writing, and cultural theory by contemporary writers from former colonies of the British Empire. We study works by Anglophone African, Caribbean, and South Asian writers. Issues include: nationalism and globalization; cultural identity and diaspora; individual interiority and collective aspirations; literary form and the very idea of "postcolonial" literature. Authors include: J. M. Coetzee, Amitav Ghosh, V. S. Naipaul, Michael Ondaatje, Caryl Phillips, Derek Walcott, Zoé Wicomb. Enrollment limited to 30. DVPS
Spr ENGL0700ES01 24277 TTh 10:30-11:50(09) (O. George)

ENGL 0700G. American Fiction and Mass Culture.
How have American fiction writers responded to the growing national influence of mass culture industries such as recorded music, film, and television? This course will consider this question by assessing both how writers have imagined the impact of mass culture on American life and how the style of literary writing has evolved in relation to popular media. Authors include F. Scott Fitzgerald, Nathanael West, Toni Morrison, Colson Whitehead, and Don DeLillo. Enrollment limited to 30. DVPS
Spr ENGL0700GC01 24337 MWF 10:00-10:50(03) (R. Murray)

ENGL 0700L. Make It New: American Literature 1900-1945. 
Introductory survey of a major—perhaps the major—period of American literature. Genres include poems, plays, short stories, and novels, as well as film. Writers include Willa Cather, Raymond Chandler, T. S. Eliot, William Faulkner, F. Scott Fitzgerald, Robert Frost, Ernest Hemingway, Eugene O'Neill, Gertrude Stein, and Wallace Stevens; filmmakers include Charlie Chaplin and Orson Welles. Enrollment limited to 30. Fall ENGL0700LS01 14796 MWF 2:00-2:50(07) (S. Burrows)
ENGL 0710B. African American Literature and the Legacy of Slavery.
Traces the relationship between the African American literary tradition and slavery from the antebellum slave narrative to the flowering of historical novels about slavery at the end of the twentieth century. Positions these texts within specific literary, historical, and political frameworks. Authors may include Frederick Douglass, Harriet Jacobs, Charles Chesnutt, Octavia Butler, and Toni Morrison. DVPS
Fall ENGL0710BS01 14797 TTh 10:30-11:50(13) (R. Murray)

ENGL 0710K. Catastrophic Communities.
What becomes of communities and individuals in a catastrophe? This course considers the different literary, social and ethical formations that arise or are destroyed in disaster, and examines what it means to be both an individual and part of a collective in times of unprecedented upheaval. Readings by Blanchot, Camus, Sebald, Duras, Freud, Arendt, Jaspers, Orwell, and Eggers. WRIT
Spr ENGL0710KS01 24278 TTh 10:30-11:50(09) (R. Reichman)

ENGL 0710L. Ishiguro, Amongst Others.
Kazuo Ishiguro is one of the most distinctive and enigmatic voices in contemporary fiction. He has few obvious precursors, and there is little consensus among literary critics about the meanings of his works. This course will try to establish principles for reading Ishiguro's works by seeking alliances for his writing in works of philosophy, literature and cinema. Such interlocutors will include Ozu, Kiarostami, Kierkegaard, Sartrre, Hadžihalilović, Dostojevsky, Pasolini, Fall ENGL0710LS01 14798 MWF 9:00-10:50(02) (T. Breton)

ENGL 0710M. Impressionism and Modernism.
This course explores the role of the "literary impressionists" (Crane, James, Conrad, and Ford) in the transformation of the novel from realism to modernism (especially the "post-impressionists" Stein, Joyce, and Woolf). "Impressionism" is defined by its focus on consciousness, the inner life, and the ambiguities of perception. What happens to the novel when writers worry about whether the way they tell their stories is an accurate reflection of how we know the world? Attention will also be paid to how the literary experiment of post-impressionist writers relate to simultaneously occurring innovations in the visual arts.
Spr ENGL0710MS01 24409 TTh 1:00-2:20(10) (K. Schapira)

ENGL 0760H. Realism and Modernism.
The novel as a genre has been closely identified with the act of representation. What it means to represent "reality," however, has varied widely. This seminar will explore how the representation of reality changes as modern fiction questions the assumptions about knowing, language, and society that defined the great tradition of realism. English and American novels will be the primary focus of our attention, but influential French, German, and Russian works will be studied as well. Limited to 20 first-year students. Banner registration after classes begin requires instructor approval. FYS LILE
Fall ENGL0760HS01 14691 MWF 11:00-11:50(04) (P. Armstrong)

ENGL 0760O. The Terrible Century.
Although the term "terrorism" was coined in the 18th century, and although its contemporary resonance has reached an unprecedented pitch, the truly terrible century was arguably the 20th. This course introduces 20th century literature in English through a historical and philosophical examination of terror and terrorism. We will focus on several historical contexts, including: British colonialism in Ireland and Africa, South African apartheid, and the post 9/11 world. Readings include Conrad, Bowen, Farrell, Gordimer, Coetzee, Foulds, Walters, Hamid. Enrollment limited to 20 first-year students. FYS
Spr ENGL0760OC01 24407 Th 4:00-6:20(17) (T. Bewes)

ENGL 1140A. The Literary Scholar.
Why does literature need critical study? And does critical study inevitably undermine the pleasures of reading? To address those questions, we will examine the histories of literary criticism (Wimsatt, Brooks, et alii), literary theory (Saussure, Foucault, Derrida, et alii), and English literature (from Beowulf to Philip Larkin); we will examine literary texts through reader response theory, stylistics, literary linguistics, rhetorical theory, and philology. Writing in this seminar will range from reforming conventional literary critical discourse to experimenting with nontraditional forms. Prerequisite: ENGL 0130, 0160, or 0180. S/NC.
Spr ENGL1140AS01 24279 MWF 1:00-1:50(06) (L. Stanley)

ENGL 1160F. Reporting Crime and Justice.
Crime and justice stories are people stories. The drama of everyday life is played out every day in courtrooms. This advanced journalism course will get students into the courtrooms, case files and archives of Rhode Island's judicial system and into committee hearings at the State House where they will report on stories that incorporate drama, tension, and narrative storytelling. Prerequisite: ENGL 0160 or ENGL 1160A (Advanced Feature Writing). Enrollment limited to 17. Instructor permission required. Preference will be given to English concentrators. S/NC
Spr ENGL1160FS01 25238 F 3:00-5:20(15) (T. Breton)

ENGL 1180B. Digital Nonfiction
Digital Nonfiction is an opportunity to explore the fundamental differences between print and digital narratives. Focusing on three short assignments and one longer project, this class encourages students to learn by doing. Additionally, students develop their digital fluency by exploring a variety of platforms and readings. Digital Nonfiction is an advanced creative nonfiction class that requires ENGL 0130, 0160, or 0180. Enrollment is limited to 17. Instructor permission required. S/NC.
Fall ENGL1180BS01 14761 T 4:00-6:20(18) (M. Stewart)

ENGL 1180I. Writing Medical Narrative.
This class will examine the recent turn toward the use of narrative in medicine and the recent trend of published medical narrative. We'll look at literary and cultural narratives of sickness and health and how they shape perceptions and treatments, while keeping the science and politics of health care—and its public discourse—in view. Writing sample required. Prerequisite: ENGL 0110, 0130, 0160, 0180, 1140, 1160, 1180, or 1190. Class list will be reduced to 17 after writing samples are reviewed during the first week of classes. Preference will be given to English concentrators. S/NC.
Spr ENGL1180IS01 24409 TTh 1:00-2:20(10) (K. Schapira)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
ENGL 1180Q. Narrating History.
For the advanced writer: the protocols of historical narrative and essay for a general audience. Using the archives of Brown, the Rhode Island Historical Society, and the student's family (if feasible), each writer will research primary and secondary sources, use interviews and oral histories, to help shape three engaging, instructive true stories of the past. Intensive library work, revisions, and peer editing.
Writing sample required. Prerequisite: ENGL 0130, 0160, 0180, 1140, 1160, 1180, or 1190. Class list will be reduced to 17 after writing samples are reviewed during the first week of classes. Preference will be given to English concentrators. Banner registrations after classes begin require instructor approval. S/NC.
Spr ENGL1180Q 24280 M 3:00-5:20(13) (E. Taylor)

ENGL 1180R. Travel Writing: Personal and Cultural Narratives.
For the advanced writer. Helps students build skills in the growing genre of travel writing, including techniques for reading, observing, interviewing, composing, and revising travel pieces. Students will read the best contemporary writing about national and international travel in order to develop their own writing in areas like narrative, setting, characters, and voice. The course will feature interactive discussions, instructor conferences, and workshops. Prerequisite: ENGL 0130, 0160, 0180, or any 1000-level nonfiction writing course. Class list will be reduced to 17 after writing samples are reviewed during the first week of classes. Preference will be given to English concentrators. Banner registrations after classes begin require instructor approval. S/NC.
Spr ENGL1180R 24281 W 3:00-5:20(14) (J. Readey)

ENGL 1190A. "The Arrangement of Words": Liberating Fiction(s). We read fiction because we enjoy stories. As critical or astute readers, we are often drawn into something more than the story itself: into the way it is told, into the inflections and constructions of language. Concentrating on American fiction writers 1918-1945 (Hemingway, Faulkner, Welty, O'Connor, others), we will examine their fiction and non-fictional prose to see what they do and how and why. Writing will range from critical exposition to annotated fictional experiments. Prerequisite: ENGL 0130, 0160, 0180, 1140, 1160, 1180, or 1190. S/NC.
Spr ENGL1190A 24283 MWF 10:00-10:50(03) (L. Stanley)

ENGL 1190L. Creative Nonfiction: Practice and Criticism. For advanced writers, what is Creative Nonfiction? Writers have flocked to it; scholars have questioned it. Does it harm the truth? Is it narrative with too much "I" and too little "Eye"? What makes it significant? To help us explore persistent questions about form, point of view, method, and ethics, readings will include historical examples, recent practitioners, editors, and critics. Intensive reading responses, research, drafting, and revision. Two critical essays; one piece of creative nonfiction. Prerequisite: ENGL130, 0160, 0180, 1140, 1160, 1180, or 1190. Class list will be reduced to 17 after writing samples are reviewed during the first week of classes. Preference will be given to English concentrators. Banner registrations after classes begin require instructor approval. S/NC.
Fall ENGL1190L 14593 W 3:00-5:20(17) (E. Taylor)

ENGL 1190M. The Teaching and Practice of Writing: Writing Fellows Program. For students accepted as Writing Fellows, this course offers the study of literary essays and composition theory to help develop their own writing with a critical awareness of the elements of an essay. Students will write essays throughout the semester and will confer with each other for every paper, thereby gaining experience in peer tutoring and becoming better writers through the help of an informed peer. They will also respond to the writing of a cohort of students in another designated Writing Fellows class. Enrollment is restricted to undergraduates who have been accepted into the Writing Fellows Program in the preceding July. Banner registrations after classes begin require instructor approval. S/NC.
Fall ENGL1190M S01 14594 MWF 1:00-2:20(10) (D. Brown)

ENGL 1190P. The Art of Memoir in Theory and Practice. This course introduces students to the historical and theoretical nuances of memoir. You will critically engage with a variety of readings and develop an appreciation of your creative role as a memoirist. In the process of crafting a portfolio of work you will explore the complexities of remembering and experiment with the style of narrative voice and structure. Writing sample required. Prerequisite: ENGL 0130, 0160, 0180, or any 1000-level nonfiction writing course. Class list will be reduced to 17 after writing samples are reviewed during the first week of classes. Preference will be given to English concentrators. S/NC.
Fall ENGL1190P S01 15237 MWF 12:00-12:50(12) (R. Ward)

ENGL 1190Q. The Essay. This course offers a feel for the essay and its versatile range, from the informative to the personal to the philosophical. We will study tone and style, meaning, beginnings and endings, and use of historical and personal information. Our focus will be on the craft of writing rather than on literary criticism. Readings include essays by two dozen accomplished writers. Writing sample required. Prerequisite: ENGL 0110, 0130, 0160, 0180, or any 1000-level nonfiction writing course. Class list will be reduced to 12 after writing samples are reviewed during the first week of classes. Preference will be given to English concentrators. S/NC.
Fall ENGL1190Q S01 25240 T 4:00-6:20(16) (To Be Arranged)

ENGL 1200. Independent Study in Nonfiction Writing. Tutorial instruction oriented toward some work in progress by the student. Requires submission of a written proposal to a faculty supervisor. Section numbers vary by instructor. Instructor permission required.

ENGL 1310H. The Origins of American Literature. Where does American literature begin? Can it be said to have a single point of origin? Can writings by people who did not consider themselves American be the source of our national literary tradition? Does such a tradition even exist, and, if so, what are its main characteristics? Authors may include Columbus, de Vaca, Shakespeare, and Anne Bradstreet.

ENGL 1310T. Chaucer. Texts in Middle English by Geoffrey Chaucer including the romance Troilus and Criseyde; dream vision poems Book of the Duchess, House of Fame, and Parliament of Fowls; Chaucer's translation of Boethius's Consolation of Philosophy; his shorter poems; and two Canterbury Tales. Prerequisite: Knowledge of Middle English not required. Not open to first-year students.

ENGL 1311E. History of the English Language. Provides an introduction to the study of the English language from a historical, linguistic, and philological perspective, and an overview of the study of the "Englishes" that populate our globe. While providing students with the ability to identify and explain language change through historical periods, also examines language as a social and political phenomenon.

ENGL 1311G. Shakespeare, Love and Friendship. Shakespeare portrays friends who are compared to a "double cherry"; a lover who wants to cut her beloved out in little stars; and subjects who swear with desire to see their kings. How does Shakespeare imagine the possibilities and pitfalls of affection, whether personal or political? What happens to that affection when Shakespeare is adapted into film? LILE Fall ENGL1311G S01 16027 TTh 9:00-10:20(08) (J. Kuzner)

ENGL 1311H. Sagas Without Borders: Multilingual Literatures of Early England. This course traces evolutions of the hero in Old English, Norse, Welsh, and Irish narratives within and around early medieval England. Introduction to genres of saga, romance, and the short poetic lai, as students consider how the nature of the hero changes in specific cultural and linguistic moments. Texts in modern English translation. Essays will focus on close textual readings. Not open to first-year students. LILE Fall ENGL1311H S01 16153 MWF 2:00-2:50(07) (L. Jacobs)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
ENGL 1360F. Quest, Vision, Diaspora: Medieval Journey Narratives. Medieval texts explored ideas of self, love, rite-of-passage, spirituality, and group identity through narratives of travel, both imagined and real. We will read romance quests that foray to fairylands and wastelands, visionary journeys to hell, pilgrimages of self discovery, an epic exodus that founds King Arthur’s nation, and a 14th-century round-the-world travelogue. Chaucer, Malory, Kempe, Mandeville, Layamon, Anonymous. Middle English readings. Not open to first-year students. Enrollment limited. Spr ENGL1360F S01 24288 W 3:00-5:20(14) (E. Bryan)

ENGL 1360S. Between Gods and Beasts: The Renaissance Ovid. Ovid’s Metamorphoses, an epic compendium of classical myths, narrates with wit and pathos the transformations of body and mind wrought by sexual passion. Central to Renaissance conceptions of the human, it inspired drama, poetry, and narrative. Readings: Shakespeare, Marlowe, Donne, Spenser, Milton. Students who have taken ENGL 1310D may not register for this course. Enrollment limited to 20. LILE WRIT Fall ENGL1360S S01 14586 M 3:00-5:20(15) (C. Kahn)

ENGL 1360W. Firing the Canon: Early Modern Women’s Writing. What did women write during the centuries before Jane Austen? Virginia Woolf mused over Shakespeare’s imaginary sister Judith. Fortunately for us, many real women produced texts that have been rediscovered and reprinted. They provide the subject matter for this course. Readings include drama, fiction, poetry, diaries and letters, prophecies, and essays by writers including Lanyer, Wroth, Cavendish, Behn, Haywood, and Montagu. Enrollment limited to 20. Spr ENGL1360W S01 24411 M 3:00-5:20(13) (M. Rabb)

ENGL 1360X. Seventeenth-Century English Lyric Poetry. A close reading of five poets—Donne, Jonson, Herrick, Herbert, and Crashaw—from one of the richest and most daringly experimental periods of English poetry. Since much of the period’s lyric poetry is love poetry, we’ll be especially concerned with expressions of erotic desire and the passions. We’ll also treat the affective cross-affiliations between amorous and religious devotion in the period. Enrollment limited to 20. Spr ENGL1360X S01 24412 TTh 2:30-3:50(11) (R. Rambuss)

ENGL 1360Z. Shakespeare and Embodiment. Consideration of three Shakespearean texts, the erotic narrative poem “Venus and Adonis,” the early revenge drama Titus Andronicus, and the late romance, Cymbeline, and their various representations of the body: as subject to violence, gender and desire, sovereignty and history. Attention to Shakespeare’s rewriting of Ovid and antiquity across genres. Enrollment limited to 20. Not open to first-year students. Spr ENGL1360Z S01 24413 M 3:00-5:20(13) (K. Newman)

ENGL 1361A. Fantasies of Milton. Paradise Lost has served as the basis for numerous fantasy novels. Even Comus has become a (supposedly inappropriate) children’s story. How can a seventeenth-century poet’s treatment of temptation, disobedience, reason and self-regard come to seem relevant in the present? What do contemporary writers feel compelled to preserve and to change? How might we reimagine Milton? Enrollment limited to 20. LILE Fall ENGL1361A S01 16031 Th 4:00-6:20(16) (J. Kuzner)

ENGL 1380. Undergraduate Independent Study in Medieval and Early Modern Literatures. Tutorial instruction oriented toward a literary research topic. Section numbers vary by instructor. Instructor permission required.

ENGL 1510A. Jane Austen and Her Predecessors: The Other History of the Novel. This course focuses on the novels of Jane Austen—from Sense and Sensibility to Persuasion. The course first establishes some familiarity with the earlier women writers of narrative fiction, in order to gain a deeper understanding of the development of the novel and of Austen’s place in that rich tradition. Additional readings include work by Aphra Behn, Eliza Haywood, Charlotte Lennox, Elizabeth Inchbald, and Mary Wollstonecraft. Spr ENGL1510A S01 24414 TTh 2:30-3:50(11) (M. Rabb)

ENGL 1510Z. The Realist Age: American Literature at the Turn of the Century. What do we mean when we call a novel realistic? When did the term first start being used, and why? This class attempts to answer these questions by studying the emergence of realism as the dominant American literary form at the turn of the century. Writers will include Mark Twain, Henry James, Stephen Crane, Edith Wharton, and Charles Chesnutt. Fall ENGL1510Z S01 14834 MWF 11:00-11:50(04) (S. Burrows)

ENGL 1511K. Gothic Novels and Romantic Poems. The difference between “high Romantic” poetry and Gothic popular fiction blurs when we look closely at these haunted and haunting texts. This seminar will examine some major Romantic poems by Wordsworth, Coleridge, Keats, Shelley, and Byron in tandem with Gothic novels by Ann Radcliffe, Matthew Lewis, Jane Austen, and Mary Shelley. Spr ENGL1511K S01 24295 MWF 2:00-2:50(07) (M. Redfield)

ENGL 1511M. Victorian Self and Society. This multi-genre course studies literature and culture of the Victorian period, looking at the changing ideas of society and the individual’s place within that larger community in an age of empire, industrialization, urbanization, class conflict, and religious crisis. Topics include conceptions of the role of art and culture in society, the railway mania of the 1840s, women’s suffrage and the condition of women, and the Great Exhibition of 1851. Readings (essays, poems, stories, plays, and novels) by Carlyle, Charlotte Brontë, Ruskin, Robert Browning, Dickens, Tennyson, Christina Rossetti, George Eliot, George Gissing, Weldon, A. E. Housman. Spr ENGL1511M S01 24299 TTh 10:30-11:50(09) (V. Ryan)

ENGL 1511O. American Poetry I: Puritans through the Nineteenth Century. Survey of the invention and development of American poetic traditions. Readings include Bradstreet, Taylor, Wheatley, Freenau, Bryant, Emerson, Poe, Whitman, Melville, Dickinson, and Frost. Fall ENGL1511OC S01 14587 T 12:00-2:20(10) (M. Blasing)

ENGL 1560R. From Frankenstein to Einstein: Literature and Science from 1800 to 1950. Science and literature as interrelated ways of knowing and learning, focusing on questions of language, observation, interpretation, and value. Themes include utopias and dystopias, evolution and degeneration, man and machine, entropy and chaos, and the relationship between literary imagination and scientific creativity. Readings include poems, plays, novels, and essays (Shelley, Arnold, Doyle, Poe, Wells, Kafka, Stoppard) alongside a range of scientific writing (Darwin, Huxley, Freud, Gould, James Watson) and philosophy of science (Popper, Feyerabend, Kuhn). Enrollment limited to 20 juniors and seniors. Banner registrations after classes begin require instructor approval. LILE Spr ENGL1560R S01 24415 W 3:00-5:20(14) (V. Ryan)

ENGL 1560W. Getting Emotional: Passionate Theories. This course examines connections between emotion, feeling, and affect in several key texts from 18th-, 19th-, and 20th-century literature. We will ask how and why affect becomes a central concept for writers and thinkers in the Enlightenment, and chart the ways in which affect productively opens up onto contemporary theorizations of identity, gender, sexuality, and race. Possible authors include: Wordsworth, Austen, Blake, Equiano, Coleridge, Keats, Shelley, Wilde, Pater, Kant, Melville, Hume, Hume. Films by Todd Haynes, McQueen, Campion, Frampton. Theoretical readings by Berlant, Ellison, Terada, Deleuze, Stewart. Enrollment limited to 20 juniors and seniors. LILE Spr ENGL1560W S01 24416 Th 4:00-6:20(17) (J. Khalip)

ENGL 1561D. Writing and the Ruins of Empire. An exploration of literary representations of “empire” and “imperialism” from the 18th century to the present. Readings in Gibbon’s Decline and Fall of the Roman Empire, Volney’s Ruins of Empire, and a wide range of 19th- and 20th-century texts. Some consideration of theories of imperialism and of visual representations of cultures of empire. Enrollment limited to 20. Prior coursework in 18th- and 19th-century literature advised. Fall ENGL1561D S01 14588 Th 4:00-6:20(16) (W. Keach)

ENGL 1561P. The American Short Story Before 1900. Surveys the genre of the short story in American literature through 1900. We will examine its origins and growth, paying particular attention to common themes and rhetorical strategies. We will consider the importance of the short story form to literary nationalistic movements in America, and we will explore the relation of the genre to a range of historical movements. Authors may include Irving, Hawthorne, Poe, Chopin, Jewett,
Tuturial instruction oriented toward a literary research topic. Section numbers vary by instructor. Instructor’s permission required.

ENGL 1710L. Harlem Renaissance: The Politics of Culture.
The Harlem Renaissance was a remarkable flowering of culture in post-war New York as well as a social movement that advanced political agendas for the nation. This course takes up the relationship between literature and politics by exploring such matters as the urbanization of black America, the representation of the black poor, the influence of white patronage, and the rise of primitivism. Writers may include Hughes, Hurston, Larsen, Fisher, Locke, and McKay. DVPS
Fall ENGL1710L S01 24305 MWF 1:00-1:50(06)  (R. Murray)

Today, many African writers use European languages that came to Africa as a consequence of colonial conquest. Often, the texts are addressed primarily to European and American readers. This course begins with these facts to explore issues of history, language, and form in modern African writing. In a context where nationalist assertions of various stripes become stronger even as the world becomes more interconnected through trade, immigration, and digital media, what might African literature teach us about such things as self and other, particularity and universality? Writers include Achebe, Farah, Ngugi, and Vera. DVPS
Fall ENGL1710J S01 14803 MWF 1:00-1:50(06)  (O. George)

ENGL 1710K. Literature and the Problem of Poverty.
Explores poverty as a political and aesthetic problem for the American novelist. Examines the ways that writers have imagined the poor as dangerous others, agents of urban decay, bearers of folk culture, and engines of class revolt. Also considers these literary texts in relation to historical debates about economic inequality. Writers may include Crane, Faulkner, Wright, Steinbeck, and Hurston.
Fall ENGL1710K S01 14804 TTh 1:00-2:20(10)  (R. Murray)

ENGL 1711A. American Poetry II: Modernism.
Study of modernist American poetry. Readings include Pound, Eliot, Stevens, Williams, H.D., Moore, Hughes, and others.
Spr ENGL1711A S01 24304 T 12:00-2:20(10)  (M. Blasing)

ENGL 1760G. American and British Poetry Since 1945.
Study of poetry after 1945. Readings include Bishop, Plath, Ashbery, Merrill, O’Hara, Heaney, Larkin, Walcott, Rich, Dove. Enrollment limited to 20. LILE
Fall ENGL1760G S01 14589 F 3:00-5:20(05)  (M. Blasing)

ENGL 1760Q. James Joyce and the Modern Novel.
One measure of James Joyce’s achievement as a writer is his influence (as an inspiration, an antagonist, or a competitor) on novelists who came after him. Our primary concern will be with Joyce’s formal innovations: How did his audacious narrative experiments transform the novel as a genre? Do his stylistic games break with the realistic tradition or expose its linguistic and epistemological workings? In addition to Dubliners, Portrait of the Artist, and Ulysses, we will read novels by Woolf, Faulkner, Beckett, and Nabokov. Enrollment limited to 20. Not open to first-year students.
Instructor permission required.
Spr ENGL1760Q S01 24306 Th 4:00-6:20(17)  (P. Armstrong)

ENGL 1761P. Yeats, Pound, Eliot.
Readings in the poetry and selected prose of Yeats, Pound, and Eliot. Enrollment limited to 20. LILE
Spr ENGL1761P S01 24307 F 3:00-5:20(15)  (M. Blasing)

ENGL 1761V. The Korean War in Color.
We examine US and South Korean representations of the Korean War. We look at how this event was depicted in US films of the 1950s with a focus on how it occasioned a transformation of American understandings of race, both domestically and transnationally. We then look at how this event has been memorialized by contemporary American authors as well as in South Korean literature and film. Authors we read include: Susan Choi, Ha Jin, Chang-rae Lee, Toni Morrison, Jayne Anne Phillips and Hwang Sok-Yong. Enrollment limited to 20. DVPS LILE WRIT
Fall ENGL1761V S01 15238 TTh 2:30-3:50(11)  (D. Kim)

ENGL 1762A. Perverse Cinema.
A seminar on movies that pursue and spectacularize the perverse, as well as on how viewing movies is itself a perverse pleasure. We will study film genres that traffic in what’s sensational, excessive, uncanny, and transgressive, such as the detective film, thriller, melodrama, sex film, horror, and sci-fi. Special emphasis on the movies of Hitchcock, Kubrick, Lynch, and Cronenberg. Enrollment limited to 20 concentrators in English, Comparative Literature, McM, American Studies, Gender and Sexuality Studies, and Theatre Arts and Performance Studies. Not open to first year students.
Fall ENGL1762A S01 14806 M 3:00-5:20(15)  (R. Rambuss)

ENGL 1762B. The Ekphrastic Mode in Contemporary Literature.
Ekphrasis—the extended description of a visual work of art in a work of literature—is as old as Homer and as modern as McEwan; however, in contemporary literary criticism the concept has been eclipsed by terms such as "self-reflexivity" and "metafiction." This course proposes a rediscovery of ekphrasis as a key feature of contemporary works of literature and film. Includes texts by Sebald, Alan Bennett, Godard, Starnone, Panahi, McEwan. Enrollment limited to 20. Not open to first year students.
Spr ENGL1762B S01 24418 TTh 10:30-11:50(09)  (T. Bewes)

ENGL 1780. Undergraduate Independent Study in Modern and Contemporary Literatures.
Tuturial instruction oriented toward a literary research topic. Section numbers vary by instructor. Instructor’s permission required.

ENGL 1900R. Queer Relations: Aesthetics and Sexuality.
A study of the relationship between aesthetic thought and sexuality in a variety of literary and cinematic works. We will supplement our readings with ventures into queer theory, emphasizing how art is related to identity, community, race, gender, and ethics. Authors include Wilde, Pater, James, Winterson, Cole, Guibert, Foucault, Bersani, Edelman. Films by Julien and Jarman. DVPS
Fall ENGL1900R S01 14620 TTh 1:00-2:20(10)  (J. Khalip)

ENGL 1900T. The Postcolonial and the Postmodern.
Explores the contexts and conceptual implications of theories of postmodernism and postcolonialism. Particular attention to intersections and disjunctions between both concepts as attempts to grapple with the challenges of modernity from the vantage point of the late-20th century. Course will end with two novels that address related issues with the tools of fictional narrative: Coetzee’s Foe and Rushdie’s Midnight’s Children. Readings include: Butler, Hall, Jameson, Laclau, Lyotard, Spivak. Not open to first-year students. Enrollment limited to 20.
Spr ENGL1900T S01 24308 TTh 2:30-3:50(11)  (O. George)

ENGL 1901E. Literature and the Digital Humanities.
We will explore the implications of using digital technologies to study literature. How does our understanding of literature and literary study change—if it does—in light of recently developed digital methods for studying such works? How do such methods compare with traditional ways of studying literature? How might literary studies be reconceived in relation to new media studies? Enrollment limited to 20.
Spr ENGL1901E S01 24419 MWF 2:00-2:50(07)  (J. Egan)

ENGL 1910E. Lyric Language and Form: Renaissance to Modern.
Tracing the trajectory of literary forms from the renaissance into the modern, examples will look at stubborn forms like the sonnet (Shakespeare, Berryman, Lowell); soft forms like blank/free verse (Marlowe, Milton, Wordsworth, Tennyson, Eliot); low and nonsense forms (Skelton, Caroll, hip-hop); and the antithetic functions of stanza and narrative (Spenser, Browning, Dr. Suess).
Spr ENGL1910E S01 24315 TTh 1:00-2:20(10)  (S. Foley)

ENGL 1950E. From Photography to Film: Theories of the Image.
This senior seminar examines theoretical accounts of photography and cinema from the invention of the camera in 1839 to the present-day. Our reading will include theorists of photography and film such as Benjamin, Barthes, and Deleuze, and artists and filmmakers such as Eisenstein,
Godwin, Wollstonecraft, Keats, Shelley, Goya, Dickens, Whitman, the present are differently thought in connection with philosophies of hope between optimism and temporality, or more specifically, how futurity and contemporary writers and theorists. We will focus on the relationship This course will center on close readings of texts that revolve around ENGL 2561F. “This is what you were born for”: Optimism and permission required.

In English, Comparative Literature, MCM, and Religious Studies. Is Christianity still a blood cult? Enrollment limited to 15 graduate students. To what extent is sacrifice as violent ritual action to sacrifice as internalized ethical imperative? To what extent in the Judeo-Christian tradition? How do we get from sacrifice as violent to successful completion of the senior thesis. Particular attention to efficient ways of developing literary-critical projects, as well as evaluating, incorporating, and documenting secondary sources. Enrollment limited to English concentrators whose applications to the Honors in English program have been accepted. Permission should be obtained from the Honors Advisor in English. S/NC

Fall ENGL1991 S01 14582 W 3:00-5:20(17) (D. Kim)

ENG 1993. Senior Honors Seminar in Nonfiction Writing. This course is designed for students accepted into the Nonfiction Honors Program. It will be run in workshop format, and will focus on research skills and generative and developmental writing strategies for students embarking on their thesis projects. Weekly assignments will be directed toward helping students work through various stages in their writing processes. Students will be expected to respond thoughtfully and constructively in peer reviewing one another’s work. Open to seniors who have been admitted to the Honors Program in Literature and Cultures in English. Instructor permission required.

Fall ENGL1993 S01 14580 M 3:00-5:20(15) (C. Imbriglio)

ENG 1994. Senior Honors Thesis in Nonfiction Writing. Independent research and writing under the direction of the student's Nonfiction Writing honors supervisor. Permission should be obtained from the Honors Advisor for Nonfiction Writing. Open to senior English concentrators pursuing Honors in Nonfiction Writing. Instructor permission required.

Fall ENGL1994 S01 14581 Arranged (C. Imbriglio)
Spr ENGL1994 S01 24311 Arranged (L. Stanley)

ENG 2360U. Sacrifice. On the devotional poetry of Donne, Lanyer, Herbert, Milton, and Crashaw. Our way into this strange, intense body of verse is sacrifice and "sacrifice theory" (Bataille, Girard, Agamben). Why the eternal sacrificial injunction in the Judeo-Christian tradition? How do we get from sacrifice as violent ritual action to sacrifice as internalized ethical imperative? To what extent is Christianity still a blood cult? Enrollment limited to 15 graduate students in English, Comparative Literature, MCM, and Religious Studies. 

Spr ENGL2360U S01 24447 F 3:00-5:20(15) (R. Rambuss)

ENG 2380. Graduate Independent Study in Medieval and Early Modern Literatures. Section numbers vary by instructor. May be repeated for credit. Instructor’s permission required.

ENG 2450. Exchange Scholar Program. Fall ENGL2450 S01 14030 Arranged "To Be Arranged"

ENG 2561F. "This is what you were born for": Optimism and Futurity. This course will center on close readings of texts that revolve around the concept of optimism, and while principle materials will be drawn from the Enlightenment and Romantic periods, our reach will extend to contemporary writers and theorists. We will focus on the relationship between optimism and temporality, or more specifically, how futurity and the present are differently thought in connection with philosophies of hope and change. We will begin with Voltaire, Leibniz, and Kant, and veer into Wordsworth, Wollstonecraft, Keats, Shelley, Goya, Dickens, Whitman, Crane, along with a cluster of theoretical works by Bloch, Berlant, Deleuze, Edelman, Munoz, Snediker. Enrollment limited to 15. Graduate students only.

Fall ENGL2561FS01 14807 Th 4:00-6:20(16) (J. Khalip)

ENGL 2561G. On Late Style: James and His Contemporaries. Reads the final works of Henry James in the context of theoretical accounts of lateness and the last fiction of a number of his models, contemporaries, and heirs. Texts include The Ambassadors, The Wings of the Dove, The Golden Bowl, The American Scene, Bouvard and Pécuchet, Daniel Deronda, Remembrance of Things Past; theorists include Said, Adorno, Benjamin, Barthes, Bersani, Sedgwick, Cameron. Enrollment limited to 15 graduate students.

Spr ENGL2561G S01 24449 M 3:00-5:20(13) (S. Burrows)

ENGL 2580. Graduate Independent Study in the Enlightenment and the Rise of National Literatures. Section numbers vary by instructor. May be repeated for credit. Instructor’s permission required.

ENGL 2760M. Globalism and Postcoloniality. This seminar focuses on two currents in contemporary literary and cultural criticism: postcolonial theory and theories of world literature. We will read theoretical texts alongside literary works by influential figures associated with concepts of postcoloniality and transnationalism. Our aim is to explore the varied idioms, genres, and philosophical perspectives that the authors make available. Themes include: nationalism and "national consciousness", biopower and modernity; history and temporality; and the closure of "literature" on the arena of the present. Authors include: Arac, Coetzee, Damrosch, Fanon, Farah, Ghosh, Gordimer, Hall, Jameson, Moretti, Naipaul, Robbins, Spivak, and Walcott. Enrollment limited to 15 graduate students.

Fall ENGL2760M S01 14809 W 3:00-5:20(17) (O. George)

ENGL 2760Y. American Orientalism and Asian American Literary Criticism. We examine critical studies of American Orientalism, influential works of Asian Americanist cultural criticism, American Orientalist texts by white and black authors, and literary texts by Asian American authors. Critics, cultural historians and writers we read may include: Christina Klein, Vijay Prashad, Elaine Kim, Frank Chin, Lisa Lowe, W.E.B. DuBois, Susan Choi, Nam Le, Karen Tei Yamashita. Enrollment limited to 15 graduate students.

Spr ENGL2760Y S01 25581 Th 4:00-6:20(17) (D. Kim)

ENGL 2780. Graduate Independent Study in Modern and Contemporary Literatures. Section numbers vary by instructor. May be repeated for credit. Instructor’s permission required.

ENGL 2900R. Neuroaesthetics and Reading. How does literature play with the brain? What can neuroscience teach literary theorists and critics about the aesthetic experience? Conversely, what can neuroscientists learn from the history and theory of criticism that should guide their research in the new, rapidly developing field of "neuroaesthetics"? Intensive analysis of the theories of art, reading, and aesthetic experience proposed by neuroscience and cognitive science in light of traditional aesthetics and contemporary literary theory. Enrollment limited to 15. Graduate students only.

Fall ENGL2900R S01 14810 F 3:00-5:20(05) (P. Armstrong)

ENGL 2900S. Deleuze, Rancière, Literature, Film: The Logic of Connection. The most contentious element in Deleuze’s work on cinema is the "sensorimotor break” that separates the classical cinema of the movement-image from the modern cinema of the time-image. What is the nature of this break? And how can it be brought into dialogue with developments in twentieth-century literature? This course reads Deleuze alongside Rancière in order to address the politics of connection and periodization in literary and film. All primary readings will be in English translation; others may include Woolf, Coetzee, Sebald. Enrollment limited to 15. Graduate students only.

Fall ENGL2900S S01 14811 W 3:00-5:20(17) (T. Bewes)

ENGL 2900T. Freud and Lacan. Examines the foundations of psychoanalysis through Freud’s and Lacan’s writings. We will engage critically with their founding principles, reading practices, literariness, and ethics. Texts include Freud’s Interpretation of Dreams, Beyond the Pleasure Principle, Dora, and a range of case

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
ENVS 0070C. Transcending Transportation Impacts.
Students will be engaged in interdisciplinary analyses of the life-cycle costs, environmental impacts, technical developments, and policy innovations at the local and regional level. We will discuss technical modifications in vehicles, such as plug-in hybrids, as well as policy and planning on intermodal systems, recycle-a-bike programs, intelligent transportation systems, and other innovations. Enrollment limited to 20 first year students. Instructor permission required. FYS LILE WRIT
Fall
ENVS0070C S01 15258 T 4:00-6:20(18) (K. Teichert)

Many important political issues hinge on matters of science or technology. But most Americans are ill-equipped to assess these matters. As a result, we are vulnerable to spin when scientific information is distorted, cherry-picked or otherwise misused to advance financial, political or even religious goals. This course examines ways these phenomena skew public discussion of climate change, vaccine safety, the teaching of evolution, transportation systems, and other innovations. Enrollment limited to 20 first year students. FYS LILE WRIT
Fall
ENVS0070D S01 15249 TTh 2:30-3:50(11) (C. Dean)

Offers a survey introduction to contemporary environmental issues and is a "gateway" class for those interested in concentrations in environmental studies/sciences. It is a required course for concentrators. We explore the relationships between human societies and the non-human environment through a survey of topical cases, including: human population growth and consumption, global climate change, toxins, water resources, environmental justice and ethics, and agro-food systems. This course also analyzes various solutions—social, political, technical, and economic—put forth by institutions and individuals to address questions of environmental sustainability. One 90-minute weekly discussion group required. WRIT
Fall
ENVS0110 S01 15252 MWF 10:00-10:50(03) (M. King)

Interested students must register for BIOL 0190E.
Fall
ENVS0120 S01 16460 Arranged 'To Be Arranged'

ENVS 0121. Plants, Food, and People (BIOL 0190H).
Interested students must register for BIOL 0190H.
Spr
ENVS0121 S01 25596 Arranged 'To Be Arranged'

ENVS 0220. Physical Processes in Geology (GEOL 0220).
Interested students must register for GEOL 0220.
Fall
ENVS0220 S01 16456 Arranged 'To Be Arranged'

ENVS 0240. Earth: Evolution of a Habitable Planet (GEOL 0240).
Interested students must register for GEOL 0240.
Spr
ENVS0240 S01 25591 Arranged 'To Be Arranged'

ENVS 0241. Climate and Climate Change (GEOL 0030).
Interested students must register for GEOL 0030.
Fall
ENVS0241 S01 16455 Arranged 'To Be Arranged'

Interested students must register for RELS 0260.
Spr
ENVS0260 S01 25595 Arranged 'To Be Arranged'

ENVS 0300. Environment and Society in Africa (SOC 0300L).
Interested students must register for SOC 0300L.
Spr
ENVS0300 S01 25594 Arranged 'To Be Arranged'

Interested students must register for BIOL 0420.
Spr
ENVS0420 S01 25597 Arranged 'To Be Arranged'

Enables students to master fundamental ecological concepts and explore how this knowledge can be used to inform conservation and management. Students will develop scientific skills and experience the challenges of coastal conservation science through both case studies and field trips, including a mandatory overnight trip. Suitable for students with at least some biology background; the course is aimed at first and second year undergraduates. Expected background: BIOL 0200 or equivalent. Enrollment limited to 15; instructor permission required. Email instructor (Heather_Leslie@brown.edu) to receive course application (due May 1).
Admitted students will be able to register for the course in September. WRIT

Fall ENVS0455 S01 15314 TTh 2:30-3:50(11) (H. Leslie)

Introduces students to environmental science and the challenges we face in studying human impacts on an ever-changing earth system. We will explore what is known, and not known, about how ecosystems respond to perturbations. This understanding is crucial, because natural systems provide vital services (water and air filtration, climate stabilization, food supply, erosion and flood control) that cannot be easily or inexpensively replicated. Special emphasis will be placed on climate, water and soil, population growth, and energy.
Fall ENVS0490 S01 15280 TTh 1:00-2:20(10) (R. Bhaskar)

ENVS 0520. Wild Literature in the Urban Landscape.
Combines deep study of ecological poetry, fiction, essays and other writing with service to schools in the community through exploration of local ecological challenges through both creative and more discursive expressions. The field-work or community component to this course will involve students in conducting workshops that combine literature and ecology in order to better elucidate and understand local issues related to, for one example, eco-industrial histories associated with Gorham Silver in Providence and the current state of Mt. Hope Bay on the Reservoir Triangle, where a public high school, Alvarez, now sits on contaminated soil. Enrollment limited to 22 undergraduates. S/NC.

Spr ENVS0520 S01 24522 F 3:00-5:20(15) (R. Benjamin)

ENVS 0900. Quantitative Methods in Psychology (CLPS 0900).
Interested students must register for CLPS 0900.
Fall ENVS0900 S01 16470 Arranged "To Be Arranged"
Spr ENVS0900 S01 25599 Arranged "To Be Arranged"

ENVS 0930A. Appropriate Technology (ENGN 0930A).
Interested students must register for ENGN 0930A.
Spr ENVS0930AS01 25614 Arranged "To Be Arranged"

ENVS 1070. The Burden of Disease in Developing Countries (PHP 1070).
Interested students must register for PHP 1070.
Fall ENVS1070 S01 16467 Arranged "To Be Arranged"

ENVS 1100. Statistical Methods for the Natural and Social Environmental Sciences.
An overview of statistical methods commonly utilized in environmental science to provide students with training in analytical approaches used in both disciplines. Course topics will include data manipulation, quantitative analysis (descriptive statistics, hypothesis testing, and linear models), environmental monitoring, and impact/risk assessment. Examples and problem sets will utilize R to analyze available data-sets and produce graphics for exploring datasets and presenting results. Students will be evaluated based on weekly lab exercises, a mid-term, a research paper, a final presentation, and contributions to class discussion. Expected: Basic familiarity with algebra and calculus. Students must also register for the lab. Enrollment limited to 46.
Spr ENVS1100 S01 25389 MWF 10:00-10:50(03) (E. Suddeth)

ENVS 1110. Estuarine Oceanography (GEOL 1110).
Interested students must register for GEOL 1110.
Fall ENVS1110 S01 16457 Arranged "To Be Arranged"

ENVS 1270. From Magic Mushrooms to Big Pharma: Anthropology of Drugs (ANTH 1880).
Interested students must register for ANTH 1880.
Fall ENVS1270 S01 16472 Arranged "To Be Arranged"

Interested students must register for GEOL 1330.
Spr ENVS1330 S01 25592 Arranged "To Be Arranged"

Economic analysis of environmental issues in industrialized countries with an emphasis on the implications for designing appropriate policy measures. Topics include: the valuation of environmental goods; the basic theory of economic markets, market failure, and the sources of any failure; private and government solutions to market failure; the role of uncertainty in policy-making; and open trade environments and trans-boundary pollution, on a national and global scale. Applications to issues such as climate change, land use, air and water pollution, and alternative energy. Prerequisite: ECON 1110 or 1130.
Fall ENVS1350 S01 15256 TTh 10:30-11:50(13) (S. Nagavarapu)

ENVS 1355. Environmental Issues in Development Economics.
Examines environmental issues in developing countries, including air and water pollution, land use change, energy use, and the extraction of natural resources. Uses microeconomic models of households and firms, linking household/firm decision-making on environmental issues to choices in labor, land, and product markets. Develops basic empirical techniques through exercises and a project. For readings, relies exclusively on recent research to illustrate the roles of economists and economic theory in confronting problems at the nexus of the environment, poverty, and economic development. Suggested background: ECON 1630, and ENVS 1350 or ECON 1480. Prerequisites: ECON 1110 or 1130; and ECON 1620.
Spr ENVS1355 S01 24655 TTh 10:30-11:50(09) (S. Nagavarapu)

ENVS 1356. Health, Hunger and the Household in Developing Countries (ECON 1530).
Interested students must register for ECON 1530.
Fall ENVS1356 S01 16466 Arranged "To Be Arranged"

ENVS 1370. Environmental Geochemistry (GEOL 1370).
Interested students must register for GEOL 1370.
Fall ENVS1370 S01 16459 Arranged "To Be Arranged"

ENVS 1400. Sustainable Design in the Built Environment.
Provides students with an in-depth understanding of sustainability, as it relates to planning, engineering, architecture, landscape architecture and green buildings. Students conduct economic and environmental analyses to examine planning, design and building problems and opportunities holistically. Interdisciplinary teams work on applied design projects. Prerequisites: ENVS 0410, or equivalent by permission of instructor.
Fall ENVS1400 S01 15259 W 3:00-5:20(17) (K. Teichert)

ENVS 1410. Environmental Law and Policy.
Introduces students to environmental law in the United States. Uses legal decisions and policy frameworks to consider the roles of non-governmental actors in formation and implementation of environmental policy. Students will become familiar with major federal environmental laws and regulatory databases and see how legal precedent, differing understandings of risk and alternative regulatory and market-enlisting strategies have shaped solutions to environmental problems. Provides opportunity to apply legal skills to local environmental legislation or legal problems. Intermediate coursework in Environmental Studies, Political Science, Community Health, Urban Studies or other environmentally-related coursework is recommended. First year students need instructor permission.
Spr ENVS1410 S01 24644 TTh 2:30-3:50(11) (C. Karp)

ENVS 1415. Power, Justice, and Climate Change.
Climate change creates injustices in who caused the problem, who is suffering worst and first, and who is taking action. Power differences between nations and social groups drives unequal disaster risks and "compounded vulnerabilities" for poor peoples and nations, and has led to gridlock in United Nations negotiations. The course reviews social and political dimensions of climate change, including local and national adaptation and mitigation efforts, media dynamics, collective and individual denial, negotiations, and the rise of climate social movements. Enrollment limited to 40. WRIT
Fall ENVS1415 S01 15408 TTh 9:00-10:20(08) (J. Roberts)

ENVS 1440. Conservation Biology (BIOL 1470).
Interested students must register for BIOL 1470.
Fall ENVS1440 S01 16461 Arranged "To Be Arranged"

ENVS 1490. SES-Independent Study/Science Writing.
The culmination of the Semester in Environmental Sciences at the Marine Biological Laboratory is an independent research project that builds on the topics covered in the aquatic and terrestrial ecosystem analysis core courses. In addition students participate in a seminar designed to help improve their ability to tell a lay reader about science. Enrollment is limited to students in this program. Instructor permission required.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
ENVS 1491. SES-Terrestrial Ecosystem Analysis.
Team-taught course examining: the structure of terrestrial ecosystems, fundamental biogeochemical processes, physiological ecology, impacts of environmental change on the landscape, and definitions. Students will review quantitative, qualitative, and theoretical approaches for understanding the origins and persistence of environmental discrimination. Examines the regulatory, institutional, structural, political, and economic forces that underlie patterns of race and class-based discrimination and their implications for environmental health among diverse communities. Case examples of environmental justice organizing will inform students of positive efforts by people of color in protecting their communities. Not open to first year students. Prerequisite: ENVS 0110. Spr 'To Be Arranged'

ENVS 1492. SES-Aquatic Ecosystem Analysis.
Team-taught course examining the structure of freshwater, estuarine and marine ecosystems; impacts of environmental change on the landscape at local regional and global scales; the application of basic principles of ecosystem ecology to investigating contemporary environmental problems such as coastal eutrophication, fisheries exploitation. Part of the Semester in Environmental Science at the Marine Biological Laboratory; enrollment is limited to students in this program. Instructor permission required. Fall 'To Be Arranged'

ENVS 1493. SES-Environmental Science Elective.
Two environmental science electives are offered each fall semester as part of the Semester in Environmental Science at the Marine Biological Laboratory, including: aquatic chemistry, mathematical modeling of ecological systems and microbial ecology. Enrollment is limited to students in this program. Instructor permission required. Fall 'To Be Arranged'

ENVS 1509. Introduction to Environmental Social Sciences.
This course examines beliefs and behaviors towards the environment and how the structures of society (such as the economic system and status hierarchies) influence these and contribute to the persistent abuse of the environment. Focuses on the rise of public concern and the environmental movement, unequal exposures to risks, and directions forward. Fall 'To Be Arranged'

ENVS 1555. Urban Agriculture: The Importance of Localized Food Systems.
Urban agriculture and community gardens have a critical function in a small but increasing movement toward more localized and sustainable food economies. This class will explore research and readings from multiple disciplines on the role of urban agriculture in world development and sustainability practices. Further, we will explore current U.S. farm policy, labor practices, and institutions impacting agricultural systems. More importantly, students will learn organic practices and be involved in planning and developing local urban agriculture projects. Enrollment limited to 40. Instructor permission required. E-mail Prof. King to request override (Dawn_King@brown.edu). Spr 1:00-2:20(10) (M. King)

The diminishing quality and quantity of the resources of the Earth carries profound implications for the fulfillment of human rights and aspirations. But even as we understand better the intrinsic interdependencies between humans and the environment, policy gridlock persists. Indeed, the findings of fundamental environmental science are regularly contested on political grounds. The purpose of this course is to learn how to apply knowledge to map the relevant policy context in environmental issues, and to develop the tools and approaches to address any problem of decision in the environmental arena more creatively, effectively, and responsibly. Enrollment limited to 20. Fall 3:00-5:20(15) (A. Lynch)

ENVS 1650. Statistical Inference I (APMA 1650).
Interested students must register for APMA 1650. Fall 3:00-5:20(15) (A. Lynch) 'To Be Arranged'

ENVS 1660. Instrumental Analysis with Environmental Applications (GEOL 1660).
Interested students must register for GEOL 1660. Spr 25593 Arranged 'To Be Arranged'

ENVS 1711. Current Topics in Environmental Health (PHP 1700).
Interested students must register for PHP 1700.

Provides an overview of environmental justice history, theory and definitions. Students will review quantitative, qualitative, and theoretical approaches for understanding the origins and persistence of environmental discrimination. Examines the regulatory, institutional, structural, political, and economic forces that underlie patterns of race and class-based discrimination and their implications for environmental health among diverse communities. Case examples of environmental justice organizing will inform students of positive efforts by people of color in protecting their communities. Not open to first year students. Prerequisite: ENVS 0110. Spr 24658 M 3:00-5:20(13) (D. Quigley) 'To Be Arranged'

What are the effects of globalization on the environment? Can globalization be greened? Corporations, civil society, international organizations and states are in a race to globalize their rules, sometimes working together, and others times in bitter conflict. This course seeks to understand this set of issues through a mix of examining concrete social/environmental problems and studying theories of globalization and social change. While addressing global issues and the impacts of wealthy nations, this course focuses most on the developing countries, where the impacts of these global issues appear to be worst, and where resources are fewest to address them. Enrollment limited to 20 juniors and seniors. WRIT 25247 W 3:00-5:20(14) (J. Roberts) 'To Be Arranged'

Interested students must register for HIST 1790. Fall 16463 Arranged 'To Be Arranged'

Interested students must register for HIST 1977T. Fall 16464 Arranged 'To Be Arranged'

ENVS 1820. Environmental Health and Disease (BIOL 1820).
Interested students must register for BIOL 1820. Spr 25598 Arranged 'To Be Arranged'

ENVS 1890. Native American Environmental Health Movements (ETHN 1890J).
Interested students must register for ETHN 1890J. Fall 16462 Arranged 'To Be Arranged'

ENVS 1900. Introduction to Geographic Information Systems for Environmental Applications (GEOL 1320).
Interested students must register for GEOL 1320. Fall 16458 Arranged 'To Be Arranged'

ENVS 1925. The Fate of the Coast: Land Use and Public Policy in an Era of Rising Seas.
For the last few decades, there has been a land-rush on the ocean coasts of the United States. Unfortunately, this swamps the coast at a time when sea levels are on the rise. In some places the rise is natural, in some places the rise is exacerbated by human activities and everywhere it is fueled by climate change. This course will examine the causes of sea level rise, the effects it produces on land, the steps people have taken to deal with these effects and their consequences, and possible remedies. Enrollment limited to 20. Preference given to juniors and seniors. WRIT 15253 MWF 2:00-2:50(07) (M. King) 'To Be Arranged'

ENVS 1929. The Fate of the Coast: Land Use and Public Policy in an Era of Rising Seas.
For the last few decades, there has been a land-rush on the ocean coasts of the United States. Unfortunately, this swamps the coast at a time when sea levels are on the rise. In some places the rise is natural, in some places the rise is exacerbated by human activities and everywhere it is fueled by climate change. This course will examine the causes of sea level rise, the effects it produces on land, the steps people have taken to deal with these effects and their consequences, and possible remedies. Enrollment limited to 20. Preference given to juniors and seniors. WRIT 15253 MWF 2:00-2:50(07) (M. King) 'To Be Arranged'
### Course Descriptions

#### ENVS 1930. Land Use and Built Environment: An entrepreneurial view (ENGN 1930S).

Interested students must register for ENGN 1930S.

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Interested students must register for ENGN 1930U.

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Interested students must register for ENGN 1931P.

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#### ENVS 1965. Engaged Environmental Scholarship and Communication.

This upper level seminar will enable students to place their research in the context of environmentally relevant policy and practice. Development of an environmentally-focused thesis or independent research project is a prerequisite. Students will hone practical professional skills, e.g. how to communicate scientific findings to the media and policy audiences; oral presentation skills, and tips on professional interactions. Required of all Brown Environmental Fellows (http://blogs.brown.edu/bef/), and open to others engaged in environmentally relevant projects from the natural and social sciences and humanities. Enrollment is limited to 15 seniors and graduate students, by application only (available Fall 2011). Instructor permission required. Contact Heather_Leslie@brown.edu for more information. WRIT

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First semester of individual analysis of environmental issues, required for all environmental studies concentrators. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Instructor override required prior to registration.

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Second semester of individual analysis of environmental issues, required for all environmental studies concentrators. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Instructor override required prior to registration.

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#### ENVS 2420. The Structure of Cities (ECON 2420).

Interested students must register for ECON 2420.

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#### ENVS 2680. Ecosystem Modeling for Non-Programmers.

Emphasizes hands-on experience building ecosystem models. Students build about 8 models in an intensive three-week class in January at the Marine Biological Laboratory, then build their own model as a term project over the Spring semester. Term projects will be in the form of a manuscript formatted for publication in Ecology. Prerequisites: MATH 0050 and 0060, or co-requisite MATH 0090.

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#### ENVS 2980. Reading and Research.

First semester of thesis research during which a thesis proposal is prepared. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Instructor override required prior to registration.

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#### ENVS 2981. Reading and Research.

Second semester of thesis research. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Instructor override required prior to registration.

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#### ENVS 2990. Thesis Preparation.

For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.

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### Ethnic Studies


This course will guide students through an understanding of the historical, contemporary, and ideological rationale behind the constructions of mixed race, and how mixed race theory plays out in history, art, and contemporary media. This course aims to expand the conversations of mixed race beyond the stereotypes of tragic mulattos and happy hapas, instead interrogating what mixed race looks like in the twenty-first century and what historical precedents can explain current phenomena. DVPS

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Interested students must register for AMST 0191P.

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#### ETHN 0290D. Women, Sex and Gender in Islam (RELS 0290D).

Interested students must register for RELS 0290D.

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#### ETHN 0500. Introduction to American/Ethnic Studies.

Considers the U.S. as a society whose unifying identity is rooted in ethnic and racial diversity. Explores the historical and contemporary experiences of racial and ethnic groups in this country and analyzes different forms of representation of those experiences, as well as representations of the ethnic and racial stratification in the U.S. imagination.

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#### ETHN 0512. Introduction to Latina/o Cultural Studies.

This course serves as an introduction to the many discourses that structure and challenge Latinidad -- the feeling of being Latina/o. Through historically situated critical analysis of Latina/o cultural production, including theoretical essays, literature, and film, we will meditate on the major issues that shape the Latina/o U.S. experience. We will study how Latinidad is constructed as an identity and how that identity varies across origin, place, and time. Major themes we will explore include the legacies of U.S. colonialism; cultural nationalism, citizenship, immigration and exile; labor and class; race and ethnicity; and gender and sexuality.

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#### ETHN 0700E. Postcolonial Literature (ENGL 0700E).

Interested students must register for ENGL 0700E.

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#### ETHN 0901L. African American Media Visibility: Image, Culture, Crisis (MCM 0901L).

Interested students must register for MCM 0901L.

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Paying attention to methodology and research design can enhance the capacity of research in any field and contribute to knowledge production. The purpose of this seminar is to introduce students to a variety of social science research methods with an emphasis on ethnographic, mixed-methods research (research-design, data-collection, and data analysis).

Social science research is a craft, and like any other craft, it takes practice to do it well. This seminar emphasizes a "hands-on," "applied," and/or practical approach to learning. The course is suited to students who have an on-going research project they plan to pursue throughout the semester. Enrollment limited to 20.

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#### ETHN 1110. Voices Beneath the Veil (AFRI 1110).

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#### ETHN 1250. Twentieth-Century Western Theatre and Performance (TAPS 1250).

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#### ETHN 1271. Performances in the Asias (TAPS 1270).

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For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Fall ETHN1271 S01 16003 Arranged  
'To Be Arranged'  

ETHN 1420. Global Queer Performance (TAPS 1420).  
Interested students must register for TAPS 1420.  
Fall ETHN1420 S01 15998 Arranged  
'To Be Arranged'  

ETHN 1430. The Psychology of Race, Class, and Gender (EDUC 1430).  
Interested students must register for EDUC 1430.  
Fall ETHN1430 S01 16334 Arranged  
'To Be Arranged'  

ETHN 1624. Indians, Colonists, and Africans in New England (ANTH 1624).  
Interested students must register for ANTH 1624.  
Fall ETHN1624 S01 16332 Arranged  
'To Be Arranged'  

Interested students must register for EDUC 1700.  
Fall ETHN1700 S01 16338 Arranged  
'To Be Arranged'  

Interested students must register for ENGL 1710J.  
Fall ETHN1710J S01 16046 Arranged  
'To Be Arranged'  

ETHN 1761V. The Korean War in Color (ENGL 1761V).  
Interested students must register for ENGL 1761V.  
Fall ETHN1761V S01 16047 Arranged  
'To Be Arranged'  

ETHN 1805. First Nations: the People and Cultures of Native North America to 1800 (HIST 1805).  
Interested students must register for HIST 1805.  
Fall ETHN1805 S01 16335 Arranged  
'To Be Arranged'  

ETHN 1890A. Seminar on Latino Politics in the United States.  
Advanced seminar on the politics of Latino communities in the United States. Considers the history of Latino politics; participation, partisanship and office-holding; immigration and citizenship; social movements; public policy; gender and race; and pan-ethnic identity. Advanced undergraduate and graduate students. Includes optional community research project. Some familiarity with Latino studies, U.S. politics, Latin American politics, or ethnic studies would be helpful.  
Fall ETHN1890A S01 16540 W 3:00-5:20(17) (A. Affigne)  

ETHN 1890H. Introduction to American Indian Studies.  
Introduces students to both historical and contemporary issues in North America. Issues of identity, sovereignty, representation and self-representation are key components. Because this course is interdisciplinary, we will use texts from anthropology, cultural studies, history, film and literature as tools to understand and appreciate the ways in which American Indian cultures survive, flourish and shape the United States. No special background is required. All students are welcome. Enrollment limited to 30.  
Spr ETHN1890H S01 25840 Arranged (S. Gaunt)  

ETHN 1890J. Native American Environmental Health Movements.  
American Indian reservations are home to countless sources of environmental contamination, which impact residents’ health and ability to maintain cultural practices. In response to this assault, and the numerous scientific studies that often follow, Native communities are taking charge of the research process, and partnering with scientists to explore health affects and remediation possibilities. Through case studies, we will examine how Native communities are pushing to "indigenize" the research process. This class is broadly interdisciplinary, and will be useful for students interested in contemporary issues in Native American communities, and students intending to conduct scientific research in minority communities. Enrollment limited to 20.  
Fall ETHN1890J S01 15527 TTh 2:30-3:50(11) (E. Hoover)  

ETHN 1890Q. The Hispanic Caribbean and its Diasporas.  
The purpose of this course is to examine the history and cultures of the Hispanic Caribbean. An enduring feature of the region as a whole is its cultural diversity and vitality. Perhaps to a degree unsurpassed among world regions, the Caribbean is a set of immigrant societies, shaped by successive waves of European, Africa and Asian settlers. Through art, music, and literature Caribbean people have not just borrowed from but added to Western civilization and the pan-African heritage. Increasingly, Hispanic Caribbean people are making their voices heard as immigrants in the U.S. and the former colonial metropoles of Europe.  
Fall ETHN1890Q S01 16490 TTh 1:00-2:20(10) (H. Llorens)  

ETHN 1890R. Latina Feminisms.  
This course will be a focused exploration of Latina feminisms. Through historically situated critical analysis of novels, short stories, poetry, film, and performance art, we will meditate on how the Latina body has been constructed and mobilized both within dominant culture and social justice movements. We will situate Latina cultural production and theorizing in relation to ethnic studies and women’s studies in order to ascertain the contributions and challenges that Latina feminists bring to dominant discourses of race, gender, sexuality, nationalism, labor and class.  
Spr ETHN1890R S01 25788 F 3:00-5:20(15) (L. Alvarado)  

ETHN 1891. Empires in America to 1890 (HIST 1891).  
Interested students must register for HIST 1890.  
Fall ETHN1891 S01 16336 Arranged  
'To Be Arranged'  

ETHN 1900B. Community, Language and Literacy: A Practicum.  
This course examines adult language and literacy learning and approaches to teaching in community settings. It is designed to support students’ work teaching language and literacy to immigrant adults. Working with the Swearer Center and its community partners students will explore theories informing educational practice and will gain skills and practice in providing language and literacy instruction to adult learners in the community. This practicum specifically addresses issues of language acquisition, acculturation, and broader contexts framing adult education. Enrollment limited to 20.  
Spr ETHN1900BS S02 25832 T 4:00-6:20(16) (J. Isserlis)  

ETHN 1900E. Senior Seminar in Ethnic Studies.  
No description available.  
Spr ETHN1900ES S01 25513 Arranged (D. Kim)  

ETHN 1900H. What is Ethnic Studies?.  
No description available. Enrollment limited to 20 seniors and graduate students.  
Spr ETHN1900F S01 25508 W 3:00-5:20(14) 'To Be Arranged'  

ETHN 1910. Independent Study.  
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.  

Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.  

Interested students must register for HIST 1974A.  
Fall ETHN1974A S01 15872 Arranged  
'To Be Arranged'  

ETHN 2070. Music and Identity (MUSC 2070).  
Interested students must register for MUSC 2070.  
Fall ETHN2070 S01 16372 Arranged  
'To Be Arranged'  

French Studies  
FREN 0100. Basic French.  
This is the first half of a two-semester course. Four meetings a week for oral practice. One hour of work outside of class is expected every day (grammar/writing, oral practice, reading). Enrollment limited to 18.  
Fall FREN0100 S01 15084 MF 9:00-9:50(15) (A. Wiart)  
Fall FREN0100 S02 15085 TTh 10:30-11:50(15) (A. Wiart)  
Fall FREN0100 S02 15085 TTh 9:00-10:20(15) (A. Wiart)  
Fall FREN0100 S02 15085 MF 10:00-10:50(15) (A. Wiart)  
Fall FREN0100 S03 15086 TTh 10:30-11:50(15) (A. Wiart)  
Fall FREN0100 S03 15086 TTh 9:00-10:20(15) (A. Wiart)  
Fall FREN0100 S04 15087 TTh 12:00-12:50(15) (A. Wiart)  
Fall FREN0100 S04 15087 MF 12:00-12:50(15) (A. Wiart)  
Fall FREN0100 S05 15088 TTh 1:00-2:20(15) (A. Wiart)  
Fall FREN0100 S05 15088 MF 2:00-2:50(15) (A. Wiart)
94

Course Descriptions

FREN 0200. Basic French.
This is the second half of a two-semester course. Four meetings a week
for oral practice plus one conversation hour. One hour of work outside of
class is expected every day (grammar/writing, oral practice, reading). An
accelerated track enables qualified students to go directly to FREN 0500
after FREN 0200. Enrollment limited to 18. Instructor permission required.
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FREN 0300. Intermediate French I.
A semi-intensive elementary review with emphasis on all four skills
(listening, speaking, reading and writing). Class activities include drills,
small group activities, and skits. Class materials include an audio
CD, videos, a French film, short stories, and various other authentic
documents. Prerequisite: FREN 0200 or placement (Previous experience
with French is required to take this class). Four meetings per week plus a
50-minute conversation section with TAs. Instructor permission required.
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FREN 0400. Intermediate French II.
Continuation of FREN 0300 but may be taken separately. A four-skill
language course that stresses oral interaction in class (three meetings
per week plus one 50-minute conversation section). Materials include
audio activities, film, and a novel. Short compositions with systematic
grammar practice. Prerequisite: FREN 0300, FREN 0200 with permission,
or placement. Instructor permission required.
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12:00-12:50(17)
1:00-1:50(17)

(T. Ravindranathan)
(T. Ravindranathan)
(Y. Kondratiev)
(Y. Kondratiev)
(Y. Kondratiev)

FREN 0500. Writing and Speaking French I.
A four-skill language course that stresses oral interaction in class.
Thematic units will focus on songs, poems, a short novel (E-E Schmitt),
two graphic novels (Sattouf, Larcenet), films and a detective novel by
Fred Vargas. Activities include a creative project using Comic Life, and a
systematic grammar review. Prerequisite: FREN 0400, FREN 0200 with
written permission, or placement. Instructor permission required.
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FREN 0600. Writing and Speaking French II.
Prerequisite for study in French-speaking countries. Class time is devoted
mainly to conversation and discussion practice. Writing instruction and
assignments focus on essays, commentaries, and to a lesser degree, on
story writing. Apart from reading assignments for discussion (press articles
and literary excerpts), students select two novels to read. Prerequisite:
FREN 0500 or placement. Enrollment limited to 18. Instructor permission
required.

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FREN 0610. Writing and Speaking French II: International Relations.
Prerequisite for study in French-speaking countries. Continuation of FREN
500. Class time is devoted mainly to conversation and discussion practice.
Same level as FREN0600. This course is designed for students who are
interested in international relations. Discussions and writing assignments
are related to global politics from French and Francophone perspectives
and introduce students to the discourse of international relations in French.
Prerequisite: FREN 0500. Enrollment limited to 18.
Spr FREN0610 S01 25278

MWF

10:00-10:50(03)

(S. Ravillon)

FREN 0720A. From Courtly Love to Postmodern Desire.
From twelth-century courtly literature fo contemporary film, this course
explores the enduring romance between French culture and Eros. The
ambiguities of desire are brought to the fore across changing religious and
social contexts. Readings include Duras, Flaubert, Freud, and Baudrillard.
Open to students who receive a 5 (AP test), 700 and above (SAT II) or
with instructor’s permission. Open to first year students only. Please email
Virginia_Krause@brown.edu if you have questions. FYS
Spr FREN0720AS01 24463

TTh

2:30-3:50(11)

(V. Krause)

FREN 0750F. Empire in the French Imagination.
From the early nineteenth century to the 1931 Colonial Exposition in Paris
and the Algerian Revolution, ideas and debates about slavery, race, and
colonialism informed the ways in which French writers and intellectuals
thought about empire and its relationship to national identity. This course
examines how these debates took shape through contrasting imaginative
conceptions of empire from the 1800s until the 1960s, when France lost
most of her colonies. How did visions of empire contribute to the formation
of French colonial identity, and what kind of purchase do these ideas have
on contemporary French cultural and political life?
Spr FREN0750F S01 25279

MWF

2:00-2:50(07)

(J. Izzo)

FREN 1050I. Étrangers et voyageurs dans la France des Lumières.
The course will attempt to study a number of foreign subjects that emerge
out of the context of travel in the literature of the eighteenth century. We
will examine these others produced by the discourse of Enlightenment
through some classic and some marginal works and will discuss various
questions of colonization, slavery, race, and difference. Readings in
Montesquieu, Voltaire, Lahontan, Diderot, Graffigny, Mme de Duras,
Condorcet, Raynal, Saint-Pierre.
Fall FREN1050I S01 15187

TTh

2:30-3:50(11)

(P. Saint-Amand)

FREN 1060E. Gender, Sexuality and the Novel.
Examines novelistic constructions of gender and sexuality in relation
to 19th-century French culture and literary movements, including
romanticism, realism and naturalism, decadence, and the popular novel.
Topics include constructions of homosexuality in literature and non-fiction,
fatal femininity, besieged masculinity, sexuality and race, prostitution,
bored housewives. Works by Balzac, Flaubert, Zola, Maupassant,
Rachilde, accompanied by non-fictional sources in early sexology and
criminology.
Fall FREN1060ES01 15188

TTh

9:00-10:20(08)

(G. Schultz)

FREN 1110G. En Marge: Exilés et Hors-la-Loi au Moyen Age.
Through a close reading of medieval texts from a diverse selection of
genres and voices, this course will seek to understand not only those
excluded from medieval society, but also their relationship to that society.
The thematic focus will be on the condition of marginality itself—the way
in which the margins belong fully neither to the outside nor to the inside,
but describe a meeting point between them. In this course, students will be
asked to consider the marginal space as it provides a dual perspective on
excluded individuals and on the world that excludes them.
Fall FREN1110GS01 15246

W

3:00-5:20(17)

(J. Moreau)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).


FREN 1150E. Les Silences du son.
The history of cinema presumes an increasing realism thanks to technological advancements such as sound and color. But different elements of sound (noise, dialogue, music) always functioned, from the silent era forward, in complicated relations with the visual. The course will examine some of those elements and relations via a series of films by Godard, Duras, Beineix, Corneux, Audiard and others. Readings will be in electronic form; viewing sessions in addition to regular classes may be required.

Fall  FREN1150E S01 16408  TTh  3:00-7:50(14) (D. Willis)

FREN 1310A. "French Lovers"; Séduction et libertinage sous l'Ancien Régime.
A study of love and relationships in the Old Regime. The course will concentrate on the major actors (the libertine, the fop), on the spaces (the boudoir, the salon, the garden), on social practices (conversation). Authors will include Molière, Mme de Lafayette, Crébillon fils, Lacos and film adaptations by Honoré, Frears, and Forman.

Fall  FREN1310A S01 15189  TTh  1:00-2:20(10) (P. Saint-Amand)

FREN 1310L. Les paradis artificiels.
This course studies the roles that alcohol and other mind-altering substances have played in the composition, themes, and tropes of French literature from the 19th century to the present. In addition to wine, writers also experimented with hallucinogens such as opium and mescaline. 19th-century medicine contributed to the range of intoxicants available for abuse, even as it fed hygienist and literary discourses condemning alcoholism and drug use as social scourges. Other topics include prohibitionist movements, absinthe and the poètes maudits, narcoïcs and decadent literature, and the role of drugs and alcohol in the avant-garde, counter-cultures, and radical politics.

Fall  FREN1310LS S01 15200  TTh  10:30-11:50(13) (G. Schultz)

FREN 1330A. Fairy Tales and Culture.
Fairy tales, which occur is almost every culture, encapsulate in (usually) succinct form many of the pressing concerns of human existence: family conflict, the struggle for survival, sexual desire, the quest for happiness, etc. This course explores why writers and readers have been attracted to the fairy-tale form through a study of its key elements and its uses in adult and children’s literature, book illustration, and film. Special attention given to French contes de fées, along with North American, English, German, Italian and selected non-Western fairy tales. Discussions and readings in English with French, German, and Italian originals on reserve.

Fall  FREN1330A S01 16407  MWF  12:00-12:50(12) (L. Seifert)

FREN 1510A. Advanced Oral and Written French: Traduction.
An introduction to the theory and practice of translation, this course will be designed to expand students' range and appreciation of written styles and registers and will be based on translation exercises and texts reflecting different types of written and oral communication. Texts will range from literary texts (excerpts from novels, plays, comic books...) to journalistic texts (articles from newspapers...). Class activities will also include comparative studies of translated texts, as well as grammar review and vocabulary work. Course taught in French. Written translations to and from French. Prerequisite: FREN 1500 or equivalent. Enrollment limited to 18. Instructor permission required.

Fall  FREN1510A S01 15652  MWF  10:00-10:50(03) (S. Ravillon)

FREN 1510C. Advanced Oral and Written French: A table!.
Thematic units with different approaches to French cuisine and the French meal, such as regional cuisine, meals in literature and at the movies, radio-TV culinary shows, political and economical considerations, and, of course, a practical unit on how to compose, prepare and eat a French meal. Follows FREN 0600 in the sequence of language courses. Development of oral skills via presentations, debates, conversation, and discussion based on the various topics. Writing activities: essays, translations, commentaries, journals, creative descriptions and stories, etc. May be repeated for credit. Enrollment limited to 18.

Fall  FREN1510CS S01 15205  TTh  2:30-3:50(11) (A. Wiart)

FREN 1510F. Advanced Written and Oral French: Regards sur la France actuelle.
This course will use contemporary and classic works, newspaper articles, and film – all "made in France" – to explore and analyze the myths, realities, and contradictions of France today. Through in-class discussions, debates, and presentations, students will gain a deeper understanding of the enigma and legacy of this European country that once was the center of the cultural world and an early model of democracy. Follows FREN 0600 in the sequence of language courses. Writing activities, essays, commentaries, journals, etc.. May be repeated for credit. Prerequisite: FREN 0600. Enrollment limited to 18.

Spr  FREN1510F S01 25529  MWF  9:00-9:50(02) 'To Be Arranged'

FREN 1610A. Ateliers d'écriture.
An advanced course in (functional or creative) writing. The workshops range from practice in interpersonal communication (letters) to essays and various forms of narration. Recommended to students returning from a study-abroad program, students with a native French background who lack formal training in writing, or post-FREN 1510 students. Exercises for each workshop plus a final writing project. Prerequisite: FREN 1510. Enrollment limited to 17. Instructor permission required.

Spr  FREN1610A S01 24504  TTh  1:00-2:20(10) (A. Wiart)

FREN 1710D. Enfances africaines et antillaises : colonialisme, racialisation, modernité.
For many writers and filmmakers from Francophone Africa and the French Caribbean, stories of childhood have been (and remain) especially privileged sites through which to examine questions of race, (post)colonialism, and modernity. This class will explore some classic examples of this trend as well as more contemporary variations of (post)colonial coming-of-age narratives. How do stories of childhood speak to and about colonialism and postcolonialism, politics, violence, and race? We will approach this broad question in a number of texts and films from Africa and the Caribbean, in a variety of national and cultural contexts.

Fall  FREN1710C S01 15215  MWF  2:00-2:50(07) (J. Izzo)

FREN 1900A. Boulevard du Crime.
A study of crime and criminality in relation to French culture and literature from the late-middle ages through the 20th-century. Readings in a variety of sources including poetry (from Villon to Verlaine), theater (Racine), the novel (Zola, Genêt, Duras), trials (Gilles de Rais, the prototype of Bluebeard), memoirs (Lacenaire, dubbed the "elegant murderer"), and criminological treatises. Film screenings will complement readings.

Spr  FREN1900A S01 25740  Th  4:00-6:20(17) (G. Schultz)

FREN 1970. Individual Independent Study
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Instructor permission required.

Independent study in an area of special interest to the student, with close guidance of a member of the staff, and leading to a major paper. Required of candidates for honors, and recommended for all senior concentrators. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

FREN 2110F. La matière du livre: Humanisme et Renaissance.
Close study of literary works in light of the period’s defining events: the birth of humanism, the invention of printing, the rediscovery of scepticism, the promotion of French as a national language, and the Wars of Religion. Readings in Rabelais, Marguerite de Navarre, and Montaigne, among others.

Fall  FREN2110F S01 15216  Th  4:00-6:20(16) (V. Krause)

By examining how recent thinkers have used the period to (re)define "classicism," "modernity," "modernism," or the "post-modern" and confronting these interpretations with selected 17th-century texts, we will explore the crucial role the century plays in French cultural, literary and theoretical debates. Readings include Barthes, Bourdieu, Derrida, Foucault and Descartes, Cyrano de Bergerac, Pascal, La Rochefoucauld, Racine, La Bruyère, and Perrault.

Spr  FREN2130C S01 25666  F  3:00-5:20(15) (L. Seifert)

FREN 2170J. Naturalisme et décadence.
In this seminar we will read seminal works associated with these two nineteenth-century literary tendencies. We will explore the antithetical
nature of their aesthetic programs and the ideological implications of their differences. Moving beyond the literary text, we will consider corresponding cleavages that divided France along similar lines between the old guard (Catholic monarchists) and the new (republican secularists), between science and the Church, between Dreyfusards and anti-Dreyfusards, among other conflicting viewpoints that polarized France at the end of the century. Works by Zola, Maupassant, Huysmans, Lorrain, Péladan, Ménils,

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<tr>
<th>Course Code</th>
<th>Title</th>
<th>Instructor</th>
<th>Time and Location</th>
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<tbody>
<tr>
<td>GNSS0090C</td>
<td>Introduction to Gender and Sexuality Studies</td>
<td>F. Fox</td>
<td>Spr 24434 M 3:00-5:20(13)</td>
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</table>

**FREN 2190H. Les Autres du Réel.**
If the real is that which always returns to the same place (as has been said about the Lacanian real), this course will examine certain displacing figures and modes of figuration — poetry, folly, metaphor, allegory, prehistory, the parasite, the ghost, the animal — through which literature has sometimes thought its own work. Privileging a selection of 20th century works of literature (in particular post-war and contemporary writers, including Ponge, Michaux, Chevardière, Darrieussecq) and critical theory (Kristeva, Lacan, Ricoeur, de Man, Derrida, Deleuze amongst others), we will consider what it means to take seriously literature's claim to alternative ontologies.

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<th>Course Code</th>
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<tr>
<td>FREN2450</td>
<td>Exchange Scholar Program</td>
<td>T. Ravinranthan</td>
<td>Fall 3:00-5:20(05)</td>
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**FREN 2600G. Stop, Love, Listen.**
The course will be organized as a series of three modules that have as their background the beating heart, and as their common motif the sense of interruption or punctuation (of that same heartbeat). Starting from Beckett's fragmentation of writing we will follow other versions of the interrupted text in Blanchot and Cixous; second, we will investigate how the passion of love "parenthesizes" (or not) the concerns of everyday life, political engagement, and corporeal necessity; and third, how attention to (musical) sound complicates hearing and understanding. Texts: Beckett, Blanchot, Cixous, Nancy, Barthes, Bataille, Szyndy, films by Jacques Audieri. Taught in English.

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<tbody>
<tr>
<td>FREN2600GC</td>
<td>Stop, Love, Listen</td>
<td>D. Willis</td>
<td>Fall 3:00-5:20(17)</td>
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**FREN 2970. Preliminary Examination Preparation.**
For graduate students who have completed their course work and are preparing for a preliminary examination.

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<tr>
<td>FREN2970</td>
<td>Preliminary Examination Preparation</td>
<td>D. Nguyen</td>
<td>Spr To Be Arranged</td>
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**FREN 2980. Reading and Research.**
Work with individual students in connection with special readings, problems of research, or preparation of theses. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

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<th>Course Code</th>
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<th>Time and Location</th>
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<tbody>
<tr>
<td>FREN2980</td>
<td>Reading and Research</td>
<td>D. Nguyen</td>
<td>Spr To Be Arranged</td>
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**FREN 2990. Thesis Preparation.**
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.

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<th>Course Code</th>
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<tr>
<td>FREN2990</td>
<td>Thesis Preparation</td>
<td>D. Nguyen</td>
<td>Spr To Be Arranged</td>
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**FREN LIST. Courses of Interest to French Concentrators.**
Spring 2014
The following courses may be of interest to French concentrators. Please see the sponsoring department for the time and location of each course.

<table>
<thead>
<tr>
<th>Language</th>
<th>Title</th>
<th>Instructor</th>
<th>Time and Location</th>
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</thead>
<tbody>
<tr>
<td>English</td>
<td>ENGL 2900T Freud and Lacan</td>
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</table>

**Gender and Sexuality Studies**

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<tr>
<th>Course Code</th>
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<th>Instructor</th>
<th>Time and Location</th>
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</thead>
<tbody>
<tr>
<td>GNSS0090C</td>
<td>Reproductive Health: Science and Politics</td>
<td>F. Fox</td>
<td>Spr 24434 M 3:00-5:20(13)</td>
</tr>
</tbody>
</table>

**GNSS 0120. Feminist Utopias and Dystopias.**
From the religious overtones and abhorrence of heterosexual sex in the all-female world of Millenium Hall (1762), to the need for a new race of cyborg in Octavia Butler's Lilith's Brood Trilogy (1987-89), to the gender-inflected environmental apocalypse of Margaret Atwood's Oryx and Crake, feminist writers have used their utopian and dystopian fiction to imagine worlds where the standard system of male/female (or even human/machine) does not work. This course will examine feminist utopias and dystopias across historical periods and within the context of contemporary feminist and queer theory about gender, "race," sexuality, environmental justice, and interspecies communication. Enrollment limited to 30. WRIT

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<tr>
<th>Course Code</th>
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<th>Time and Location</th>
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<tbody>
<tr>
<td>FREN2990</td>
<td>Utopias and Dystopias</td>
<td>D. Davis</td>
<td>Spr 10:30-11:50(13)</td>
</tr>
</tbody>
</table>

**GNSS 1710. Sex and the Law: Strange Bedfellows.**
This class will examine legal debates about sexual activity and sexual speech generated by alternate, incompatible views of the source and function of laws and the role of the legal system in enforcing moral codes. We will look at works that see the law as given by God, later natural law traditions intended to enforce a common morality, and texts that see law as a human construct. Not open to first year students. WRIT

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<th>Time and Location</th>
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<tbody>
<tr>
<td>FREN2990</td>
<td>Sex and the Law: Strange Bedfellows</td>
<td>P. Foa</td>
<td>Spr 10:00-2:20(10)</td>
</tr>
</tbody>
</table>

**GNSS 1810. Independent Study and Research.**
Independent reading and research for upper-level students under the direction of a faculty member. Please check Banner for the correct section number and CRN to use when registering for this course.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Instructor</th>
<th>Time and Location</th>
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<tbody>
<tr>
<td>FREN2990</td>
<td>Independent Study and Research</td>
<td>D. Weinsein</td>
<td>Spr 10:30-11:50(09)</td>
</tr>
</tbody>
</table>

**GNSS 1960B. Health and Healing in American History.**
Surveys the history of American medicine in its social and political context, including changes in conceptions of health, treatment practices, and medical institutions. Focuses on how gender and race have informed how patients and healers have made sense out of pain and disease. WRIT

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<tbody>
<tr>
<td>FREN2990</td>
<td>Health and Healing in American History</td>
<td>D. Weinsein</td>
<td>Spr 10:30-11:50(16)</td>
</tr>
</tbody>
</table>

**GNSS 1960U. Reinventing Cinema and Media in Post-Mao China.**
Focuses on cinematic production and media culture in mainland China since the late 1970s. How was cinema reinvented beyond the conventions of socialist realism? How did cinema transform itself as a result of its intersections with other forms of media, such as television, cassette and video tape, video games and the internet? What does this mediascape tell
us about the society of post-Mao China? How do we not only "see," but also "listen to" post-socialist culture? Examines films ranging from 1980s experimental and entertainment films to more recent documentaries, as well as gaming and internet culture-inspired video art. Enrollment limited to 20.

Spr GNS1960L S01 25637 W 3:00-5:20(14) (X. Liu)

GNSS 1960V. The Communist Experience in Eastern Europe: Genres of Interpretation.

Almost twenty-five years after the disintegration of the communist regimes across Eastern Europe, the question of how to remember the communist experience is highly contested. This interdisciplinary course highlights the complexities of the collective memory of communism, which fluctuates between attempts to come to terms with communist crimes and tendencies to idealize state socialism. Focusing on a range of issues—such as nostalgia, consumer culture, sexuality, gender, violence, the legacy of repression, and attempts at transitional justice—we will explore the nature of communist and post-communist realities by discussing scholarly studies and weekly screenings of full-length feature and documentary films. Enrollment limited to 20.

Spr GNS1960V S01 25638 Th 4:00-6:20(17) (L. Topouzova)


Independent research under the direction of a faculty member, leading to a thesis. Required of honors candidates. Open to seniors only. Instructor permission required.


Independent research under the direction of a faculty member, leading to a thesis. Required of honors candidates. Open to seniors only. Instructor permission required.

GNSS 1990. Senior Seminar.

A research seminar focusing on the research and writing of the participants. Required of senior concentrators; open to other advanced students by permission.

Fall GNS1990 S01 15234 W 3:00-5:20(17) (M. Fernandes)


An advanced feminist research seminar in feminist theory and gender studies. Presentations made by Brown faculty, Pembroke Center fellows, visiting scholars, and students. Offered in conjunction with the Pembroke Seminar. Enrollment limited to 8.

Fall GNS2010G S01 16075 W 10:00-12:20(03) (L. Cook)


An advanced feminist research seminar in feminist theory and gender studies. Presentations made by Brown faculty, Pembroke Center fellows, visiting scholars, and students. Offered in conjunction with the Pembroke Seminar. Enrollment limited to 8.

Spr GNS2020G S01 25376 W 10:00-12:20(02) (L. Cook)

GNSS XLIST. Courses of Interest to Concentrators in Gender and Sexuality Studies.

Fall 2013

The following courses have a primary focus on women or gender or make significant use of modes of feminist or queer analysis. They may count toward the concentration in Gender and Sexuality Studies. Please check with the sponsoring department for times and locations.

African Studies
AFRI 0570 20th Century Black Feminist Thought and Practice in the U.S.
AFRI 0800 Race, Gender, and Urban Politics
AMST 0191O Revolting Bodies: Aesthetics, Representation, and Popular Culture
AMST 1904T Women and Work in the 21st Century

Comparative Literature
COLT 0811O Desire and Sexuality in Arabic Literature
COLT 1810N Freud: Writer and Reader

Education
EDUC 1430 The Psychology of Race, Class, and Gender

English
ENGL 1360S Between Gods and Beasts: The Renaissance Ovid
ENGL 1762A Perversive Cinema
ENGL 1900R Queer Relations: Aesthetics and Sexuality

French
FREN 1060E Gender, Sexuality and the Novel

History
HIST 1972H Sex, Power, and God: A Medieval Perspective
HIST 1975U Gender, Empire, and the Nation in the Middle East

Modern Culture and Media
MCM 0901K Statelessness and Global Media: Citizens, Foreigners, Aliens
MCM 1503Z Dialogues on Feminism and Technology

Religious Studies
RELS 0296O Women, Sex and Gender in Islam

Science and Society
SCSO 1700M Gender, Science, and Society

Theatre Arts and Performance Studies
TAPS 1270 Performances in the Asia
TAPS 1420 Global Queer Performance

Spring 2014

The following courses have a primary focus on women or gender or make significant use of modes of feminist or queer analysis. They may count toward the concentration in Gender and Sexuality Studies. Please check with the sponsoring department for times and locations.

African Studies
AFRI 0710A Racial and Gender Politics in Contemporary Brazil

American Studies
AMST 0191R Fat, Messy, and Late: Unregulated Bodies in American Capitalism

Anthropology
ANTH 1221 Anthropology of Masculinity

Comparative Literature
COLT 1812H "Women’s Literary Make-up": Mirrors, Maquillage and the Tenth Muse English
ENGL 1360W Firing the Canon: Early Modern Women’s Writing
ENGL 1360Z Shakespeare and Embodiment
ENGL 1510A Jane Austen and Her Predecessors: The Other History of the Novel

Italian
ITAL 2550 Gender Matters

Religious Studies
RELS 0080 Gender, Power, God(s)

Geological Sciences

GEOL 0010. Face of the Earth.
Study of Earth’s surface (e.g., mountains, rivers, shorelines) and processes which have created and modify it (e.g., glaciation, floods, volcanism, plate tectonics, earthquakes). The goals are to increase appreciation and enjoyment of our natural surroundings and provide a better understanding of environmental problems, natural resources, land use, and geologic hazards. Four labs, plus a field trip. For non-science concentrators (science concentrators should take GEOL 0220). Students MUST register for both components of this course (the lecture and one of the labs) during the SAME registration session. Enrollment limited to 100.

Spr GEOL0010 S01 24573 MWF 1:00-1:50(06) (L. Gromet)

GEOL 0030. Climate and Climate Change.
This course is designed to provide students with an understanding of the climate system on Earth, changes in Earth’s climate over time, and interactions between climate change and human society. Topics will include: global energy balance; the structure, composition and role of the atmosphere and oceans; the influence of the global carbon cycle on climate; the social, economic and political drivers of human perturbations to the carbon cycle; and societal vulnerability, resilience and adaptive capacity in the face of environmental changes. No prerequisites; course open to all levels. Enrollment limited to 40.

Fall GEOL0030 S01 15808 Th 2:30-3:50(11) (A. Lynch)

GEOL 0050. Mars, Moon, and the Earth.
Space exploration has revealed an astonishing array of surface features on the planets and their satellites. Why are atmospheres on the planets different from Earth’s atmosphere? Do other planets represent our past or future environment? Is there life on other planets? The planets and their histories are compared to gain insight and a new perspective on planet Earth.

Fall GEOL0050 S01 15288 MWF 2:00-2:50(07) (J. Head)

GEOL 0070. Introduction to Oceanography.
Examines the ocean’s role in global (and local) change, emphasizing the ocean as an evolving, dynamically balanced ecosystem. Focus on physical/chemical/biological systems’ interconnections needed to understand the natural variability of the ocean on various time and space...
scales, from El Niño to global warming. Three lectures, one section meeting weekly; written exercises on oceanographic problems; two field trips to study estuarine and coastal processes. 

**GEOL 0160C. Global Environmental Change.**
Examination of evidence that supports or refutes various perspectives on global environmental change, with a foundation in the principles that govern the fundamental underlying processes. Example topics include climate change (warming, cooling, neutral), population growth (how many, how fast), and loss of natural resources (diversity). Topics explored through selected readings from the natural and social sciences. Enrollment limited to 20 first year students. FYS

Fall GEOL0160C S01 15317 MWF 10:00-10:50(03) (J. Mustard)

**GEOL 0160E. Volcanos, Windows into the Deep Earth.**
Examines the physical and chemical principles controlling the generation of volcanoes and their different styles of eruption. Investigates where and why volcanoes occur, and what volcanic lavas can tell us about the composition and evolution of the Earth and other planets. Evaluates volcanic hazards and the economic benefits and cultural aspects of volcanism. Two-day field trip. Enrollment limited to 20 first year students. FYS

Fall GEOL0160E S01 16356 TTh 10:30-11:50(13) (A. Saal)

**GEOL 0240. Earth: Evolution of a Habitable Planet.**
Introduces Earth's surface environment evolution - climate, chemistry, and physical makeup. Uses Earth's carbon cycle to understand solar, tectonic, and biological cycles' interactions. Examines the origin of the sedimentary record, dating of the geological record, chemistry and life on early Earth, and the nature of feedbacks that maintain the "habitable" range on Earth. Two field trips; five laboratories arranged. Prerequisite: GEOL 0220 or 0230, or instructor permission. WRIT

Spr GEOL0240 S01 24582 MWF 11:00-11:50(04) (T. Herbert)

**GEOL 0250. Computational Approaches to Modelling and Quantitative Analysis in Natural Sciences: An Introduction.**
Application of numerical analysis to mathematical modelling in the natural sciences including topics such as ground water and glacier flow, earthquakes, climate models, phase equilibrium, and population dynamics. Numerical methods will include the solution of linear algebraic systems of equations, numerical integration, solution of differential equations, time series analysis, statistical data analysis tools. Development of computer programming skills in the Matlab programming environment. Suggested prerequisites: MATH 0090, 0100; PHYS 0030, 0040, or 0050, 0060. Fall GEOL0250 S01 15310 MWF 10:00-10:50(03) (E. Parmentier)

**GEOL 0810. Planetary Geology.**
Examines the geology of solid planets. Focuses on a mission to Mars through an understanding of processes that shape planetary surfaces. Terrestrial analogs, conceptual models, and laboratory simulations are used as reality checks. Integration of these processes through time reveals the geologic evolution of the planets. Three lectures and one discussion session per week. CAP course. Prerequisite: GEOL 0010 or 0050, or 0220, or instructor permission. Spr GEOL0810 S01 24777 MWF 2:00-2:50(07) (P. Schultz)

**GEOL 1110. Estuarine Oceanography.**
Examines physical, chemical, and biological characteristics of local estuaries using field measurements, analysis of field data, and interpretation of processes; field investigation results will be prepared as a cooperative class report. Topics include: tidal and circulation processes, salinity and freshwater fluxes, watershed pollutants, estuary flushing rates, and estuary ecosystems. Primarily for students with experience in the sciences. MATH 0090, 0100, or equivalent, recommended. Enrollment limited to 20. WRIT

Labs will be held on Fridays from 1-5pm, with fieldwork through mid-October.

Fall GEOL1110 S01 15295 MWF 1:00-1:50(06) (W. Prell)

**GEOL 1150. Limnology: The Study of Lakes.**
This course will provide an interdisciplinary overview of the physics, chemistry, biology, and geology of lakes. Areas of emphasis will include the origin of lake basins, water circulation patterns, heat and water budgets, biogeochemical processes, lake ecosystems, and the stratigraphic record of lakes. We will also discuss human and climatic impacts on lakes. Prerequisites: GEOL 0220 and 0240, or instructor permission. Enrollment limited to 20. WRIT

Spr GEOL1150 S01 24776 MWF 11:00-11:50(04) (J. Russell)

**GEOL 1240. Stratigraphy and Sedimentation.**
Introduction to depositional environments and processes responsible for formation of sedimentary rocks. Major sedimentary environments in the Recent are discussed; general models are proposed, and stratigraphic sequences in older sediments are examined in the light of these models. The Phanerozoic stratigraphic record is examined from the perspective of Earth system history. Laboratory arranged. Prerequisites: GEOL 0220 or 0240, or instructor permission. GEOL 0310, 1410 are also recommended. WRIT

Fall GEOL1240 S01 15307 TTh 10:30-11:50(13) (T. Herbert)

**GEOL 1320. Introduction to Geographic Information Systems for Environmental Applications.**
Introduction to the concepts of geospatial analysis and digital mapping. The principles of spatial data structures, coordinate systems, and database design are covered. Related work in image databases also discussed. Extensive hands-on training in ESRI-based geographic information system software will be provided. Focal point of class is the completion of student-selected research project employing GIS methods. Enrollment limited to 20. After pre-registration, instructor permission is required to register or get on wait-list. Please see or email instructor. S/NC

Fall GEOL1320 S01 15316 TTh 1:00-2:20(10) (L. Carlson)

**GEOL 1330. Global Environmental Remote Sensing.**
Introduction to physical principles of remote sensing across electromagnetic spectrum and application to the study of Earth’s systems (oceans, atmosphere, and land). Topics: interaction of light with materials, imaging principles and interpretation, methods of data analysis. Laboratory work in digital image analysis, classification, and multi-temporal studies.
One field trip to Block Island. Recommended preparation courses: MATH 0090, 0100; PHYS 0060; and background courses in natural sciences.

GEOL 1350. Weather and Climate.
Weather phenomena occur on short time scales, and form the basis for understanding climate, the study of changes over longer time scales. This course aims to provide an understanding of the processes that drive weather patterns, the general circulation of the atmosphere, and climate on Earth. Topics include: structure and composition of the atmosphere; sources of energy driving atmospheric processes; weather forecasting; the hydrological cycle; the forces that create severe weather; the influence of humans on the atmosphere; and factors that influence climate, climate variability and climate change. MATH 0090, 0100; PHYS 0050, or equivalent recommended. Enrollment limited to 30. WRIT
Spr GEOL1350 S01 24771 TTh 1:00-2:20(10) (J. Mustard)

GEOL 1360. Global Tectonics.
Plate tectonic theory and the evolution of continents and the seafloor. Emphasis on the structure and tectonics of western U.S. considering geological, geophysical, and geochemical constraints as well as direct geodetic observations of plate motions from GPS measurements.

Prerequisite: GEOL 0220 and 0230. Three or more of GEOL 0220, 0230, 1240, 1410, 1420, 1450 and 1610 are recommended.
Spr GEOL1560 S01 24571 TTh 9:00-10:20(08) (D. Forsyth)

GEOL 1370. Environmental Geochemistry.
The course will examine the biogeochemical cycling, fate and transport of chemicals in the atmospheric and aquatic environments. Topics such as chemical weathering, natural water pollution and remediation, acid deposition, global warming and air pollution will be examined through natural ecosystem examples from rivers, lakes, estuaries, and ocean. Field trips and laboratory arranged. Prerequisites: CHEM 100 or 0330, or instructor permission.
Fall GEOL1370 S01 15308 TTh 9:00-10:20(08) (Y. Huang)

GEOL 1410. Mineralogy.
Introduction to mineralogical processes on Earth’s surface and its interior. Topics include crystallography, crystal chemistry, nucleation, crystal growth, biomineralization, environmental mineralogy, and mantle mineralogy. Laboratory study devoted to optical identification of rock-forming minerals. Prerequisites: GEOL 0230, CHEM 100 or 0330, or equivalent.
Fall GEOL1410 S01 15291 MWF 10:00-10:50(03) (Y. Liang)

GEOL 1420. Petrology.
Introduction to the origin of igneous and metamorphic rocks. Emphasis on principles and understanding rather than facts and memorization. Principles are used to extract information concealed in the rocks about their formation, processes, sources and evolution with time. Laboratory work focuses on rock hand samples and microscopic textures. Field trips, laboratory arranged. Prerequisites: GEOL 1410, or instructor permission.
Spr GEOL1420 S01 24779 TTh 9:00-10:20(08) (A. Saal)

GEOL 1450. Structural Geology.
Introduction to the geometry, kinematics and mechanics of rocks deformed by brittle fracture or faulting and ductile solid state flow, on scales from microscopic to mountain ranges. The emphasis is on using concepts to interpret the formation, strain history and rheology of deformed rocks. Several class periods and field trips will be devoted to the study of recent and deformed rocks. The primary focus will be on the factors that control the kinematics and mechanics of deformation. (D. Forsyth)
Spr GEOL1450 S01 24592 MWF 10:00-10:50(03) (A. Lynch)

GEOL 1530. Weather and Climate.
Weather phenomena occur on short time scales, and form the basis for understanding climate, the study of changes over longer time scales. This course aims to provide an understanding of the processes that drive weather patterns, the general circulation of the atmosphere, and climate on Earth. Topics include: structure and composition of the atmosphere; sources of energy driving atmospheric processes; weather forecasting; the hydrological cycle; the forces that create severe weather; the influence of humans on the atmosphere; and factors that influence climate, climate variability and climate change. MATH 0090, 0100; PHYS 0050, or equivalent recommended. Enrollment limited to 30. WRIT
Spr GEOL1350 S01 24579 TTh 2:30-3:50(11) (M. Hastings)

GEOL 1610. Solid Earth Geophysics.
A survey of basic geophysical techniques for determining the structure and dynamics of Earth’s interior. Topics include: global structure from seismic waves; gravity, magnetic field, and shape of the Earth; thermal processes within the Earth; structure of continental and oceanic lithosphere. Recommended courses: GEOL 0220, PHYS 0470, APMA 0330. No prerequisites.
Fall GEOL1610 S01 15286 MWF 11:00-11:50(04) (D. Forsyth)

GEOL 1660. Instrumental Analysis with Environmental Applications.
This course covers the principles and practical applications of important analytical chemistry tools used to study environmental problems, including discussions of method selection and statistical treatment of data. Students will strategize and implement a study of a field site. Includes lab sessions with hands-on experience of instrumental analysis using atomic and molecular spectrosopic techniques, separations by gas and liquid chromatography, and electrochemical methods.
Prerequisite: CHEM 0330 or GEOL 1370. Enrollment limited to 20. Instructor permission required.
Spr GEOL1660 S01 24588 TTh 10:30-11:50(09) (Y. Huang)

GEOL 1950F. Geomicrobiology.
Microbes were the predominant form of life for most of Earth’s history and continue to drive many of the elemental cycles that sustain life in our contemporary biosphere. By taking this course students will learn about the phylogenetic and metabolic diversity of microbes in the environment and their influence on global biogeochemical cycles. Students will gain hands-on experience with molecular and environmental microbiological techniques and the bioinformatics tools required to analyze and interpret the resulting data. There are 2 sections or topical areas: Phylogenetic and ecological diversity of microbes; Microbial and metabolic diversity of biogeochemical cycling.
Prerequisite: BIOL 0415 or 1460 or 1480 or GEOL 1130. Enrollment limited to 12. Instructor permission required.
Fall GEOL1950FS01 15656 M 3:00-5:20(15) (J. Rich)

Astrophysical and Dynamical Processes in Planetary Sciences is a course that challenges students to use physical and geophysical analysis to construct a quantitative understanding of the formation and evolution of the Sun, the solar system’s planets and small bodies, and extrasolar planets. The goal is to provide senior undergraduate and first-year graduate students with core knowledge of facts and current theories in the planetary sciences. Through lectures, problem sets, and exams, the students will construct quantitative framework on which to evaluate, and place into context, hypotheses and theories discussed in prior-level graduate courses. Prerequisites: MATH 0100; and one of GEOL 0050, PHYS 0210, 0220, or 0270. APMA 0330 is desirable but not required.
Fall GEOL1950G S01 15811 MWF 2:00-2:50(07) (A. Milinar)

GEOL 1960A. Rheology of the Crust and Mantle.
Introduces the principals of rock mechanics and uses them to describe brittle and ductile deformation processes in the crust and mantle. Each topic will review experimental constraints on deformation mechanisms and introduce the theories that support their application to geological conditions. Analyze microstructural observations in rocks deformed by brittle fracture and fault propagation, frictional sliding, the brittle/plastic transition, viscous deformation mechanisms, microstructural analysis of deformed rocks, and the scaling and extrapolation of laboratory flow laws.
Prerequisite: GEOL 1450 or permission of instructor. Enrollment limited to 20.
Fall GEOL1960AS01 15670 TTh 11:00-11:50(11) (J. Hirth)

The shapes of plants and animals, of mountains and shorelines arise because nature dissipates energy as rapidly as possible. These morphological patterns allow description of the energy "landscape" that
produced them. Societies and economies show temporal and spatial patterns as well: does the "flow rate" of ideas and of money cause these patterns? We will explore just how "entropy rules." Enrollment limited to 16. Instructor permission required.

Spr GEOL1960F S01 25611 Arranged (R. Cooper)

GEOL 1970. Individual Study of Geologic Problems. One semester is required for seniors in Sc.B. and honors program. Course work includes preparation of a thesis. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Enrollment is restricted to undergraduates only.

GEOL 2350. Quaternary Climatology Seminar. Discussion of current problems in paleoclimatology and global climate change. Students analyze the primary literature, and do original analyses of their own on published data. Topics include: theories of ice ages, millennial-scale climate variability, the influence of greenhouse gases and radiative forcing on climate, and historical and future climate changes. Prerequisites: graduate student status; or GEOL 0240, 0310, and 1240; or instructor permission.

Spr GEOL2350 S01 24775 W 3:00-5:20(14) (J. Russell)

GEOL 2430. Igneous Petrology. Study of mineral equilibria in igneous rocks in relation to theoretical and experimental studies in silicate systems. Principles of the origin and evolution of igneous rocks in space and time. Offered alternate years. Fall GEOL2430 S01 15294 MWF 10:00-10:50(03) (S. Parman) Spring GEOL2430 S01 15295 TTh 10:00-10:50(14) (J. Gromet)

GEOL 2450. Exchange Scholar Program.

GEOL 2520. Numerical Geodynamics. Numerical methods for the solution of continuum physics problems arising in geophysics and geology: Basic theoretical formulations and algorithms implementing finite element, finite difference, and boundary element methods are developed. Applications include problems in viscous and plastic flow, elasticity, and heat and mass transport discussed within a geological framework. Course consists of lectures and a computer project applying the methods and concepts considered to a scientifically significant problem. Recommended: APMA 0330, 0340; ENGN 1750. Offered alternate years.

Spr GEOL2520 S01 24774 MWF 11:00-11:50(04) (E. Parmentier)

GEOL 2730. Isotope Geochemistry. A survey course emphasizing fundamental principles in isotope geochemistry, including nuclear systematics, nuclear synthesis, geochronological and stable isotope systems, and the application of radiogenic and stable isotopic tracers to geological problems. Prerequisites: GEOL 1410 and 1420, or instructor permission.

Fall GEOL2730 S01 15287 TTh 9:00-10:20(08) (L. Gromet)

GEOL 2840. Asteroids and Meteorites. Compositional and petrographic characteristics of meteorites are examined along with the physical and compositional diversity of asteroids and other small bodies of the solar system. Possible links between specific types of asteroids and meteorite groups will be evaluated in the context of early solar system evolution. Data from spacecraft encounters with asteroids will be critically reviewed.

Fall GEOL2840 S01 16576 TTh 1:00-2:20(10) (R. Miliken)

GEOL 2860. Planetary Volcanology. An examination of volcanism using observations of features and deposits on planetary bodies, comparing them to predictions from the theory of magma ascent and emplacement. Attention to the influence of different variables (i.e. gravity, composition, temperature, pressure, and atmospheric effects). The history of planetary volcanism, its relation to thermal evolution, and comparative planetary volcanology are also addressed. Offered alternate years.

Spr GEOL2860 S01 24580 W 3:00-5:20(14) (J. Head)

GEOL 2870. Planetary Evolution: The Galilean Satellites. Planetary Evolution in Spring 2013 is a seminar class focusing on open scientific questions and scientific controversies about the Galilean satellites of Jupiter sparked by the exploration of the system by the Voyager and Galileo spacecraft. We will discuss the origin of the satellites, the interior dynamics of Io and Callisto, the driving forces for resurfacing on Europa and Ganymede, icy moon habitability and planetary protection. Enrollment limited to 20. Spr GEOL2870 S01 24547 Arranged (A. Milnar)

GEOL 2880. Planetary Cratering. Impact cratering affects nearly every solid-body object in the solar system. A major impact can produce relief comparable to the highest terrestrial mountains in just a few minutes. Course assesses the impact cratering process and record in different planetary environments, at different scales, and at different times. Open to Geology graduate students only. Offered alternate years.

Fall GEOL2880 S01 15297 W 3:00-5:20(17) (P. Schultz)

GEOL 2920D. Introduction to Geochemical Modeling. Continuum descriptions of mass transfer in geochemical cycles. Topics include: fundamentals of diffusive and advective mass transfer, kinetics of weathering and early diagenesis, fluid flow in the Earth’s crust and mantle, trace elements and isotopes in magmatic processes. Recommended: CHEM 0330, GEOL 1610 and APMA 0330, 0340.

Spr GEOL2920CE S01 24591 TTh 1:00-2:20(10) (Y. Liang)

GEOL 2920E. Introduction to Organic Geochemistry. Mainly literature critiques and seminars, supplemented by introductory lectures. Topics include organic biomarkers, analytical methodologies, natural macromolecules, stable isotope ratios of biomarkers, application of organic geochemistry in studies of climatic and environmental change, fossil fuel exploration, and applied environmental research.

Spr GEOL2920E S01 24583 TTh 9:00-10:20(08) (Y. Huang)

GEOL 2920N. Problems Antarctic Dry Valley Geosciences. The Antarctic Dry Valleys represent an extreme hyperarid polar desert environment. Their geomorphology records the range of processes operating in these environments, preserving a record of climate change over millions of years. Major microenvironments are studied at the micro-, meso-, and macro-scale through literature review, field analyses, and research projects. Exobiological themes and climate change on Mars will be assessed.

Spr GEOL2920N S01 24921 M 3:00-5:20(13) (J. Head)

GEOL 2920V. Terrestrial Nitrogen and Carbon Cycling. This course will examine aboveground/ belowground processes in the context of the global nitrogen and carbon cycles, and the impacts of both natural and anthropogenic disturbances. It will include discussion of processes such as (de)nitrification, N-fixation, respiration, photosynthesis, and decomposition and their relationship to soil properties; the coupling of N and C cycles in soils related to climate change and increasing N deposition. It will include emphasis on emerging new techniques to quantify N and C processes in the laboratory, field and through modeling, and field trip investigating current field studies. Prerequisites: BIOL 1480 or GEOL 1130 or equivalent biogeochemistry course. Enrollment limited to 15.

Spr GEOL2920V S01 21585 Arranged (J. Tang)

GEOL 2970. Preliminary Examination Preparation. For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.

Fall GEOL2970 S01 14039 Arranged 'To Be Arranged'

Spr GEOL2970 S01 23555 Arranged 'To Be Arranged'

GEOL 2980. Research in Geological Sciences. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Enrollment is restricted to graduate students only.

GEOL 2990. Thesis Preparation. For graduate students who have met the tuition requirements and are paying the registration fee to continue active enrollment while preparing a thesis.

Fall GEOL2990 S01 14040 Arranged 'To Be Arranged'

Spr GEOL2990 S01 23556 Arranged 'To Be Arranged'
German Studies

German Studies

GRMN 0100. Beginning German.
A course in the language and cultures of German-speaking countries. Four hours per week plus regular computer and listening comprehension work. At the end of the year, students will be able to communicate successfully about everyday topics. This is the first half of a year-long course whose first semester grade is normally a temporary one. Neither semester may be elected independently without special written permission. The final grade submitted at the end of the course work in GRMN 0200 covers the entire year and is recorded as the final grade for both semesters.

Fall GRMN0100 S01 14148 MWF 11:00-11:50(15) (J. Sokolosky)
Fall GRMN0100 S01 14148 T 12:00-12:50(15) (J. Sokolosky)
Fall GRMN0100 S02 14149 MWF 12:00-12:50(15) (J. Sokolosky)
Fall GRMN0100 S02 14149 T 12:00-12:50(15) (J. Sokolosky)
Fall GRMN0100 S03 14150 MWF 12:00-12:50(15) (J. Sokolosky)
Fall GRMN0100 S03 14150 T 1:00-1:50(15) (J. Sokolosky)
Fall GRMN0100 S04 16654 T 12:00-12:50(15) (J. Sokolosky)
Fall GRMN0100 S04 16654 MWF 2:00-2:50(15) (J. Sokolosky)

GRMN 0200. Beginning German.
A course in the language and cultures of German-speaking countries. Four hours per week plus regular computer and listening comprehension work. At the end of the year, students will be able to communicate successfully about everyday topics and participate in the annual film festival. This is the second half of a year-long course. Students must have taken GRMN 0100 to receive credit for this course. The final grade for this course will become the final grade for GRMN 0100. If GRMN 0100 was taken for credit then this course must be taken for credit; if taken as an audit, this course must also be taken as an audit. Exceptions to this policy must be approved by both the academic department and the Committee on Academic Standing.

Spr GRMN0200 S01 23625 MWF 11:00-11:50(15) (J. Sokolosky)
Spr GRMN0200 S01 23625 T 12:00-12:50(15) (J. Sokolosky)
Spr GRMN0200 S02 23642 MWF 12:00-12:50(15) (J. Sokolosky)
Spr GRMN0200 S02 23642 T 12:00-12:50(15) (J. Sokolosky)
Spr GRMN0200 S03 23643 MWF 12:00-12:50(15) (J. Sokolosky)
Spr GRMN0200 S03 23643 T 1:00-1:50(15) (J. Sokolosky)

GRMN 0300. Intermediate German I.
Focuses on deepening students’ understanding of modern German culture by reading texts and viewing films pertinent to Germany today. Intended to provide a thorough review of German grammar and help students develop their writing, reading, listening, and speaking skills. Frequent writing assignments. Four hours per week. Recommended prerequisite: GRMN 0200.

Fall GRMN0300 S01 14151 MWF 10:00-10:50(15) (J. Sokolosky)
Fall GRMN0300 S01 14151 Th 12:00-12:50(15) (J. Sokolosky)
Fall GRMN0300 S02 14152 Th 12:00-12:50(15) (J. Sokolosky)
Fall GRMN0300 S02 14152 MWF 1:00-1:50(17) (J. Sokolosky)

GRMN 0400. Intermediate German II.
An intermediate German course that stresses improvement of the four language skills. Students read short stories and a novel; screen one film; maintain a blog in German. Topics include German art, history, and literature. Frequent writing assignments. Grammar review as needed. Four hours per week. Recommended prerequisite: GRMN 0300. WRIT

Spr GRMN0400 S01 23644 MWF 10:00-10:50(16) (J. Sokolosky)
Spr GRMN0400 S01 23644 Th 12:00-12:50(16) (J. Sokolosky)
Spr GRMN0400 S02 23645 Th 12:00-12:50(16) (J. Sokolosky)
Spr GRMN0400 S02 23645 MWF 1:00-1:50(16) (J. Sokolosky)

GRMN 0500F. Twentieth-Century German Culture.
A broad exploration of twentieth-century German culture using many kinds of written and visual texts (e.g. literature, journalism, film, art). While continuing to work on all four language skills (speaking, listening, reading, writing) students will gain more intensive knowledge about German culture, society, and history. In German. Recommended prerequisite: GRMN 0400. WRIT

Fall GRMN0500F S01 14909 MWF 10:00-10:50(15) (K. Mendicino)
Fall GRMN0500F S02 16122 MWF 9:00-9:50(15) (K. Mendicino)

GRMN 0600B. Was ist Deutsch?
In this course we will examine some of the ideas and myths that became entangled with the emerging notion of a "German" identity in the eighteenth and nineteenth centuries. Some of the terms that we will discuss include 'Kultur,' 'Bildung,' 'Freiheit' and 'Gesellschaft,' all of which have rich semantic histories. Conducted in German. Recommended prerequisite: one course in the GRMN 0500 series. WRIT
Spr GRMN0600B S01 24188 MWF 2:00-2:50(07) (T. Kniesche)

GRMN 0750B. Tales of Vampirism and the Uncanny.
This course compares literary texts of horror and haunting in English and German Romanticism. The psychoanalytic foundations of vampirism are discussed to enable students to boldly go beyond mere fandom and engage these texts on a more sophisticated level. Readings by Walpole, Coleridge, Poe, Tieck, E.T.A. Hoffmann and others. In English. Enrollment limited to 20 first year students. FYS WRIT
Fall GRMN0750B S01 14910 TTh 10:30-11:50(13) (T. Kniesche)

GRMN 0750E. Reading Film: An Introduction to German Cinema.
What is it that fascinates us about cinema? What desires and drives have held us in thrall to the moving image? This seminar introduces you to writing about film, not just within the specific field of media studies but within the humanities as a whole. We will examine 12 filmic examples (ranging from early silent film to contemporary popular cinema) alongside a selection of theoretical and historical readings. The course will impart the basic skills needed to write in a critical, reflective, and rigorous way about film. For those interested in film in the context of any humanities field. Enrollment limited to 20 first year students. FYS WRIT
Spr GRMN0750E S01 25427 TTh 1:00-2:20(10) (Z. Sng)

GRMN 1200B. Thinking Friendship, from Plato to Derrida.
How have the concept and experience of friendship been construed in the Western intellectual traditions? What are the implications of dividing one’s personal, cultural, and political world into friends and enemies? What is the relation between friendship and questions of community, hospitality, war, and the work of mourning? To what extent are our so-called social networking services the end of friendship? We will gain a grounding in the history and theory of friendship through close and caring readings of writers such as Plato, Aristotle, Cicero, Montaigne, Kant, Emerson, Nietzsche, Freud, Heidegger, Schmitt, Blanchot, Levinas, Nancy, and Derrida. Taught in English. Enrollment limited to 25.
Spr GRMN1200B S01 24500 W 3:00-5:20(14) (G. Richter)

GRMN 1200C. Nietzsche - The Good European.
Nietzsche prided himself on his transnational identity. He loved German literature and was himself a writer of the first rank. Yet he was critical of the culture and the politics of his nation and he loved the literatures and cultures of many other nations. We will study his philosophical works with a view to his criticisms of Deutschtum and his affirmation of other traditions—starting with the Greeks, for by profession he was a classicist. We will also study Nietzsche’s journeys—for he was convinced that the places in which he thought and wrote were essential to his thinking and writing. Enrollment limited to 40.
Fall GRMN1200C S01 16173 W 3:00-5:20(17) (D. Kreil)

GRMN 1320H. Klassik und Romantik.
Both German Classicism and Romanticism can be read as responses to revolutionary changes in the areas of politics, economics, philosophy, and the lifeworld (Lebenswelt). But whereas Romanticism was an all-Europe movement, 18th century classical literature and aesthetics were a uniquely German phenomenon. How did both schools of thought and literature view the onset of modernity and how did they respond to it? What was similar and what was different in their respective ideas of how to deal with the changing times? Texts by Goethe, Schiller, Hölderlin, Friedrich Schlegel, Novalis, and others. In German. Prerequisite: GRMN 400.
Fall GRMN1320H S01 15077 TTh 1:00-2:20(10) (T. Kniesche)

GRMN 1340N. Literature and Multilingualism.
Has literature ever really been monolingual? Has it not spoken, from the outset, with a split tongue? We will examine a range of authors from the twentieth century in this seminar for whom speaking is always speaking otherwise: speaking about the other, speaking as other, something other...

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Interested students must register for PHIL 2080D.

Special work or preparation of an honors thesis under the direction of a GRMN 1990. Senior Conference Banner for the correct section number and CRN to use when registering German or English. At the discretion of the instructor. Please check Independent study on a particular topic related to German culture. In GRMN 1970. Independent Study

“Third Reich,” and from a symbol of German imperialism and militarism GRMN 1900F. Berlin gestern und heute

Interested students must register for COLT 1813J.

GRMN 1700A. Introduction to Yiddish Culture and Language (JUDS 1713).

Interested students must register for JUDS 1713.

Spring GRMN1440S 23930 MWF 1:00-1:50(06) (S. Bernstein)

GRMN 1450E. Ghostly, Manifest: Heine, Marx, Hoffmann, and Freud.

As historical materialism emerges in the nineteenth century, the ghost returns again and again in the writing of the period. What does this coincidence manifest, when the ghost inaugurates Marx’s Manifest der kommunistischen Partei, or when Heine summons in his poetry the specters of Romanticism—their own, as he says elsewhere, reawakened manifestations of the ghostly poetry of the Middle Ages? What does this coincidence imply for thinking about temporality, history, and writing? We will engage such questions, which have been investigated in recent decades by Derrida and others, through close readings of Heine, Marx, E.T.A. Hoffmann, and Freud. Prerequisite: GRMN 0600 or instructor permission. In German.

Fall GRMN1450S 16081 MWF 2:00-2:50(07) (K. Mendicino)

GRMN 1700A. Introduction to Yiddish Culture and Language (JUDS 1713).

Interested students must register for JUDS 1713.

Spring GRMN1700S 25160 Arranged ‘To Be Arranged’

GRMN 1800A. Berlin: Dissonance, Division, Revision (COLT 1813J).

Interested students must register for COLT 1813J.

Fall GRMN1800S 16090 Arranged ‘To Be Arranged’

GRMN 1990F. Berlin gestern und heute.

Berlin looks back on an "interesting" history: from local Prussian backwater to metropolis, from capital of early 20th century culture to center of the "Third Reich," and from a symbol of German imperialism and militarism to the capital of the New Berlin Republic. This seminar sets out to explore some of the history of this city in art, architecture, film and literature, from the 18th century to the present. In German. Prerequisite: GRMN 0600.

Spring GRMN1990S 24340 MWF 10:00-10:50(03) (T. Kniesche)

GRMN 1970. Independent Study

Independent study on a particular topic related to German culture. In German or English. At the discretion of the instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

GRMN 1990. Senior Conference.

Special work or preparation of an honors thesis under the direction of a faculty member. Please check Banner for the correct section number and CRN to use when registering for this course.

GRMN 2081A. Realism, Idealism, and Modernity (II) (PHIL 2080D).

Interested students must register for PHIL 2080D.

Fall GRMN2081S 16088 Arranged ‘To Be Arranged’

GRMN 2320E. Political Romanticism.

What, if anything, is political about Romanticism? We will read the literary and non-literary writings of British and German romantic authors, with a focus on their complex relationship to political ideas, political practice, and the very concept of "the political." We will also consider why the question of Romanticism’s relationship to politics has been re-visited with such insistency in the 20th century. Authors include W. Wordsworth, P. B. Shelley, Coleridge, Friedrich Schlegel, Novalis, and Kleist. All readings and discussions in English.

Spring GRMN2320S 24189 T 4:00-6:20(16) (Z. Sng)

GRMN 2500A. Rethinking the Bildungsroman (COLT 2520G).

Interested students must register for COLT 2520G.

Fall GRMN2500S 16091 Arranged ‘To Be Arranged’


An essay, Lukács once said, is not yet form, but form on the way to becoming form. It is something in between: between art, science, and philosophy, between reason and intuition, between "precision and soul" (Musil). We will begin with the idea of the essay in Montaigne and Francis Bacon, and trace its development in Germany’s intellectual and literary history from around 1870 till 1960. We will try to understand why, during this period, the essay became the preferred medium of thought and one of the dominant forms of reflecting on great Westerns narratives as well as important contemporary discourses.

Fall GRMN2660S 15655 T 4:00-6:20(10) (D. Ooschmann)


Interested students must register for ENGL 2900T.

Spring GRMN2660S 25119 Arranged ‘To Be Arranged’

GRMN 2660R. Articulations of Revolution.

How is revolution articulated? The word “re-volution” implies a turning-again. Revolution, however, is also scanned in many registers during the age of the French Revolution by a rhetoric of cutting, interrupting, and disjoining. Turning to the tropes of the turn and the cut for orientation, this seminar will examine the articulations of revolution – the ways in which it is spoken, jointed, and disjointed – in the eighteenth and nineteenth centuries, as well as the consequences of tropes and articulation for revolution. Readings include works by Rousseau, de Sade, Fichte, Hölderlin, Hegel, Kleist, Büchner, and Marx.

Spring GRMN2660S 25360 M 3:00-5:20(13) ‘To Be Arranged’

GRMN 2660S. Inheriting (in) Modernity.

This seminar will devote itself to the vexing question of what an intellectual and cultural inheritance is and how one should respond to its demanding complexities. How do we relate to a tradition, a legacy, a canon, an estate, a previous way of thinking and being? The readability of an inheritance and its many ghosts can be confronted in a rigorous fashion only in the moment when this very readability threatens to break down and the idea of a straightforward understanding is suspended. Readings include Nietzsche, Freud, Kafka, Bloch, Benjamin, Heidegger, Adorno, and Derrida. (Taught in English).

Spring GRMN2660S 16326 F 3:00-5:20(05) (G. Richter)

GRMN 2660T. The “House of Language” Exposed to Literature.

According to a notion found in Nietzsche’s Zarathustra and adapted by Martin Heidegger, language is “the House of Being.” This seminar broaches the question of how to dwell in language by examining various constellations of theoretical and literary texts by Hoelderlin, Heidegger, Hebel, von Hofmannsthal, Kafka, Benjamin, Scheerbart, Brecht, and Rolf Dieter Brinkmann. The seminar opens with Celen’s translation of a poem by Emily Dickinson: “I dwell in possibility”: “Mein Haus, das ist die Möglichkeit.” [Taught in English.]

Spring GRMN2660S 25797 Th 4:00-6:20(17) (T. Schestag)

GRMN 2970. Preliminary Examination Preparation.

For graduate students who have met the tuition requirement and are paying the Registration Fee to continue active enrollment while preparing for a preliminary examination.

Fall GRMN2970S 14043 Arranged ‘To Be Arranged’

Spring GRMN2970S 23559 Arranged ‘To Be Arranged’
GRMN 2980. Reading and Research.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

GRMN 2990. Thesis Preparation.
For graduate students who have met the tuition requirement and are paying the Registration Fee to continue active enrollment while preparing a thesis.
Fall GRMN2990 S01 14044 Arranged 'To Be Arranged'
Spr GRMN2990 S01 23560 Arranged 'To Be Arranged'

GRMN XLIST. Courses of Interest to Students Concentrating in German Studies.

Swedish
SWED 0300. Intermediate Swedish I.
Continuing Swedish.
Fall SWED0300 S01 15974 TTh 4:00-5:20(16) (A. Weinstein)

Hispanic Studies
HISP 0100. Basic Spanish.
This fast-paced beginning course provides a solid foundation in the development of communicative skills in Spanish (speaking, listening comprehension, reading and writing) as well as some insight on the cultures of the Spanish-speaking world. Individual work outside of class prepares students for in-class activities focused on authentic communication. Placement: students who have never taken Spanish before, or have scored below 390 in SAT II, or below 240 in the Brown Placement Exam. Students who have taken Spanish before and those with an AP score of 3 or below must take the Brown Placement Exam. Students should check Placement and Course Description in the Undergraduate Program section of the Hispanic Studies Website. Enrollment limited to 18; 15 spaces are available for students during pre-registration. 3 spaces will be available at the start of the semester for incoming or re-admitted students who should attend the first class. Pre-enrolled students must attend the first four days of class to maintain their pre-registered status and notify the instructor in advance if they must miss any day before the 4th class when the composition of the course section is finalized. If course is full, students should sign the wait list available in Rochambeau House, 84 Prospect St., Room 117 during the pre-registration period.
Fall HISP0100 S01 14735 MW 9:00-9:50(15) (S. Sobral)
Fall HISP0100 S01 14735 TTh 9:00-10:20(15) (S. Sobral)
Fall HISP0100 S02 14737 MW 10:00-10:50(15) (S. Sobral)
Fall HISP0100 S02 14737 TTh 10:30-11:50(15) (S. Sobral)
Fall HISP0100 S03 14738 MW 1:00-1:50(15) (S. Sobral)
Fall HISP0100 S03 14738 TTh 1:00-2:20(15) (S. Sobral)
Fall HISP0100 S04 14739 MW 8:30-9:50(15) (S. Sobral)
Fall HISP0100 S04 14739 TTh 12:00-12:50(15) (S. Sobral)
Fall HISP0100 S04 14739 T 12:00-12:50(15) (S. Sobral)

HISP 0110. Intensive Basic Spanish.
A highly-intensive, two-semester sequence in one semester that carries 10 contact hours per week. Primarily for students with knowledge of Spanish, who have scored below 450 in SAT II or below 340 in Brown Placement Exam. Students with little or no preparation in Spanish should consult with the Course Supervisor. Focused on acquisition of communicative skills (speaking, listening comprehension, reading and writing), and development of cultural awareness. With successful completion of the course students will be able to understand simple texts, carry on short spontaneous conversations involving everyday topics (such as modern daily life, health, art and culture, nature and the environment, and relationships) and write simple texts with good command of grammar and sentence structure. Ideal for students interested in fast-tracking their language learning to meet study abroad requirements. Double credit. Instructor permission required. Enrollment limited to 18; 15 spaces are available for students during pre-registration. 3 spaces will be available at the start of the semester for incoming or re-admitted students who should attend the first class. Pre-enrolled students must attend the first four days of class to maintain their pre-registered status and notify the instructor in advance if they must miss any day before the 4th class when the composition of the course section is finalized. If course is full, students should sign the wait list available in Rochambeau House, 84 Prospect St., Room 117 during the pre-registration period.
Fall HISP0110 S01 14740 MW 9:00-9:50(15) (N. Schuhmacher)

HISP 0200. Basic Spanish.
A continuation of HISP 0100. This course continues to focus on acquisition of communicative skills (speaking, listening comprehension, reading and writing) as well as cultural awareness. With successful completion of the course students will be able to understand simple texts, carry on short spontaneous conversations involving everyday topics (such as modern day life and its pressures, health, art and culture, nature and the environment, relationships) and write simple texts with good command of grammar and sentence structure. Prerequisite: HISP 0100 or placement: SAT II scores between 400 and 450; Brown Placement Exam scores between 241 and 340. Students with an AP score of 3 or below must take the Brown Placement Exam. Students should check Placement and Course Description in the Undergraduate Program section of the Hispanic Studies Website. Enrollment limited to 18; 15 spaces are available for students during pre-registration. 3 spaces will be available at the start of the semester for incoming or re-admitted students who should attend the first class. Pre-enrolled students must attend the first four days of class to maintain their pre-registered status and notify the instructor in advance if they must miss any day before the 4th class when the composition of the course section is finalized. If course is full, students should sign the wait list available in Rochambeau House, 84 Prospect St., Room 117 during the pre-registration period.
Spr HISP0200 S01 24282 MW 9:00-9:50(15) 'To Be Arranged'
Spr HISP0200 S01 24282 TTh 9:00-10:20(15) 'To Be Arranged'
Spr HISP0200 S02 24284 MW 10:00-10:50(15) 'To Be Arranged'
Spr HISP0200 S02 24284 TTh 10:30-11:50(15) 'To Be Arranged'
Spr HISP0200 S03 24285 MW 12:00-12:50(15) 'To Be Arranged'
Spr HISP0200 S03 24285 TTh 1:00-2:20(15) 'To Be Arranged'
Spr HISP0200 S04 24286 MW 1:00-1:50(15) 'To Be Arranged'
Spr HISP0200 S04 24286 TTh 1:00-2:20(15) 'To Be Arranged'

HISP 0300. Intermediate Spanish I.
This course continues to develop and strengthen students’ proficiency in the Spanish language, as well as to help them increase their cultural understanding. It seeks to develop both fluency and accuracy and to teach students to express, interpret, and negotiate meaning in context. Through the exploration of themes such as the individual and the community, health issues, traveling, multiculturalism and human rights, students focus on communication and learn to appreciate cultural differences. Prerequisite: either HISP 0200, HISP 0110, or placement: SAT II scores between 460 and 510; Brown Placement Exam scores between 341 and 410. Students with an AP score of 3 or below must take the Brown Placement Exam. Students should check Placement and Course Description in the Undergraduate Program section of the Hispanic Studies Website. Enrollment limited to 18; 15 spaces are available for students during pre-registration. 3 spaces will be available at the start of the semester for incoming or re-admitted students who should attend the first class. Pre-enrolled students must attend the first four days of class to maintain their pre-registered status and notify the instructor in advance if they must miss any day before the 4th class when the composition of the course section is finalized. If course is full, students should sign the wait list available in Rochambeau House, 84 Prospect St., Room 117 during the pre-registration period.
Fall HISP0300 S01 14742 MW 9:00-9:50(17) (V. Smith)
Fall HISP0300 S01 14742 TTh 9:00-10:20(17) (V. Smith)
Fall HISP0300 S02 14743 MW 10:00-10:50(17) (V. Smith)
Fall HISP0300 S02 14743 TTh 10:30-11:50(17) (V. Smith)
Fall HISP0300 S03 14744 MW 12:00-12:50(17) (V. Smith)
Fall HISP0300 S03 14744 TTh 1:00-2:20(17) (V. Smith)
Fall HISP0300 S04 14745 MW 1:00-1:50(17) (V. Smith)
Fall HISP0300 S04 14745 TTh 1:00-2:20(17) (V. Smith)
Spr HISP0300 S01 24287 MW 9:00-9:50(16) 'To Be Arranged'

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
HISP 0400. Intermediate Spanish II.
This course offers an exploration of the Spanish language and Hispanic cultures through a variety of thematic foci: the world of work, the arts, globalization and technology, leisure, and celebrations. It focuses on vocabulary building, the examination of some of the more difficult points of grammar, and moving students towards a more sophisticated level of comprehension and expression. Students work with readings, including literary texts; songs; film; and the visual arts. Prerequisite: HISP 0300 or placement: SAT II scores between 520 and 590 or Brown Placement Exam scores between 411 and 490. Students with an AP score of 3 or below must take the Brown Placement Exam. Students should check Placement and Course Description in the Undergraduate Program section of the Hispanic Studies Website. Enrollment limited to 18; 15 spaces are available for students during pre-registration. 3 spaces will be available at the start of the semester for incoming or re-admitted students who should attend the first class. Pre-enrolled students must attend the first four days of class to maintain their pre-registered status and notify the instructor in advance if they must miss any day before the 4th class when the composition of the course section is finalized. If course is full, students should sign the wait list available in Rochambeau House, 84 Prospect St., Room 117 during the pre-registration period.

HISP 0500. Advanced Spanish I.
Offers comprehensive work in listening, speaking, reading, and writing, with targeted grammar review. Students work with a variety of readings (literature, newspaper articles, etc.) and with art forms such as music and film, in order to develop oral and written expression and to explore issues relevant to the Hispanic world. Students explore topics of their own interest through student-led activities and presentations. Prerequisite: HISP0400 or placement: SAT II scores between 600 and 660, Brown Placement Exam scores between 491 and 570, or AP score of 4 in language or literature. Please check Hispanic Studies website (Undergraduate Programs) for course descriptions and placement information. Enrollment limited to 18: 15 spaces are available for students during pre-registration. 3 spaces will be available at the start of the semester for incoming or re-admitted students who should attend the first class. Pre-enrolled students must attend the first four days of class to maintain their pre-registered status and notify the instructor in advance if they must miss any day before the 4th class when the composition of the course section is finalized. If course is full, students should sign the wait list available in Rochambeau House, 84 Prospect St., Room 117 during the pre-registration period.

HISP 0600. Advanced Spanish II.
Offers continued, advanced-level work in speaking, listening, reading, and writing skills, with focused review of challenging aspects of Spanish grammar. Course materials include films, music, art works, and a variety of written texts (articles, stories, plays, a novella, etc.) chosen to promote class discussion and in-depth written analysis. There will be individual and group activities, including in-class presentations and creative writing projects. Prerequisite: HISP0500 or placement: SAT II scores between 670 and 740, Brown Placement Exam scores between 571 and 650, or AP score of 5 in language. Please check Hispanic Studies website (Undergraduate Programs) for course descriptions and placement information. Enrollment limited to 18. Pre-enrolled students must attend the first four days of class to maintain their pre-registered status and notify the instructor in advance if they must miss any day before the 4th class when the composition of the course section is finalized. If course is full, students should sign the wait list available in Rochambeau House, 84 Prospect St., Room 117 during the pre-registration period. Students with scores of 750 and above on the SAT II, 551 on the Brown Placement Exam, or 5 in AP Literature should consider offerings in the HISP 0730-0740-0750 range.

HISP 0730. Early and Contemporary Writers of Spanish America.
An introduction to major authors, movements, and themes of Spanish American literature from the Discovery to the present. This course also aims to develop students’ oral and written expression in Spanish. Students are expected to engage in close reading and discussion of texts, as well as to revise their papers. Prerequisite: HISP 0600, or AP score =5, or SAT II (Literature) score of 750 or above, or Brown placement score of 651 or above. WRIT

HISP 0740. Intensive Survey of Spanish Literature.
An introduction to the major authors and literary movements of Spanish literature from the Middle Ages to contemporary times. Focuses on building critical vocabulary. Also aims to develop students’ written and oral expression in Spanish. Preparatory course for 1000-level courses for students who achieve the highest placement in Spanish. Prerequisite: HISP 0600, or AP score =5, or SAT II (Literature) score of 750 or above, or Brown placement score of 651 or above. WRIT

HISP 0750B. Hispanics in the United States.
Designed to bridge academic learning about Hispanic/Latino culture and volunteer work in agencies serving Hispanics in Providence. Readings, films, and guest presentations focus on issues of concern to these groups. Spanish language learning occurs in the classroom and the community, where students have the opportunity to enrich and test course content. Prerequisite: HISP 0600 or placement: SAT II scores of over 750. 5 in AP Literature or 651 and over in the Brown Placement Exam. Instructor permission required.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Despite its origins in Don Quijote and its European prehistory, the Spanish novel appears as a new genre in the 19th century, when it works to redefine the national literary canon and elaborate a new aesthetic norm. We study its development throughout the century, from the early romantic historical novel, through the mid-century bourgeois novel, and later realism and naturalism. Prerequisite: HISP 0730 or 0740.

Spr HISP1260B S01 24325 TTh 1:00-2:20(10) 'To Be Arranged'

HISP 1290J. Spain on Screen: 80 Years of Spanish Cinema.
This course traces major developments in Spanish cinema from silent films of the 1930s to globalized commercial cinema of the 21st century. In this 80-year period, Spain has undergone sweeping political, social, economic, and cultural changes, many of which we see reflected in its cinema. By critically examining films by Spain’s most well-known and influential directors – Rey, Berlanga, Bufuel, Bardem, Saura, Erice, Almodóvar – as well as less canonical filmmakers, we will ask what representations of Spain we see on screen in the last eight decades, interrogating notions of nation, race, class, gender, sexuality, and political ideology, among others. Prerequisite: HISP 0730 or 0740. WRIT

Fall HISP1290J S01 16179 TTh 9:00-10:20(08) (S. Thomas)

HISP 1370B. Gaborium: Memory, Fiction, and Reading in Gabriel García Márquez.
Departing from some formats of writing and reading (myth, history, legend, journalism, memoirs) in García Márquez writings, we plan to study the representation (magical, carnivalesque, political) unfolding in his novels, stories, and essays. From this processing of information and exchange, our course will analyze the cultural history of abundance, scarcity, and Utopia in Latin America. Prerequisite: HISP 0730 or 0740. Enrollment limited to 40.

Spr HISP1370B S01 24430 Th 4:00-6:20(17) (J. Ortega)

HISP 1370N. Carlos Fuentes and the New Mexican Narrative.
This seminar will focus on close-readings and conceptualization of Fuentes’ innovative works of fiction and main ideas on Mexico and its cultural history. We will discuss a selection of his short-stories, novels and essays, moving from the political to the Gothic, from history to the Baroque. We will follow with new Mexican fiction writers who renew and debate Fuentes practices and ideas. Among them, Carmen Boulosa, Jorge Volpi, Pedro Ángel Palou, Cristina Rivera Garza and Yuri Herrera. The seminar will be in Spanish, and is limited to 40 students.

Fall HISP1370N S01 14976 Th 4:00-6:20(16) (J. Ortega)

HISP 1370V. Mujeres Malas.
This seminar will analyze the notion of “bad women” in Pre-modern and Latin American Literature and visual texts. Perception, representation, and stereotyping of these women, both historical and fictional, as Mad, Witch, Femme fatal, Hysterical, and Crazy, will allow us to follow the ideological narrative that produced these characters. Some of them are based on medical, primitive, political, and even psychoanalytic conceptions. We will discuss the primitive Castilian epic cycle, Celestina, Carmen, the novel and the opera; Malinche, Cortéz’ translator in the conquest of Mexico; and novels and short stories from contemporary authors as well as Luis Buñuel’ films. Prerequisite: HISP 0730 or 0740.

Fall HISP1370V S01 14975 TTh 10:30-11:50(13) (J. Ortega)

HISP 1370X. In a State of Memory: Contemporary Argentine Literature and Film.
From dictatorship through post-dictatorship to economic crises, Argentine literature and film of the past three decades has grappled with a series of critical questions: how does one speak in a state of repression? How does a community recover, dispute, and shape stories for successive generations? And how does culture itself survive under the pressure of national and international economic crises? This course will study novels, films, poetry, and artworks from the dictatorship, post-dictatorship, and contemporary moments, from Ricardo Piglia to César Aria, La historia oficial a La ciénaga, underground activism to street art. Prerequisite: HISP 0730 or 0740. Enrollment limited to 40.

Fall HISP1370X S01 14980 M 3:00-5:20(15) (M. Clayton)

HISP 1900L. Theories of Literature and Culture in a Hispanic Context.
Introduces key contemporary perspectives in the fields of literary and cultural theories from a transatlantic perspective. Emphases will be on definition of literature, theories of the novel and of literary genres, theories of interpretation, Latin American and Spanish theoretic perspectives like hybridism, "transculturación" and the theory of Baroque, and a revision of modern approaches to culture (critical theory, ecology, gender theory, post-structuralism, etc.). Spanish and Latin American texts will be used as a counterpoint to theory. Offered for senior concentrators in the Hispanic Studies department in their last semester. Readings by Carpentier, Nietzsche, Aristòtle, Derrida, Foucault, Deleuze, Simmel, Paz, Borges, Abram, Rama and others. Open to senior Hispanic studies concentrators.

Spr HISP1900L S01 24321 TTh 2:30-3:50(11) (A. Mazzucchelli)

HISP 1990. Senior Conference.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

HISP 2030D. Fifteenth-Century Sentimental Romances and Celestina.
The fifteenth-century sentimental romances establish narrative innovations and a literary climate that lead inevitably to the creation of the "novel". With their insistence portrayal of the sufferings of love, romances by Padrón, Flores, San Pedro, and Rojas represent an essential step in the evolution of the modern novel.

Fall HISP2030D S01 14164 M 3:00-5:20(15) (K. Vazquez)

HISP 2160J. The Poetics and Practice of Space in the Theater of the Spanish Baroque.
This seminar will explore the real and virtual spaces of seventeenth-century Spanish drama. We will examine the diverse spaces in which theatrical performances took place (public playhouses, city streets, court theaters, convents), as well as the various types of spaces represented on the stage (domestic and public, urban and rural, worldly and supernatural, familiar and distant). How did dramatic space articulate the boundaries of the public and private in the Spanish baroque? How did it function in the configuration of social hierarchies, subjectivities, and marginal as well as normative identities? In the theatrical world of seventeenth-century Spain, how did spatial practices on stage shape the experience of space off stage?

Spr HISP2160J S01 24574 Th 3:00-5:20(17) (L. Bass)

HISP 2250E. XIXth Century Spanish Literature.
No description available.

Spr HISP2250E S01 24320 F 3:00-5:20(15) 'To Be Arranged'

HISP 2350D. Nineteenth-Century Latin American Prose.
Departing from the national representations of the early fiction and later realism and romanticism, we will focus on the fundamental novels and stories of the nineteenth century. Some of the issues discussed are national formation, the family romance, nature and history, as well as the political dimension of these texts.

Spr HISP2350D S01 24316 M 3:00-5:20(13) (A. Mazzucchelli)

HISP 2350E. Novela latinamerica contemporánea.
Estudiaremos la constelación de novelas fundamentales (Pedro Páramo, Los ríos profundos, Rayuela, La muerte de Artemio Cruz, Cien Años de soledad entre otras) que configuran un sistema literario hecho de innovación formal, ampliación de la lectura, y puesta en crisis de la representación.

Spr HISP2350E S01 24319 W 3:00-5:20(14) 'To Be Arranged'

HISP 2350O. Latin America Reviewed.
This seminar explores the practices, theories, and tropes which frame our understandings of post-independence Latin America. Readings will establish a counterpoint between figurations of Latin America in early discovery accounts and nineteenth century travel narratives, turn-of-the-century poetic re mappings of the continent, and twentieth century Latin American novelistic rewritings of earlier tropes. Reading these texts alongside key theoretical articles on transculturation, modernization,
post-colonialism, and globalization, we will trace the development of the
discourses of cannibalism, cartography, civilization and barbarism,
regionalism and cosmopolitanism, which structure the ways in which Latin
America is configured from within and without.

**HISP 2450. Exchange Scholar Program.**

**HISP 2520L. Sor Juana Inés de la Cruz in Her Literary Context.** Intensive study of Sor Juana’s major writings in a variety of genres; comparisons with other writers of her extended literary milieu.

**HISP 2620A. Entre nosotros: La Familia en la literatura y el cine españoles (1942-2009).** This course reflects on the representation of the family in Spanish literature and film since the Civil War, spanning texts and films from the period 1942-2009. Some of the themes we will explore over the course of the semester include: the family as a space for the formation of identities and subjectivities; the symbolic relationship between family and nation; religion; gender roles and the concepts of maternity, fatherhood, and childhood; monstrous families and the specter of incest; modern "found" families constructed outside biological bonds. Texts and films by Sender, Buero Vallejo, Delibes, Cela, Lafuente, Buñuel, Borau, Almodóvar, Saura, among others.

**HISP 2970. Preliminary Examination Preparation.** For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.

**HISP 2980. Research in Spanish and Latin American Literature.** Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

**HISP 2990. Thesis Preparation.** For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.

**HISP 2991. Thesis Preparation.** Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

**HISP XLIST. Courses of Interest to Concentrators in Hispanic Studies.**

**History**

**HIST 0150A. History of Capitalism.** Capitalism didn’t just spring from the brain of Adam Smith. Its logic is not encoded on human DNA, and its practices are not the inevitable outcome of supply and demand. So how did capitalism become the dominant economic system of the modern world? History can provide an answer by exploring the interaction of culture and politics, technology and enterprise, and opportunity and exploitation from the era of the Atlantic Slave Trade to the 2008 Financial Crisis. HIST 0150 courses introduce students to methods of historical analysis, interpretation, and argument. This class presumes no previous history courses. E

**HIST 0150B. The Philosophers’ Stone: Alchemy From Antiquity to Harry Potter.** As a set of ideas and practices, alchemy has a long, rich history in China, Roman Egypt, the Middle East, Europe, and the U.S.. From late antiquity to the present, alchemists have transformed matter in order to understand nature, make things (including elixirs and gold), and explore connections between the natural and the supernatural. The history of alchemy offers a point of entry into science, magic, medicine, gender, religion, and cultural images of the sage, fool, and fraud. HIST 0150 courses introduce students to methods of historical analysis, interpretation, and argument. This class presumes no previous history courses. E

**HIST 0520. Modern American History: New and Different Perspectives.** Rather than a survey, this course uses specific episodes and events to reveal different modes of analysis. Examples of questions are: What do gender perspectives tell us about men on the frontier and women in dance halls? What is the importance of baseball to American culture? How do a historian and a lawyer differ in their analysis of a sensational crime case? How will we understand why the U.S. dropped two atomic bombs on Japan? How did scandals in television and popular music signal an end to American innocence? How has the Baby Boom generation altered American society? And more. M

**HIST 0930J. The World of Byzantium (CLAS 0660).** Interested students must register for CLAS 0660.

**HIST 0940A. History of Intercollegiate Athletics (EDUC 0850).** Interested students must register for EDUC 0850.

**HIST 0940B. The Campus on Fire: American Colleges and Universities in the 1960’s (EDUC 0400).** Interested students must register for EDUC 0400.

**HIST 0940E. Autobiography of the Civil Rights Movement (AFRI 0110C).** Interested students must register for AFRI 0110C. WRIT

**HIST 0940H. The Jew in the Modern World (JUDS 0050L).** Interested students must register for JUDS 0050L.

**HIST 0960G. When Leaders Lie: Machiavelli in International Context (ITAL 0981).** Interested students must register for ITAL 0981.

**HIST 0970A. Object Histories: The Material Culture of Early America.** Interested students must register for ITAL 0981.

**HIST 0970J. Slavery and Historical Memory in the United States.** How has America chosen to remember and forget the enslavement of millions of its own people? What are appropriate ways to acknowledge slavery in monuments, museum exhibitions, film, literature, and public policy? By approaching these questions through a wide range of visual and textual sources, we will explore the indeterminate space between history and memory. Enrollment limited to 20 first year students. FYS WRIT P

**HIST 0970P. Culture and U.S. Empire.** This seminar examines the relationship of American culture to U.S. imperial project. We will look at how cultural ideologies such as those about race, gender, and American exceptionalism have not only shaped Americans’ interactions with other peoples but also justified the spread of U.S. power. Enrollment limited to 20 first year students. FYS WRIT M
HIST 0970S. Sport in American History
This course covers the relationship of sports to aspects of American culture since 1900. Topics include gender, race, amateurism, professionalism, intercollegiate athletics, and sports heroes. Enrollment limited to 20 first year students. FYS M
Spr HIST0970S S01 23977 M 3:00-5:20(13) (H. Chudacoff)

HIST 0971E. The U.S. and the Middle East: Image and Imperialism.
The Middle East has figured prominently, in narrative and image, in the Western imagination. We will assess some of those narratives and images in their historical contexts, first tracing U.S. - Middle Eastern relations in the 19th and 20th centuries, then focusing our attention on representations of the Middle East in sources such as diplomatic reports, films, travel narratives, religious tracts, magazine advertising, and cartoons. Topics include the role of the press, the creation of the Middle Eastern "bad guy," imagining the "Oriental" female and male, imperial ethnographies, and visions of the "Holy Land." Enrollment limited to 20 first year students. Instructor permission required. FYS WRIT M
Fall HIST0971E S01 14862 T 4:00-6:20(18) (P. Brummell)

HIST 0971G. The Age of Revolutions, 1760-1824.
In the middle of the eighteenth century, the Americas belonged to a handful of European monarchies; within a few decades, most of the Americas was composed of independent republics, some of the European monarchs were either deposed or quaking on their thrones. Usually considered separately, revolutions in British North America, France, Saint-Domingue (Haiti) and Spanish America had diverse local circumstances yet composed a single cycle of intellectual ferment, imperial reform, accelerating violence and, forging of new political communities. We will examine revolutions that helped create the world we live in. Enrollment limited to 20 first year students. E FYS WRIT
Fall HIST0971G S01 15309 Th 4:00-6:20(16) (J. Mumford)

HIST 0971L. Science and Society in Darwin's England.
This course is a first year seminar designed to introduce students to the study of history. It will be divided into two very different parts. The first part will be organized as a traditional history seminar in which we explore together the world in which Darwin developed his theory of the Origin of Species. The second part will be a historical re-enactment of an 1863 discussion in Britain's Royal Society about whether to award Darwin their highest honor, the Copley Medal. Enrollment limited to 20 first year students. FYS WRIT M
Fall HIST0971L S01 15957 TTh 6:30-7:50(14) (J. Richards)

HIST 0971J. Athens, Jerusalem, and Baghdad: Three Civilizations, One Tradition.
This FYS examines the core beliefs of early Greek, Jewish, Christian, and Islamic civilizations that form the basis of Western thought. Serving a similar ideological purpose in the pre-modern world as have political and economic theories for the modern world, religion and philosophy defined individual lives and collective identities. We focus on the manner of appropriation and modification of thought from one culture to another in order to appreciate that there is far more similarity than difference in belief systems among what are today viewed as separate, even contesting, cultures. Enrollment limited to 20 first year students. Instructor permission required. FYS WRIT P
Fall HIST0971J S01 15948 M 3:00-5:20(15) (K. Sacks)

This class examines the rise of abolitionism and colonialism in the Atlantic world in the eighteenth and nineteenth centuries. We will begin by analyzing the intellectual, political, and economic foundations of the movement for the abolition of the transatlantic slave trade, assessing its spread and impact to the Americas and Africa. The class devotes significant attention to the suppression of the slave trade in the Lusophone Atlantic world (Angola, Brazil, and Portugal). Enrollment limited to 20 first year students. FYS WRIT P
Fall HIST0971M S01 15694 W 10:00-12:20(03) (R. Ferreira)

HIST 0980B. Becoming French: Minorities and the Challenges of Integration in the French Republic.
Recent controversies around Muslim integration, including debates around the headscarf and uprisings in the working class suburbs of large French cities, point to difficulties France has faced in integrating its minority populations. This course will explore the encounter between France and its immigrant, religious, and racial minorities from the Revolution to contemporary times. By comparing paths of integration and debates around minority inclusion, we will consider how minorities negotiated their identities as they struggled to internalize France's cultural and historical legacy. We will also address political and historiographical debates over the relationship between political citizenship and religious/cultural identity. Enrollment limited to 20 first year students and sophomores. M
Spr HIST0980B S01 24001 M 3:00-5:20(13) (M. Mandel)

HIST 1000A. History of Greece: From Alexander the Great to the Roman Conquest.
Covers the decline of Athens as the center of classical civilization; the conquests of Alexander the Great; the culture of the Greek elite and, to the extent that it’s recoverable, of the indigenous populations of the Hellenistic world; and Greek contributions to what we call Western Civilization. P
Spr HIST1000A S01 24079 Th 10:30-11:50(09) (K. Sacks)

HIST 1020. Living Together: Muslims, Christians, and Jews in Medieval Iberia.
A pressing issue in today's pluralistic societies is how people of different identities (religious, ethnic, etc.) can live together. This course explores a slice of history that can help us think through questions of difference in our own world: medieval Spain, where for centuries Muslims, Christians, and Jews lived in close proximity. Often through explicit juxtaposition with modern debates, this course examines how these people understood and structured their relations with each other in the Iberian Peninsula between 711 and 1492. Themes include: identity and cultural definition; power and religious violence; tolerance and intolerance; acculturation and assimilation; gender and sexuality. WRIT P
Fall HIST1020 S01 14649 TTh 9:00-10:20(08) (A. Remensnyder)

HIST 1190. The Roots of Modern Science.
This course explores the ways theories of physics, chemistry, biology and mathematics grew in relation to the natural, cultural and social worlds of the 18th and 19th centuries. There are no formal pre-requisites for the course, which is designed to be equally open and accessible to science and humanities students. WRIT M
Fall HIST1190 S01 16276 MWF 11:00-11:50(04) (J. Richards)

HIST 1210. European Intellectual History: Discovering the Modern.
A lecture course, primarily for juniors and seniors, that focuses on salient philosophic, artistic, and ideological currents of 19th-century Europe. Beginning with the crisis of political and cultural legitimacy posed by the French Revolution, it concludes with the consolidation of bourgeois culture in the 1860s and 1870s and the two great scientific systematizers of these decades: Darwin and Marx. M
Spr HIST1210 S01 23988 MWF 10:00-10:50(03) (M. Gluck)

HIST 1230. European Intellectual History: Exploding the Modern.
The overarching theme of the course is the relationship between modernity and the primitive as manifested in major cultural, aesthetic and political movements in the 20th century. Films are an integral part of the course. WRIT M
Fall HIST1230 S01 14546 MWF 10:00-10:50(03) (M. Gluck)

HIST 1280. English History, 1529-1660.
Examines politics, religion, and society from the Protestant Reformation to the Puritan Revolution—a period of rapid and dramatic change when the world, for most English people, was turned upside down. Considers the experiences and concerns of ordinary men and women, as well as the elite. Takes in Scotland, Ireland, and the great migration to New England. P
Fall HIST1280 S01 14551 MWF 2:00-2:50(07) (T. Harris)

A survey of British history from the restoration of monarchy to the Wilkes affair and the loss of the American colonies. In addition to political developments such as the Glorious Revolution and the rise of party, examines political ideology (including the great political theorist, John Locke) and various themes in social history (such as crime, popular protest, the sexual revolution, and the experiences of women). P
Spr HIST1290 S01 23988 MWF 2:00-2:50(07) (T. Harris)
This course surveys the literature on the origins of visual information—architecture, entertainment, mapping, shopping, advertising, painting, and film—in the modern city. For each of these visual productions, both form and content are implicated in the political and social worlds of their original settings. Nineteenth-century issues of labor, gender, consumption, and governance played a role in making the original spectacles. What messages they contained, who produced them, and who witnessed them were determined by contemporary hierarchies, political struggle, and technology. Enrollment limited to 20. M
Spr HIST1301 S01 25039 MWF 1:00-1:50(06) (E. Guidi)

HIST 1311. Land Use and Capitalism, 1350-2013.
This course offers an overview of major traditions for analyzing landscape in political economy, theology, literature, and anthropology, asking how imaginary landscapes of the mind become the material realities of farm and highway. Themes will include the rise of modern, surveying, engineering, cities, infrastructure systems, and land reform. It will ask how historic models of government have played out in an era of environmental disaster, famine, mortgages, and evictions. We will explore tensions between political centralization and heterotopias, nomadic and settled people, peoples' movements and finance, exploring questions about the spiritual, economic, aesthetic, ecological, political relationship of people to territory. M
Fall HIST1311 S01 15487 TTh 1:00-2:20(10) (E. Guidi)

HIST 1330. War and Peace in Modern Europe.
Introducing students to the history and culture of twentieth-century Europe, we will discuss the major political, cultural, intellectual, economic changes that have characterized the history of Europe from 1890s to present time. Exploring the different trends in European history, and engaging with the major theoretical debates underlying the study of modern Europe. Course topic includes: total war, rise of mass politics and culture; Fascism, Nazism and the Holocaust; Communism and the Cold War; anti-colonialism and postcolonial European identity; Welfare state; post-Cold War era, using a variety of texts, including scholarly contributions, literary texts, autobiographical accounts, memoirs and film documentaries. M
Spr HIST1330 S01 24637 TTh 2:30-3:50(11) (O. Bartov)

HIST 1350. Modern Genocide and Other Crimes against Humanity.
This course explores the emergence, evolution, varieties, underlying causes, and means of confronting and coming to terms with genocide and other crimes against humanity in the 20th century. We will discuss the origins of genocide and the subsequent conceptualization of this phenomenon; manifestations of colonial, imperial, racial, and communist genocide; war crimes and mass crimes by totalitarian regimes; and policies of mass expulsions and "ethnic cleansing." We will conclude with attempts to curb and punish genocide by means of international justice. M
Fall HIST1350 S01 14537 TTh 2:30-3:50(11) (O. Bartov)

With Greece in crisis and the Middle East experiencing an "Arab Spring" the Eastern Mediterranean is again hitting the headlines. This course offers a historical perspective to current developments by examining the social, political and cultural transformations between the mid-19th century and the 1922 Greco-Turkish exchange of populations while questioning the current image of the Eastern Mediterranean as a model of cosmopolitan conviviality and an archetype of unbridled violence. Topics include state-building in Greece, the modernization of the Ottoman Empire, colonialism in Egypt, nationalism and coexistence, the Balkan wars and population movements, and, finally, contemporary nostalgias for fin-de-siècle Mediterranean.
Spr HIST1361 S01 24888 MWF 10:00-10:50(03) (P. Papamichos Chronakis)

Refugees and minorities dominate contemporary international politics and the western humanitarain imagination bringing Hollywood stars to the most devastated parts of the Global South. And yet during the twentieth century, the global south was Europe itself. This course draws from the insights of history, minority and refugee studies, and international relations and uses a variety of sources (from parliamentary reports to refugee testimonies, and from films to literature), to examine this phenomenon. M
Fall HIST1363 S01 15695 MWF 12:00-12:50(12) (P. Papamichos Chronakis)

HIST 1455. The Modern Middle East, 1800 to the Present.
From North Africa to Afghanistan, and Turkey to the Arabian peninsula, the goal of this course is to provide students with a robust background in modern Middle Eastern history, broadly defined. We begin in the nineteenth century, an era of intense social and economic transformation that led to the collapse of the Ottoman empire and emergence of a new state system, primarily under British and French colonial rule. We then explore forces shaping the contemporary Middle East, including nationalism, oil, regional conflicts and the Cold War, Islamism and mass politics, and military interventions by the US and other world powers. M
Spr HIST1455 S01 25795 MWF 12:00-12:50(05) (F. Ahmed)

HIST 1493. Cultural History of the Netherlands in a Golden Age and a Global Age.
Between 1580 and 1690 two nations emerged in Europe from what had been one unified region. To the north, the Dutch Republic gained its independence from Spain and developed as a bastion of liberty, ideas in ferment, visuals arts, Calvinist faith, science, technology, global economic reach. To the south, the "loyal" Netherlands, now Belgium, returned to the Spanish and Catholic fold, but sustained its leading position in the arts, competed in global trade, and negotiated a new compromise of government. In this course we present an interdisciplinary, comparative view of the "two" Netherlands and their legacy in the world. M
Spr HIST1493 S01 25861 TTh 10:30-11:50(09) (H. Cook)

This course examines the development of science and related fields in the period sometimes called 'the scientific revolution'. It will both introduce the student to what happened, and ask some questions about causes and effects. The new science is often associated with figures like Harvey, Galileo, Descartes, Boyle, Leeuwenhoek, and Newton. But it is also associated with new ways of assessing nature that are mingled with commerce. The question of the relationship between developments in Europe and elsewhere is therefore also explored. P
Fall HIST1495 S01 14542 MWF 1:00-1:50(06) (H. Cook)

HIST 1496. War and Medicine since the Renaissance.
Since the Renaissance, warfare has mainly been a mass activity organized by states, with the ability to cause mass harm growing by leaps and bounds. At the same time, states have developed methods to care for their armed forces, and sometimes the civilians entangled in their military operations. This course will deal briefly with the history of warfare, and mainly with the ways in which states, citizens, and interested parties have attempted to ameliorate the bodily effects of warfare, from the Renaissance to the late 20th century. E
Spr HIST1496 S01 23983 TTh 1:00-2:20(10) (H. Cook)

An exploration of how the artifacts of visual, material, aural and ritual culture illuminate the practices and beliefs of people at various levels of Chinese society from the late imperial period to the present. Topics include arrangements of space and time, popular entertainment, religion and performance, the growth of mass media, and the relationship of cultural forms to politics, protest and global forces. In addition to lectures, discussions, and papers, students will have the opportunity to create research presentations using multiple media formats. E
Spr HIST1503 S01 24054 TTh 1:00-2:20(10) (R. Nedostup)

HIST 1530. Modern Korea: Contending with Modernity.
This course examines the extraordinarily rapid revolution of Korea from isolated, agrarian society into a culturally modern, industrialized, and democratic nation that is an important actor on the world stage. It also will investigate how a non-Western society generates its own inspiration for historic models of government have played out in an era of environmental disaster, famine, mortgages, and evictions. We will explore tensions between political centralization and heterotopias, nomadic and settled people, peoples' movements and finance, exploring questions about the spiritual, economic, aesthetic, ecological, political relationship of people to territory. M
HIST 1540. Samurai and Merchants, Prostitutes and Priests: Japanese Urban Culture in the Early Modern Period. Examines the cultural traditions of the urban samurai, the wealthy merchant, and the plebian artisan that emerged in the great metropolises of Edo, Osaka, and Kyoto during the early modern period. Focuses on the efforts of the government to mold certain kinds of cultural development for its own purposes and the efforts of various social groups to redirect those efforts to suit their desires and self-interest. P

Spr HIST1540 S01 24002 TTh 10:30-11:50(09) (J. McClain)

HIST 1571. The Making of Modern East Asia. This course examines Asia in the shaping of the modern world, from competing definitions of empires circa 1800 to the rise of the notion of the twenty-first as a “Pacific Century.” It investigates the definition(s) of Asia as a world region, explores transnational interactions and emphasizes Asians as historical actors via written, visual and aural sources. Events are placed in the context of key historical paradigms, including varying definitions of modernity, the rise of the nation-state, the birth of mass politics, new mechanisms of war, the language of self-determination, changing views of gender, shifting types of media and consumption, etc. M W RIT

Fall HIST1571 S01 14774 TTh 10:30-11:50(13) (R. Nedostup)

HIST 1580. Gandhi’s India: South Asia Before 1947. Gandhi’s India tracks the emergence and transformations of British colonial rule in the Indian subcontinent, the insurgencies and the cultural and economic critiques that shaped anti-colonial nationalism, the conflicts that fueled religious differences and the ideas that shaped non-violent civil disobedience as a unique form of resistance. With readings from Gandhi, Marx and Tagore, amongst others, this course interrogates relationships between power and knowledge, histories from below, as well as violence and political mobilizations that would, by the mid-twentieth century, bring down an empire and create a bloody and enduring divide with the birth of two nation-states. M

Fall HIST1580 S01 14659 TTh 10:30-11:50(13) (V. Zamindar)

HIST 1581. Inequality and Change: South Asia after 1947. With a focus on inequality and change this lecture course will survey South Asia’s history post-1947, with the end of colonial rule and the making of nation-states. With a historical attention to ‘inequality’, we will interrogate the inequalities cast by rural poverty, environment, religion, caste, gender and ethnicity and the remarkable contestations of people in the region that have challenged state power, and have thus shaped South Asia’s postcolonial histories. We will particularly focus on histories from below, and engage historical and literary writings, newspapers as well as documentary films. M

Spr HIST1581 S01 25233 MWF 11:00-11:50(04) (V. Zamindar)

HIST 1630. Modern Latin America I. This course offers an introduction to the history of Latin America, beginning with the late colonial period and running through the close of the twentieth century. Emphasis is placed on political, social, and cultural history; less attention is paid to diplomatic and economic history. M

Spr HIST1630 S01 23990 TTh 2:30-3:50(11) (J. Green)

HIST 1639. Colonial Africa. This course considers major actors and developments in sub-Saharan Africa from the mid-nineteenth through the mid-twentieth centuries. With a critical awareness of the ways that Africa’s past has been narrated, it balances coverage of the state and economy with attention to daily life, families, and popular culture. The majority of the reading assignments are drawn from contemporary documents, commentaries, interviews, and memoirs. These are supplemented by works produced by historians. Students will analyze change, question perspectives, and imagine life during the age of European imperialism. Written assignments include a book review, examinations, and identifying and editing a primary source text. M

Fall HIST1639 S01 16262 MWF 12:00-12:50(12) (N. Jacobs)

HIST 1640. Clash of Empires in Latin America. Examines Latin America as the scene of international rivalry from the 16th to the 19th century. Topics include comparative colonization, the transatlantic slave trade, privateering and piracy in the Caribbean, and the creation of an “Atlantic world.” P

Fall HIST1640 S01 14543 MWF 10:00-10:50(03) (R. Cope)

HIST 1670. History of Brazil. This course charts the history of Brazil from Portuguese contact with the indigenous population in 1500 to the present. It examines the country’s political, economic, social, intellectual, and cultural development to understand the causes, interactions, and consequences of conflict, change, and continuity within Brazilian society. WRIT E

Fall HIST1670 S01 14548 TTh 2:30-3:50(11) (J. Green)

HIST 1701. The Shot Heard ’Round the World: The History of Revolutionary America. For those who lived through it, the American Revolution was a very personal experience. The struggle for American liberties pitted neighbors against neighbors, tore local communities apart, destroyed families, ruined livelihoods and ended lives. But the Revolution was also a global phenomenon. Its ideological origins lay in ancient Greece and Rome. Its economic causes stretched around the globe. Its ideals and values have inspired generations. Only by studying the complexity of the Revolution, and by placing the local experiences of newly-minted “Americans” within the global backdrop of their times, can this formative stage of United States history be fully understood. P

Spr HIST1701 S01 24057 TTh 10:30-11:50(09) (S. Roberts)

HIST 1740. The American Civil War. In this course we will investigate the “felt histories” of the American Civil War—the personal experiences of Americans (northerners and southerners, slaves and freed people, European immigrants and Native Americans, men and women) who fought its battles and bore its consequences. These histories, as Robert Penn Warren notes, are an “index to the very complexity, depth, and fundamental significance” of the conflict. In addition to military and political dimensions we will also examine constructions of Civil War memory (photography, film, and other media) and the dominant narratives that have shaped our understanding of the war since 1865. M

Fall HIST1740 S01 16484 TTh 2:30-3:50(11) (M. Nelson)

HIST 1750. American Politics and Culture Since 1945. History of the United States between the end of World War II and the present. Major themes and topics include race and civil rights, women’s history and feminism, the Cold War, Vietnam, and U.S. foreign policy, suburbanization and the urban crisis, the rise and fall of the welfare state, and a history of consumption and popular culture. M

Fall HIST1750 S01 16444 MWF 1:00-1:50(06) (T. Jundt)

HIST 1770. U.S. Cultural History from Revolution to Reconstruction. What does it mean to survey a country’s history? In this course, it means setting out in several different directions in order to determine the form, extent, and situation of the United States from the 1750s to the 1870s. It means looking carefully at the nation’s past through its cultural productions (ideas, beliefs, and customs expressed in print, material, and visual forms), and it means paying close attention to the details. Each week, students will examine one object, text, or idea in order to track broader developments in American history during this time period. M

Spr HIST1770 S01 25378 TTh 1:00-2:20(10) (M. Nelson)

HIST 1780. Making America Modern, 1877-1920. This course surveys a crucial period in American history between the end of Reconstruction and the beginning of World War I. During this time, the United States transitioned from a relatively fragmented, traditional, and largely agricultural society into one that was remarkably diverse, increasingly urban, and highly industrialized. In surveying this important transitional period, we will pay particular attention to far-reaching changes in the nation’s business and economic life, its social movements, as well as its cultural developments, all with an eye to understanding how the United States became one of the world’s most commanding economic, political, and cultural powers. M

Fall HIST1780 S01 16115 MWF 1:00-1:50(06) (L. Rieppel)

HIST 1781. Ideas in the U.S. Since 1865. This course treats aspects of both the intellectual and cultural history of the United States since the Civil War. Efforts will be made not only to comprehend the ideas of major thinkers, but also trends in the general culture that entail changes and continuities in values, attitudes, and behaviors. It will explore how historical changes have inspired ideas, and how those ideas have helped to shape history. Major themes include

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Darwinism, Victorianism, pragmatism, progressivism, pluralism, modernity, corporate capitalism, environmentalism, the beats, and the Sixties. M
Spr HIST1781 S01 25666 MW 8:30-9:50(02) (T. Jundt)

HIST 1783. Science in the Marketplace.
We will explore the longstanding relationship between science and commerce from the 17th century to our own asking when the modern notion of science as a disinterested pursuit of objective truth took root. We will also explore how knowledge of the natural world has been shaped by personal, financial, and other kinds of self-interest in a number of diverse contexts ranging from Galileo’s invention of the telescope in Renaissance Italy to the patenting of genetically engineered organisms in today’s world, paying special attention to the diverse mechanisms that have been devised to guard against fraud and disinformation. E
Spr HIST1783 S01 25792 MWF 1:00-1:50(06) (L. Rieppel)

Analyzes the relationship between ecological and social change in North America from pre-Columbian times to the 20th century. Topics include Indian uses of the environment; the reshaping of ecosystems under European colonization; the transfer of plants, animals, and diseases from Africa and Europe to the Americas; urbanization; and the rise of the environmental movement. Recommended prerequisites: HIST 0510 and 0520. E
Fall HIST1790 S01 14650 TTh 9:00-10:20(08) (S. Roberts)

HIST 1801. Religion, Politics, and Culture in America, 1865 - Present. Religion has played an undeniable role in the contemporary American cultural landscape. This course looks some perspective on the present by investigating the various and, at times, surprising role religion has played in history in the shaping of American culture from 1865 to the present. M
Spr HIST1801 S01 23987 MWF 11:00-11:50(04) (L. Fisher)

HIST 1805. First Nations: the People and Cultures of Native North America to 1800.
This course explores the history of North America through the eyes of the original inhabitants from pre-contact times up through 1800. Far from a simplistic story of European conquest, the histories of Euroamericans and Natives were and continue to be intertwined in surprising ways. Although disease, conquest, and death are all part of this history, this course also tells another story: the big and small ways in which these First Nations shaped their own destiny, controlled resources, utilized local court systems, and drew on millennia-old rituals and practices to sustain their communities despite the crushing weight of colonialism. WRIT P
Fall HIST1805 S01 15697 MWF 12:00-12:50(12) (L. Fisher)

HIST 1830. American Urban History, 1870-1950. A survey with a specialized focus exploring American history from an urban frame of reference. Topics include the social consequences of the modern city, politics, reform, and federal-city relations. M
Fall HIST1830 S01 14642 MWF 9:00-9:50(02) (H. Chudacoff)

HIST 1890. Empires in America to 1890. This course surveys the development of American foreign relations from initial encounters between Native Americans and newly arrived Europeans to the extension of EuroAmerican power beyond the continental United States. By being attentive to a wider global context, we will attempt to understand the trajectory of “America” from a colonial hinterland to dominant world power. E
Fall HIST1890 S01 14656 MWF 2:00-2:50(07) (N. Shibusawa)

HIST 1900. American Empire Since 1890. This survey of twentieth-century US foreign relations will focus on the interplay between the rise of the United States as a superpower and American culture and society. Topics include: ideology and U.S. foreign policy, imperialism and American political culture, U.S. social movements and international affairs, and the relationship between U.S. power abroad and domestic race, gender and class arrangements. M
Spr HIST1900 S01 24083 MW 2:00-2:50(07) (N. Shibusawa)

Interested students must register for EDUC 1200.
Spr HIST1930A S01 25112 Arranged "To Be Arranged"

HIST 1930G. Black Freedom Struggle Since 1945 (AFRI 1090).
Interested students must register for AFRI 1090.
Spr HIST1930G S01 25111 Arranged "To Be Arranged"

HIST 1930L. The History of American Education (EDUC 1020).
Interested students must register for EDUC 1020.
Fall HIST1930L S01 15847 Arranged "To Be Arranged"

Interested students must register for AFRI 1640.
Spr HIST1930P S01 25125 Arranged "To Be Arranged"

HIST 1930U. Slavery in the Ancient World (CLAS 1120E).
Interested students must register for CLAS 1120E.
Fall HIST1930U S01 15848 Arranged "To Be Arranged"

HIST 1930V. History of Zionism and the Birth of the State of Israel (JUDS 1712).
Interested students must register for JUDS 1712.
Fall HIST1930V S01 15849 Arranged "To Be Arranged"

HIST 1930X. Antisemitism and Islamophobia (JUDS 1710).
Interested students must register for JUDS 1710.
Spr HIST1930X S01 25121 Arranged "To Be Arranged"

Interested students must register for JUDS 1740.
Spr HIST1931A S01 25179 Arranged "To Be Arranged"

HIST 1951. The First Globalization: The Portuguese in Africa, Asia, and the Americas. This class surveys history of Portuguese empire in Asia, Africa, and Brazil from fifteenth to early nineteenth centuries. Portugal pioneered the European expansion in the fourteenth century, laying the groundwork for several historical phenomena that defined modernity, such as the formation of colonial coastal enclaves in Africa and Asia, the colonization of the Americas, and the beginning of large-scale trade across the Atlantic and Indian oceans. The class analyzes the economic, religious and technological factors behind Portugal’s pioneering role in European expansion. We focus on patterns of socio-cultural and religious interaction between Portuguese and native peoples in Asia, Africa, Brazil.
P Spr HIST1951 S01 25035 TTh 9:00-10:20(08) (R. Ferreira)

HIST 1960R. Urban Schools in Historical Perspective (EDUC 1720).
Interested students must register for EDUC 1720.
Fall HIST1960R S01 16263 Arranged "To Be Arranged"

HIST 1960S. 17th Century Portuguese World (POBS 1600S).
Interested students must register for POBS 1600S.
Spr HIST1960S S01 26344 Arranged "To Be Arranged"

HIST 1970C. African Environmental History.
This seminar considers the relations of humans and their non-human environment in Africa’s past. The topics are the same as those in the environmental history of other regions: conservation, food, animals, disease, population, energy, and climate. We sample recent writings on these topics while asking how Africa’s environmental history has been affected by its position as the cradle of humanity, the source for the Atlantic slave trade, the imperial possession of Europe, and the underdeveloped margin of the global capitalist economy. Enrollment limited to 20. E
Fall HIST1970C S01 16183 Th 4:00-6:20(16) (N. Jacobsa)

HIST 1970Y. The Cold War and Environmentalism. Beginning with the psychic and environmental dislocations wrought by the advent of the Bomb, this seminar will move forward in time to trace the nation’s growing environmental awareness and concern as we seek to understand what underlies contemporary environmentalism. In so doing we will look not only at classic texts like Aldo Leopold’s Sand County Almanac and Rachel Carson’s Silent Spring, but many complicating traditional notions of the origins and conduct of the modern environmental movement.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
This seminar will examine the history of consumer culture in the United States, with readings spanning the colonial era through the present. We will focus on how the culture of the U.S. has encouraged and shaped the development of consumer culture, and how the growing power of that consumer culture has, in turn, influenced American culture and life and (arguably) impacted other cultures. Enrollment limited to 20. Fall HIST1971B S01 16446 M 3:00-5:20(15) (T. Junctd)

Cross-dressing knights, virgin saints, homophobic priests, and mystics who speak in the language of erotic desire are but some of the medieval people considered in this seminar. This course examines how conceptions of sin, sanctity, and sexuality in the High Middle Ages intersected with structures of power in this period. While the seminar primarily focuses on Christian culture, it also considers Muslim and Jewish experience. Enrollment limited to 20. WRIT P Fall HIST1972H S01 15433 M 3:00-5:20(15) (A. Remensnyder)

This course will focus on the political, social, economic, and cultural changes that took place in Brazil during the military dictatorship that ruled the country from 1964-85. We will examine why the generals took power, the role of the U.S. government in backing the new regime, and the process that led to democratization. M Spr HIST1972R S01 23992 W 3:00-5:20(14) (J. Green)

This course will explore the intersections between cultural modernity and assimilated Jews in central European cities such as Berlin, Vienna, Prague and Budapest in the 19th and 20th centuries. Enrollment limited to 20. M Fall HIST1972V S01 14547 Th 4:00-6:20(16) (M. Gluck)

HIST 1973J. Korea: North and South.
This course offers a systematic investigation of the political, economic, and social histories of Korea, North and South, from the inception of the two governments following liberation from Japanese occupation in 1945 to the present day. Enrollment limited to 20. M Spr HIST1973J S01 24003 W 9:30PM-11:50PM(15) (J. McClain)

HIST 1973M. Outside the Mainstream.
When ratifying the UN Covenant on Civil Rights in 1979, its representative reported, "The right of any person to enjoy his own culture... is ensured under Japanese law. However, minorities... do not exist in Japan." Nothing could have been further from the truth. Japan is - and for a long time, has been - home to immigrants, indigenous populations forced to accept Japanese citizenship, outcast communities of Japanese ethnicity, and otherwise ordinary persons who live outside the mainstream as outlaws and prostitutes. This course examines how these minority communities came into existence and struggled to maintain distinctive lifestyles in what many view as an extraordinarily homogenous society. Enrollment limited to 20 students. M Fall HIST1973M S01 14557 T 9:30-10:50(8) (J. McClain)

Modernity as a distinct kind of cultural experience was first articulated in the Paris of the 1850s. The seminar will explore the meaning of this concept by looking at the theories of Walter Benjamin, as well as historical examples of popular urban culture such as the mass circulation newspaper, the department store, the museum, the café concert and the early cinema. Enrollment limited to 20. M Spr HIST1973P S01 23889 Th 8:00-10:20(8) (M. Gluck)

Looks at the origins and nature of the English Civil War and Republican experiment in government (1642-1660) through a close examination of primary source materials. Considers not only the constitutional conflict between the crown and parliament, but also the part played by those out-of-doors in the revolutionary upheaval, the rise of popular radicalism, and the impact of events in Scotland and Ireland. P Spr HIST1973T S01 23999 M 3:00-5:20(13) (T. Harris)

HIST 1974A. Modern Mexico.
We will cover Mexican history from the Liberal reforms of Benito Juarez in mid-19th to the long dictatorship of Porfirio Diaz which set up the Mexican Revolution of 1917, and conclude with an examination of the impact of the revolution on 20th century Mexico, including the large-scale movement of people and capital across the U.S.-Mexican border. M Fall HIST1974A S01 14617 W 3:00-5:20(17) (E. Hu-Dehant)

HIST 1974F. Early Modern Ireland.
This seminar will cover various themes in the political, religious, social and cultural history of Ireland between c. 1500 and the later eighteenth century. Topics to be discussed include the Reformation, the Irish Rebellion, Cromwell's rule, the War of the Two Kings, popular protest, the beginnings of the Irish nationalism, and the experiences of women. M Fall HIST1974F S01 14616 M 3:00-5:20(15) (T. Harris)

HIST 1975U. Gender, Empire, and the Nation in the Middle East.
Examines the histories of colonialism and nationalism in the modern Middle East through a gendered lens. The ruptures of colonialism recast gender relations, while the alchemy of race, gender, and ethnicity figured prominently in the formation of anti-colonial nationalisms. Colonialism and nationalism, in turn, shaped processes that informed and were shaped by highly gendered notions of civilization and citizenship. The course draws on a variety of genres, including film, art, memoirs, and political speeches. Our case studies include Algeria, Afghanistan, Egypt, Iran, and Iraq. Enrollment limited to 20. Not open to first year students. M Fall HIST1975U S01 14558 T 4:00-6:20(18) (S. Balaghi)

The seminar will focus on Partition of the Indian sub-continent in 1947 - an event that can be placed at the very heart of the twentieth century - not only in terms of chronology, but in terms of the kinds of questions it raises. We will ask how questions about Partition lend itself to understanding border-making, displacements and violence more broadly. We will examine debates on religious community, genocidal violence, rape, refugeeeness, and territorial divisions of identity and nation-state formation as quintessential to the twentieth century experience. Enrollment limited to 20. M Fall HIST1976B S01 15801 W 3:00-5:20(17) (V. Zamindar)

HIST 1976M. Women in the Islamic Middle East.
This course focuses on women in the Middle East, from the seventh century emergence of Islam to the twentieth century rearticulation of women's "place" in the context of nation state formation and the struggle for new identities. We examine the status of women and the ways women were culturally crafted. In particular, we will discuss the contested nature of women's roles; the encounter between "Eastern" and "Western" societies; power, patronage, and exclusion; veils and voices; and the modes by which women's lives were narrated (by themselves and others). Enrollment limited to 20. Instructor permission required. E Spr HIST1976M S01 23974 T 4:00-6:20(16) (P. Brummet)

This course examines the role that Chinese cosmological and popular religious beliefs had, first, in the formation of concepts of social justice and, second, in shaping popular protest movements throughout Chinese history. The course begins with an exploration of early concepts of cosmic and social justice and an examination of how these concepts are expressed in selected pre-21st century popular uprisings; and then moves on to study a range of contemporary protest movements—against environmental degradation, government corruption, religious restrictions, and so forth—and their social and political significance for the future development of China. Enrollment limited to 20. M Spr HIST1976N S01 25662 W 3:00-5:20(14) (C. Brokaw)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
cultural conditions that allowed early modern Jewish merchants to create economic networks stretching from India to the New World? We will answer these questions by examining the connections and interactions between four major Jewish centers: Ottoman Jewry in the Eastern Mediterranean, the Port Jews of Amsterdam and London, Polish-Jewish estate managers in Ukraine, and the Court Jews of central Europe. We will see how European expansion exploited - and was exploited by - these Jewish entrepreneurs. Enrollment limited to 20 undergraduates. P Spr HIST1978R S01 24088 M 3:00-5:20(13) (A. Teller)

HIST 1976T. History of the Andes from the Inca Empire to Evo Morales
Before the Spanish invaded in the 1530s, western South America was the scene of the largest state the New World had ever known, Tawantinsuyu, the Inca empire. During almost 300 years of colonial rule, the Andean provinces were shared by the "Republic of Spaniards" and the "Republic of Indians" - two separate societies, one dominating and exploiting the other. Today the region remains in many ways colonial, as Quechua- and Aymara-speaking villagers face a Spanish-speaking state, as well as an ever-more-integrated world market, the pressures of neoliberal reform from international banks, and the melting of the Andean glaciers. Enrollment limited to 20. E Spr HIST1976T S01 24004 W 3:00-5:20(14) (J. Mumford)

This seminar will explore the knowledge-production and military-financial infrastructures that maintain empires, and the means through which people have resisted or embraced empire. While some attention will be made to the 19th and early 20th century colonial context, the bulk of the course will focus on the Cold War liberal era to the neoliberal regime that continues today. Topics include: popular culture and ideology, Cold War university, area studies, international anti-war networks, transnational labor activism, the anti-colonial radical tradition, and the Arab Spring/Occupy Movements. Weekly readings; evaluation based on participation and analytical essays. Enrollment limited to 20 juniors and seniors. M Spr HIST1977G S01 25282 W 3:00-5:20(14) (V. Zamindar)

This course will trace how American attitudes towards nature have shifted over the centuries: from the colonial period, when the wilderness was seen as something to be feared and subdued, to the romantic view of nature that emerged in the nineteenth century, to the growing concerns of nature over the centuries: from the colonial period, when the wilderness was seen as something to be feared and subdued, to the romantic view of nature that emerged in the nineteenth century, to the growing concerns of nature that emerged in the nineteenth century, to the growing concerns of nature that emerged in the nineteenth century, to the growing concerns of nature that emerged in the nineteenth century, to the growing concerns of nature that emerged in the nineteenth century, to the growing concerns of nature that emerged in the nineteenth century, to the growing concerns of nature that emerged in the nineteenth century, to the growing concerns of nature that emerged in the nineteenth century, to the growing concerns of nature that emerged in the nineteenth century, to the growing concerns of nature that emerged in the nineteenth century, to the growing concerns of nature that emerged in the nineteenth century, to the growing concerns of nature that emerged in the nineteenth century, to the growing concerns of nature that emerged in the nineteenth century, to the growing concerns of nature that emerged in the nineteenth century, to the growing concerns of nature that emerged in the nineteenth century, to the growing concerns of nature that emerged in the nineteenth century. Readings will include many of the national culture within Iran itself has been deeply embedded in cultural and controversy. The purpose of this course is to trace the origins of "scientific" concept of race and interrogate its transformations and uses over time. The primary sources assigned, ranging from the eighteenth to the twentieth centuries, will highlight the multiple, and often ambiguous, definitions of the term; also underscoring the concept's correlation, at various points in history, to idea of species, variety, tribe, linguistic group, nation, civilization. Enrollment limited to 20. M Fall HIST1978E S01 15956 W 3:00-5:20(17) (R. Parks)

Polo. Plague. Pox. This seminar will use historical, sociological, journalistic, epidemiological, documentary film, and literary sources to explore urban disease outbreaks and human responses from ancient to modern times. By examining cases such as plague in Florence and Hong Kong, yellow fever in Charleston and Veracruz, smallpox in Rio de Janeiro and Bombay, AIDS in New York and Kampa, and SARS in Toronto and Beijing, we will seek to understand the role of urban ecological factors in the emergence of disease, and the nature of social, scientific, and civic authority responses to urban epidemics. Enrollment limited to 20. M Spr HIST1978F S01 25261 M 3:00-5:20(13) (R. Parks)

This course will look closely at the dramatic developments that fundamentally challenged Western Science between 1859 and the advent of the Second World War in the 1930s. Its primary focus will be on a variety of texts written in an effort to understand and interpret the meanings of fundamentally new ideas including from the biological side--evolutionary theory, genetic theory, and eugenics; from the physical side relativity theory, and quantum mechanics. The class should be equally accessible to students whose primary interests lie in the sciences and those who are working in the humanities. Enrollment limited to 20. M Spr HIST1978G S01 25181 W 3:00-5:20(14) (J. Richards)

HIST 1978H. Culture and Power in Modern Iran.
"I went to the Persian Art Exhibit at 51st Street and Fifth Ave...The important thing is the realization that here is an art which has survived through 6,000 years of invasion, war, tyranny, prosperity and power." So wrote Eleanor Roosevelt in her newspaper column in June 1940. Throughout the history of modern Iran, its relations with the West have been mediated through a cultural lens. In turn, the struggle to define national culture within Iran itself has been deeply embedded in cultural production. This course examines the history of modern Iran through its art, cinema, literature, and cultural institutions. Enrollment limited to 20. M Spr HIST1978H S01 25267 Th 4:00-6:20(17) (S. Balaghi)

HIST 1978I. The Social Lives of Dead Bodies in China and Beyond.
Corpses, much like the living, are not neutral bodies, but are managed into structures of social meaning. This course aims to uncover corpses as signifiers and actors during times of community upheaval. We will take modern China as our focal point, but also look elsewhere in the Americas, Europe, Africa and Asia since the 19th century, when the broadening scale and nature of warfare; state expansion; rapid urban and rural development; global circulations of technology; and the interplay of international philanthropies with older forms of charity and ritual pacification significantly affected the treatment, conceptions, and actions of the dead. Enrollment limited to 20. WRIT M Fall HIST1978I S01 14773 Th 4:00-6:20(16) (R. Nedostup)

The Mediterranean Sea is home to some of the oldest, most celebrated urban settlements in the world. Its cities have nonetheless experienced such repeated and deep transformations in the past two centuries as to become virtually unrecognizable with regards to the built environment, the ethnic composition of their population, and discursive representations. This course takes a critical look at these developments and will examine
the cities as shaped by imperial state, western traveller, colonial urbanist, nationalist visionary, uprooted refugee, Holocaust survivor, fighting soldier - in a kaleidoscopic attempt to understand dramatic and traumatic experience of modernity in streets/piazzas of the Mediterranean.

Enrollment limited to 20. M

Fall HIST1978K S01 15698 M 3:00-5:20(15) (P. Papamichos Chronakis)

This course examines the varieties of Indian and African enslavement in the Atlantic world, including North America, up through 1800. Reading widely in the recent literature in the field as well as in primary sources from the colonial period, we will ponder the origins, practices, meanings, and varieties of enslavement, along with critiques and points of resistance by enslaved peoples and Europeans. Special emphasis will be given to the lived nature of enslavement, and the activity of Indians and Africans to navigate and resist these harsh realities. A final project or paper is required, but there are no prerequisites. Enrollment limited to 20. P
Spr HIST1978O S01 25237 Th 4:00-6:20(17) (L. Fisher)

HIST 1978T. Fin-de-Siècle Paris and Vienna.
We will examine two great imperial capitals facing similar set of challenges at the end of a century dominated by Europe. Austria-Hungary and France were forced to reckon with declining status as great powers, made manifest by their defeat at the hands of Prussia in 1867/1870 respectively. Both struggled with place of ethnic and religious minorities in modern states, and both responded with outbursts of political anti-Semitism that emerged. We will not only gain a basic factual knowledge of fin-de-siècle urban life but also explore some of the works and problems animating the intellectual life of the twentieth century. Enrollment limited to 20. M
Fall HIST1978T S01 15699 W 3:00-5:20(17) (J. Revill)

HIST 1978U. Utopias and Other Wastelands.
What factors are necessary for a social movement to grow? We'll look at international Progressive movement, appropriate technology, trade unions, and cooperatives, as examples of modern movements doomed in one nation, flourishing elsewhere. We'll interpret the conservative utopias of Ayn Rand, Milton Friedman, alongside the radical utopias of Theosophists. Looking into the alliances of professionals, experts, national legislators, capitalism and organs of world government, trying to understand alignments of power that caused some movements to flourish and others to falter, asking when individuals and collectives have the opportunity to change the world around them and how we measure their success. Enrollment limited to 20. M
Spr HIST1978U S01 25286 Th 4:00-6:20(17) (E. Guldi)

HIST 1978V. Islamic Political Thought, Global Islam, and Globalization.
The term 'Global Islam' is used to describe Islam's worldwide diversity as well as the groups and networked understanding that make this religion a vital aspect of 21st-century life. This seminar examines Globalization as a factor in shaping the evolution of Political Islamic Thought and the emergence of Global Islam, and explores the process for how modernity and globalization have influenced fundamentalist theological reform movements and formed a basis for political action. It will examine concepts of global 'Ummahs', which link disparate groups across national boundaries into imagined communities with a shared religious viewpoint and perceived fate. Enrollment limited to 20. M
Fall HIST1978V S01 15700 F 3:00-5:20(0) (A. Watson)

HIST 1978W. Nature on Display.
This course explores how people have visualized nature in a variety of contexts and time periods from the 16th to the 21st century. We will examine the depiction of nature in extremely diverse places, genres, and media: everything from natural history encyclopedias, public dissections, habitat dioramas, to the circus, zoological garden, documentary film, and municipal park. As we do so, we will mine these encounters to explore our changing attitudes towards nature and the place we humans occupy in it.
E
Spr HIST1978W S01 25793 M 3:00-5:20(13) (L. Riepepl)

HIST 1978X. Afghanistan: Crossroads of Civilizations to America's Longest War.
The primary goal of this seminar is to deepen students' knowledge of history of Afghanistan on topics ranging from geography and society to watershed events and key personalities. Secondly, the course is designed to provide you with research tools that will enable you to further educate yourself about Afghanistan and contextualize ongoing developments pertaining to the country and its people, relations with its neighbors, and role in the contemporary world. Thirdly, we'll illustrate Afghanistan's unique position as a transregional borderland between three "Area Studies" in US academia—Middle East, Central Asia, South Asia—thereby providing students with a springboard for advanced study or work in one or more associated fields. Enrollment limited to 20. E
Fall HIST1978X S01 16160 M 3:00-5:20(15) (F. Ahmed)

HIST 1978Y. Constitutional History of the Modern Middle East.
In this historical seminar we examine the profound social and political transformations in the modern Middle East through the lenses of constitutions and constitutional movements. From Ottoman Turkey to contemporary Egypt, and from the West Bank to Waziristan, a primary goal of this seminar is to appreciate the juridical diversity of the Middle East, broadly defined. Secondly, in exploring the tensions between law, state, and society underlying constitutional "moments", we will learn about the pressures and strains, as well as the promise and limits, of constitutional, geographic and political settings of the region—including contexts where state authority (let alone courts) can hardly be called "supreme." Enrollment limited to 20. M
Fall HIST1978Y S01 16116 Th 4:00-6:20(16) (F. Ahmed)

HIST 1978Z. History of the Amazon.
This course traces the history of human interactions and understandings of the Amazon, a tropical rainforest of continental dimensions. It has provided an environment for diverse encounters between outsiders and indigenous peoples, some of whom remain uncontacted to this day. Beginning with pre-Columbian indigenous history and Amazons of Greek legends and arrive at present-day debates concerning preservation/development. Other issues to be considered include indigenous and property rights, sovereignty, and the evolving ethics of biodiversity and conservation. We will focus on the largest section of the basin, the Brazilian Amazon, but incorporate comparative perspectives from further afield. Enrollment limited to 20. E
Fall HIST1978Z S01 16165 M 3:00-5:20(15) (L. Tahtinen)

HIST 1979A. Death and Destruction in American History.
What can trauma—the loss of life, and of property—tell us about the past? The turn to "dark history" illuminates all manner of American cultural developments: political shifts, economic changes, class and racial tensions, gender roles, landscape use. In this course we will examine the beliefs and practices circulating around the most intimate of traumas (death) as well as large-scale events—(un)natural disaster, war, and economic implosion—in order to determine the ways they have shaped American history. Enrollment limited to 20. E
Fall HIST1979A S01 16485 T 4:00-6:20(18) (M. Nelson)

HIST 1979B. The American West.
Lone horsemen. Teepees gathered along riverbanks. Shootouts in dusty streets. Railroad tracks stretching out across the plains. These are common visions of the American West, and they convey many of the myths of America: the frontier spirit, the vanishing Indian, the American dream. This course will examine these myths and the cultural, political, and environmental realities that both informed and undermined them over the course of two hundred years. Readings will range widely across both space and time, moving with communities across deserts, national boundaries, mountain ranges, and plains as they come into various forms of contact with one another. Enrollment limited to 20. M
Spr HIST1979B S01 25620 T 4:00-6:20(16) (M. Nelson)

HIST 1979C. Plague, War, Famine and Death: Crisis in Late-Medieval Europe.
This course explores the ways that people in fourteenth and fifteenth century Europe responded to the extreme hardships inflicted by famines, climate change, epidemics, wars, peasant rebellions, and political upheaval. Covering topics ranging from evolving treatments for the plague to reactions to the Ottoman Turks' capture of Constantinople in 1453, our
discussions will help students to develop a deep understanding of a key period of transition within the history of Europe. Drawing on the lessons of the late Middle Ages, the course will provide background for understanding current events such as the Syrian Civil War and the Eurozone financial crisis. 

**HIST 2960. Prospectus Development Seminar**
Thursday Lecture Series.

paying the registration fee to continue active enrollment while preparing for

**HIST 2890. Preliminary Examination Preparation**

This is the second half of a year-long course, upon completion the grade will revert to HIST 1993. Prerequisite: HIST 1993.

**HIST 2450. Exchange Scholar Program.**

For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.

**HIST 2890. Preliminary Examination Preparation.**

For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.

**HIST 2910. Reading and Research.**

Section numbers vary by instructor. Please see check Banner for the correct section number and CRN to use when registering for this course.

**HIST 2930. Colloquium.**

Required of all first-year graduate students; includes participation in Thursday Lecture Series.

**HIST 2940. Graduate Workshop: The Practice of History.**

Required of all incoming Ph.D. students.

**HIST 2950. Professionalization Seminar.**

Required of all second year Ph.D. students; includes participation in Thursday Lecture Series.

**HIST 2960. Prospectus Development Seminar.**

This required course open only to second-year students in the History Ph.D. program focuses on the development of a dissertation prospectus. The seminar will include considering the process of choosing a dissertation topic, selecting a dissertation committee, identifying viable dissertation projects, articulating a project in the form of a prospectus, and developing research grant proposals based on the prospectus.

**HIST 2970C. Rethinking the Civil Rights Movement.**

This graduate course encourages a rethinking of the complex components, arguments and activities that have characterized what we have come to know as the Civil Rights Movement, concentrating primarily on African American agency, actions and politics, through careful reading of recent scholarship in the field. While knowledge of U.S. history is preferred, this course asks larger thematic questions about protest movements (the role of the state, relationships with and between oppressed groups and organizations, and periodization), that will interest non-Americans also. Some of the topics covered include: gender, organizing and strategies, the local, global ramifications and interactions, organizational structures and politics, and the recent concept of the Long Civil Rights Movement.

**HIST 2970E. Early Modern Continental Europe - Reading**

This course is designed to introduce graduate students to some major topics and debates in early modern European history, as well as a range of geographical, methodological, and historiographical perspectives. Readings combine recent works and classics to give a sense both of where the field has been and where it is going. Topics covered include political history, religious interactions (among Christians and between Christians, Jews and Moslems), urban history, the history of the book, Atlantic history, the history of science, and the Enlightenment. The class also provides the opportunity to explore a single topic of choice in greater depth.

**HIST 2971B. Topics in Twentieth Century Europe.**

This course will introduce graduate students to current scholarship on major issues in twentieth century European history. Topics will include (but are not limited to) the causes and consequences of the two world wars; the emergence, workings, and collapse of authoritarian societies; the spread of mass culture and consumerism; Americanization; decolonization; the European Union, and the collapse of the bi-polar political system. In the interest of introducing students to the significant historiographical debates of the field, they will read both standard historical interpretations and newer scholarship.

**HIST 2971E. Latin American Historiography.**

This course examines the development of historical writings on Latin America produced in the United States from the late nineteenth century until the present. We will focus on themes, such as race, gender, labor, subaltern studies, dependency theory, postcolonial analysis, and post-modernism, to understand the diverse approaches to Latin American history.

**HIST 2971L. Borderlands: Violence and Coexistence.**

Readings of theoretical and empirical studies in interstate and inter-ethnic relations in borderland regions throughout the world, with an emphasis on the modern period in East-Central. Open to graduate students only.

**HIST 2971R. Approaches to Middle East History.**

This is a reading course of canonical and recent works that have shaped the fields of early modern and modern Middle East history. We begin with neo-Orientalist and Modernization-theory writings that ruled until the early 1970s. We then consider two turns often in tension with each other: A Marxist/Weberian approach that leads to social history (broadly construed); and a discursive Foucauldian/Saidian approach that leads to cultural and post-colonial studies. Discussion will center on key debates, thematic trajectories, and impact of theoretical trends in other fields. Requirements include weekly essays, oral presentations, and a final historiographical paper.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
A combined history/historiography seminar about the globalization of European history and the status and future of European historiography in the 21st century. This will include a practical/professional consideration of the status and future directions of European history in the the curriculum and structure of departments. Globalization is understood as a close analogue to provincialization in Dipesh Chakrabarty’s usage and thus also to figure in the legacy of such historical and theoretical phenomena as colonialism, post-colonialism, and imperialism.
Spr HIST2981G S01 25796 M 3:00-5:20(13) (M. Steinberg)

HIST 2981H. Property, Markets, and State, a Global Perspective.
Beginning in 1860, simultaneous land and rent strikes rocked every part of Britain’s empire, and in the decades that followed, international anti-landlord movements conjoined actors in India, Ireland, Scotland, and California. This class will explicitly incorporate digital history methodologies throughout, experimenting with text-mining and mapping software applied to large-scale corpora on the history of land administration. Themes may include the history of water wars, global governance, liberation theology, common pool resources, international finance, and see copyright. Cross-enrollment from engineering, computer science, welcome. M
Fall HIST2981H S01 16039 M 3:00-5:20(15) (E. Guldi)

HIST 2990. Thesis Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.
Fall HIST2990 S01 14053 Arranged ‘To Be Arranged’
Spr HIST2990 S01 23568 Arranged ‘To Be Arranged’

History of Art and Architecture
HIAA 0010. Introduction to the History of Art and Architecture.
Introduction to the history of western art and material culture from the beginning to the present. In addition to examining visual strategies of representation, the course explores the varied ways in which art reflects and shapes social, religious, and political concerns. Weekly one-hour conference required. Enrollment limited to 150. A
Spr HIAA0010 S01 23898 MWF 12:00-12:50(05) (R. Vanel)

This undergraduate seminar traces the rise of American painting in the period from the Revolution to the dawn of modernism in the 20th century. Major figures, such as Thomas Cole, Frederick Church, Winslow Homer and Albert Pinkham Ryder, will be examined, as will significant movements, such as the Hudson River School and Tonalism. Discussion will help place American art within the context of history, the invention of national identity, and parallel developments in popular visual culture. Enrollment limited to 100.
Fall HIAA0070 S01 14530 MWF 11:00-11:50(04) (D. Nickel)

HIAA 0101. Architectural Drawing and Sketching.
There are two primary objectives for architectural drawing and sketching.
First, it is a tool to record and document visual encounters with natural and man-made environments, artifacts and buildings. Second, it is the ability to transmit thoughts and ideas on paper (or the tablet). It is the initial spontaneous recording of the creative act in progress.
Fall HIAA0101 S01 16641 F 3:00-5:20(05) ‘To Be Arranged’

Examines Renaissance Roman painting, sculpture, and architecture in the context of the unique urban character of the city: site of antique myth, religious pilgrimage, and a cosmopolitan court. Beginning with Filarete and Fra Angelico, we move through the Renaissance (Michelangelo and Raphael), looking at the formation of artists’ workshops and academies, ending with the urbanization programs of Sixtus V.
WRIT A
Fall HIAA0560 S01 14532 TTh 10:30-11:50(13) (E. Lincoln)

HIAA 0630. Cultural History of the Netherlands in a Golden Age and a Global Age.
Between 1580 and 1690 two nations emerged in Europe from what had been one unified region. To the north, the Dutch Republic gained its independence from Spain and developed as a bastion of liberty, ideas in ferment, visuals arts, Calvinist faith, science, technology, and global economic reach. To the south, the “loyal” Netherlands, now Belgium, returned to the Spanish and Catholic fold, but sustained its leading position in the arts, competed in global trade, and negotiated a new compromise of government. In this course we present an interdisciplinary, comparative view of the “two” Netherlands and their legacy in the world.
WRIT
Spr HIAA0630 S01 25226 TTh 10:30-11:50(09) (J. Muller)

This lecture course introduces the built environments in and of “Africa,” from the earliest known examples to the contemporary moment. Through a consideration of texts and images, we will interrogate “Africa” as both a construct and a concrete geographical entity characterized by diverse cultures, contexts, and histories. In addition to exploring the content of various architectural and urban traditions, we will approach our topic from the point of view of the theoretical paradigms that have governed the historiographical interpretation of particular periods, regions, and cultures. Readings will be arranged thematically and according to (general) chronology and geography. Weekly one-hour conference required. A
DVPS WRIT
Fall HIAA0770 S01 16482 TTh 2:30-3:50(11) (I. Osayimwese)

HIAA 0870. 20th Century British Art: Edwardian to Contemporary.
The field of British art offers a wide view onto the history of art and aesthetics. This survey of British art in the twentieth century will examine the nation’s art, artists, and art movements alongside its current events. Readings will be drawn from periodicals, primary documents (artist’s letters and manifestos) and secondary texts (Alloway, Hall, Read and others). Architecture, literature (Martin Amis, Joseph Conrad, Lynton Kwesi Johnson and others) and music will be considered throughout the course.
Fall HIAA0870 S01 16483 TTh 1:00-2:20(10) (C. Martin)

The seminar will analyze the relations among architecture, art, and society in the post-nuclear age, in the context of the Cold War, a burgeoning consumer market, and the explosive expansion of communications media. We will trace the emergence of the raw concrete style variously called “Brutalist,” “Metabolist,” or “New Monumentalist,” together with associated movements in the arts (Art Brut, Jikken Kobo), literature (the “Angry Young Men,” “Beat”), music and information theory (Iannis Xenakis, Gordon Pask)) in Europe, Asia, and the Americas. Architects and artists studied include Alison and Peter Smithson, James Stirling, Eduardo Paolozzi, Paul Rudolph, and Lina Bo Bardi. Enrollment limited to 10 concentrators in History of Art and Architecture. A WRIT
Fall HIAA1180 S02 16487 M 3:00-5:20(15) (A. Vidler)

HIAA 1200C. Mosaics in the Greek and Roman World.
Roman mosaics survive in huge quantities from nearly every corner of the Roman Empire, far outnumbering any other surviving art form from the Roman world. The demise of architecture and wall paintings, in fact, often contributes to the survival of floor mosaics when buildings collapse, burning and thereby protecting mosaic floors, which remain unharmed. Despite their prevalence and their often excellent state of preservation, however, mosaics are only beginning to attract the volume of scholarly attention lavished on other media, such as sculpture and paintings. We will consider floor mosaics, wall mosaics and opus sectile, all in context as often as possible, and bring medieval and modern mosaics into the picture as well. Enrollment limited to 20. A
Spr HIAA1200C S01 25724 M 3:00-5:20(13) (R. Vanel)

Interested students must register for HMAN 1971B.
Fall HIAA1300V S01 16872 Arranged ‘To Be Arranged’
HIAA 1410D. War, Revolution, and Art.
Amidst the upheavals of revolution and war, art can render society’s fears and hopes legible. Artists can bear witness, propel social transformations, and imagine alternative futures. From posters to graffiti, film to photography, painting to graphic novels, art can be a vehicle for and a reflection of social change and political resistance. In turn, for scopic regimes, art is an effective tool of propaganda and mobilization; artists become targets or minions of ideologies and demagogues. Art encompasses and documents technologies of power during revolutions and wars. Our case studies in the class include Iran, Iraq, Afghanistan, the US, and Arab Spring. Enrollment limited to 20.
Spr HIAA1410D S01 23899 T 4:00-6:20(16) (S. Balaghi)

HIAA 1560A. Italy and the Mediterranean.
Sicily, Venice, and Rome were Medieval and Renaissance international centers whose populations of pilgrims, traders, soldiers, and diplomats occasioned opportunities for cultural cooperation and violence between East and West. We will study mosaics and architecture of the multi-ethnic Norman rule following the Islamic conquest of Sicily; Venetian relations with the Ottoman Empire and its Greek colonies in goods, painting styles, architecture and atlases; and in Rome obsessions with Egyptian engineering, the vitality of Arabic studies, and reports of travelers resulting from papal efforts to incorporate Eastern Christians under the umbrella of the Roman church. Enrollment limited to 20 juniors and seniors. WRIT
Spr HIAA1560A S01 23900 W 3:00-5:20(14) (E. Lincoln)

HIAA 1600A. Bosch and Bruegel: Art Turns the World Upside Down.
An in-depth look at the work of these two enigmatic Netherlandish artists. After seeing how art history uses various methods to establish what they actually painted and drew, we will move outwards to interpretation and historical study of their images of comedy, proverbs, religion, and landscape. Artworks in local museums will be important focuses of discussion. Prerequisite: HIAA 0010 or 0500.
Spr HIAA1600A S01 23901 Th 4:00-6:20(17) (J. Muller)

HIAA 1850C. The City of Paris: Urbanism and Architecture from the Tenth through the Twentieth Centuries.
An introduction to the history of architecture and urbanism through the examination of Paris, capital city of France over the more than ten centuries of its development from Roman until modern times. Lectures and readings explore important monuments and urban spaces and the issues relevant to their development over time. These include the notion of a capital, the importance of construction in shaping perception of the city’s sense of identity (and identities), and major urban renewals and transformations. Paris will be briefly considered in relation to other famous capital cities such as Baroque Rome and nineteenth-century London. No previous experience in the history of architecture or urbanism is required. All readings are in English, although knowledge of French is always useful.
A
Fall HIAA1850C S02 16016 MWF 12:00-12:50(12) (C. Zemer)

HIAA 1910D. Water and Architecture.
The seminar explores the varied ways in which water is manipulated in architecture and urban planning. We examine several case studies, including Roman aqueducts such as the Pont du Gard, medieval urban and monastic hydraulic systems, Renaissance and early modern garden (and fountain) design, and the local examples of Slater Mill and the Providence water supply.
A
Fall HIAA1910D S01 14531 W 3:00-5:20(17) (S. Bonde)

Reading and reports on an approved topic, supervised by a member of the staff. Project proposals must be submitted and approved no later than the first week of the semester. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

The subject of the thesis and program of study will be determined by the needs of the individual student. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

HIAA 2150A. Hispanic Visual Culture of the Early Modern Period.
No description available.
Fall HIAA2150A S02 15971 W 3:00-5:20(17) (C. Zemer)

The seminar will analyze the relations among architecture, art, and society in the post-nuclear age, in the context of the Cold War, a burgeoning consumer market, and the explosive expansion of communications media. We will trace the emergence of the raw concrete style variously called "Brutalist," "Metabolist," or "New Monumentalist," together with associated movements in the arts (Art Brut, Jikken Kobo), literature (the "Angry Young Man" "Beat"), music and information theory (Iannis Xenakis, Gordon (Pask)) in Europe, Asia, and the Americas. Architects and artists studied include Alison and Peter Smithson, James Stirling, Eduardo Paolozzi, Paul Rudolph, and Lina Bo Bardi. Enrollment limited to 10 graduate students in History of Art and Architecture.
Fall HIAA2180 S01 16358 M 3:00-5:20(15) (A. Vidler)

HIAA 2440D. Architectural Reuse: The Appropriation of the Past.
This seminar will consider the survival, revival and adaptive reuse of older objects, texts and built spaces in the visual and material culture of successor cultures. We will look critically at the literature on the archaeology of memory, "Renaissance and revival, spolia studies and adaptive reuse." The seminar will examine selected case studies, including the reuse of sculptural elements in the Arch of Constantine, the conversion of Pantheon into a church and Hagia Sophia into a mosque, appropriated elements in the Qutb mosque in Delhi and the adaptation of the Bankside Power Station as the Tate Gallery. Enrollment limited to 20.
Spr HIAA2440D S01 24331 W 3:00-5:20(14) (S. Bonde)

HIAA 2450. Exchange Scholar Program.
Fall HIAA2450 S01 14045 Arranged ‘To Be Arranged’

HIAA 2550C. Color.
How do we understand color as an integral part of a visual object? How shape, we think about the artist’s decision and the viewer’s responsibility? This seminar will look at color (and its purposeful repression) in painting, sculpture and the decorative arts of the early modern period, also considering the discourses of color in 20th-century painting and other eras, such as antiquity, when color was a profitable topic through which to discuss the senses. We will also look at the economy and science of pigments, and the value of color in different discourses and objects. Graduate students, or by permission.
Spr HIAA2550C S01 25663 M 3:00-5:20(13) (E. Lincoln)

HIAA 2860E. Topics in the History of Photography: Photography and Philosophy.
Throughout its history, the photograph has posed a special problem— and special opportunity—for thinkers. As a technology, an artform, and a ubiquitous aspect of modern culture, photography has also been an object of theoretical speculation; as a form of pictorial representation perceived to stand in unique relation to “truth” and “reality,” the photograph has invited the attention of philosophers. This graduate seminar will survey the ways philosophy and critical theory have handled photography, from its origins in Enlightenment thought to the most recent speculations about its essence. Enrollment limited to 20.
Fall HIAA2860E S01 16344 F 3:00-5:20(05) (D. Nickel)

HIAA 2930. Practicum.
Goya and the Interpretation of War. Working with materials from the Brown collection and RISD Museum. Reading knowledge of Spanish and French strongly advised. Pre-approval required, please contact instructor by email. Open to graduate students only.
Fall HIAA2930 S01 14533 Th 4:00-6:20(16) (J. Muller)

HIAA 2940. Master’s Qualifying Paper Preparation.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

HIAA 2970. Preliminary Examination Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for their doctoral examination.
Fall HIAA2970 S01 14046 Arranged ‘To Be Arranged’
Spr HIAA2970 S01 23561 Arranged ‘To Be Arranged’

**HIAA 2980. Individual Reading (Single Credit).**
Single credit. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

**HIAA 2981. Individual Reading (Double Credit).**
Double credit. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

**HIAA 2982. Individual Reading for the Doctoral Candidate.**
Single Credit. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

**HIAA 2983. Dissertation Research.**
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

**HIAA 2990. Thesis Preparation.**
For graduate students who are preparing a thesis and who have met the tuition requirement and are paying the Registration Fee to continue active enrollment.
Fall HIAA2990 S01 14047 Arranged ‘To Be Arranged’
Spr HIAA2990 S01 23562 Arranged ‘To Be Arranged’

**HIAA 2991. Dissertation Preparation.**
For graduate students who are preparing a dissertation and who have met the tuition requirement and are paying the registration fee to continue active enrollment.
Fall HIAA2991 S01 14048 Arranged ‘To Be Arranged’
Spr HIAA2991 S01 23563 Arranged ‘To Be Arranged’

**HIAA 2992. Master’s Thesis Preparation.**
For students preparing a terminal MA thesis, may be repeated in the following semester. Sign up for sections according to individual primary advisor.

**International Relations**

**INTL 1440. Ethnicity and Inequality in Global Perspectives.**
Drawing on literature in sociology, politics, international relations, economics, and development studies, this course will critically examine the institutions, beliefs, ideas and practices that have engendered ethnic inequality in many parts of the world. Our aim is to help students gain a deeper understanding of how ethnicity, identity and religion interact with the institutions of modern societies so as to produce sustained social and economic disparity along group lines. Another goal is to gain an understanding of how ethnic inequality within countries can translate into global threats.
Fall INTL1440 S01 15992 TTh 10:30-11:50(09) (G. Loury)

**INTL 1700. International Law.**
This introduction to public international law covers the nature of legal reasoning in international relations, the interplay of international law and international politics, and the international legal process. Examines selected substantive fields such as state responsibility, the use of force, international human rights, and the U.S. and international law.
Fall INTL1700 S01 16144 TTh 2:30-3:50(11) (A. Becker)

**INTL 1801M. Globalization and the Rise of Asia.**
This course introduces the politics and economics of globalization and, in particular, the spectacular rise of the Asian economies and their impact on the global economy, financial markets, and the balance of power. The goals of the course are: First, examine the key problems rapidly developing nations have faced, and continue to struggle with, in an interdependent world economy, and why some nations have succeeded in moving into a period of unprecedented growth. Second, analyze how the rise of the Asian economies will affect the U.S. and other developed nations. Enrollment limited to 20 seniors in International Relations. Instructor permission required. WRIT
Fall INTL1801M S01 16032 W 3:00-5:20(18) (D. Wyss)

**INTL 1802C. Cyber Conflict and Internet Freedom.**
This course will examine the problems confronting the United States and its international partners in addressing network and computer insecurity while upholding privacy, civil liberties and other fundamental values. While technical topics will be addressed, it is not a technical course but a course that examines the public policy challenges associated with a major technology issue. Enrollment limited to 20 seniors concentrating in International Relations. WRIT
Fall INTL1802C S01 16274 M 3:00-5:20(17) (T. Edgar)

**INTL 1802F. History of American Intervention.**
This course reviews modern history through the study of invasions, coups, and other interventions carried out by the United States. From the Marine assault on Tripoli in 1805 to the bombing of Tripoli in 2011, there have been scores of these episodes. They have shaped American history and the history of the wider world. Enrollment limited to 20 seniors. WRIT
Fall INTL1802F S01 16163 T 4:00-5:20(15) (S. Kinzer)

**INTL 1802G. Reading Global: International Relations through Fiction.**
"Any book thoughtfully read sharpens the mind and improves on an individual’s professional potential.” So declared U.S. General James Amos when he reinvigorated the Marine Commandant’s reading list in October 2012. This capstone course is designed in a similar spirit for Brown IR students, built around 20th century works of fiction from around the world which won recognition for the insights they offer on core issues in international relations and development studies. Enrollment limited to 20 seniors concentrating in International Relations. WRIT
Fall INTL1802G S01 16574 F 3:00-5:20(16) (K. Brown)

**INTL 1802I. Human Security.**
In this course, we will engage the definitional debate that challenges traditional notions of national security. We will trace the normative, political and intellectual history of this policy lens, and we will examine its real world implications across several key issue areas. What are the conceptual and practical consequences of a concern with human security, as opposed to national security or human rights? Enrollment limited to 20 seniors concentrating in International Relations. WRIT
Fall INTL1802I S01 16575 W 3:00-5:20(17) (N. Brigden)

**INTL 1910. Senior Honors Seminar.**
Open only to Senior students accepted into the honors program in international relations. Instructor permission required. WRIT
Fall INTL1910 S01 18033 W 6:30-8:50PM(17) (C. Elliott)

**INTL 1920. Senior Honors Thesis.**
Open only to Senior students accepted into the honors program in international relations. Instructor permission required. WRIT

**INTL 1970. Individual Research Project.**
Limited to juniors and seniors. Section numbers vary by instructor. Required: A completed proposal form and syllabus, sponsor’s and concentration advisor’s approval, and written permission from Dr. Elliott (following review of the proposal) prior to registering for any section of this course. Banner overrides will be given by the IR Program manager only, and no overrides will be issued after the Registrar’s course add deadline.

**INTL XLIST. Courses of Interest to Students Concentrating in International Relations.**

**Italian Studies**

**ITAL 0100. Elementary Italian.**
Elective for students without previous training in Italian. No credit for first semester alone. Fundamentals of Italian grammar and development of skills in speaking, comprehension, and writing. Overview of contemporary Italian society. Five meetings per week, audio and video work, two Italian films. Note: This is a year course.
Fall ITAL0100 S01 14704 MWF 10:00-10:50(15) (A. Abbona-Sneider)
Fall ITAL0100 S01 14704 TTh 10:30-11:50(15) (A. Abbona-Sneider)
Fall ITAL0100 S02 14705 TTh 9:00-10:20(15) (A. Abbona-Sneider)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
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<th>Course</th>
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**ITAL 0200. Elementary Italian.**
See Elementary Italian (ITAL 0100) for course description.

| Spring | ITAL0200 | S01 24024 | 10:00-10:50(15) | MWF | (C. Abbona-Sneider) |
| Spring | ITAL0200 | S02 24025 | 9:00-10:20(15) | TTh | (C. Abbona-Sneider) |
| Spring | ITAL0200 | S02 24025 | 10:00-10:50(15) | TTh | (C. Abbona-Sneider) |
| Spring | ITAL0200 | S03 24026 | 1:00-1:50(15) | MWF | (C. Abbona-Sneider) |
| Spring | ITAL0200 | S03 24026 | 1:00-2:20(15) | TTh | (C. Abbona-Sneider) |
| Spring | ITAL0200 | S04 24027 | 10:30-11:50(15) | TTh | (C. Abbona-Sneider) |

**ITAL 0300. Intermediate Italian I.**
Review of the fundamentals of grammar, with emphasis on speaking and writing. Reading of representative short stories. Weekly compositions, presentations, and a paper. Three Italian films. Prerequisite: ITAL 0100-0200, or ITAL 0110, or placement by examination. Requirement for enrollment in the Bologna Program.

| Fall | ITAL0300 | S01 14708 | 12:00-12:50(12) | MW | (C. Abbona-Sneider) |
| Fall | ITAL0300 | S01 14708 | 12:00-12:50(12) | TTh | (C. Abbona-Sneider) |
| Fall | ITAL0300 | S03 14710 | 12:00-12:50(12) | TTh | (C. Abbona-Sneider) |
| Fall | ITAL0300 | S03 14710 | 2:00-2:50(12) | MW | (C. Abbona-Sneider) |

**ITAL 0400. Intermediate Italian II.**
Review of specific grammar problems. Reading of one novel and newspaper articles. Compositions and oral presentations. Three Italian films. Prerequisite: ITAL 0300, or placement by examination.

| Spring | ITAL0400 | S01 24028 | 12:00-12:50(16) | MW | (C. Abbona-Sneider) |
| Spring | ITAL0400 | S01 24028 | 12:00-12:50(16) | TTh | (C. Abbona-Sneider) |
| Spring | ITAL0400 | S02 24029 | 12:00-12:50(16) | TTh | (C. Abbona-Sneider) |
| Spring | ITAL0400 | S02 24029 | 2:00-2:50(16) | MW | (C. Abbona-Sneider) |

**ITAL 0500. Advanced Italian I.**
The purpose of this advanced course is to improve speaking and writing skills by offering extensive practice in a variety of styles and forms. Students will discuss various aspects of contemporary Italian culture. Reading, analysis and class discussion of texts (articles, songs, pictures, short stories, movies and television), oral presentations, based on research, and a writing portfolio (compositions, essays, blog and a journal). Prerequisites: ITAL 0400, or placement by examination.

| Fall | ITAL0500 | S01 14711 | 1:00-1:50(10) | W | (C. Abbona-Sneider) |
| Fall | ITAL0500 | S01 14711 | 1:00-2:20(10) | TTh | (C. Abbona-Sneider) |

**ITAL 0560. Constructing the Eternal City: Popes and Pilgrims in Renaissance Rome (HIAA 0560).**
Interested students must register for HIAA 0560.

| Spring | ITAL0560 | S01 15859 | Arranged | "To Be Arranged" |

**ITAL 0600. Advanced Italian II.**
A sixth semester course with intensive practice in speaking and writing. Short stories, poems, music, and movies will be used to discuss Italian Society from the Second World War through the present. We will explore some important themes—family, religion, gender, and politics. Class discussion, compositions, oral presentations, and a final paper. Prerequisite: ITAL 0500, placement by examination.

| Spring | ITAL0600 | S01 24030 | 1:00-2:20(10) | TTh | (C. Abbona-Sneider) |

**ITAL 0951. The Grand Tour, or a Room with a View: Italy and the Imagination of Others.**
Italy has for many decades been the place to which people traveled in order to both encounter something quite alien to their own identities and yet a place where they were supposed to find themselves, indeed to construct their proper selves. This course introduces students to some of the most important texts that describe this "grand tour." Readings, both literary and travelogues by Goethe, De Stael, Henry James, Hawthorne, Freud, among others, and films like "A Room With a View" - all in order to determine the ways in which Italy "means" for the cultural imagination of Western civilization. Enrollment limited to 20 first year students. FYS

| Fall | ITAL0951 | S01 15802 | 3:00-5:20(15) | M | (S. Stewart-Steinberg) |

**ITAL 0981. When Leaders Lie: Machiavelli in International Context.**
This course examines the writing of Niccolò Machiavelli, a Renaissance author praised and condemned for his insistence on analyzing the realities of politics, rather than the ideals of political behavior. Machiavelli’s view of the tenuous relationship of ethics to politics has cast him as the founder of political science and the proponent of "consequential morality" or the notion that the ends justify the means. We will also examine precedents for his ideas and conclude by examining the relevance of Machiavelli’s insights for understanding political practices and ethics in the twenty-first century. LILE WRIT

| Spr | ITAL0981 | S01 25219 | 2:30-3:50(11) | TTh | (C. Castiglione) |

**ITAL 1020. Boccaccio’s Decameron.**
Close study and discussion of Boccaccio’s collection of 100 tales told by ten young Florentines over a period of two weeks, while in flight from the devastating plague of 1348. The Decameron defined the standard of Italian prose narrative for four centuries and deeply influenced Renaissance drama. We will also pay particular attention to visualizations and adaptations of the Decameron into a variety of media, from manuscript illumination to painting, theatre and film. Students will contribute to the Decameron Web, the award-winning Boccaccio web site administered by the department of Italian Studies. Sections in English and Italian. Enrollment limited to 40. WRIT

| Spr | ITAL1020 | S01 24031 | 1:00-1:50(06) | MW | (M. Riva) |

**ITAL 1030A. Fellini.**
The career of one of the undisputed masters of 20th-century film, revisited on the 20th anniversary of his death: from his contributions to neo-realism (Oscar nomination as screenwriter of Rossellini’s Open City) to the "magic" realism of the 1950s (Fellini’s first of four Oscars for La strada); and from his modernist masterpieces (La Dolce Vita, 8½) to his meta-cinematic fictions (Intervista, The Voice of the Moon). In reviewing Fellini’s oeuvre, we will focus on issues of authorship, art film and psychoanalysis, myth and memory, realism and hyperrealism. Taught in English with a discussion group in Italian.

| Fall | ITAL1030A | S01 14712 | 2:30-3:50(11) | TTh | (M. Riva) |

**ITAL 1435. Theater, Spectacle and the City in Italy, 1400-1600.**
Renaissance Italian playwrights adapted dramatic models from the ancient world for their comedies and tragedies. At the same time, designers and architects created spaces for drama that imitated ancient models but also adopted innovative concepts of pictorial space pioneered by 15th century painters. All the participants were in turn conditioned by the various social and political contexts in which the plays were conceived and produced. How the mutually conditioning factors of the play-text, the stage space, and the larger civic or court context work together will be the focus of the course.

| Spr | ITAL1435 | S01 24730 | 3:00-5:20(13) | M | (R. Martinez) |
ITAL 1560A. Italy and the Mediterranean (HIAA 1560A).
Interested students must register for HIAA 1560A.
Spr ITAL1560A S01 25120 Arranged ‘To Be Arranged’

ITAL 1590. Word, Media, Power in Modern Italy.
The role of media (print, news, art, music, photography, cinema, radio, television) in shaping national identity, nationalistic agendas, imperial aspirations, democratic revivals and populist consensus in Italy, from the post-Risorgimento age to the Fascist regime, and from the post-WW2 renaissance to the “decadent” Berlusconi era. The most influential genres and trends in Italian culture, from opera to futurism, from neo-realist cinema and literature to post-modern fashion and industrial design, will be analyzed against the backdrop of the most important social and political turning points of Italian and European history. Taught in English.
Spr ITAL1590 S01 25408 MWF 11:00-11:50(04) (M. Riva)

ITAL 1610. The Divina Commedia: Inferno and Purgatorio.
A close reading of the first two canticles of Dante’s poem in the light of contemporary European and American critical interpretations. In Italian. Enrollment limited to 40.
Fall ITAL1610 S01 15335 Th 4:00-6:20(16) (R. Martinez)

ITAL 1620. The Divina Commedia: Dante’s Paradiso: Justifying a Cosmos.
Close study of the third and final part of Divine Comedy, in which Dante unfolds Italy, in his vision of the planetary and stellar spheres condition human life and fashion the Providential plan of history. There will be ancillary readings from Dante’s other works: Convivio, the Monarchia, and the Epistles. In Italian. Prerequisite: ITAL 0500 or 0600, or instructor permission. Enrollment limited to 40.
Spr ITAL1620 S01 24106 T 1:00-3:20(10) (R. Martinez)

ITAL 1920. Independent Study Project (Undergraduate).
Undergraduate Independent Study supervised by a member of the Italian Studies Faculty. Students may pursue independent research in order to prepare for their honors thesis or honors multimedia project, or they may enroll in the course in order to work individually with a faculty member on a specific area of Italian Studies not covered in the current course offerings. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.
ITAL 1990. Senior Conference.
Special work or preparation of an honors thesis under the direction of a member of the staff. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

ITAL 2220. New Perspectives on Fascism.
Examines the new light shed by recent research on Italian Fascism, placing Italy’s Fascist veneto (1922-45) in a larger European context. Among the questions to be addressed: What explains Mussolini’s rise to power and his ability to stay in power? To what extent did Italians become Fascist? What role did force play in ensuring popular allegiance to the regime? What role did the Church play? Did Fascism remake concepts of gender? Attention will be paid to the role of journalists and the media, writers, intellectuals, and the arts. Comparison with Nazi Germany will be explored.
Fall ITAL2220 S01 15330 W 3:00-5:20(17) (D. Kertzer)

ITAL 2450. Exchange Scholar Program.
Fall ITAL2450 S01 14054 Arranged ‘To Be Arranged’
Spr ITAL2450 S01 23699 Arranged ‘To Be Arranged’

ITAL 2550. Gender Matters.
This course examines the impact of gender as a category of historical analysis. Beginning with Joan Scott’s seminal work on the topic (1986), students assess its subsequent global impact. Two Italian issues are considered in this comparative context: Is gender analysis still gender analysis if the word gender is not employed? How has the study of masculinity, sexuality, and queer studies opened new lines of inquiry? The recasting of women as moral beings and the experiences of Benvenuto Cellini will be used as case studies to examine these questions. Students work in their own geographical area for their final project. Open to seniors and graduate students.
Spr ITAL2550 S01 24639 Th 4:00-6:20(17) (C. Castiglione)

ITAL 2661. Visualizations in the Humanities: From the Cabinet of Curiosities to the Geoparser (AMST 2661).
Interested students must register for AMST 2661.
Fall ITAL2661 S01 15939 Arranged ‘To Be Arranged’

ITAL 2820. Italian Studies Colloquium.
The Italian Studies Colloquium is a forum for an exchange of ideas and work of the community of Italian scholars at Brown and invited outside scholars. Graduate students present their work in progress, and engage the work of faculty and visitors. They are expected to come prepared with informed questions on the topic presented. Presentations in both Italian and English. Instructor permission required.
Fall ITAL2820 S01 14734 W 5:30-7:00(17) (R. Martinez)
Spr ITAL2820 S01 24032 W 5:30-7:00(14) (R. Martinez)

ITAL 2900. Theory and Methods of Foreign Language Teaching.
Theory and practice of foreign language learning and teaching (theory of language, language learning and acquisition, approaches, methods and techniques, curriculum design, materials development, testing and evaluation). In English.
Spr ITAL2900 S01 25228 W 3:00-5:20(14) (C. Abbona-Sneider)

ITAL 2970. Preliminary Examination Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.
Fall ITAL2970 S01 14055 Arranged ‘To Be Arranged’
Spr ITAL2970 S01 23570 Arranged ‘To Be Arranged’

ITAL 2980. Reading and Research.
Courses on special subjects individually planned and supervised. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.
ITAL 2990. Thesis Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.
Fall ITAL2990 S01 14056 Arranged ‘To Be Arranged’
Spr ITAL2990 S01 23571 Arranged ‘To Be Arranged’

Judaic Studies

JUDS 0050A. Believers, Agnostics, and Atheists in Contemporary Fiction.
Contemporary society is divided over issues of religious faith. In recent decades there has been a resurgence of religious faith, while at the same time many have been skeptical and even hostile to religious belief and practice. Others are just not sure what to believe. In this seminar, we will read and discuss contemporary short stories that explore the ways that these ongoing differences over spiritual matters affect people. These works portray a variety of human situations: the affirmation and rejection of religious faith, confusion over the existence and nature of God, and positive and negative views of religious institutions and the clergy who lead them. Writers of both Christian and Jewish background will be studied. Enrollment limited to 20 first year students. FYS WRIT
Fall JUDS0050A S01 15619 MWF 10:00-10:50(03) (D. Jacobson)

JUDS 0050J. Friendship in the Ancient World (RELS 0090F).
Interested students must register for RELS 0090F.
Fall JUDS0050J S01 15922 Arranged ‘To Be Arranged’

How have Jews come to terms with dynamic nature of the Modern World? How has life in new places and new times affected Jewish life? We will look at the changing structures of Jewish identity in the modern period as the Jews came to terms with their new, and ever changing situation in society. Each week a different form of Jewish identity will be examined in its specific historical setting. Among others we will look at a Court Jew, an Enlightened Jew, a Jewish Nationalist, a Jew in a Nazi Ghetto, an Israeli Jew, and a contemporary American Jew. Enrollment limited to 20 first year students. DVPS FYS LILE WRIT
Fall JUDS0050L S01 15824 M 3:00-5:20(15) (A. Teller)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
An intensive introduction to the fundamentals of biblical Hebrew grammar and vocabulary intended to prepare students to read biblical texts in the original language. For students with little or no prior knowledge of Hebrew. Fall JUDS0090A S01 15796 MWF 2:00-2:50(07) (K. Sonia)

JUDS 0090B. Readings in Biblical Hebrew

An introduction to the reading of biblical texts in Hebrew. Reading of selected texts from narrative, law, and poetry in the Hebrew Bible, with a few texts in post-classical Hebrew (the Dead Sea Scrolls and the Mishnah) introduced late in the semester. Intended for students who have completed JUDS 0090A; others should consult the instructor. Spr JUDS0090B S01 25038 MWF 9:00-9:50(02) (K. Sonia)

JUDS 0100. Elementary Hebrew

An introduction to the skills of reading, writing, and conversing in contemporary Israeli Hebrew. Students also read Hebrew texts adapted for their level of Hebrew based on biblical, rabbinic, and modern Hebrew literature, which introduce them to the approaches of Hebrew writers in various periods and to a variety of cultural issues. If registration is closed, please contact the professor and a wait list will be created. This is the first half of a year-long course whose first semester grade is normally a temporary one. Neither semester may be elected independently without special permission. Enrollment limited to 20. Fall JUDS0100 S01 15614 MWF 11:00-11:50(04) (P. Laster) Fall JUDS0100 S01 15614 TTh 10:30-11:50(04) (P. Laster)

JUDS 0200. Elementary Hebrew

This is the second half of a year-long course, an introduction to the skills of reading, writing, and conversing in contemporary Israeli Hebrew. Students also read Hebrew texts adapted for their level of Hebrew based on biblical, rabbinic, and modern Hebrew literature, which introduce them to the approaches of Hebrew writers in various periods and to a variety of cultural issues. If registration is closed, please contact the professor and a wait list will be created. Students must have taken JUDS 0100 for credit to receive credit for this course. Exceptions must be approved by both the academic department and the Committee on Academic Standing. Enrollment limited to 20. Spr JUDS0200 S01 24865 MWF 11:00-11:50(04) (R. Adler Ben Yehuda) Spr JUDS0200 S01 24865 TTh 10:30-11:50(04) (R. Adler Ben Yehuda)

JUDS 0300. Intermediate Hebrew

Develops the skills of reading, writing, and conversing in contemporary Israeli Hebrew at the intermediate level and of reading Hebrew texts of the biblical, rabbinic, and modern periods (biblical stories, rabbinic legends, modern Hebrew poems, stories, essays, newspaper articles). Discussions and compositions focus on the psychological, cultural, political, and social issues reflected in the Hebrew sources that we study. Prerequisite: JUDS 0200 or equivalent. Enrollment limited to 20. If unable to enroll because of closed registration, please contact the professor and a wait list will be created. Fall JUDS0300 S01 15626 TTh 12:00-12:50(12) (P. Laster) Fall JUDS0300 S01 15626 MWF 12:00-12:50(12) (P. Laster)

JUDS 0400. Intermediate Hebrew

Develops the skills of reading, writing, and conversing in contemporary Israeli Hebrew at the intermediate level and of reading Hebrew texts of the biblical, rabbinic, and modern periods (biblical stories, rabbinic legends, modern Hebrew poems, stories, essays, newspaper articles). Discussions and compositions focus on the psychological, cultural, political, and social issues reflected in the Hebrew sources that we study. Prerequisite: JUDS 0300 or equivalent. Enrollment limited to 20. If unable to enroll because of closed registration please contact the professor and a wait list will be created. Spr JUDS0400 S01 24866 TTh 12:00-12:50(05) (R. Adler Ben Yehuda) Spr JUDS0400 S01 24866 MWF 12:00-12:50(05) (R. Adler Ben Yehuda)

JUDS 0500. Writing and Speaking Hebrew

Enables students to improve their skills in speaking and writing Hebrew on a variety of topics. Features advanced work on language structure and active language practice in the classroom. Class discussions of Israeli current events draw on Israeli stories, poems, television programs, and films and on the Israeli press. Students also compose essays and stories in Hebrew. Prerequisite: JUDS 0400 or equivalent. Enrollment limited to 20. Fall JUDS0500 S01 15627 TTh 9:00-10:20(08) (P. Laster)

JUDS 0670. War and Peace in the Hebrew Bible and its Environment

An examination of the role of war and peace in the Hebrew Bible and in texts and art of ancient Israel’s neighbors. Topics include divine beings, war and peace-making; peace treaties; explaining defeat and victory; ideologies of warfare; the treatment of prisoners, corpses and captured bones; the warrior as masculine ideal; civil war and coups; treaty obligations; ritual dimensions of war and peace (e.g., mourning, animal sacrifice, child sacrifice, divination, memorializing war); visual representations of war as propaganda; the idea of a future, eschatological war between the forces of good and the forces of evil. No prerequisites. WRIT.

Spr JUDS0670 S01 25653 TTh 9:00-10:20(08) 'To Be Arranged'

JUDS 0680. Judaism, Christianity, and the Bible.

No book in human history has exercised as much influence as the Bible. Over the past 2,000 years, people have killed and died for the Bible, and it continues to exercise a powerful if contested role in modern politics. Yet how did it achieve this power? This course will trace the development of the Hebrew Bible (Old Testament) from its origins in ancient Israel to its development about five hundred years later as a foundational text of both Judaism and Christianity. The focus will be on how Jews and early Christians throughout antiquity understood and ascribed authority to the Bible. WRIT

Please note: for fall 2013, interested students must register for RELS 2082 (as both JUDS 0090A and JUDS 0090B) and then register for this course. Fall JUDS0680 S01 15893 'To Be Arranged'

JUDS 0752. Becoming French: Minorities and the Challenges of Integration in the French Republic (HIST 0980B). Interested students must register for HIST 0980B. Spr JUDS0752 S01 25157 'To Be Arranged'

JUDS 0820. God and Poetry

Throughout recorded history, poetry has expressed a variety of religious experiences. In this seminar we will read selections from biblical psalms, the biblical book of Job, and contemporary Christian and Jewish poetry, and explore how the language of poetry can serve as a means to convey the nature of relations between humanity and God. We will also seek to understand the underlying universal human psychological experiences reflected in the poems and how religiosity provides a framework for people to deal with those experiences. In our discussion of the contemporary Christian and Jewish poems, we will seek to understand the attempt of the poet to write about religious experience in a secular age. Students with a variety of cultural backgrounds and religious orientations (believers, agnostics, and atheists) are welcome. Enrollment limited to 20. Fall JUDS0820 S01 15799 MWF 1:00-1:50(06) (D. Jacobson)

JUDS 1610. The Archaeology of Jerusalem: From the Origins to the Ottomans.

Jerusalem has earned a special eminence among the famed ancient cities of the world. Its sanctity to Jews, Christians, and Moslems has made the city a focus of discussions and controversies regarding the evolving and changing identities throughout its long urban history. More than 1700 archaeological excavations and surveys in and around the Old City have been conducted over the last 150 years. In this seminar we will examine the material remains of the city from the beginnings in the Chalcolithic period through the end of the Ottoman period in 1917 CE. The contemporary literary sources as well as the more recent scholarly debates and discoveries help us understand the material remains of the relevant periods.

Spr JUDS1610 S01 25044 T 4:00-6:20(16) (K. Galor)

JUDS 1611. The Dead Sea Scrolls

The Dead Sea scrolls have rightly celebrated as changing our fundamental understanding of ancient Jewish and Christian history as well as the Bible. But what is in them, and why do they matter? In this course we will read through most of the scrolls in English translation and cover topics such as: authorship; historical context; religious practice; and...
JUDS 1713. Introduction to Yiddish Culture and Language.

Yiddish was the language spoken by most Jews in Eastern Europe and the countries to which they emigrated (including the U.S., England, South Africa, South American countries, and Israel) from the nineteenth century until after the Holocaust. It was the basis for a transnational Jewish cultural and literary production, and it played a central role in modern Jewish political life. We will explore the history of Yiddish culture and the development of the Yiddish press, literature, and cinema. The connection between Yiddish and modern Jewish politics will also be discussed. Students in the course will also have the opportunity to develop a basic knowledge of the Yiddish language.

Spr JUDS1713 S01 25043 Th 4:00-6:20(17) (R. Rojanski)


What are the relationships between Man, God, and the World? Over the centuries, Jewish mystics have sought and found many different answers to this question. In doing so, they created new spiritual formations for Judaism to supplant rational philosophy as bearer of the truth about the Kosmos. We will examine the most important mystical texts produced by Jews to understand this crucial strand of Jewish - and Human - religious, spiritual, and cultural development. Among other books, we will read from the Zohar, Lurianic Kabbalah, the false messianic testimonies of the Sabbatean movement, Hasidism, and the thought of Martin Buber. Enrollment limited to 20. DVPS LILE

Spr JUDS1740 S01 25062 Th 1:00-2:20(10) (A. Teller)

JUDS 1810. Israeli Literature in Hebrew.

For students interested in reading selections of Hebrew fiction, drama, and poetry. Concentrates on major issues of the State of Israel, for example: the relationship between modernity and tradition, responses to the Holocaust, the Arab-Israeli conflict, and other cultural, social, and political issues. Israeli feature films are viewed and discussed. Conducted in Hebrew. Emphasizes strengthening Hebrew reading, writing, and speaking skills. Prerequisite: JUDS 0500. Students who have not taken JUDS 0500 should see instructor for permission to enroll.

Spr JUDS1810 S01 25042 MF 10:00-10:50(03) (D. Jacobson)

JUDS 1820. Holocaust Literature.

Readings in works of prose and poetry by victims and survivors of the Holocaust that portray experiences in ghettos, in concentration camps, and in hiding. Additional readings in works of the post-war era by survivors and their offspring. Discussion of the moral, psychological, religious, and cultural dimensions of the Holocaust and its ongoing impact on humanity. WRIT

Spr JUDS1820 S01 25041 MF 1:00-1:50(06) (D. Jacobson)


Section numbers vary by instructor. Please see Banner for the correct course reference number (CRN) to use when registering for this course.

JUDS 1975. Honors Thesis Semester I.

First of two semesters working with a faculty member in the Program in Judaic Studies to complete an honors thesis. Instructor permission required. LILE

JUDS 1976. Honors Thesis Semester II.

Second of two semesters working with a faculty member in the Program in Judaic Studies to complete an honors thesis. Instructor permission required. LILE

JUDS 2450. Exchange Scholar Program.

Center for Language Studies

American Sign Language

SIGN 0100. American Sign Language I, II.

Introduces basic ASL conversation. Features core vocabulary, common signing phrases, non-manual components (facial expression, body postures), signing space, fingerspelling, numbers, loan signs, cultural protocols, rules of ASL grammar and structure. Deaf cultural behavior is introduced in the classroom and through readings, videotapes, and deaf community events. This is the first half of a year-long course whose first semester grade is normally a temporary one. Neither semester may be elected independently
without special written permission. The final grade at the end of the course work in SIGN 0200 covers the entire year and is recorded as the final grade for both semesters.

Fall SIGN0100 S01 15078 MTWThF 12:00-12:50(12) (T. Riker)
Fall SIGN0100 S02 16750 MTWThF 9:00-9:50 (T. Riker)

SIGN 0200. American Sign Language I, II.
Introduces basic ASL conversation. Features core vocabulary, common signing phrases, non-manual components (facial expression, body postures), signing space, fingerspelling, numbers, loan signs, cultural protocols, rules of ASL grammar and structure. Deaf cultural behavior is introduced in the classroom and through readings, videotapes, and Deaf community events.

This is the second half of a year-long course. Students must have taken SIGN 0100 to receive credit for this course. If SIGN 0100 was taken for credit then this course must be taken for credit; if taken as an audit, this course must also be taken as an audit. Exceptions to this policy must be approved by both the academic department and the Committee on Academic Standing.

Fall SIGN0200 S01 24420 MTWThF 12:00-12:50(05) (T. Riker)

SIGN 0300. American Sign Language III.
Explores sociolinguistic aspects of ASL within the Deaf cultural context. Focuses on classifiers, linguistic principles related to dialogues and storytelling techniques (e.g., role-shifting, narrative structure). Deaf culture is experienced by attending events and by voluntary service to the Deaf community. Prerequisite SIGN 0200 or placement interview.

Fall SIGN0300 S01 15079 TTh 10:30-11:50(13) (T. Riker)

SIGN 0400. American Sign Language IV.
Intensive use of expressive and receptive input in complex grammatical structures, advanced classifiers, dialogues, and storytelling techniques. Discussion of social factors that give rise to code-switching; regional and ethnic sign variations; social, political, and cultural evolution of U.S. Deaf community. Interaction with Deaf community in directed and non-directed activities. Prerequisite SIGN 0300 or placement interview.

Spr SIGN0400 S01 24421 TTh 10:30-11:50(09) (T. Riker)

SIGN 0500. American Sign Language V.
Focuses on the use of ASL discourse in formal as well as informal settings. Students will explore and present the advanced ASL genres of public speaking, artistic expression, formal discussion, interview, and narrative projects. Development of ASL vocabulary in specialized area not covered in previous courses. Prerequisite: ASL IV (SIGN 0400) or equivalent.

Fall SIGN0500 S01 15080 TTh 1:00-2:20(10) (T. Riker)

Independent study in an area of special interest to the student, with close guidance by a member of the faculty, and leading to a major paper/project. Required of candidates for honors, and recommended for third year students. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Prerequisite: SIGN 0500 or instructor permission.

Arabic

ARAB 0100. First-Year Arabic.
Builds basic listening, speaking, reading, and writing skills, introducing the Arabic language in its cultural environment. Six contact hours per week, with an emphasis on grammar and communication, plus written, audio, and video assignments outside of class. This is the first half of a year-long course whose first semester grade is normally a temporary one. Neither semester may be elected independently without special written permission. The final grade at the end of the course work in ARAB 0200 covers the entire year and is recorded as the final grade for both semesters. If course is full, please sign the wait list in Room 205, 155 Angell Street. Enrollment limited to 18.

Fall ARAB0100 S01 14381 MW 9:00-9:50(15) (M. Christoff)
Fall ARAB0100 S01 14381 TTh 9:00-10:20(15) (M. Christoff)
Fall ARAB0100 S02 14382 MWF 2:00-2:50(15) (A. Hassan)
Fall ARAB0100 S02 14382 TTh 2:30-3:50(15) (A. Hassan)
Fall ARAB0100 S03 14383 TTh 10:30-11:50(15) (A. Hassan)
Fall ARAB0100 S03 14383 MWF 11:00-11:50(15) (A. Hassan)

ARAB 0110. Egyptian Arabic.
This course will introduce students to one of the major colloquial variants of contemporary Arabic. The native language of Egyptian citizens, used predominantly in everyday communication, has long since become widely understood throughout the Arab world, since popularized by the media and pop culture. The beginning oral proficiency that students will acquire in this course, by examining a range of sources, from textbooks to short stories, movies, social media posts and personal accounts by guest-speakers, and by practicing conversation in class, will facilitate their communication with native speakers of Arabic in a variety of informal situations. Prerequisite: ARAB 200. Enrollment limited to 18.

Fall ARAB0110 S01 16569 TTh 1:00-2:20(10) (A. Hassan)

ARAB 0200. First-Year Arabic.
Builds listening, speaking, reading, and writing skills, at the low intermediate level of Arabic proficiency. Six contact hours per week, with an emphasis on grammar and communication, plus written, audio, and video assignments outside of class. This is the second half of a year-long course. Students must have taken ARAB 0100 to receive credit for this course. If ARAB 0100 was taken for credit then this course must be taken for credit; if taken as an audit, this course must also be taken as an audit. Exceptions to this policy must be approved by both the academic department and the Committee on Academic Standing. Enrollment limited to 18.

Spr ARAB0200 S01 24423 MWF 9:00-9:50(02) (M. Christoff)
Spr ARAB0200 S01 24423 TTh 10:00-10:50(02) (M. Christoff)
Spr ARAB0200 S02 24424 MWF 2:00-2:50(07) (A. Hassan)
Spr ARAB0200 S02 24424 TTh 2:30-3:50(07) (A. Hassan)
Spr ARAB0200 S03 24425 TTh 10:30-11:50(04) (A. Hassan)
Spr ARAB0200 S03 24425 MWF 11:00-11:50(04) (A. Hassan)

ARAB 0300. Second-Year Arabic.
Develops listening, speaking, reading and writing skills at the intermediate level of language proficiency through extensive use of various texts and multimedia. Promotes a better understanding of the Arabic cultural traditions. Six contact hours weekly, plus written, audio, and video assignments outside of class. Prerequisite: ARAB 0200. This is the first half of a year-long course whose first semester grade is normally a temporary one. Neither semester may be elected independently without special written permission. The final grade at the end of the course work in ARAB 0400 covers the entire year and is recorded as the final grade for both semesters. If course is full, please sign the wait list in Room 205, 155 Angell Street.

Fall ARAB0300 S01 15181 MWF 10:00-10:50(03) (M. Christoff)
Fall ARAB0300 S01 15181 TTh 10:30-11:50(03) (M. Christoff)
Fall ARAB0300 S02 15182 MWF 1:00-1:50(06) (M. Faiza)
Fall ARAB0300 S02 15182 TTh 1:00-2:20(06) (M. Faiza)

ARAB 0400. Second-Year Arabic.
Develops listening, speaking, reading and writing skills at the intermediate level of language proficiency through extensive use of various texts and multimedia. Promotes a better understanding of the Arabic cultural traditions. Six contact hours weekly, plus written, audio, and video assignments outside of class. Prerequisite: ARAB 0300. This is the second half of a year-long course. Students must have taken ARAB 0300 to receive credit for this course. If ARAB 0300 was taken for credit, then this course must be taken for credit; if taken as an audit, this course must also be taken as an audit. Exceptions to this policy must be approved by both the academic department and the Committee on Academic Standing. Enrollment limited to 18.

Spr ARAB0400 S01 24426 MWF 10:00-10:50(03) (M. Christoff)
Spr ARAB0400 S01 24426 TTh 10:30-11:50(03) (M. Christoff)
Spr ARAB0400 S02 24427 MWF 1:00-1:50(06) (M. Faiza)
Spr ARAB0400 S02 24427 TTh 1:00-2:20(06) (M. Faiza)

ARAB 0500. Third-Year Arabic.
Offers comprehensive training in listening, speaking, reading, and writing, with grammar review as needed. Broadens students’ perspective of Arabic.
culture using selections from the classical and modern traditions of Arabic writing and various art forms. Five contact hours weekly. Prerequisite: ARAB 0400.

ARAB 0600. Third-Year Arabic.
Offers comprehensive training in listening, speaking, reading, and writing with grammar review as needed. Broadens students’ perspective of Arabic culture with selections from the classical and modern traditions of Arabic writing and various art forms. Five contact hours weekly. Prerequisite: ARAB 0500.

ARAB 0700. Advanced Arabic: Tales of the City.
The Arab city, current site of a major political upheaval, is the central theme of this integrated-skill language and culture course. Images of cities, as multifaceted as the people who inhabit them, animate cinema screens and daily news reports, inspire masters of writing, artists, and musicians, arouse political activism. By engaging the complex representation of the urban theme in contemporary discursive and art forms, this course will enhance students’ understanding of the dynamics of urban politics and culture in the Middle East, while building a content-specific lexicon and advanced communicative ability. Prerequisite: ARAB 0600, or an equivalent. Enrollment limited to 12.

ARAB 0800. Fourth-Year Arabic.
Builds advanced Arabic competence, using communicative approaches to the learning of content, function, and accuracy. Guided reading, writing and research. Three contact hours weekly. Prerequisite: ARAB 0700.

ARAB 0900. Love, Revolution and Nostalgia in Modern Arabic Poetry.
This course aims to introduce students to the most prominent Arab poets of the 20th and 21st century. Students will strengthen their language skills while reading and discussing texts by major modern poets from the Middle East and North Africa. They will explore a range of themes from politics and oppression, to love, eroticism, personal freedom and women’s liberation. By the end of the course, students will be familiar with the themes, styles and development of modern Arabic poetry, in addition to gaining a deeper exposure to the culture of the Arab world. Conducted in Modern Standard Arabic for advanced students. Enrollment limited to 12. DVPS

ARAB 1900. Special Topics in Arabic Language, Literature, and Culture.
Advanced level integrated skill course focusing on specific reading and writing topics derived from the traditions and arts of the Arabic language. Course prerequisites include advanced capacity in Arabic grammar and reading comprehension. Enrollment limited to 10.

Catalan

CATL 0100. Introduction to Catalan.
CATL100 will provide students with a basic foundation in Catalan through the practice of the four fundamental communicative skills: speaking, listening comprehension, reading and writing, but also by mediating and interacting in class. Students can expect to be able to maintain simple conversations by the end of the course. Additionally, the subject will provide an exploration of the Catalan culture, while will be carried out through cinema, performance art, architecture, design, literature and sociopolitical contents. Additionally, academic bibliography on various subjects will be available, opening the doors to the fascinating artistic heritage and current production in the Catalan-speaking areas.

CATL 0200. Catalan Language and Culture.
An intermediate course which introduces students to Catalan culture and allows them to review and extend their knowledge of all basic patterns (e.g. grammar, vocabulary, phonetics, sociocultural norms) of the language. Students will develop their oral and written skills by describing, narrating, and presenting arguments. They will work with texts and audio-visual material that will provide them with a deeper understanding of Catalan literature, culture, and contemporary society. Classes will be conducted in Catalan. Therefore a basic knowledge of Catalan literature is a prerequisite or students may request the instructor’s permission to take the course.

CATL 0300. Introduction to Catalan Culture.
The course will begin with an introduction to Catalan grammar. After students have a basic command of the language, they will be encouraged to read a wide range of texts written in Catalan related to many different topics. The texts have been selected not only for their linguistic value, but also because of the cultural aspects they introduce. The course will include activities designed to teach students about Catalonia, its culture and its traditions. For example, students will have the opportunity to listen to songs, watch films, news reports, etc. All texts will be provided by the professor and handed out in class. Students are welcome to bring to class any Catalan text of their interest. Classes will be conducted in Catalan as much as possible. Therefore, some knowledge of another Latin language is required.

EINT 2100. Academic Discourse for Internationals.
This course develops the English skills of first-year international graduate students who are preparing to be teaching assistants. Students improve their listening comprehension and fluency in conversational interactions typical of academic settings. Areas of spoken English that are addressed include pronunciation, stress patterns, intonation, vocabulary, and structure. Instructor permission required.

EINT 2200. Academic Interactions.
This course develops the English language skills of first-year international graduate students who are preparing to be teaching assistants. Students improve their fluency and expression of complex ideas in a variety of linguistic situations typical of classroom interactions. Students also increase their control of vocabulary, pronunciation and listening comprehension when communicating with American undergraduates. Instructor permission required.

EINT 2300. Negotiating an American Classroom.
In this course, international graduate students increase their abilities to communicate accurately and fluently in English with American undergraduates. International students develop their ability to interact, in culturally appropriate ways, in a variety of teaching situations common to an institution of higher education, where they are responsible for expressing and explaining complex information and ideas in English. Instructor permission required.

EINT 2400. Speaking Professionally for Internationals.
This course develops the English communication skills of international graduate students with an emphasis on intelligibility of speech and clarity of expression in a variety of teaching and professional situations (e.g. presenting material, responding to questions, directing discussions). Students develop increased facility of English in extended discourse when they are the authority in a teaching or other professional context. Instructor permission required.
### Hindi-Urdu

**HNDI 0100. Beginning Hindi or Urdu.**

Introduces conversation, reading, and writing of modern standard Hindi and the Devanagari script. Those who already know Devanagari but have rusty conversation skills may join the class second semester; obtain instructor's permission during the first semester. Those who prefer to learn Urdu and the Persian script should contact the instructor.

- Fall: HNDI0100 S01 14159 TTh 12:00-12:50 (12) (A. Koul)
- Spring: HNDI0100 S01 14159 MTWThF 12:00-12:50 (12) (A. Koul)

**HNDI 0200. Beginning Hindi or Urdu.**

Introduces conversation, reading, and writing of modern standard Hindi and the Devanagari script. Those who already know Devanagari but have rusty conversation skills may join the class second semester; obtain instructor's permission during the first semester. Those who prefer to learn Urdu and the Persian script should contact the instructor. Prerequisite: HNDI 0100.

- Spring: HNDI0200 S01 23648 TTh 12:00-12:50 (05) (A. Koul)
- Spring: HNDI0200 S01 23648 MTWThF 12:00-12:50 (05) (A. Koul)

**HNDI 0300. Intermediate Hindi-Urdu.**

A continuation of HNDI 0100-0200, which is a prerequisite. Introduces the variation of the Arabic script used for Urdu. Prepares students to communicate in written and spoken language. Activities are conducted in Hindi/Urdu. Meets four hours weekly.

- Fall: HNDI0300 S01 14160 TTh 4:00-4:50 (06) (A. Koul)
- Fall: HNDI0300 S01 14160 MTWThF 1:00-1:50 (06) (A. Koul)

**HNDI 0400. Intermediate Hindi-Urdu.**

A continuation of HNDI 0100-0200. Introduces the variation of the Persian script used for Urdu. Prepares students to communicate in written and spoken language. Activities are conducted in Hindi/Urdu. Meets four hours weekly. Prerequisite: HNDI 0300.

- Fall: HNDI0400 S01 23647 TTh 4:00-4:50 (06) (A. Koul)
- Fall: HNDI0400 S01 23647 MTWThF 1:00-1:50 (06) (A. Koul)

**HNDI 1080. Advanced Hindi-Urdu.**

Each student follows an independent reading list determined in consultation with the instructor. The readings may include folk tales, journalistic prose, 20th-century literature, classical Urdu poetry of the 17th to 19th centuries, or subjects in nonfction. The class meets together three hours weekly for discussion. Each student also spends one hour weekly with the instructor. Prerequisite: HNDI 0400.

- Fall: HNDI1080 S01 14161 Arranged (A. Koul)
- Spr: HNDI1080 S01 23648 Arranged (A. Koul)

**PRSN 0200. Basic Persian.**

Fast-paced course for beginners. Course stresses acquisition of Persian alphabet and basic grammatical patterns, beginning levels of speaking, listening, reading, and writing. Strong emphasis on the links between language and culture.

- Fall: PRSN0200 S01 14123 TTh 1:00-2:20 (10) (I. Anvar)
- Fall: PRSN0200 S01 14123 MW 1:00-1:50 (10) (I. Anvar)

**PRSN 0300. Intermediate Persian Language and Culture.**

Expands students' proficiency in modern Persian language and culture; develops listening, speaking, reading and writing skills at the intermediate level through various texts and multimedia. Prerequisite: PRSN 0200.

- Fall: PRSN0300 S01 14125 TTh 11:00-12:50 (13) (I. Anvar)

**PRSN 0400. Advanced Persian Language and Culture I.**

For students who have completed PRSN 0400 or have acquired language skills above the intermediate level through contact with Persian in other ways. The main goal of this course is to improve speaking, listening, reading and writing skills and promote exposure to the culture. It will enable students to expand their knowledge of the language by studying samples of modern and classical Persian literature in order to advance toward mastery of contemporary literature. The course will motivate students to communicate both in written and spoken Persian by utilizing the adequate grammatical order and correct vocabulary. Prerequisite: PRSN 0400.

- Fall: PRSN0400 S01 14159 M 2:00-2:50 (17) (I. Anvar)
- Fall: PRSN0400 S01 14142 W 10:00-11:50 (17) (I. Anvar)

**PRSN 0500. Advanced Persian Language and Culture II.**

Designed for students who have completed PRSN 0500 or have acquired language skills above the advanced level through other means. The main goal of the course is to improve speaking, listening, reading and writing skills and promote exposure to the language and culture through in-depth study of samples of Persian literature, history, journals, newspapers, radio and TV material to advance toward mastery of contemporary literature. Students will be motivated to communicate both in written and spoken Persian by utilizing adequate grammatical order and vocabulary. Activities will include poetry reading, informal gatherings and translation from and into Persian. Prerequisite: PRSN 0500.

- Spring: PRSN0500 S01 23608 Arranged (I. Anvar)

**PRSN 1200. Iranian Cinema: Before and After the Islamic Revolution.**

This course provides an overview of Iranian Cinema in general and explores in detail Iranian cinema after the Islamic revolution. It explores the politics, history, techniques and the art of cinema of the past several decades in Iran. Classes consist of screenings, discussions and lectures. Conducted in English, open to all students. Enrollmant limited to 25. DVPS LILE

- Fall: PRSN1200 S01 14140 W 3:00-5:20 (17) (I. Anvar)
- Spr: PRSN1200 S01 23609 W 3:00-5:20 (14) (I. Anvar)

**Latin American Studies**

**LAST 1510M. New Latin American Populisms in Comparative Perspective: Bolivia, Argentina, Venezuela & Ecuador.**

Seminar: this course is based on the notion that there is more to populism and old dichotomies such as rational/irrational, rural/urban or modern/traditional. It will discuss and identify a more precise definition of populism, characterize the "new Latin American populism" and compare it with the classic populisms of the Post War era and the "neo-populism" of the nineties. It will discuss the commonalities and differences of these regimes for complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
in terms of their coalitions of support and their public policies. Limited to 25 juniors and seniors.

Fall LAST1510MS S01 16614 F 3:00-5:20(05) (M. Casullo)

For Latin American Studies concentrators writing senior projects or honors theses.

For Latin American Studies concentrators writing senior projects or honors theses.

LAST XLIST. Courses of Interest to Students Concentrating in Latin American Studies.

Literary Arts

LITR 0110A. Fiction I.
A workshop for students who have little or no previous experience in
writing fiction. Enrollment limited to 17 per section. This course is limited to
undergraduates. S/NC. WRIT
Fall LITR0110A S01 14666 T 4:00-6:20(15) (M. Luby)
Fall LITR0110A S02 14667 W 3:00-5:20(15) (E. Abrams)
Fall LITR0110A S03 14668 Th 5:00-7:20(15) (M. Faerber)
Fall LITR0110A S04 14669 F 3:00-5:20(15) (K. Puig)
Spr LITR0110A S01 23935 M 5:30-7:50(15) 'To Be Arranged'
Spr LITR0110A S02 23936 T 4:00-6:20(16) 'To Be Arranged'
Spr LITR0110A S03 23937 Th 5:00-7:20(12) 'To Be Arranged'
Spr LITR0110A S04 23938 F 3:00-5:20(15) 'To Be Arranged'

LITR 0110B. Poetry I.
A workshop for students who have little or no previous experience in
writing poetry. Enrollment limited to 17 per section. This course is limited to
undergraduates. S/NC. WRIT
Fall LITR0110B S01 14670 M 5:30-7:50(17) (J. Caffrey)
Fall LITR0110B S02 14671 T 4:00-6:20(17) (P. Giebel)
Fall LITR0110B S03 14672 Th 5:00-7:20(17) (E. Mena-Landry)
Fall LITR0110B S04 14673 F 3:00-5:20(17) (B. Lutton)
Fall LITR0110B S05 16434 T 4:00-6:20(18) (P. Richards)
Spr LITR0110B S01 23939 M 5:30-7:50(15) 'To Be Arranged'
Spr LITR0110B S02 23940 T 4:00-6:20(16) 'To Be Arranged'
Spr LITR0110B S03 23941 Th 5:00-7:20(17) 'To Be Arranged'
Spr LITR0110B S04 23942 F 3:00-5:20(15) 'To Be Arranged'

LITR 0110D. Digital Language Art I.
Project-oriented workshop for writers, visual/sound artists, filmmakers and
programmers who wish to explore digital media techniques. No experience
working in this field (or with computer programming) required. You’ll learn
through doing, reading, talking and collaborating on works in various
traditions. Enrollment limited to 17. S/NC. WRIT
Fall LITR0110D S01 14674 Th 12:00-2:20(10) (C. Novello)
Spr LITR0110D S01 23943 F 12:00-2:20(15) 'To Be Arranged'

LITR 0110E. Screenwriting I.
A workshop for students who have little or no previous experience in
writing screenplays. This course is limited to undergraduates. S/NC.
Enrollment limited to 17.
Fall LITR0110E S01 14677 T 12:00-2:20(10) (L. Colella)
Spr LITR0110E S01 23944 Th 12:00-2:20(10) 'To Be Arranged'

LITR 0210A. Fiction Writing II.
Topics often include stylistic matters related to tone and point of view,
and structural matters like controlling switches in time. See general
course description above for course entry procedures for all intermediate
workshops. Enrollment limited to 17. Instructor permission required. S/NC.
WRIT
Fall LITR0210A S01 14678 T 4:00-6:20(18) (M. Awad)
Fall LITR0210A S02 14679 W 3:00-5:20(18) (J. Howard)
Spr LITR0210A S01 23947 T 4:00-6:20(16) 'To Be Arranged'
Spr LITR0210A S02 23948 W 3:00-5:20(14) (J. Howard)

LITR 0210B. Poetry Writing II.
Emphasis is placed on verse strategies, meter, rhythm, imagery and
rhythm. Writing includes frequent exercises in various poetic traditions.
See general course description above for course entry procedures for all
intermediate workshops. Written permission required. S/NC. WRIT
Fall LITR0210B S01 14680 T 4:00-6:20(18) (D. Gromadzki)
Spr LITR0210B S01 23949 T 4:00-6:20(16) 'To Be Arranged'

LITR 0210D. Electronic Writing II.
Project-oriented workshop for writers, visual/sound artists, filmmakers, and
programmers wishing to explore techniques for effective and innovative
use of text in digital media. Topics include hypertext narrative, kinetic
poetry, and recombinant and computer-generated texts. Collaboration
encouraged. Work sample (writing, programming, website) due on first day
of semester. Enrollment limited to 17. Instructor permission required. S/NC.
WRIT
Spr LITR0210D S01 23950 T 4:00-6:20(16) 'To Be Arranged'

LITR 0210E. Screenwriting II.
Emphasis is placed on filmic devices, such as dialogue, voice-over,
montage and time. Writing includes frequent exercises. See general
course description above for course entry procedures for all intermediate
workshops. This course is limited to undergraduates. Enrollment limited to
17. Instructor permission required. S/NC.
Fall LITR0210E S01 14683 M 3:00-5:20(15) (A. Ferraiolo)
Spr LITR0210E S01 23952 T 4:00-6:20(16) 'To Be Arranged'

0710. Writers on Writing Seminar.
Offers students an introduction to the study of literature (including works
from more than one genre) with special attention given to a writer’s way
of reading. This course will include visits to the course by contemporary
writers who will read to the class and talk about their work. Enrollment
limited to 20 first year students. FYS WRIT
Fall LITR0710 S01 14684 Th 2:30-3:50(11) (J. Howard)
Spr LITR0710 S01 23953 TTh 2:30-3:50(11) (F. Gander)

LITR 1010A. Advanced Fiction.
The writing of short stories or longer works in progress in regular
installments, along with appropriate exercises and reading assignments.
See general course description above for course entry procedures for all
advanced workshops. Written permission required. S/NC. WRIT
Fall LITR1010A S01 14685 Th 10:30-12:50(13) (M. Steinbach)
Fall LITR1010A S02 16348 W 3:00-5:20(17) (J. Wideman)
Spr LITR1010A S01 23954 T 12:00-2:20(10) (M. Steinbach)
Spr LITR1010A S02 23955 T 4:00-6:20(16) (J. Howard)

LITR 1010B. Advanced Poetry.
Course work includes a body of exercises, close reading of poetry,
workshop conversations and conferences. See general course description
above for course entry procedures for all advanced workshops. Instructor
permission required. S/NC. WRIT
Fall LITR1010B S01 14686 W 3:00-5:20(17) (M. Harper)
Spr LITR1010B S01 23956 M 3:00-5:20(13) (P. Nelson)

LITR 1010D. Advanced Electronic Writing.
An advanced experimental workshop in writing for digital media. Students
should have some experience of working with computer-based authoring
tools for generating content. Writing for digital media is taken to mean any
writing for which electronic supports are vital: to its literary aesthetic, to its
cultural viability as (potential) literary art. The primary aim of the course is to
produce a work of writing in digital media, but associated readings and
discussion will draw out the problems associated with this contemporary
challenge to traditional practices. Prerequisite one of the following: LITR
1010D, 1010A, 1010B, 1010C, 1010E, 1011G (or related experience).
Enrollment limited to 12. Instructor permission required. S/NC. WRIT
Fall LITR1010D S01 14687 W 3:00-5:20(17) (J. Cayley)

LITR 1010E. Advanced Screenwriting.
The writing of short screenplays or a longer work in progress in regular
installments, along with a body of exercises, workshop conversations
and conferences. See general course description above for course entry
procedures for all advanced workshops. Instructor permission required. S/NC.
WRIT
LITR 1010F. Advanced Translation.
The course explores translation in various contexts, focusing on the challenges and techniques involved in translating texts from one language to another. Students will engage with theoretical approaches to translation and practice by translating short texts, analyzing the choices made in the translation process, and discussing the cultural and political implications of translation.

Fall LITR1010F S01 14688 T 4:00-5:20(18) (A. Ferrario)

LITR 1150V. The Novel in Brief.
This workshop/seminar takes the novel form on a wild ride as it investigates concepts such as compression, fragmentation, miniaturization, and deconstruction in the construction of narratives. Students will be required to write their own brief novel over the course of the semester. Writing sample due at first class session. Instructor permission given after review of manuscripts. Enrollment limited to 12. WRIT
Fall LITR1150V S01 16432 W 3:00-5:20(17) (A. Gladman)

LITR 1150X. Reading, Writing and Thinking.
We will explore various ways to engage with a work of art in order to fuel one's imagination and projects. Close textual reading of several books with writing assignments based on the readings. Writers will include Woolf, Stein, Beckett, Coetzee, Kertesz and others. Writing samples due at first class session. Instructor permission given after review of manuscripts. Enrollment limited to 12. S/NC. WRIT
Spr LITR1150X S01 24120 Th 12:00-2:20(10) (A. Maso)

LITR 1200. Writers on Writing.
Offers students an introduction to the study of literature (including works from more than one genre) with special attention given to a writer's way of reading. This course will include visits to the course by contemporary writers, who will read to the class and talk about their work. Enrollment is limited to 30 students.
Fall LITR1200 S01 14693 Th 2:30-3:50(11) (A. Gladman)
Spr LITR1200 S01 23959 Th 2:30-3:50(11) (B. Evenson)

LITR 1220E. Dada and Surrealism.
Two of the most famous modernist movements, studied through their writings, their visual arts, their performances, and their manifestoes; their origins and influence; their place in history. S/NC.
Spr LITR1220E S01 24123 W 3:00-5:20(14) (L. Swensen)

LITR 1230E. Form and Theory of Fiction.
"Form and Theory of Fiction" offers an exploration of narrative theories directed particularly at creative writers, in conjunction with a hands-on examination of contemporary fictional narrative practices. Theoretical readings include historical essays on fiction and work by Gaston Bachelard, Mieke Bal, Gilles Deleuze, and others. Enrollment limited to 20.
Spr LITR1230E S01 23987 W 3:00-5:20(17) (B. Evenson)

With the theme of "Slavery and Justice" in recent Brown University review, [4] "Master Poets of Apartheid Streets: Perpetual Resistance against de jure and de facto Segregation" is the formal and precise embouchure as Critical Realism which legislates as antidote to pernicious social, economic and educational racism: the aesthetic stance of this seminar is "An Integer Is a Whole Number." Through close attention to the conventions of poetry as praxis by these four master poets, in social context, the modality of this study is poetic discourse (what Frederick Douglass called "a sacred effort" in Douglass' description of President A. Lincoln's 'Second Inaugural.' Peripheral insights will be provided by Brown University researchers of the past: Charles H. Nichols, Winthrop Jordan, Richard Slotkin, in their three dissertations, and James R. Patterson's most recent book on "Brown v. Board of Education." Written permission required. Enrollment limited to 20. S/NC.
Spr LITR1230G S01 14694 Th 4:00-6:20(16) (M. Harper)

LITR 1230I. The Documentary Vision in New Literature of the Americas.
A study of genre-defiant works, lyric treatments, atypical narratives, film works, etc., including works by Anne Carson, Elena Poniatowska, W.S. Merwin, Maggie Nelson, Raoul Zurita and others. Enrollment limited to 20. Spr LITR1230I S01 24121 M 3:00-5:20(13) (C. Wright)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Chinese poetics (such as was taken up by Pound and became influential in English literature) - and on theories that we can use for our practice, from: Fenollosa, Foucault, Derrida, and others. Enrollment limited to 20. Spr LITR1230J S01 23960 W 3:00-5:20(14) (J. Cayley)

**LITR 1300. Independent Study in Reading, Research, and Writing About Literature.**
Provides advanced students with an opportunity to pursue tutorial instruction oriented toward a literary research topic.

**LITR 1310. Independent Study in Creative Writing.**
Offers tutorial instruction oriented toward some significant work in progress by the student. Typically taken by honors or capstone candidates in the antepenultimate or penultimate semester. See instructor to seek permission during the semester before undertaking the course of study. One advanced-level workshop is prerequisite. S/N.C.

**LITR 1410A. Fiction Honors.**
A workshop setting for the completion of theses by advanced writers of fiction. See general course description above for course entry procedures for all honors workshops. Instructor permission required. Enrollment limited to 12 senior Literary Arts concentrators. S/N.C. Spr LITR1410A S01 23961 Th 12:00-2:20(10) (M. Steinbach)

**LITR 1510. Honors Independent Study in Creative Writing.**
Provides tutorial instruction for students completing their theses or capstone projects. Typically taken by honors or capstone candidates in their final semester. See instructor to seek permission during the semester before undertaking the course of study. S/N.C.

**LITR 2010A. Graduate Fiction.**
Advanced practice of the art: a writing seminar, limited to graduate students in Literary Arts. Emphasis is placed on developing a better understanding of the creative process, strategies and forms. Written permission required. S/N.C. Fall LITR2010A S01 14695 M 12:00-2:20(12) (T. Field) Spr LITR2010A S01 23962 F 12:00-2:20(05) (C. Maso)

**LITR 2010B. Graduate Poetry.**
Advanced practice of the art: a writing seminar, limited to graduate students in Literary Arts. Emphasis is placed on developing a better understanding of the creative process, strategies and forms. Written permission required. S/N.C. Fall LITR2010B S01 14696 W 12:00-2:20(12) (L. Swensen) Spr LITR2010B S01 23963 W 12:00-2:20(05) (C. Wright)

**LITR 2230. Graduate Independent Study in Reading, Research, and Writing About Literature.**
Provides graduate students with an opportunity to pursue tutorial instruction oriented toward a literary research topic.

**LITR 2310. Graduate Independent Studies in Literary Writing.**
Offers tutorial instruction oriented toward some significant work in progress by the graduate student. S/N.C.

**LITR 2410. Graduate Thesis Independent Study in Literary Writing.**
Provides tutorial instruction for graduate students completing their graduate creative theses. Typically taken in the final semester. See instructor to seek permission during the semester before undertaking the course of study. S/N.C.

**LITR 2450. Exchange Scholar Program.**

**Mathematics**

**MATH 0010B. Exploring the Fourth Dimension.**
This interdisciplinary seminar explores all the mathematics students have seen or ever will see, concentrating on an engaging topic that begins with elementary geometry and branches out to literature, history, philosophy, and art as well as physics and other sciences. Guideposts to the fourth dimension include Salvador Dalí’s Corpus Hypercubus, Edwin Abbott Abbott’s Flatland, and Jeff Weeks’ The Shape of Space. Students will investigate new mathematical topics such as combinatorics, regular polytopes, topology, and non-Euclidean geometry. Although students will use computers for visualization, no computer experience is required. There are no specific mathematical prerequisites except curiosity and a willingness to participate actively. Students considering concentrations in humanities, social sciences, and the arts are especially invited to this first-year seminar. Enrollment limited to 20 first year students. FYS Fall MATH0010ES01 14981 TTh 2:30-3:50(11) (T. Banchoff)

**MATH 0050. Analytic Geometry and Calculus.**
MATH 0050 and 0060 provide a slower-paced introduction to calculus for students who require additional preparation. Presents the same calculus topics as MATH 0090, together with a review of the necessary precalculus topics. Students successfully completing this sequence are prepared for MATH 0100. Prerequisite: for MATH 0050 is written permission; for MATH 0060 is MATH 0050 or written permission. S/N.C only. Fall MATH0050 S01 14983 MWF 9:00-9:50(02) (D. Wiely)

**MATH 0060. Analytic Geometry and Calculus.**
A slower-paced introduction to calculus for students who require additional preparation. Presents the same calculus topics as MATH 0090, together with a review of the necessary precalculus topics. Students successfully completing this sequence are prepared for MATH 0100. Prerequisite: for MATH 0050 is written permission; for MATH 0060 is MATH 0050 or written permission. S/N.C only. Spr MATH0060 S01 24473 MWF 9:00-9:50(02) 'To Be Arranged'

**MATH 0070. Calculus with Applications to Social Science.**
A one-semester survey of calculus for students who wish to learn the basics of calculus for application to social sciences or for cultural appreciation as part of a broader education. Topics include functions, equations, graphs, exponentials and logarithms, and integration and differentiation; applications such as marginal analysis, growth and decay, optimization, and elementary differential equations. May not be taken for credit in addition to MATH 0090. S/N.C only. Fall MATH0070 S01 14984 TTh 9:00-10:20(08) (A. Landman)

**MATH 0090. Introductory Calculus, Part I.**
An intensive course in calculus of one variable including limits, differentiation, maxima and minima, the chain rule, rational functions, exponential functions, integration; applications such as marginal analysis, growth and decay, optimization, and elementary differential equations. May not be taken for credit in addition to MATH 0090. S/N.C only. Fall MATH0090 S01 14985 MWF 9:00-9:50(15) (X. Chen) Fall MATH0090 S02 14986 MWF 10:00-10:50(15) (D. Katz) Fall MATH0090 S03 14987 MWF 12:00-12:50(15) (N. Ma) Fall MATH0090 S04 14988 TTh 9:00-10:20(15) (W. Hindes) Fall MATH0090 S05 14989 Th 2:30-3:50(15) (Q. Cheng) Fall MATH0090 S06 14990 TTh 10:30-11:50(15) (A. Culic) Spr MATH0090 S01 24474 MWF 9:00-9:50(15) 'To Be Arranged' Spr MATH0090 S02 24475 MWF 2:00-2:50(15) 'To Be Arranged'

**MATH 0100. Introductory Calculus, Part II.**
A continuation of the material of MATH 0090 including further development of integration, inverse trigonometric and logarithmic functions, techniques of integration, and applications. Other topics include infinite series, power series, Taylor's formula, introduction to differential equations, and numerical methods. MATH 0090 and 0100 or the equivalent are recommended for all students intending to concentrate in the sciences or mathematics. Lectures plus one 80-minute section arranged. S/N.C only. Fall MATH0100 S01 15004 MWF 9:00-9:50(17) (H. Tran) Fall MATH0100 S02 15005 MWF 12:00-12:50(17) (I. Minevich) Fall MATH0100 S03 15006 MWF 1:00-1:50(17) (M. Yin) Fall MATH0100 S04 15007 TTh 10:30-11:50(17) (J. Hoffstein) Fall MATH0100 S05 15008 TTh 2:30-3:50(17) (E. Kiral) Spr MATH0100 S01 24480 MWF 10:00-10:50(16) (D. Katz) Spr MATH0100 S02 24481 MWF 12:00-12:50(16) 'To Be Arranged' Spr MATH0100 S03 24482 MWF 2:00-2:50(16) 'To Be Arranged' Spr MATH0100 S04 24483 TTh 10:30-11:50(16) 'To Be Arranged'

**MATH 0170. Advanced Placement Calculus.**
Begins with a review of fundamentals of calculus and includes infinite series, power series, paths, and differential equations of first and second order. Placement in this course is determined by the department on the basis of high school AP examination scores or the results of tests given by
the department during orientation week. May not be taken in addition to MATH 0100.
Fall MATH0170 S01 15019 MWF 2:00-2:50(18) (P. McGrath)
Fall MATH0170 S02 15020 MWF 11:00-11:50(18) (D. Katz)
Fall MATH0170 S03 15021 TTh 9:00-10:20(18) (C. Kuan)

MATH 0180. Intermediate Calculus.
Three-dimensional analytic geometry. Differential and integral calculus for functions of two or three variables: partial derivatives, multiple integrals, line integrals, Green’s Theorem, Stokes’ Theorem. Prerequisite: MATH 0100, 0170, or 0190.
Fall MATH0180 S01 15022 MWF 12:00-12:50(15) (X. Chen)
Fall MATH0180 S02 15023 MWF 1:00-1:50(15) (W. Wong)
Fall MATH0180 S03 15024 MWF 2:00-2:50(15) (X. Chen)
Spr MATH0180 S01 24492 MWF 10:00-10:50(17) ‘To Be Arranged’
Spr MATH0180 S02 24493 MWF 11:00-11:50(17) (R. Broker)
Spr MATH0180 S03 24494 MWF 12:00-12:50(17) ‘To Be Arranged’

MATH 0190. Advanced Placement Calculus (Physics/Engineering).
Covers roughly the same material and has the same prerequisites as MATH 0170, but is intended for students with a special interest in physics or engineering. The main topics are: calculus of vectors and paths in two and three dimensions; differential equations of the first and second order; and infinite series, including power series and Fourier series. The extra hour is a weekly problem session.
Fall MATH0190 S01 15028 MWF 1:00-1:50(17) (B. Viray)
Fall MATH0190 S02 15029 MWF 2:00-2:50(17) (S. Molcho)

MATH 0200. Intermediate Calculus (Physics/Engineering).
Covers roughly the same material as MATH 0180, but is intended for students with a special interest in physics or engineering. The main topics are: geometry of three-dimensional space; partial derivatives; Lagrange multipliers; double, surface, and triple integrals; vector analysis; Stokes’ theorem and the divergence theorem, with applications to electrostatics and fluid flow. The extra hour is a weekly problem session. Recommended prerequisite: MATH 0100, 0170, or 0190.
Fall MATH0200 S01 15032 MWF 12:00-12:50(18) (J. Lai)
Fall MATH0200 S02 15033 MWF 9:00-9:50(18) (G. Daskalopoulos)
Fall MATH0200 S03 15034 MWF 10:00-10:50(18) (G. Daskalopoulos)
Spr MATH0200 S01 24603 TTh 2:30-3:50(18) ‘To Be Arranged’
Spr MATH0200 S02 24604 MWF 1:00-1:50(18) (T. Fong)
Spr MATH0200 S03 24605 MWF 2:00-2:50(18) ‘To Be Arranged’

MATH 0350. Honors Calculus.
A three-semester calculus course for students of greater aptitude and motivation. Topics include vector analysis, multiple integration, partial differentiation, line integrals, Green’s theorem, Stokes’ theorem, the divergence theorem, and additional material selected by the instructor. Prerequisite: Advanced placement or written permission.
Fall MATH0350 S01 15038 TTh 10:30-11:50(13) (R. Kenyon)

MATH 0420. Introduction to Number Theory.
An overview of one of the most beautiful areas of mathematics. Ideal for any student who wants a taste of mathematics outside of, or in addition to, the calculus sequence. Topics include: prime numbers, congruences, quadratic reciprocity, sums of squares, Diophantine equations, and, as time permits, such topics as cryptography and continued fractions. No prerequisites.
Spr MATH0420 S01 24609 TTh 1:00-2:20(10) (M. Lee)

MATH 0520. Linear Algebra.
Vector spaces, linear transformations, matrices, systems of linear equations, bases, projections, rotations, determinants, and inner products. Applications may include differential equations, difference equations, least squares approximations, and models in economics and in biological and physical sciences. MATH 0520 or 0540 is a prerequisite for all 1000-level courses in Mathematics except MATH 1260 or 1610. Recommended prerequisite: MATH 0180, 0200, or 0350. May not be taken in addition to MATH 0540.
Fall MATH0520 S01 15039 MWF 2:00-2:50(17) (M. Yin)
Fall MATH0520 S02 15040 TTh 1:00-2:20(17) (A. Landman)
Fall MATH0520 S03 15041 TTh 1:00-2:20(17) (M. Ulirsch)

MATH 0520. Honors Linear Algebra.
Linear algebra for students of greater aptitude and motivation, especially mathematics and science concentrators with a good mathematical preparation. Matrices, linear equations, determinants, and eigenvalues; vector spaces and linear transformations; inner products; Hermitian, orthogonal, and unitary matrices; and Jordan normal forms. Provides a more extensive treatment of the topics in MATH 0520. Recommended prerequisites: MATH 0180, 0200, or 0350.
Fall MATH0540 S01 15042 TTh 1:00-2:20(17) (T. Goodwillie)
Fall MATH0540 S02 15043 MWF 11:00-11:50(17) (B. Cole)
Spr MATH0540 S01 24614 MWF 11:00-11:50(13) (F. Tong)
Spr MATH0540 S02 24615 MWF 1:00-1:50(13) ‘To Be Arranged’

MATH 1010. Analysis. Functions of One Variable.
Completeness properties of the real number system, topology of the real line. Proof of basic theorems in calculus, infinite series. Topics selected from ordinary differential equations. Fourier series, Gamma functions, and the topology of Euclidean plane and 3-space. Prerequisite: MATH 0180, 0200, or 0350. MATH 0520 or 0540 may be taken concurrently. Most students are advised to take MATH 1010 before MATH 1130.
Spr MATH1010 S01 24616 TTh 9:00-10:20(08) (R. Kenyon)

MATH 1040. Fundamental Problems of Geometry.
Topics are chosen from euclidean, projective, and affine geometry. Highly recommended for students who are considering teaching high school mathematics. Prerequisites: MATH 0520, 0540, or instructor permission.
Spr MATH1040 S01 24617 TTh 9:00-10:20(08) (A. Landman)

The study of curves and surfaces in 2- and 3-dimensional Euclidean space using the techniques of differential and integral calculus and linear algebra. Topics include curvature and torsion of curves, Frenet-Serret frames, global properties of closed curves, intrinsic and extrinsic properties of surfaces, Gaussian curvature and mean curvature, geodesics, minimal surfaces, and the Gauss-Bonnet theorem.
Fall MATH1060 S01 15044 MWF 10:00-10:50(03) (J. Holmer)

MATH 1110. Ordinary Differential Equations.
Ordinary differential equations, including existence and uniqueness theorems and the theory of linear systems. Topics may also include stability theory, the study of singularities, and boundary value problems.
Fall MATH1110 S01 15045 TTh 1:00-2:20(10) (T. Fong)

MATH 1120. Partial Differential Equations.
The wave equation, the heat equation, Laplace’s equation, and other classical equations of mathematical physics and their generalizations. Solutions in series of eigenfunctions, maximum principles, the method of characteristics, Green’s functions, and discussion of well-posedness.
Prerequisites: MATH 0520 or MATH 0540, or instructor permission.
Spr MATH1120 S01 24618 TTh 2:30-3:50(11) (N. Kappoules)

MATH 1130. Functions of Several Variables.
A course on calculus on manifolds. Included are differential forms, integration, and Stokes’ formula on manifolds, with applications to geometrical and physical problems, the topology of Euclidean spaces, compactness, connectivity, convexity, differentiability, and Lebesgue integration. It is recommended that a student take a 1000-level course in analysis (MATH 1010 or MATH 1260) before attempting MATH 1130.
Fall MATH1130 S01 15046 TTh 2:30-3:50(11) (S. Maloni)

MATH 1140. Functions Of Several Variables.
See Functions Of Several Variables (MATH 1130) for course description.
Prerequisite: MATH 1130 or instructor permission.
Spr MATH1140 S01 24619 MWF 1:00-1:50(06) (S. Treil)

MATH 1260. Complex Analysis.
Examines one of the cornerstones of mathematics. Complex differentiability, Cauchy-Riemann differential equations, contour integration, residue calculus, harmonic functions, geometric properties of
forms, tensor fields, homogeneous spaces, fiber bundles, connections,

MATH 1270. Topics in Functional Analysis.
Infinite-dimensional vector spaces with applications to some or all of the following topics: Fourier series and integrals, distributions, differential equations, integral equations, calculus of variations. Prerequisite: At least one 1000-level course in Mathematics or Applied Mathematics, or permission of the instructor.
Fall MATH1270 S01 15048 MWF 1:00-1:50(06) (B. Cole)

MATH 1410. Combinatorial Topology.
Topology of Euclidean spaces, winding number and applications, knot theory, fundamental group and covering spaces. Euler characteristic, simplicial complexes, classification of two-dimensional manifolds, vector fields, the Poincaré-Hopf theorem, and introduction to three-dimensional topology. Prerequisites: MATH 0520 or MATH 0540, or instructor permission.
Fall MATH1410 S01 15049 TTh 10:30-11:50(13) (T. Banchoff)

MATH 1530. Abstract Algebra.
An introduction to the principles and concepts of modern abstract algebra. Topics include groups, rings, and fields; applications to number theory, the theory of equations, and geometry. MATH 1530 is required of all students concentrating in mathematics.
Fall MATH1530 S01 15050 MWF 10:00-10:50(03) (J. Silverman)
Spr MATH1530 S01 24620 TTh 2:30-3:50(11) (R. Schwartz)

MATH 1540. Topics in Abstract Algebra.
Galois theory together with selected topics in algebra. Examples of subjects which have been presented in the past include algebraic curves, group representations, and the advanced theory of equations. Prerequisite: MATH 1530.
Spr MATH1540 S01 24621 TTh 10:30-11:50(09) (M. Rosen)

MATH 1560. Number Theory.
A basic introduction to the theory of numbers. Unique factorization, prime numbers, modular arithmetic, quadratic reciprocity, quadratic number fields, finite fields, Diophantine equations, and additional topics. Prerequisite: MATH 1530 or written permission.
Spr MATH1560 S01 24622 TTh 1:00-2:20(10) (J. Hoffstein)

MATH 1580. Cryptography.
The main focus is on public key cryptography. Topics include symmetric ciphers, public key ciphers, complexity, digital signatures, applications and protocols. MATH 1530 is not required for this course. What is needed from abstract algebra and elementary number theory will be covered. Prerequisite: MATH 0520 or MATH 0540.
Fall MATH1580 S01 15051 MWF 11:00-11:50(04) (B. Viray)

MATH 1610. Probability.
Basic probability theory. Sample spaces; random variables; normal, Poisson, and related distributions; expectation; correlation; and limit theorems. Applications in various fields (biology, physics, gambling, etc.).
Prerequisites: MATH 0180, 0200 or 0350.
Fall MATH1610 S01 15052 TTh 9:00-10:20(08) (R. Kenyon)

MATH 1620. Mathematical Statistics.
Central limit theorem, point estimation, interval estimation, multivariate normal distributions, tests of hypotheses, and linear models. Prerequisite: MATH 1610 or written permission.
Spr MATH1620 S01 24623 MWF 10:00-10:50(03) (J. Holmer)

MATH 1970. Honors Conference.
Collateral reading, individual conferences. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Introduction to differential geometry (differentiable manifolds, differential forms, tensor fields, homogeneous spaces, fiber bundles, connections, and Riemannian geometry), followed by selected topics in the field.
Fall MATH2010 S01 15053 TTh 2:30-3:50(11) (N. Kapouleas)

MATH 2050. Algebraic Geometry.
Complex manifolds and algebraic varieties, sheaves and cohomology, vector bundles, Hodge theory. Kähler manifolds, vanishing theorems, the Kodaira embedding theorem, the Riemann-Roch theorem, and introduction to deformation theory.
Fall MATH2050 S01 15054 Arranged (S. Lichtenbaum)

MATH 2060. Algebraic Geometry.
See Algebraic Geometry (MATH 2050) for course description.
Spr MATH2060 S01 24625 Arranged (S. Lichtenbaum)

MATH 2110. Introduction to Manifolds.
Inverse function theorem, manifolds, bundles, Lie groups, flows and vector fields, tensors and differential forms, Sard’s theorem and transversality, and further topics chosen by instructor.
Spr MATH2110 S01 24626 TTh 1:00-2:20(10) (N. Kapouleas)

MATH 2210. Real Function Theory.
Point set topology, Lebesgue measure and integration, Lp spaces, Hilbert space, Banach spaces, differentiability, and applications.
Fall MATH2210 S01 15055 MWF 1:00-1:50(06) (W. Strauss)

MATH 2220. Real Function Theory.
The basics of Hilbert space theory, including orthogonal projections, the Riesz representation theorem, and compact operators. The basics of Banach space theory, including the open mapping theorem, closed graph theorem, uniform boundedness principle, Hahn-Banach theorem, Riesz representation theorem (pertaining to the dual of C_0(X)), weak and weak-star topologies. Various additional topics, possibly including Fourier series, Fourier transform, ergodic theorems, distribution theory, and the spectral theory of linear operators.
Spr MATH2220 S01 25288 Arranged (S. Treil)

MATH 2250. Complex Function Theory.
Introduction to the theory of analytic functions of one complex variable. Content varies somewhat from year to year, but always includes the study of power series, complex line integrals, analytic continuation, conformal mapping, and an introduction to Riemann surfaces.
Fall MATH2250 S01 15056 MWF 2:00-2:50(07) (S. Treil)

MATH 2260. Complex Function Theory.
See Complex Function Theory (MATH 2250) for course description.
Spr MATH2260 S01 24627 Arranged (G. Daskalopoulos)

MATH 2410. Topology.
An introductory course with emphasis on the algebraic and differential topology of manifolds. Topics include simplicial and singular homology, de Rham cohomology, and Poincaré duality.
Fall MATH2410 S01 15057 TTh 10:30-11:50(13) (T. Goodwillie)

MATH 2420. Topology.
See Topology (MATH 2410) for course description.
Spr MATH2420 S01 24628 Arranged (T. Goodwillie)

MATH 2450. Exchange Scholar Program.
Fall MATH2450 S01 14059 Arranged 'To Be Arranged'

MATH 2510. Algebra.
Basic properties of groups, rings, fields, and modules. Topics include: finite groups, representations of groups, rings with minimum condition, Galois theory, local rings, algebraic number theory, classical ideal theory, basic homological algebra, and elementary algebraic geometry.
Fall MATH2510 S01 15058 MWF 11:00-11:50(04) (D. Abramovich)

MATH 2520. Number Theory.
Introduction to algebraic and analytic number theory. Topics covered during the first semester include number fields, rings of integers, primes and ramification theory, completions, adeles and ideles, and zeta functions. Content of the second semester varies from year to year; possible topics include class field theory, arithmetic geometry, analytic number theory, and arithmetic K-theory. Prerequisite: MATH 2510.
Fall MATH2520 S01 15059 MWF 11:00-11:50(04) (S. Lichtenbaum)

MATH 2540. Number Theory.
See Number Theory (MATH 2530) for course description.
Spr MATH2540 S01 24629 Arranged (D. Abramovich)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
MATH 2710M. Topics in Geometric Structures.
Graduate topics course in geometric structures.
Fall MATH2710S S01 16698 TTh 10:30-11:50(13) (R. Schwartz)

MATH 2710N. Automorphic L-series.
Graduate topics course in automorphic L-series
Fall MATH2710N S01 16699 TTh 2:30-3:50(11) (J. Hoffstein)

MATH 2720E. Applied Topics in Mathematics.
Spr MATH2720E S01 24630 Arranged (J. Silverman)

MATH 2970. Preliminary Exam Preparation.
No description available.
Fall MATH2970 S01 14060 Arranged 'To Be Arranged'
Spr MATH2970 S01 23574 Arranged 'To Be Arranged'

MATH 2980. Reading and Research.
Independent research or course of study under the direction of a member of the faculty, which may include research for and preparation of a thesis. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

MATH 2990. Thesis Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a
Fall MATH2990 S01 14061 Arranged 'To Be Arranged'
Spr MATH2990 S01 23575 Arranged 'To Be Arranged'

MATH XLIST. Courses of Interest to Graduate Students Majoring in Mathematics.

Fall 2013
The following courses may be taken for credit by graduate students majoring in Mathematics. Please check with the sponsoring department for times and locations.

Applied Mathematics
APMA 2230 Partial Differential Equations
APMA 2630 Theory of Probability

Spring 2014
The following courses may be taken for credit by graduate students majoring in Mathematics. Please check with the sponsoring department for times and locations.

Applied Mathematics
APMA 2240 Partial Differential Equations
APMA 2640 Theory of Probability

Medieval Studies

MDVL 0310C. Matters of Romance (ENGL 0310C).
Interested students must register for ENGL 0310C.
Spr MDVL0310C S01 25150 Arranged 'To Be Arranged'

MDVL 0360E. The Medieval King Arthur (ENGL 0360E).
Interested students must register for ENGL 0360E.
Fall MDVL0360E S01 15884 Arranged 'To Be Arranged'

MDVL 0410. Christianity in Late Antiquity (RELS 0410).
Interested students must register for RELS 0410.
Spr MDVL0410 S01 25151 Arranged 'To Be Arranged'

MDVL 0510K. The 1001 Nights (COLT 0510K).
Interested students must register for COLT 0510K.
Spr MDVL0510K S01 25559 Arranged 'To Be Arranged'

MDVL 0660. The World of Byzantium (CLAS 0660).
Interested students must register for CLAS 0660.
Fall MDVL0660 S01 15885 Arranged 'To Be Arranged'

MDVL 0811O. Desire and Sexuality in Arabic Literature (COLT 0811O).
Interested students must register for COLT 0811O.
Fall MDVL0811OS S01 16381 Arranged 'To Be Arranged'

MDVL 1020. Living Together: Muslims, Christians, and Jews in Medieval Iberia (HIST 1020).
Interested students must register for HIST 1020.
Fall MDVL1020 S01 15886 Arranged 'To Be Arranged'

MDVL 1040. Crusaders and Cathedrals, Deviants and Dominance: Europe in the High Middle Ages (HIST 1040).
Interested students must register for HIST 1040.
Spr MDVL1040 S01 25153 Arranged 'To Be Arranged'

MDVL 1110G. En Marge: Exilés et Hors-la-Loi au Moyen Age (FREN 1110G).
Interested students must register for FREN 1110G.
Fall MDVL1110G S01 16382 Arranged 'To Be Arranged'

MDVL 1120D. Alcuin (LATN 1120D).
Interested students must register for LATN 1120D.
Spr MDVL1120D S01 25161 Arranged 'To Be Arranged'

MDVL 1310T. Chaucer (ENGL 1310T).
Interested students must register for ENGL 1310T.
Fall MDVL1310T S01 15888 Arranged 'To Be Arranged'

Interested students must register for ENGL 1311H.
Fall MDVL1311H S01 16175 Arranged 'To Be Arranged'

MDVL 1360F. Quest, Vision, Diaspora: Medieval Journey Narratives (ENGL 1360F).
Interested students must register for ENGL 1360F.
Spr MDVL1360F S01 25154 Arranged 'To Be Arranged'

MDVL 1530C. Interpreting the Self: Biography in Medieval Arabic Literature (RELS 1530C).
Interested students must register for RELS 1530C.
Fall MDVL1530C S01 15889 Arranged 'To Be Arranged'

MDVL 1813P. Captive Imaginations: Writing Prison in the Middle Ages (COLT 1813P).
Interested students must register for COLT 1813P.
Spr MDVL1813P S01 25560 Arranged 'To Be Arranged'

Tutorial instruction on an approved topic in Late Antique and/or Medieval cultures, supervised by a member of staff. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. May be repeated once for credit.

Interested students must register for HIST 1972H.
Fall MDVL1972H S01 15892 Arranged 'To Be Arranged'

Independent research and writing on a topic of special interest to the student, under the direction of a faculty member. Required of candidates for honors. Permission should be obtained from the Director of the Program in Medieval Studies.

MDVL 2030D. Fifteenth-Century Sentimental Romances and Celestina (HISP 2030D).
Interested students must register for HISP 2030D.
Fall MDVL2030D S01 15891 Arranged 'To Be Arranged'

MDVL 2080E. Seminar: Fortunatus and Alcuin (LATN 2080E).
Interested students must register for LATN 2080E.
Fall MDVL2080E S01 16426 Arranged 'To Be Arranged'

MDVL 2400G. Late Antiquity into Early Islam: Methods and Problems (RELS 2400G).
Interested students must register for RELS 2400G.
Spr MDVL2400G S01 25155 Arranged 'To Be Arranged'

Middle East Studies

Limited to juniors and seniors. Section numbers vary by instructor. Please check Banner for the correct section and CRN to use when registering for this course. Required: all proposals for independent study must be approved by the faculty sponsor and the MES program director. Students should not register for any section of MES 1970 without this approval.
MES 1999. Arab Youth: Movements, Cultures, and Discourses.
Youth has become a central social concept in the contemporary global economy. In the wake of 9/11, the discussion of "youth" in the Arab world became a global priority. This course takes an anthropological and sociological approach to studying youth. Why has "youth" become a focus of concern now? How does this shape our thinking about social, economic, political, and historical issues in the Arab world, and what issues does it obscure? The course examines the historical emergence and transformation of categories of "youth," "teen" and "adolescent" in the contexts of capitalist industrialization, nationalism, postcolonialism, state formation and globalization. Enrollment limited to 20.

Fall 2013

The following related courses, offered in other departments, may be of interest to students concentrating in Middle East Studies. Please see the course listing of the sponsoring department for times and locations.

Ancient West Asian Studies
AWAS2310 Ancient Scientific Texts: Akkadian
Anthropology
ANTH0066S Contemporary Egypt in Revolution

Arabic
ARAB0100 First-Year Arabic
ARAB0300 Second-Year Arabic
ARAB0500 Third-Year Arabic

ARAB0700 Advanced Arabic: Tales of the City

ARAB0900 Love, Revolution and Nostalgia in Modern Arabic Poetry

Archaeology and the Ancient World
ARCH0150 Introduction to Egyptian Archaeology and Art
ARCH2740 Social Life in Ancient Egypt

Comparative Literature
COLT0710W Cultures of Colonialism: Palestine/Israel

COLT08110 Desire and Sexuality in Arabic Literature

COLT0811Q Mediterranean Cities

COLT1440P 1948 Photo Album: From Palestine To Israel

COLT1813K The Problem of the Vernacular

Egyptology
EGYT11310 Introduction to Classical Hieroglyphic Egyptian Writing and Language (Middle Egyptian)

EGYT1440 History of Egypt II

Hindi-Urdu
HNDI0100 Beginning Hindi or Urdu

HNDI0200 Intermediate Hindi- Urdu

HNDI0850 Advanced Hindi-Urdu

History
HIST0971E The U.S. and the Middle East: Image and Imperialism

HIST0971J Athens, Jerusalem, and Baghdad: Three Civilizations, One Tradition

HIST1020 Living Together: Muslims, Christians, and Jews in Medieval Iberia

HIST1975U Gender, Empire, and the Nation in the Middle East

HIST1979K The Mediterranean City: Conflict and Coexistence in the Long Twentieth Century

HIST1978V Islamic Political Thought, Global Islam, and Globalization

HIST1978X Afghanistan: Crossroads of Civilizations to America’s Longest War

HIST1978Y Constitutional History of the Modern Middle East

HIST2971R Approaches to Middle East History

Judaic Studies
JUDS0050L The Jew in the Modern World

JUDS0090A Introduction to Biblical Hebrew

JUDS0100 Elementary Hebrew

JUDS0300 Intermediate Hebrew

JUDS0500 Writing and Speaking Hebrew

JUDS1611 The Dead Sea Scrolls

JUDS1620 Jerusalem Since 1850: Religion, Politics, Cultural Heritage

JUDS1625 Problems in Israeliite Religion and Ancient Judaism

JUDS1712-S01 History of Zionism and the Birth of the State of Israel

Persian
PRSN0100 Basic Persian

PRSN0300 Intermediate Persian Language and Culture

PRSN0500 Advanced Persian Language and Culture I

PRSN1200 Iranian Cinema: Before and After the Islamic Revolution

Religious Studies

REL05200D Women, Sex and Gender in Islam

REL05325 Judaism, Christianity and the Bible

REL51530C Interpreting the Self: Biography in Medieval Arabic Literature

Modern Culture and Media

MCM 0110. Introduction to the Theory and Analysis of Modern Culture and Media.
An introduction to critical theory, cultural studies, and media analysis that addresses print, photography, film, television, and digital media. We will examine these media in relationship to influential theoretical approaches such as structuralism and post-structuralism, ideological analysis and psychoanalysis, feminist and queer theory, critical race theory and theories of post-colonialism and globality, and media and technology studies. LILE WRIT

Fall MCM0110 S01 15900 MW 1:00-1:50(06) (L. Joyrich)

MCM 0240. Television Studies.
Introduces students to the rigorous study of television, concentrating on television formations (texts, industry, audience) in relation to social/cultural formations (gender, generational, and family dynamics; constructions of race, class, and nation; consumerism and global economic flows). That is, this course considers both how television has been defined and how television itself defines the terms of our world. Students MUST register for the lecture section, the screening, and a conference section. Open to undergraduates only. LILE WRIT

Spr MCM0240 S01 23829 MW 1:00-1:50(10) (L. Joyrich)

MCM 0260. Cinematic Coding and Narrativity.
Examination of the structural and ideological attributes of cinema, concentrating on the dominant narrative model developed in the American studio system and alternatives to that model. Emphasis on contemporary theories of cinematic representation. Students become conversant with specific elements and operations of the cinematic apparatus (e.g., camera, editing, soundtrack) and its production of discursive meanings. Students MUST register for the lecture, section and one screening. A sign up-sheet will be available for conferences after the first class meeting. Open to undergraduates only. LILE WRIT

Spr MCM0260 S01 23829 MW 11:00-11:50(04) (P. Rosen)

MCM 0710. Introduction to Filmmaking: Time and Form.
A studio-style course on working with time based media, focused specifically on the technology of 16mm film production. With its focus on photographic and montage processes, as well as lighting and sound, the principles established in this course provide a solid foundation for all subsequent work in media, whether cinematic, video or new media, and it is strongly advised as a foundation level, skills oriented media course. Students produce a series of short, non-sync films. No previous experience required. Screenings, demonstrations and studio work. Application required. Application is available in the MCM office. Students must bring a completed application to the first class to be considered for admission. Up to 40 students can apply, but the final class list of 15 will be determined after this meeting, with permission of the instructor. Enrollment limited to 15. S/NC

Spr MCM0710 S01 23866 T 1:30-3:50(10) (D. Barker)

MCM 0730. Introduction to Video Production: Critical Strategies and Histories.
Provides the basic principles of video technology and independent video production through a cooperative, hands-on approach using small format video (Mini DV). Emphasizes video as a critical intervention in social and visual arts contexts. No previous experience required. Application required. Application is available in the MCM office. Students must bring a completed application to the first class to be considered for admission. Up to 40 students can apply, but the final class list of 12 will be determined after this meeting, with permission of the instructor. Enrollment limited to 12. S/NC

Fall MCM0730 S01 14469 Th 3:00-5:50(16) (A. Cokes)

MCM 0750. Art in Digital Culture.
How do we produce, disseminate, and exchange images in a global networked society? How do digital technologies challenge conventions about art making, authorship, and audience? This production course introduces students to the practice, and critical inquiry into art in digital
MCM 0800J. The Revolution is Being Photographed.
The course will examine the following idea: revolution is not an epoch making event but a dialect, a genre and grammar of practices and gestures, Images and moving images will be read as the "written" signs of this dialect, which document more and less known revolutionary moments. The recurrent familiar gestures repeated by the demonstrators will be studied as components of a language rather than planned actions carried out to achieve a given goal. The recurrence of the same idioms and gestures in various parts of the world requires questioning the universal and regional dimension of this language. Enrollment limited to 20 first year student. DVPS FYS LILE

Spr MCM0800J S01 25294 W 3:00-5:20(14) (A. Azoulay)

What is citizenship? What does it mean to be granted or refused state protection within the global system? To better understand how nation-states govern subjects, we will consider the condition of refugees, displaced persons, illegal residents, undocumented aliens, and stateless persons. We will read the representations of non-citizenship in global media texts (humanitarian graphic narrative, migrant diary, atrocity photography, world cinema, war fiction, crowdsourced crisis mapping). This course will place a special emphasis on how perpetual warfare, territorial re-mappings, and nationality legislation continue to generate sliding scales of non-citizenship. Readings include Arendt, Baillargeon, Chatterjee, Foucault, Lowe, and Said. Prerequisite: MCM 0110, 0230, 0240, 0250, 0260, or 1110. Enrollment limited to 20. Fall MCM0901K S01 15909 T 4:00-6:20(18) (R. Mehta)

MCM 0901L. African American Media Visibilities: Image, Culture, Crisis.
This course explores the "problem" of the black image in 20th - 21st century U.S. film and television. What is the role of spectacle and scandal in (re)presenting blackness to the public? Emphasis placed on the tension between invisibility and (hyper)visibility of the black subject in relation to gender and sexuality as well as the political, ethical, social, and psychical implications of such varying degrees of visual exposure. Topics include the aesthetics of black celebrity from Josephine Baker to Beyoncé, cinematic practices from filmmakers Spike Lee to Tyler Perry, and television blackness from The Cosby Show to Flavor of Love. Prerequisite: MCM 0110, 0220, 0230, 0240, 0250, 0260, or 1110. Enrollment limited to 20. Spr MCM0901L S01 25297 TTh 2:30-3:50(11) (B. Monk-Payton)

MCM 0901M. Ishiguro, Amongst Others (ENGL 0710L).
Interested students must register for ENGL 0710L. Fall MCM0901M S01 15867 Arranged 'To Be Arranged'

MCM 1200K. Hollywood as Global Cinema.
Commonly treated as a U.S. national cinema, Hollywood film has long been a global institution dominating worldwide distribution. We reread U.S. narrative filmmaking and its products in relation to its global ambitions. Topics include: internationalizing the history of U.S. cinema; rethinking theories of the classical and anticlassical text; local, national and global spectatorship; concepts of cultural imperialism and cultural globalization; etc. Students interested in the class who have not fulfilled the prerequisite may apply to the instructor for permission to enroll. Prerequisite: MCM 0110, 0230, 0240, 0250, 0260, or 1110. Enrollment limited to 50. Students must register for the primary meeting and one film screening. Fall MCM1200K S01 14472 TTh 1:00-2:20(10) (P. Rosen)

MCM 1201K. Queer Relations: Aesthetics and Sexuality (ENGL 1900R) 
Interested students must register for ENGL 1900R. Fall MCM1201K S01 15862 Arranged 'To Be Arranged'

MCM 1201T. Russian Cinema (RUSS 1250) 
Interested students must register for RUSS 1250.
This course focuses on the "independent" cinemas of East Asia (the three Chinas, Korea, Japan, Japan, etc.), among other Asian film and video cultures (India, Iran, Thailand, etc.). We will explore entangled "new waves," genre cinemas, documentary movements, video amateurs and activists, as well as issues related to distribution (film festivals, disc and torrent cultures, shadow economies), aesthetics, genre, political society, and the growing field of inter-Asian cultural studies. In short, beyond the "national" cinema model, this course takes a comparative/regional look at the cinemas and film/video theories of the new Asia. Enrollment limited to 20 juniors and seniors. Prerequisite: MCM 0110, 0230, 0240, 0250, 0260, or 1110. Fall MCM1503J S01 14715 Th 4:00-6:20(16) (J. Neves)

MCM 1503W. Getting Emotional: Passionate Theories (ENGL 1560W).
Interested students must register for ENGL 1560W. Spr MCM1503WS01 25126 Arranged "To Be Arranged"

MCM 1503X. The Ekphrastic Mode in Contemporary Literature (ENGL 1762B).
Interested students must register for ENGL 1762B. Spr MCM1503X S01 25127 Arranged "To Be Arranged"

Psychoanalysis, it could be said, is the mother tongue of our modernity. If Hollywood fell hard for Freud in the 40s, it was not unlike other industries. This, in fact, is Foucault’s argument: capitalism is an incitement to speak psychoanalysis, all the better to instate mechanisms of bio-power. This seminar will demonstrate why Foucault is precisely and productively wrong: how capitalism sets out to destroy psychoanalysis’s prized discovery: surplus enjoyment. Rather than contest the claim that Freud invented a science of sex, we will uncover the exotic force of this science, which divides what bio-power tries to synthesize. Prerequisite: MCM 0110, 0220, 0230, 0240, 0250, 0260, or 1110. Enrollment limited to 20 juniors and seniors. Fall MCM1503Y S01 16429 T 1:30-3:50(10) (J. Copjec)

MCM 1503Z. Dialogues on Feminism and Technology.
This experimental course asks students to reexamine the critical practices and discourses of science and technology through a feminist lens. "Dialogues on Feminism and Technology" is part of a worldwide network of feminist scholars, artists, and activists called femtechnet. We will ask students to consider how feminist thought contributes to computing, hacker culture, new media, nanotechnology, surrogacy, genetic culture, biocrit, and a wide range of related topics. Students will be expected to participate in the discussion of the class both online and in person, give short presentations, write a research paper, and complete a creative assignment outlined in the syllabus. Limited to 20 juniors and seniors. Fall MCM1503Z S01 16602 T 4:00-6:20(18) (M. Fernandes)

MCM 1504A. From Photography to Film: Theories of the Image (ENGL 1950E).
Interested students must register for ENGL 1950E. Spr MCM1504A S01 25600 Arranged "To Be Arranged"

MCM 1504B. Democracy Among the Ruins (POLS 1823M).
Interested students must register for POLS 1823M. Fall MCM1504B S01 16533 Arranged "To Be Arranged"

MCM 1700B. Approaches to Narrative.
A production seminar for intermediate to advanced students in film and/or video production. Students complete a substantial media project in the course of the semester. Class meetings will focus on close readings and critical feedback of students’ work during all phases of production. Texts related to narrative theory and production will be discussed. Screenings of exemplary works will supplement the class. Class members should have completed at least one time-based media class. Students are expected to be competent technically. An application will be completed during the first class session and the final class list will be determined after this meeting, with permission of the instructor. S/NC Fall MCM1700B S01 14475 T 2:00-6:50(11) (D. Barker)

MCM 1700D. Reframing Documentary Production: Concepts and Questions.
An advanced seminar for students of video and/or film production. Focuses on the critical discussion and production of documentary. A major project (10-20 minutes) and in-class presentations of work-in-progress required. Readings on the theory and practice of the form and selective screenings augment the presentation of student work. Class members should have completed at least one time-based media class. Students are expected to be competent technically. Application required. Application is available in the MCM office. Students must bring a completed application to the first class to be considered for admission. The final class list will be determined after this meeting, with permission of the instructor. Enrollment limited to 20. S/NC.

Fall MCM1700D S01 14476 M 2:00-5:00(07) (A. Cokes)

MCM 1700U. Experimental Data Representation.
Experimental Data Representation (EDR) focuses on generatively composed, multimedia experiences utilizing the large-scale, video wall within the Digital Scholarship Lab. This interdisciplinary course brings together students from Brown and RISD to explore the creation of screen-based visualizations via programs authored by course participants. EDR provides a platform for students to examine and design ways in which experiential variables (as output) may be algorithmically determined by data sets (as input). Readings and projects will engage areas such as statistics, cartography, multimodal interaction, data visualization, sonification, and media art. Instruction will be offered in programming environments: NodeBox, Processing, Max/MSP, and Pure Data. Enrollment limited to 20.
Spr MCM1700U S01 25612 M 2:00-6:00 (S. Greenlee)

Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

MCM 1990. Honors Thesis/Project in Modern Culture and Media.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Eighth semester students only.

MCM 2100B. Criticism and Culture in Marxist Theory.
Major texts and arguments in 20th century Western Marxist cultural theory, from Lukács through the present. Focus on problems in the conception and reading of culture and cultural texts. Where appropriate, consideration of interaction with other major theoretical frameworks (e.g., aesthetics, phenomenology, semiotics, psychoanalysis, feminism, postcolonial theory, globalization, etc.). Enrollment limited to 15 graduate students. Upperclass undergraduates require instructor permission.

MCM 2100K. American LGBT and its Global Other: Performance as Method.
Interested students must register for TAPS 2200M.
Spr MCM2100K S01 25874 Arranged "To Be Arranged"

MCM 2110G. "This is what you were born for": Optimism and Futurity (ENGL 2561F).
Interested students must register for ENGL 2561F.
Fall MCM2110G S01 15865 Arranged "To Be Arranged"

MCM 2110H. Deleuze, Rancière, Literature, Film: The Logic of Connection (ENGL 2900S).
Interested students must register for ENGL 2900S.
Fall MCM2110H S01 15866 Arranged "To Be Arranged"

MCM 2110I. Forms of Reading in the Wake of the Humanities (ENGL 2900U).
Interested students must register for ENGL 2900U.
Spr MCM2110I S01 25395 Arranged "To Be Arranged"

MCM 2110J. Wordliness and Hannah Arendt.
On the 50th anniversary of Eichmann in Jerusalem, this seminar asks: How did Hannah Arendt’s experience as a Jewish refugee from Hitler’s Germany shape her democratic theory? Do her democratic theory and support for Freud in the 40s, in some way provide a distinctive way to think about post-Holocaust diasporic conditions? We review main categories of political philosophy such as state, sovereignty, nation, violence, vulnerability
and power, also using Butler, Kafka and more. Enrollment limited to 15 graduate students.

Spr MCM2110J S01 25606 M 3:00-5:20(13) (B. Honig)

MCM 2300G. Collaboration and the Event of Photography.
This course will question the concept of “collaboration” through a variety of moments and projects of collaboration between photographers, photographed persons and spectators that take place in different political contexts. Collaboration is a form of relation that may be idyllic or problematic, liberating or coercive, generating knowledge or disseminating ignorance, empowering or intimidating, involving assistance and solidarly as much as abuse; it may take place among friends or between enemies, and it may create friendship as much as it may complicate it. Reviewing this spectrum of possibilities we shall ask how collaboration informs and transforms the event of photography. Enrollment limited to 15 graduate students. Upperclass undergraduates require instructor permission. Students must register for the primary meeting and one film screening.

Fall MCM2300G S01 14478 W 3:00-5:20(17) (A. Azoulay)

MCM 2310H. Television Realities.
How does television bring “real” events to us? How do we define or know what’s “real”? What kinds of “realities” exist on television, and how do they operate (in relationship to one another, to TV fantasy, to social structures, and to our everyday lives)? This course will consider not only some specific “reality genres” (news, catastrophe coverage, “live” and “historical” programs, “surveillance programming,” documentary and docudrama, talk and game shows, reality series and “docu-soaps”) but the representational modes that define the reality of commercial television as a whole. Enrollment limited to 15 graduate students. Permission required for undergraduates only.

Spr MCM2310H S01 23876 W 3:00-5:20(14) (L. Joyrich)

MCM 2500F. Visualizations in the Humanities: From the Cabinet of Curiosities to the Geoparser (AMST 2661).
Interested students must register for AMST 2661.

Fall MCM2500F S01 15915 Arranged ‘To Be Arranged’

MCM 2980. Independent Reading and Research in Modern Culture and Media.
Individual reading and research for doctoral candidates. Not open to undergraduates. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

MCM 2990. Thesis Preparation.
No description available.

Fall MCM2990 S01 14062 Arranged ‘To Be Arranged’
Spr MCM2990 S01 23576 Arranged ‘To Be Arranged’

Music

MUSC 0010. Introduction to Western Music.
A study of a thousand years of music of Europe and America through CDs, DVDs, and YouTube. We’ll explore how individuals, institutions, and societies create music, use it, experience it, pay for it, and control it. We’ll discuss music and time, music and politics, music and identity. Still, the heart of the course is listening to great music, and learning how it works.

Fall MUSC0010 S01 15359 MWF 11:00-11:50(04) (D. Josephson)

Ever since Karl Marx and Friedrich Engels wrote their “Communist Manifesto” (1848), artists, activists and politicians have used manifestos to announce radical change and justify provocative new ideas or practices. This seminar examines the manifesto as a genre of writing with a particularly strong influence on artistic movements in 20th century Modernism. Looking at examples by poets, musicians, and visual artists, we consider how they are informed by visions of progress, social action, political efficacy, and artistic or historical necessity. Authors include Russolo, Apollinaire, Schoenberg, Munch, Klee, Kandinsky, Stravinsky, Dali, Borges, Artaud, Frank O’Hara, Duchamp, Mallarmé, and Boulez. Enrollment limited to 20 first year students. FYS WRIT

Fall MUSC0021H S01 15522 TTh 2:30-3:50(11) (D. Gooley)

MUSC 0041. World Music Cultures (Middle East and Asia).
Introductory survey of several of the world’s musical traditions, with an emphasis on East, South, and Southeast Asia. Expands powers of musical appreciation through lectures, guided listening, and active participation in music-making. Focuses on traditional music and its relations to dance and theatre, and to its social, religious, and historical contexts, but also includes popular music and the effects of modernization. No prerequisites.

Fall MUSC0041 S01 16387 TTh 1:00-2:20(10) (M. Perlman)

MUSC 0043. Music of Africa.
How do Senegalese rappers mix traditional and African American musical meanings and traditions? How did drumming and dancing traditions become emblematic of the African continent abroad? How did South African musicians challenge apartheid? This course explores the diversity of popular and traditional musics on the African continent. Approaching music as inextricably linked to culture, students will explore how musics live in communities and interact with issues such as globalization, race, and nationalism. Framing their study within the fields of ethnomusicology, cultural anthropology, cultural studies, and history, students develop practical and theoretical bases for the study of music and culture.

Spr MUSC0043 S01 25624 TTh 9:00-10:20(08) (A. Whitmore)

MUSC 0052. Beethoven.
This course will study the life and music of the iconic Western composer, the genius who triumphed over adversity and wrote music that traced the same heroic arc. We will investigate some sources that feed into his music, among them the French Revolution, Napoleon’s remaking of Europe, the Romantic concept of composer as suffering artist, and his response to his debilitating deafness. A particular focus will be the Ninth Symphony, including attendance at rehearsals and a performance with the Brown Orchestra and interviews with the musicians involved.

Spr MUSC0052 S01 24720 TTh 10:30-11:50(09) (D. Josephson)

MUSC 0075. Jazz and American Culture.
Explores jazz in relation to American history, discussing how economics, war conditionism regional differences and race relations shaped the music as its public reception. With readings from A. Baraka, L. Levine, R. Ellison, L. Erenberg, E. Lott, G. Early, S. DeVeaux and others, we address how jazz embodies social and political values or expresses national character. Open to non-musicians. Music proficiency preferred but not required. Enrollment limited to 60.

Spr MUSC0075 S01 24713 MWF 11:00-11:50(04) (D. Gooley)

An introduction to the field of computer music, focusing on the use of electronics and computers in music and performance. Investigates basic acoustics, perception of sound, the history of music technology, and musical applications. Extensive listening assignments illustrate the impact of technology on popular and experimental genres. No prerequisites, though some experience with computers and some knowledge of music is very helpful. Significant hands-on experience with computer music systems. Enrollment limited to 80 students. Permission will be granted based on a questionnaire given in the first class, with preference given to lower-level students.

Fall MUSC0200 S01 15520 TTh 10:30-11:50(13) (P. Bussigel)

MUSC 0210E. Systems for Play.
Complex patterns emerge while playing with simple processes. This course focuses on systems as creative constraints and sites for composing sound and other materials. Amplifying, multiplying, delaying, cutting, folding, growing and randomizing become lenses for animating our practices and playgrounds for exploring tendencies (our own, the materials’, the systems’). Assignments are project-based and informed by short readings. There are no prerequisites and enrollment is limited to 18.

Spr MUSC0210E S01 25625 T 4:00-6:20(16) (P. Bussigel)

MUSC 0220. Electroacoustic Improv Ensemble.
An ensemble devoted to free improvisation with new media. Experimental approaches to sound and focused listening techniques are explored with acoustic instruments, live electronics, real-time video, together with networked improvisation, and more. Enrollment limited to 12 students; by audition.

Fall MUSC0220 S01 15536 W 7:00-9:50PM(17) (J. Rovan)
MUSC 0221. Electroacoustic Improv Ensemble.
An ensemble devoted to free improvisation with new media. Experimental approaches to sound and focused listening techniques are explored with acoustic instruments, live electronics, real-time video, together with networked improvisation, and more. Enrollment limited to 12 students; by audition.
Spr MUSC0221 S01 24752 W 7:00-9:50PM(15) (J. Rovan)

MUSC 0400. Introduction to Music Theory.
An introduction to musical terms, elements, and techniques, including notation, intervals, scales and modes, triads and seventh chords, modulation, melody writing and harmonization, analysis, and composition. Ear-training and sight-singing are included. For students with some musical training. Enrollment limited to 40.
Fall MUSC0400 S01 15358 MWF 10:00-10:50(03) (M. McGarrell)
Spr MUSC0400 S01 24712 MWF 10:00-10:50(03) 'To Be Arranged'

MUSC 0550. Theory of Tonal Music.
Prerequisite to music concentration. For students with knowledge of rudiments of music, including scales, intervals, key signatures, rhythm, and meter. Knowledge of keyboard strongly recommended. Intensive study of voice leading and tonal harmony; analysis, ear training, sight singing, keyboard exercises. A placement test will be administered in ORwig 315 at the first regular class meeting. Students intending to enroll in MUSC 0550 must take this test. Experienced instrumentalists or singers who have some facility reading music at sight normally place into MUSC 0550. MUSC 0400 is appropriate for students who need training in the rudiments to prepare for MUSC 0550. MUSC 0550 is prerequisite to MUSC 0560.
Fall MUSC0550 S01 15528 Thh 1:00-2:20(10) (M. Steinbach)
Fall MUSC0550 S02 15529 Thh 1:00-2:20(10) (A. Azziz)

See Theory Of Tonal Music (MUSC 0550) for course description. Prerequisite: MUSC 0550 or permission of the instructor.
Spr MUSC0560 S01 24706 Thh 1:00-2:20(10) (M. Steinbach)
Spr MUSC0560 S02 24707 Thh 1:00-2:20(10) (A. Azziz)

MUSC 0600. Chorus.
Half credit each semester. A practical study of choral literature, techniques, and performance practice from Gregorian chant to the present, offered through rehearsals, sectional, and performance. Enrollment is by audition, based on voice quality, experience, and music-reading ability. Instructor permission required.
Fall MUSC0600 S02 15533 MW 6:30-8:20PM(15) (L. Jodry)

MUSC 0601. Chorus.
See Chorus (MUSC 0600) for course description.
Spr MUSC0601 S01 24753 MW 6:30-8:20PM(15) (L. Jodry)

MUSC 0610. Orchestra.
Half credit each semester. A practical study of the orchestra repertoire from Bach to the present, offered through coaching, rehearsals, and performances. Enrollment is by audition. Students will be notified of audition results within the first seven days of the semester. Restricted to skilled instrumentalists. May be repeated for credit.
Fall MUSC0610 S01 15534 Thh 7:15-9:45PM(14) (P. Phillips)

MUSC 0611. Orchestra.
See Orchestra (MUSC 0610) for course description.
Spr MUSC0611 S01 24754 Thh 7:15-9:45PM(15) 'To Be Arranged'

MUSC 0620. Wind Symphony.
Half credit each semester. A practical study of the wind band repertoire from Mozart to the present, offered through coaching, rehearsals, and performances. Enrollment is by audition. Restricted to skilled instrumentalists. Instructor permission required.
Fall MUSC0620 S01 15537 W 6:00-8:20PM(15) (M. McGarrell)
Fall MUSC0620 S01 15537 M 6:00-7:20(15) (M. McGarrell)

MUSC 0621. Wind Symphony.
See Wind Symphony (MUSC 0620) for course description.
Spri MUSC0621 S01 24755 M 6:00-7:20(18) (M. McGarrell)
Spri MUSC0621 S01 24755 W 6:00-8:20PM(18) (M. McGarrell)
Spri MUSC0621 S02 24756 T 8:00PM-9:20PM(17) 'To Be Arranged'
Spri MUSC0621 S03 24757 W 2:00-3:20(17) 'To Be Arranged'
Spri MUSC0621 S04 24758 W 4:00-5:20(14) 'To Be Arranged'

MUSC 0630. Jazz Band.
Half credit each semester. A practical study of jazz from the 1920s to the present through coaching, rehearsals, and performance. Seminars on arranging, ear training, and improvisation are conducted for interested students but the focus is on performance. Enrollment is by audition. Restricted to skilled instrumentalists and vocalists. Instructor permission required.
Fall MUSC0630 S01 15549 Th 6:10-7:20(16) (M. McGarrell)
Fall MUSC0630 S01 15549 M 7:30-8:50PM(16) (M. McGarrell)
Fall MUSC0630 S02 16615 T 8:00PM-9:20PM(16) (M. McGarrell)
Fall MUSC0630 S03 16616 W 2:00-3:20(16) (M. McGarrell)
Fall MUSC0630 S04 16617 W 4:00-5:20(16) (M. McGarrell)
Fall MUSC0630 S05 16770 F 4:00-5:20 'To Be Arranged'

MUSC 0631. Jazz Band.
See Jazz Band (MUSC 0630) for course description.
Spr MUSC0631 S01 24764 Th 6:10-7:20(15) (M. McGarrell)
Spr MUSC0631 S01 24764 M 7:30-8:50PM(15) (M. McGarrell)
Spr MUSC0631 S02 25634 T 8:00PM-9:20PM(15) (M. McGarrell)
Spr MUSC0631 S03 25635 W 2:00-3:20(15) (M. McGarrell)
Spr MUSC0631 S04 25636 W 4:00-5:20(15) (M. McGarrell)

MUSC 0640. Ghanaian Drumming and Dancing Ensemble.
A dynamic introductory course on drumming, dancing, and singing of Ghana and the diaspora. Students learn to perform diverse types of African music, including Ewe, Akan, Ga, and Dagomba pieces on drums, bells, and shakers. No prerequisites. May be repeated for credit. Enrollment limited to 15. Instructor permission required.
Fall MUSC0640 S01 15542 W 5:00-7:20(17) (M. Obeng)

MUSC 0641. Ghanaian Drumming and Dancing Ensemble.
A dynamic introductory course on drumming, dancing, and singing of Ghana and the diaspora. Students learn to perform diverse types of African music, including Ewe, Akan, Ga, and Dagomba pieces on drums, bells, and shakers. No prerequisites. May be repeated for credit. Enrollment limited to 15. Instructor permission required.
Spr MUSC0641 S01 24759 W 5:00-5:20(14) (M. Obeng)

MUSC 0650. Javanese Gamelan.
Half credit each semester. Instruction, rehearsals, and performances in the gamelan music of Java, on instruments owned by the department. No prerequisites. Enrollment limited to 18 students.
Fall MUSC0650 S01 15544 T 6:00-8:50PM(14) (M. Perlman)

MUSC 0651. Javanese Gamelan.
See Javanese Gamelan, MUSC0650, for course description. Enrollment limited to 18 students.
Spr MUSC0651 S01 24760 T 6:00-8:50PM(12) (M. Perlman)

MUSC 0660. Sacred Harp/Shape-Note Singing.
Half credit each semester. Students will learn the traditional performance practices associated with the shape-note tunebook The Sacred Harp, a compilation of American vernacular hymnody first published in Georgia in 1844. This is an unaccompanied, four-part, participatory singing tradition. Ability to read Western music notation helpful but not required. No concert performances. No prerequisites. Repeatable for credit. S/NC.
Fall MUSC0660 S01 15545 Th 5:00-6:50(17) (K. Miller)

MUSC 0661. Sacred Harp/Shape-Note Singing.
Half credit each semester. Students will learn the traditional performance practices associated with the shape-note tunebook The Sacred Harp, a compilation of American vernacular hymnody first published in Georgia in 1844. This is an unaccompanied, four-part, participatory singing tradition. Ability to read Western music notation helpful but not required. No concert performances. No prerequisites. Repeatable for credit. S/NC
Spr MUSC0661 S01 24761 Th 5:00-6:50(17) (K. Miller)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
MUSC 0670. Old-Time String Band.
Half course each semester. Instruction and ensemble playing. Music taught by ear. American (southern Appalachian Mountain) traditional music on violin (fiddle), 5-string banjo, mandolin, and guitar. Enrollment limited to 20 students.
Fall MUSC0670 S01 16608 T 7:00-8:50PM (S. Austrykas)

MUSC 0671. Old-Time String Band.
See Old-Time String Band (MUSC 0670) for course description. Enrollment limited to 20 students.
Spr MUSC0671 S01 25626 T 7:00-8:50PM(12) (S. Austrykas)

MUSC 0680. Chamber Music Performance.
Half credit each semester. The practical study of the literature of chamber music through participation in a small ensemble. Regular rehearsals, coaching by department staff, and performances are required. Enrollment is by audition. Students will be notified of audition results within the first ten days of the semester. Restricted to skilled instrumentalists. May be repeated for credit.
Fall MUSC0680 S01 15546 Arranged (P. Phillips)

MUSC 0681. Chamber Music Performance.
See Chamber Music Performance (MUSC 0680) for course description.
Spr MUSC0681 S01 24762 Arranged 'To Be Arranged'

Half credit each semester. Restricted to skilled musicians. Openings are limited. Enrollment and re-enrollment is by audition and jury. Lessons are given by consultands to the Applied Music Program. A fee is charged for enrollment. Copies of the Applied Music Program Guidelines giving detailed information are available online at www.brown.edu/music. May be repeated up to four times for credit.
Fall MUSC0910 S01 15517 TTh 9:00-10:20(08) (L. Jodry)

A history of western European music to Monteverdi's Orfeo (1607), with emphasis on the analysis of individual works supported by reading and listening. Among the major composers studied are Byrd, Dufay, Josquin, Machaut, and Palestrina. Strongly recommended for freshmen and sophomores considering composition in music. Limited to students who can read music. Prerequisite: MUSC 0550 or permission of instructor.
Fall MUSC0910 S01 15517 TTh 9:00-10:20(08) (L. Jodry)

A history of music in European society from Monteverdi's opera Orfeo to Beethoven's Ninth, studied through texts, scores, CDs, DVDs, and YouTube. We'll spend two-thirds of our time on five composers: Bach, Handel, Haydn, Mozart, and Beethoven. Prerequisite: MUSC0550 or equivalent.
Spr MUSC0920 S01 24723 TTh 2:30-3:50(11) (D. Josephson)

MUSC 1010. Advanced Musicianship I.
Training in advanced musicianship skills relevant to Western art music from the sixteenth Century to the present, including sight singing, ear training, score reading, keyboard harmony, improvisation, and musical transcription. Prerequisite: MUSC 0560 with a grade of B, or permission of the instructor.
Fall MUSC1010 S01 15361 MWF 2:00-2:50(07) (A. Cole)

MUSC 1011. Advanced Musicianship II.
Continuation of MUSC 1010. Prerequisite: MUSC 1010 or permission of the instructor.
Spr MUSC1011 S01 24714 MWF 2:00-2:50(07) (A. Cole)

MUSC 1030. Tonal Counterpoint.
The contrapuntal techniques of the 18th century with emphasis on music of Bach. Written exercises in and analysis of several genres including fugue. Prerequisite: MUSC 0560 or permission of instructor.
Fall MUSC1030 S01 15521 TTh 1:00-2:20(10) (G. Shapiro)

MUSC 1100. Introduction to Composition.
Composition students begin using technical resources developed in their previous theoretical studies. Analysis and discussion of contemporary music provides examples of alternatives to traditional compositional strategies, which students integrate into later assignments. A study of contemporary notational practices and computer-based manuscripting and sequencing is also included. Prerequisite: MUSC 0560 or permission of the instructor. Enrollment limited to 20 students.
Fall MUSC1100 S01 15524 Th 4:00-6:20(16) (G. Shapiro)

MUSC 1110. Seminar in Composition.
Finding a personal voice as a composer. Assignments develop familiarity with large forms and increasingly complex structures. Analyses of contemporary compositions elucidate issues of aesthetic and political stance inherent in compositional activity and teach technical facility and range of expression. Problems of rehearsal and performance for new music are considered. Prerequisite: MUSC 0560 and 1100, or permission of the instructor. Enrollment limited to 20 students.
Spr MUSC1110 S01 24716 W 3:00-5:20(14) (G. Shapiro)

MUSC 1120. The Technique of Orchestration.
The study of orchestration includes the ranges, sounds, and idiosyncrasies of the individual instruments, and the combination of those instruments into ensemble textures. A series of graduated assignments, including pieces for solo cello, string quartet, wind quintet, wind ensemble, and full orchestra, form the basis of this course. Prerequisite: MUSC0560 or permission of the instructor. Not open to first year students.
Spr MUSC1120 S01 24722 TTh 1:00-2:20(10) (G. Shapiro)

MUSC 1140. Classical Improvisation.
A historical and practical study of improvisation in western classical traditions from the middle ages to the 19th century, with emphasis on the common practice period 1700-1850. Students will apply theoretical knowledge in harmony and counterpoint to in-class improvisations, learning such skills as melodic ornamentation, chasseen-bass elaborations, variations, preluding, and free improvisation starting with simple exercises and gradually elaborating more complex pieces. These practices will be studied in relation to their historical contexts and shifting aesthetic purposes. Historical topics include cadenzas, harmonic experimentation, the relationship between oral and written transmission, and the social contexts of performance. MUSC0560 and consultation with instructor recommended. Prerequisite: MUSC 0550. Enrollment limited to 15.
Fall MUSC1140 S01 15362 M 3:00-5:20(15) (D. Gooley)

A study of advanced studio techniques taught in parallel with topics in psychoacoustics. Students will create original studio work while developing listening and technical skills for audio production. Technical topics include recording, signal processing and mixing software, microphone technique, and live sound engineering. Class size is limited. Preference will be given to students who have completed MUSC 0200. Students will be evaluated for potential future work in the MEME program (Multimedia and Electronic Music Experiments) and past participation in MEME. Admission is determined by an entrance questionnaire completed at the first class meeting. Prerequisite: MUSC 0200
Spr MUSC1200 S01 24721 TTh 10:30-11:50(09) (J. Moses)

Seminar in Electronic Music is a study of music employing electronic media, including real-time digital signal processing, multimedia, and live performance. Technical aspects of the course focus on programming using Max/MSP to create interactive projects and algorithmic compositions. Permission of instructor required. Interested students must come to the first class. Preference will be given to students who have completed MUSC 0200.
Fall MUSC1210 S01 15514 TTh 2:30-3:50(11) (J. Rovan)

MUSC 1240B. Narrative and Immersion.
A production course examining the potentials for engagement in new media installations. The course draws on techniques of narrative to establish engagement in immersive environments. Students will be introduced to cinematic concepts, interactive technologies, multi-channel video and surround sound environments. Class meetings will consist of viewings and analysis of exemplary work, discussion of readings, and critiques of student projects. An additional 1-hour technical workshop will be devoted to learning Jitter. Class members should have completed advanced work in film/video, digital sound, and/or creative writing. Open to upper-level undergraduate students and graduate students. The final...
MUSC 1250. Sound Design.
This production seminar is a study of techniques and aesthetics used to create sonic environments and effects that enhance a variety of media including video, radio and audio art, new media, theater, and installation art. Technical topics include audio production in multi-channel formats, advanced audio editing, mixing and synthesis techniques, and audio system design. Enrollment limited to 12 students. Preference will be given to students who have completed MUSC 1200. Others will be evaluated for potential future work in the MEME program (Multimedia and Electronic Music Experiments) and past participation in MEME. Admission is determined by an entrance questionnaire completed at the first class meeting. Prereq: MUSC 1200.
Fall MUSC1250 S01 15519 TTh 10:30-11:50(13) (J. Moses)

MUSC 1661. Death and Dying.
A study of the cultural treatment of death in Europe and America from the French Revolution to the Vietnam War. Using CDs, DVDs, and YouTube, we’ll listen to operas, songs, Requiem and oratorios, and instrumental and orchestral works, from Mozart’s Don Giovanni to Crumb’s Black Angels. We’ll also read short stories, novels, and poems; watch war films; and study art, architecture, cemetery sculpture and design, mourning rituals, and state funerals.
Fall MUSC1661 S01 15363 W 3:00-5:20(17) (D. Josephson)

Interested students must register for RELS 1738.
Fall MUSC1675 S01 15888 Arranged 'To Be Arranged'

MUSC 1690C. Seminar in Jazz Studies: John Coltrane.
Saxophone virtuoso and composer, John Coltrane, pursued a life-long study of music that was driven by unparalleled energy, formed by a powerful intellectual curiosity and shaped by a deeply personal spirituality. By learning to sing and transcribe Coltrane’s music and by reading biographical, theoretical and critical materials, we will chronicle his personal, spiritual and musical development and investigate his influence on American culture, emphasizing Coltrane’s position within the music industry, his leadership role in the Civil Rights movement and his impact on Jazz education. Prerequisite: MUSC 0550 or permission. Enrollment limited to 20.
Spr MUSC1690C S01 25083 Th 4:00-6:20(17) (M. McGarrell)

Half credit each semester. Restricted to skilled musicians. Restricted to skilled musicians demonstrating mastery of an advanced repertory in their fields. Openings are limited. Enrollment and re-enrollment is by audition and jury. Lessons are given by consultants to the Applied Music Program. MUSC 0830, 0840 is prerequisite to this course. A fee is charged for enrollment. Copies of the Applied Music Program Guidelines giving detailed information are available online at www.brown.edu/ music. Prerequisite: MUSC 0400, or MUSC 0550, MUSC 0560. Written permission required. May be repeated up to four times for credit.
MUSC 1900. Introduction to Ethnomusicology.
The study of people making music. Ethnographic research and writing on musical practices; history of ethnomusicology; musical case studies from around the world highlighting such issues as authenticity, tradition, commercialism, amateurism, postcolonial politics, and the ethics of fieldwork.
Fall MUSC1900 S01 15518 TTh 10:30-11:50(13) (K. Miller)

Examines topics related to the everyday use of music: the determinants of musical taste; music for emotional self-management (in the health club or Iraq War); "high" vs. "low" music; eclectic taste; popular music and the music industry; mp3blogs; new business models. Readings (in sociology, history, and cultural studies) and original field research by class members. Instructor permission required. Enrollment limited to 20.
Spr MUSC1920 S01 25556 Th 4:00-6:20(17) (M. Perlman)

The traditional music of Java, Bali, and Sumatra, with special attention to the bronze percussion orchestras (gamelan) arts, and cult in ritual, dance, and drama. Topics include: music and trance; the impact of colonialism; nationalism, modernization, and tourism; and Indonesian music and "world beat." Theory and practice are integrated through extensive instruction on Brown’s gamelan instruments. Enrollment limited to 20 students.
Spr MUSC1930 S01 25567 TTh 1:00-2:20(10) (M. Perlman)

Students with experience in African and related musical traditions perform drumming, dancing, and singing of Ghana and the diaspora. Focus on a more challenging repertoire with emphasis on multi-part, lead, and improvisational playing. Prerequisite: audition. May be repeatable for credit. Instructor permission required. Enrollment limited to 15 students.
Fall MUSC1960 S01 15547 W 7:30-9:50PM(16) (M. Obeng)

Students with experience in African and related musical traditions perform drumming, dancing, and singing of Ghana and the diaspora. Focus on a more challenging repertoire with emphasis on multi-part, lead, and improvisational playing. Prerequisite: audition. May be repeatable for credit. Instructor permission required. Enrollment limited to 15 students. Spr MUSC1961 S01 24793 W 7:30-9:50PM(15) (M. Obeng)

Directed undergraduate research for advanced students. Prerequisite: permission of the instructor. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Directed undergraduate research for advanced students. Prerequisite: permission of the instructor. Section numbers vary by instructor. Please see the registration staff for the correct section number to use when registering for this course.

MUSC 2070. Music and Identity.
From 19th-century European nationalism to 20th-century American multiculturalism, people have used music to affirm their identities. Drawing on anthropological and sociological theory, we examine the variety of connections between music and identity in several case studies. We consider the possible contributions of music to cross-cultural understanding, and discuss the ethics of musical border-crossing.
Fall MUSC2070 S01 15360 W 12:20-2:50(06) (M. Perlman)

MUSC 2080E. Seminar in Ethnomusicology: Historiography of Music and the Performing Arts.
Advanced seminar in methods of historical research and their relevance to the interpretation of music, the performing arts, and culture. Readings include Foucault, Collingwood, Schorske, Said, Adorno, Pierre Nora and Diana Taylor, as well as musicalological essays by Taruskin, DeVeaux.
MUSC 2085. Ethnomusicology Workshop.
This workshop-style seminar focuses on professional writing genres in ethnomusicology (e.g., conference papers, grant proposals, human-subject research protocols, syllabus development, dissertation-craft, preparing job application materials, navigating the scholarly peer-review process). Students at all stages of the Ph.D. program will present work in progress and offer collegial feedback. Mandatory S/H/C; half-credit per semester, repeatable for credit. Prerequisite: Graduate standing in Music or instructor permission. Fall MUSC2085 S01 16312 F 3:00-5:20(05) (K. Miller)

This seminar investigates "world music" as a contested term in ethnomusicology, a music-industry marketing category, and a college classroom subject. We will read critical accounts of the development and significance of the "world music" concept, compare several world music textbooks, experiment with teaching the exercises/assignments therein, and explore the scholarly literature on multiculturalist pedagogy. Prerequisite: Graduate standing or written permission. MUSC 2090S S01 24717 W 3:00-5:20(14) (K. Miller)

This seminar will explore the science and aesthetics of designing alternate controllers for musical performance. Topics will include basic electronics and hardware prototyping, instrument construction, theories of gesture, human-computer interface issues, and the challenges of mapping sensor data to meaningful musical parameters. Previous experience with MaxMSP or other real-time programming required. Permission of instructor required. Spr MUSC2220 S01 24710 MW 10:00-11:20(03) (J. Rovan)

In probing the relationship between humans, interfaces, and sonic materials, this seminar will consider: how useful are established notions of composition and improvisation in a contemporary 'real-time' age? The overall aim is to develop conceptual discussion and practical experimentation, which will culminate in (at least) two concerts and a variety of web-based outputs, as well as a short piece of reflective writing. It is possible to navigate this course using a variety of software/hardware systems (Ableton Live, Max, PD, turntables, home-brew electronics, etc); and a diverse approach to a variety of technologies is highly encouraged. Fall MUSC2230 S01 15516 M 3:00-5:20(15) (J. Ferguson)

MUSC 2280. Designing-Large-Scale Multimedia Projects.
A production seminar designed for students working on a single, large project in Multimedia and/or Computer Music. The course covers planning and implementation strategies, with group critiques of proposals and works-in-progress. The class structure includes individual lessons for students working on a graduate or undergraduate thesis project. Permission will be granted based upon a questionnaire given in the first class. Spr MUSC2280 S01 25557 M 3:00-5:20(13) (J. Ferguson)

MUSC 2450. Exchange Scholar Program.
MUSC 2970. Preliminary Examination Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination. Fall MUSC2970 S01 14063 Arranged 'To Be Arranged' Spr MUSC2970 S01 23577 Arranged 'To Be Arranged'

MUSC 2980. Reading and Research.
Directed graduate research. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.
MUSC 2990. Thesis Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.

Philosophy
PHIL 0010. The Place of Persons.
Some fundamental moral and metaphysical issues concerning ourselves as persons: what (if anything) gives us a moral status different from that of other animals? Do we have the sort of free will required for moral responsibility? What makes you one individual person at a particular time? What makes you today the same individual person as the one who went by your name a few years back? A main objective is to facilitate the student’s own thinking about such issues. Spr PHIL0010 S01 24038 MWF 10:00-10:50(03) (D. Christensen)

PHIL 0030. Skepticism and Knowledge.
What is knowledge? What is the extent and basis of one's knowledge about physical objects, other people, oneself, the future, morality, and religion? WRIT Fall PHIL0030 S01 14395 TTh 1:00-2:20(10) (F. Ackerman)

PHIL 0050. Philosophy of Art: Art and Morality.
From Plato to the present, the power of the arts to trigger powerful emotions has been seen by some thinkers as a threat to morality, by others as a vital support. This debate raises such issues as whether aesthetic experience is a distinctive kind of experience and whether the creation and reception of art are autonomous activities free from the constraints of morality and politics. Beyond Plato, authors to be read will include such figures as Hume, Mendelssohn, Rousseau, Kant, Schiller, Hegel, Schopenhauer, Ruskin, Tolstoy, Collingwood, Stanley Cavell, Martha Nussbaum, Alexander Nehamas, and others. WRIT Fall PHIL0050 S01 14396 TTh 1:00-2:20(10) (P. Guyer)

PHIL 0060. Modern Science and Human Values.
Devoted to the critical study of moral problems that have been raised or affected by modern science and technology, with an emphasis on moral problems that have been raised by modern medicine. Possible topics include animal experimentation, euthanasia, organ transplantation, and pharmaceutical enhancement. More generally, we discuss what ought to be the role of the scientific community in deciding moral and social issues. WRIT. Spr PHIL0060 S01 25099 MW 12:00-12:50(05) (N. Emery)

PHIL 0070. The Individual and the State.
Chief among the demands that states make of individuals is that they obey. But why should we? This introductory-level course takes this challenge as a touchstone for a broader examination of political philosophy that falls into three main categories: arguments over how the state could come to have any claim to an individual’s obedience at all, paying special attention to social contract theory; arguments over the scope of that authority, paying special attention to arguments over the distinction between public and private domains; and arguments over the obligation to obey itself, paying special attention to unjust laws and philosophical anarchism. Spr PHIL0070 S01 25387 MW 11:00-11:50(04) (T. Fisher)

PHIL 0130. Introduction to Analytic Philosophy.
This course will be an introduction to some of the main issues and methods in contemporary analytic philosophy. We will look at work on free will, the mind-body problem, knowledge and skepticism, truth and relativism, morality, and value. We will also take note of some of the main methodological tools employed in that work, such as reflective equilibrium, use of counterexamples, appeal to the best explanation, and thought experiments. Spr PHIL0130 S01 25100 TTh 10:30-11:20(09) (S. Emet)

PHIL 0200E. Global Justice.
In this course we will study contemporary treatments of issues including the following: Is patriotism a morally respectable stance? Is war ever morally permitted? What are the moral rules of conduct within a war? Are soldiers permissibly targeted in a way that others are not? How should obligations to remediate global climate change be distributed across developed nations (who have disproportionately contributed to the problem) and developing nations (given that economic development tends
to produce pollution? There will be short reading reports and two papers. Enrollment limited to 20 first-year students. FYS WRIT
Fall PHIL0200E S01 15251 M 3:00-5:20(15) (D. Estlund)

PHIL 0220. Introduction to Philosophy. Introduction to philosophy by way of considering problems that arise in different areas of philosophy. Topics include: meaning and reference, existence, persistence and identity, Nelson Goodman's riddle of induction, and the sorites paradox.
Fall PHIL0220 S01 15245 MWF 9:00-9:50(02) (H. Siu)

PHIL 0250. The Meaning of Life. This is an introductory course in ethics, with a focus on the question of what is the nature of the human good, or of a life lived well. Readings will be from classical sources (Aristotle, Epicurus, Kant, Nietzsche, Camus) as well as from contemporary authors. In investigating this question, the course will also introduce students to some of the main problems and positions in moral philosophy. Central concepts such as obligation, responsibility, pluralism, moral knowledge will be discussed, but in the larger context of what is the nature of the good life. No prior work in philosophy will be presupposed.
Spr PHIL0250 S01 24033 MW 10:00-10:50(03) (C. Larmore)

PHIL 0300A. Introduction to the Philosophy of Wittgenstein. The course will be a careful guided reading of Wittgenstein's main works: the Tractatus Logico-Philosophicus and the Philosophical Investigations, together with some of the authors he was arguing against, Gottlob Frege and Bertrand Russell.
Spr PHIL0300A S01 25258 TTh 9:00-10:20(08) (M. Miralles del Pino)

PHIL 0350. Ancient Philosophy. We will discuss the ethics, epistemology, and metaphysics of the principal figures in ancient philosophy from the Presocratic to Aristotle. Emphasis is given to understanding the problems the philosophers were trying to solve and to assessing the arguments for their various positions. Primary readings are from the original sources in translation.
Fall PHIL0350 S01 14387 MWF 1:00-1:50(06) (M. Gill)

PHIL 0360. Early Modern Philosophy. An introduction to central themes in Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume, and Kant. Major topics include: reason, experience, and knowledge; substance and the nature of the world as it really is; induction, causation, and the origin of our ideas; skepticism, realism, and idealism. Connections are made with the scientific revolution of the 17th century. There will be discussion and advice on ways to approach philosophical reading, research and writing.
Spr PHIL0360 S01 24035 MWF 11:00-11:50(04) (J. Broackes)

PHIL 0500. Moral Philosophy. An introduction to ethics, the part of philosophy that is concerned with right and wrong, good and bad, virtue and vice. We will look at some central issues in the field as well as some of the main theories in it. Is an action good or bad because of its anticipated results or regardless of these results? Is it ever right to kill one person to save five? Is relativism true? Is abortion wrong? These would be some of the topics discussed. WRIT
Fall PHIL0500 S01 14736 MWF 1:00-1:50(08) (N. Arpaly)

PHIL 0540. Logic. An introduction to perhaps the most fundamental tool of rational thought: deductive logic. Course begins with basic sentential logic, then moves on to deduction, quantification, and prediction. Argumentation and reasoning may also be addressed at times. No previous experience with logic or philosophy is required.
Fall PHIL0540 S01 14384 MWF 10:00-10:50(03) (R. Heck)

PHIL 0560. Political Philosophy. An analytic investigation of some central problems and topics in political philosophy, including political obligation and civil disobedience, liberty, rights, equality, and democracy. Readings are drawn from recent work in the field, along with a few classics. WRIT
Fall PHIL0560 S01 16035 MWF 12:00-12:50(12) (D. Estlund)

PHIL 0880. Ethical Themes in the Contemporary American Short Story. Consideration of contemporary American short stories in terms of their treatment of such philosophical themes as love, loyalty, envy, belief, despair, and charity. Focuses on themes in moral philosophy, rather than themes in social and political philosophy. WRIT
Spr PHIL0880 S01 24036 MWF 2:00-2:50(07) (F. Ackerman)

PHIL 0990V. Current Questions About Rational Belief. We'll study some "hot topics" in epistemology. Some possible questions: (1) What's the relationship between rational belief and logic? (2) Is belief best thought of as all-or-nothing, as coming in gradations, or both? (3) Can the same evidence support divergent belief-states? (4) Is rational belief completely determined by evidence, or also by values or practical interests? (5) Are graded beliefs best seen as coming in precise degrees, or as more "spread-out?" (6) Can I have rational beliefs I know are denied by others just as intelligent, unbiased, well-informed, etc., as I am? Enrollment limited to 20 juniors and seniors.
Fall PHIL0990V S01 14390 Th 4:00-4:50(16) (D. Christensen)

PHIL 1100C. Medieval Arabic Philosophy. Medieval Arabic philosophy is, broadly speaking, a derivation and continuation of the philosophy of the Hellenistic world. This course is a general study of the most important figures and ideas in this philosophical tradition with a special emphasis on metaphysical thought. The goal is to gain an overall view of the issues that were important to thinkers of the tradition and of the approaches taken to try to solve them. This course is a sort of philosophical journey into the past aiming at getting to know is best as we can.
Spr PHIL1100C S01 25629 MW 9:00-9:50(02) (R. Najera)

PHIL 1260. Plato. A close reading of Plato’s major dialogues from a philosophical perspective. Topics may include his ethics, politics, metaphysics, epistemology, philosophy of mind, philosophy of language, or aesthetics. Readings are from original sources (in translation) and contemporary secondary literature. (Students wishing to read the texts in the original Greek should make arrangements with the instructor.)
Spr PHIL1260 S01 24045 Th 6:30-7:50(12) (M. Gill)

PHIL 1300. Philosophy of Mathematics. This course provides an introduction to the philosophy of mathematics. We will discuss the nature of mathematical objects: Are they mental constructions, do they inhabit some Platonic realm, or are there no mathematical objects at all? We will also discuss the status of our knowledge of mathematics: How is that we are justified in reasoning as we do in mathematics? The first part of the course will be devoted to discussing the history of the philosophy of mathematics. The second part of the course will focus on contemporary debates in the philosophy of mathematics.
Fall PHIL1300 S01 14385 MWF 11:00-11:50(04) (J. Schechter)

PHIL 1400. Ethics in the Novel. Consideration of novels in terms of their treatment of such philosophical themes as death, courage, faith, betrayal, responsibility to others, and mercy. Focuses on themes in moral philosophy rather than themes in social and political philosophy. Half of the course deals with Malory, the other half with contemporary American novels. No pre-requisites. WRIT
Fall PHIL1400 S01 14397 Th 2:30-3:50(11) (F. Ackerman)

PHIL 1520. Consciousness. Topics will include: forms of consciousness, physicalist and representationalist theories of qualia, pain and other bodily sensations, emotional experience, conscious thought, higher order representation theories of consciousness, self-representation theories, global workspace theories, blindsight and related phenomena, and the roles of attention and working memory in perceptual consciousness.
Spr PHIL1520 S01 24040 Th 1:00-2:20(10) (C. Hill)

PHIL 1590. Philosophy of Science. Some very general, basic questions concerning science. Can evidence justify belief in theories which go beyond the evidence? What is the nature of good scientific reasoning? Is there a single scientific method? What is a scientific explanation? Does science reveal truths about unobservable
realism, or merely tell us about parts of the world we can measure directly? WRIT

PHIL 1600. Philosophy of Law.
Philosophical examination of the chief classical and contemporary theories of the nature and function of law. Topics include the definition of law, the nature of legal systems, the logic of legal reasoning, the analysis of basic legal conceptions (e.g., of right and duty), legal rules and principles, law and justice, and law and morality. WRIT

PHIL 1620. Philosophy of Quantum Mechanics.
Can cats be both dead and alive? Can baseballs tunnel through solid walls? Is the universe constantly splitting? In this course we'll examine the standard non-relativistic quantum mechanical formalism and show how various interpretations of that formalism give surprising answers to the questions above. Among the philosophical issues at stake: the nature of explanation and probability in the physical world, how if at all we can make choices between empirically equivalent theories, and the role of intuition and common sense in science. Prerequisite: one previous course in philosophy or permission of the instructor. No prior experience in physics necessary. WRIT

Fall PHIL1620 S01 14391 TTh 9:00-10:20(08) (N. Emery)

PHIL 1650. Moral Theories.
A systematic examination of the main alternative normative moral theories: consequentialism; moral rights; moral duties; moral virtues. Focuses on the principal issues in the formulation of the different theories, on the main points of conflict between them, and on the critical evaluation of each. Readings are drawn mainly from contemporary work in moral philosophy.

Spr PHIL1650 S01 24042 TTh 2:30-3:50(11) (N. Arpaly)

PHIL 1660. Metaphysics.
A survey of some major topics in metaphysics including free will and determinism, causation, modality, time, and personal identity. Throughout the course we will ask: What makes one metaphysical theory better than another? What makes metaphysical inquiry different from scientific inquiry? And under what sorts of conditions do we consider a metaphysical dispute settled? Prerequisite: one previous course in philosophy or permission of the instructor.

Fall PHIL1660 S01 14392 TTh 10:30-11:50(13) (N. Emery)

PHIL 1680. Medieval Philosophy.
Since the Renaissance, medieval philosophy has often been unjustly dismissed as arcane and irrelevant, despite impressive innovations in ethics, philosophy of mind, metaphysics, and logic. Instead of surveying so vast a field, the course focuses on one or two sets of problems, such as the problem of evil, the freedom of the will, the existence of God, universals, substance, mind and meaning.

Fall PHIL1680 S01 16097 TTh 9:00-10:20(08) (R. Najera)

PHIL 1700. British Empiricists.
A detailed study, both historical and critical, of central issues in Locke, Berkeley, and Hume. Topics include a selection from: innate ideas; substance; personal identity; abstract ideas; theory of language; perception, materialism, and idealism; induction and causation; and skepticism. Also includes some discussion of later critiques of classical empiricism.

Fall PHIL1700 S01 14398 TTh 2:30-3:50(11) (J. Broackes)

PHIL 1750. Epistemology.
This course provides a survey of central issues in contemporary epistemology. We will discuss the nature of knowledge, justification, and rationality. Topics include: difficulties with the traditional analysis of knowledge, skepticism about the external world, the nature of empirical justification, the problem of induction, and the epistemology of the a priori.

Fall PHIL1750 S01 14388 MWF 2:00-2:50(07) (C. Hill)

PHIL 1760. Philosophy of Language.
This course examines recent philosophical work in natural language semantics. The focus is on names and descriptions. We will consider which kinds of propositions sentences containing these terms express, and their truth conditions. We may also examine belief reports and vague terms, and other theoretical issues. Prerequisite: PHIL 0540 or 1630.

Fall PHIL1760 S01 14386 MWF 12:00-12:50(12) (R. Heck)

PHIL 1880. Advanced Deductive Logic.
This course provides an introduction to the metatheory of first-order logic. We will prove the completeness of first-order logic. We then move on to the proper “limitative” results, including the undecidability of first-order logic, the Gödel incompleteness theorems, and the undefinability in arithmetic of arithmetical truth. Prerequisite: PHIL 0540 or 1630, or, for those with prior familiarity with logic, instructor's permission.

Spr PHIL1880 S01 24039 TTh 10:30-11:50(09) (J. Schechter)

An elective for students with at least six previous courses in philosophy. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

PHIL 2010A. The Metaphysics of Chance.
Metaphysicians typically reserve the term "chance" for a distinctively objective type of probability. In this course we will examine the various ways of making this distinction, its philosophical ramifications, and its scientific significance. A running theme throughout the course will be the question: To what extent should the role that probability plays in various scientific theories shape the project of giving a robust metaphysical account of chance?

Spr PHIL2010A S01 24046 W 3:00-5:20(14) (N. Emery)

PHIL 2020N. Mental Causation from Descartes to Davidson.
How can minds and consciousness have a causal impact on physical bodies and processes? This question, which deeply vexed Descartes, has now returned as a central problem in philosophy of mind. We'll begin with an important new problem confronting Descartes and other interactionist dualists ("the pairing argument"), and then move on to contemporary debates, starting with Davidson's "anomalous monism" and other forms of property dualism, like nonreductive physicalism and emergentism. Issues to be discussed include type epiphemomenalism, the exclusion argument, physical causal closure, causal and explanatory exclusion, and mind-body supervenience.

Fall PHIL2020N S01 14389 M 3:00-5:20(15) (J. Kim)

PHIL 2030A. Moral Psychology.
We all have our notions of good people, bad people, and ordinary people, but reality tends to defy these concepts. Many otherwise "nice," family loving, church going people voted for Hitler. On the other hand, people with stupid or even evil views about morality sometimes turn out to be a lot better "in practice" than their smart counterparts who know Kant by heart. The same person may be very honest with her husband but very dishonest with the IRS, brave in battle but scared of public speaking. In this class we shall explore this complexity, touching upon topics like rationality, free will, weak will, character, and love. We'll look at attempts by contemporary philosophers to find some method in the mess. Undergraduates require instructor permission to enroll.

Fall PHIL2030A S01 14741 M 5:30-7:50(15) (N. Arpaly)

PHIL 2040J. Heidegger's Being and Time.
No description available.

Spr PHIL2040J S01 24342 M 3:00-5:20(13) (C. Larmore)

PHIL 2060B. Perception.
This seminar will be mainly concerned with the metaphysics of perception. One topic will be recent work on the question of whether there is perceptual awareness of natural kinds, and the question of whether there is perceptual awareness of Gibsonian affordances. We will also consider questions about the degree to which perception is influenced by higher cognition. Another topic will be the question of whether the fundamental objects of perceptual awareness are viewpoint-dependent or "perspectival" properties. And a fourth will be the comparative merits of representational and acquaintance-based theories.

Spr PHIL2060B S01 24047 Th 4:00-6:20(17) (C. Hill)

PHIL 2080D. Realism, Idealism, and Modernity (II).
This course continues discussion of realism and idealism as alternative responses to the challenges of modernity. We begin with Schelling's System of Transcendental Idealism and selections from Hegel; subsequent authors include Nietzsche, a Neo-Hegelian such as F.H.
Brady, a Neo-Kantian such as Ernst Cassirer, a pragmatist such as John Dewey or C. I. Lewis, and more recent philosophers such as Rudolf Carnap, Thomas Kuhn, Jurgen Habermas, and others. We will especially consider how recent versions of conceptual relativism such as Kuhn’s draw on both the realist/idealist traditions to model the modern scientific outlook. Undergraduates with instructor permission. Enrolment limited to 20 graduate students. S/NC

PHIL 2100J. Realism and Idealism in Political Theory. Should normative political theory—such as the theory of justice, or authority—be “realistically” grounded in facts about how people or states will characteristically tend to behave? Is political normativity importantly distinct from any kind of moral normativity? This cluster of issues has been important to many of the most important political philosophers of our day, and we will read works by John Rawls, G. A. Cohen, Thomas Nagel, Bernard Williams, and Amartya Sen. Along the way we will read some papers and drafts of work in progress by the instructor toward an eventual book on these issues.

PHIL 2160L. Ethics. No description available.

PHIL 2200. Graduate Proseminar. Will cover classics of philosophy from the end of the 19th century to the end of the 20th; including ethics as well as metaphysics, epistemology and philosophy of language.

PHIL 2300A. The Epistemic Significance of Etiology. There has been a lot of discussion recently about whether, and how, information about the etiology of one’s beliefs can affect the rationality of maintaining those beliefs. Perhaps evidence of certain sorts of etiology can render a belief unjustified, or at least rationally require us to reduce confidence in that belief. We will look at various arguments about the epistemic significance of etiology, for different classes of beliefs. We’ll also look at whether these arguments exhibit common patterns, and, at what might be said in general about the epistemic significance of the origins of our beliefs.

PHIL 2450. Exchange Scholar Program.


PHIL 2970. Preliminary Examination Preparation. For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.

PHIL 2980. Research in Philosophy. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

PHIL 2990. Thesis Preparation. For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.

PHIL XLIST. Courses of Interest to Philosophy Concentrators. Fall 2013

There are many courses that look at philosophers or philosophical questions in other departments, including Africana Studies, Classics, Cognitive and Linguistic Sciences, French Studies, German Studies, Judaic Studies, Mathematics, Modern Culture and Media, Political Science, and Religious Studies. They include:

**Classics**
- CLAS 17500 Philosophy of Socrates

**Portuguese and Brazilian Studies**
- POBS 0910 On the Dawn of Modernity

**Religious Studies**
- RELS 0325 Judaism, Christianity and the Bible

Spring 2014

There are many courses that look at philosophers or philosophical questions in other departments, including Africana Studies, Classics, Cognitive and Linguistic Sciences, French Studies, German Studies, Judaic Studies, Mathematics, Modern Culture and Media, Political Science, and Religious Studies. They include:

**Greek**
- GREEK 11108 Plato, Phaedrus

**Religious Studies**
- RELS 1130 Philo

**University Courses**
- UNIV 1520 The Shaping of World Views

**Physics**

PHYS 0030. Basic Physics. Survey of mechanics, electricity, magnetism, optics, and modern physics for concentrators in sciences other than physics-including premedical students or students without prior exposure to physics who require a less rigorous course than PHYS 0050, 0060. Employing the concepts of elementary calculus but little of its technique. Lectures, conferences, and laboratory. Six hours of attendance. Recommended: MATH 0090 or 0100.

PHYS 0040. Basic Physics. See Basic Physics (PHYS 0030) for course description.

PHYS 0050. Foundations of Mechanics. An introduction to Newtonian mechanics that employs elementary calculus. Intended for science concentrators. Potential physics concentrators, who do not have adequate preparation for PHYS 0070, may enroll, but are urged to continue with PHYS 0160 rather than PHYS 0060. Lectures, conferences, and laboratory. Six hours of attendance. Recommended: MATH 0090 or MATH 0100.

PHYS 0060. Foundations of Electromagnetism and Modern Physics. An introduction to the principles and phenomena of electricity, magnetism, optics, and the concepts of modern physics. Recommended for those who wish to limit their college physics to two semesters but seek a firm grounding in the subject, including but not limited to those with some previous knowledge of physics. Lectures, conferences, and laboratory. Six hours of attendance. Prerequisite: PHYS 0050. Recommended: MATH 0100.

PHYS 0070. Analytical Mechanics. A mathematically more rigorous introduction to Newtonian mechanics than PHYS 0050. For first-year students and sophomores who have studied physics previously and have completed a year of calculus. Lectures, conferences, and laboratory. Six hours of attendance. Prerequisites: high school physics and calculus or written permission.

PHYS 0100. Flat Earth to Quantum Uncertainty: On the Nature and Meaning of Scientific Explanation. Physics has had a dramatic impact on our conception of the universe, our ideas concerning the nature of knowledge, and our view of ourselves. Philosophy, sometimes inspired by developments in physics, considers the impact of such developments on our lives. In this seminar, students will explore how classical and modern physical theory have affected our view of the cosmos, of ourselves as human beings, as well as our view of the relation of mathematical or physical structures to ‘truth or reality.’ Through a study of physics as well as selected philosophical readings, we will consider how we can know anything, from seemingly simple facts.
to whether a machine is conscious. Enrollment limited to 20 first year students. Instructor permission required. FYS WRIT

**PHYS 0112. Alien Worlds: The Search for Extra-Solar Planets and Extraterrestrial Life**

The course will cover the significant developments in the detection and characterization of extra-solar planetary systems in the past 20 years. We will study the astrophysics of planetary system formation, the techniques for detecting planets, the properties of the planets discovered so far, and the prospects for future discoveries, with an emphasis on the search for "Earth-analogues" and the implications for astrobiology. Enrollment limited to 20 first year students. FYS

**PHYS 0114. The Science and Technology of Energy**

Energy plays fundamental roles in society. Its use underlies improvements in the living standard; the consequences of its use are having a significant impact on the Earth's climate; its scarcity in certain forms is a source of insecurity and political conflict. This course will introduce the fundamental laws that govern energy and its use. The physical concepts to be covered include mechanical energy, thermodynamics, the Carnot cycle, electricity and magnetism, quantum mechanics, and nuclear physics. The technological applications include wind, hydro, and geothermal energy, engines and fuels, electrical energy transmission and storage, solar energy and photovoltaics, nuclear reactors, and biomass. Enrollment limited to 20 first year students. FYS

**PHYS 0160. Introduction to Relativity and Quantum Physics**

A mathematically rigorous introduction to special relativity and quantum mechanics. The second course in the three-semester sequence (PHYS 0470 being the third) for those seeking the strongest foundation in physics. Also suitable for students better served by an introduction to modern physics rather than electromagnetism. Lectures, conferences, and laboratory. Six hours of attendance. Prerequisite: PHYS 0070 or 0050. Recommended: MATH 0180 or 0200.

**PHYS 0220. Astronomy**

An introduction to basic ideas and observations in astronomy, with an introduction to the observed sky, coordinates and astronomical calendars and cycles, the historical development of our understanding of astronomical objects. Particular emphasis is placed on the properties of stars, galaxies, and the Universe as a whole, including the basic ideas of cosmology. The material is covered at a more basic level than PHYS 0270. Knowledge of basic algebra and trigonometry is required, but no experience with calculus is necessary. The course includes evening laboratory sessions.

**PHYS 0270. Introduction to Astronomy**

A complete survey of basic astronomy, more rigorous than is offered in PHYS 0220. Requires competence in algebra, geometry, trigonometry, and vectors and also some understanding of calculus and classical mechanics. Laboratory work required. This course or an equivalent required for students concentrating in astronomy. The course includes conferences and evening laboratory sessions.

**PHYS 0470. Electricity and Magnetism**

Electric and magnetic fields. Motion of charged particles in fields. Electric and magnetic properties of matter. Direct and alternating currents. Maxwell's equations. Laboratory work. Prerequisites: PHYS 0040, 0060, or 0160; and MATH 0180, 0200 or 0350. Labs meet every other week.

**PHYS 0500. Advanced Classical Mechanics**

Dynamics of particles, rigid bodies, and elastic continua. Normal modes. Lagrangian and Hamiltonian formulations. Prerequisites: PHYS 0070, 0160 or 0050, 0060 and MATH 0180 or 0200; or approved equivalents.

**PHYS 0560. Experiments in Modern Physics**

Introduction to experimental physics. Students perform fundamental experiments in modern quantum physics, including atomic physics, nuclear and particle physics, and condensed matter physics. Visits to research labs at Brown acquaint students with fields of current research. Emphasizes laboratory techniques, statistics, and data analysis. Three lecture/discussion hours and three laboratory hours each week. Required of all physics concentrators. Prerequisites: PHYS 0070, 0160 or 0050, 0060; 0470. WRIT

**PHYS 0720. Methods of Mathematical Physics**

This course is designed for sophomores in physical sciences, especially those intending to take sophomore or higher level Physics courses. Topics include linear algebra (including linear vector spaces), Fourier analysis, ordinary and partial differential equations, complex analysis (including contour integration). Prerequisites: PHYS 0060 or 0160, MATH 0180, 0200 or 0350, or consent of the instructor.

**PHYS 0790. Physics of Matter**

An introduction to the principles of quantum mechanics and their use in the description of the electronic, thermal, and optical properties of materials. Primarily intended as an advanced science course in the engineering curriculum. Open to others by permission. Prerequisites: ENGN 0040, APMA 0340 or equivalents.

**PHYS 1250. Stellar Structure and the Interstellar Medium**

This class is an introduction to the physics of stars and their environment. The course covers the fundamental physics that set the physical properties of stars, such as their luminosity, size, spectral properties and how these quantities evolve with time. In addition, it includes a study of the physics that takes place in the gaseous environment surrounding stars, the Interstellar Medium (ISM). The ISM is very important because it contains a wealth of information on the evolutionary history of galaxies, their composition, formation and future. Prerequisites: PHYS 0270, PHYS 0500, or instructor permission. PHYS 1530 (perhaps taken concurrently) is strongly recommended but not required.

**PHYS 1410, 1420 (may be taken concurrently), or instructor permission.**

**PHYS 1410. Quantum Mechanics A**

A unified treatment of quanta, photons, electrons, atoms, molecules, matter, nuclei, and particles. Quantum mechanics developed at the start of the 20th century is covered at a more advanced level than PHYS 0410, 0420 (may be taken concurrently), or instructor permission. This class is an introduction to the physics of stars and their environment. The course covers the fundamental physics that set the physical properties of stars, such as their luminosity, size, spectral properties and how these quantities evolve with time. In addition, it includes a study of the physics that takes place in the gaseous environment surrounding stars, the Interstellar Medium (ISM). The ISM is very important because it contains a wealth of information on the evolutionary history of galaxies, their composition, formation and future. Prerequisites: PHYS 0270, PHYS 0500, or instructor permission. PHYS 1530 (perhaps taken concurrently) is strongly recommended but not required.

**PHYS 1420. Quantum Mechanics B**

A unified treatment of quanta, photons, electrons, atoms, molecules, matter, nuclei, and particles. Quantum mechanics developed at the start and used to link and explain both the older and newer experimental phenomena of modern physics. Prerequisites: PHYS 0500 and 0560; and MATH 0520, 0540 or PHYS 0720; or approved equivalents.

**PHYS 1510. Advanced Electromagnetic Theory**

Maxwell's laws and electromagnetic theory. Electromagnetic waves and radiation. Special relativity. Prerequisites: PHYS 0470; and MATH 0180, 0200, or 0350; or approved equivalents.

**PHYS 1530. Thermodynamics and Statistical Mechanics**

The laws of thermodynamics and heat transfer. Atomic interpretation in terms of kinetic theory and elementary statistical mechanics. Applications to physical problems. Prerequisites: MATH 0180 or 0200 or 0350. Corequisite: PHYS 1410.
PHYS 1610. Biological Physics.
Introduction on structures of proteins, nucleotides, and membranes; electrostatics and hydration; chemical equilibrium; binding affinity and kinetics; hydrodynamics and transport; cellular mechanics and motions; biophysical techniques including sedimentation, electrophoresis, microscopy and spectroscopy. Suitable for undergraduate science and engineering majors and graduate students with limited background in life science. Prerequisites: MATH 0180.

PHYS 1600. Computational Physics.
This course provides students with an introduction to scientific computation, primarily as applied to physical science problems. It will assume a basic knowledge of programming and will focus on how computational methods can be used to study physical systems complementing experimental and theoretical techniques. Prerequisites: PHYS 0070, 0160 (or 0050, 0060) and 0470 (or ENGN 0510); MATH 0180 or 0200 or 0350; the ability to write a simple computer program in Fortran, Matlab, C or C++. WRIT

PHYS 1610. Biological Physics.
Introduction on structures of proteins, nucleotides, and membranes; electrostatics and hydration; chemical equilibrium; binding affinity and kinetics; hydrodynamics and transport; cellular mechanics and motions; biophysical techniques including sedimentation, electrophoresis, microscopy and spectroscopy. Suitable for undergraduate science and engineering majors and graduate students with limited background in life science. Prerequisites: MATH 0180.

PHYS 2060. Quantum Mechanics.
No description available.

PHYS 1600. Computational Physics.
A sequence of intensive, advanced experiments often introducing sophisticated techniques. Prerequisites: PHYS 0470, 0500 and 0560; and MATH 0520, 0540 or PHYS 0720; or approved equivalents. WRIT

PHYS 2060. Quantum Mechanics.
No description available.

PHYS 2100. General Relativity and Cosmology.
Given every other year.

PHYS 2140. Statistical Mechanics.
No description available.

PHYS 2200. Quantum Theory of Fields I.
No description available.

PHYS 2300. Quantum Theory of Fields II.
No description available. Instructor permission required.

PHYS 2410. Solid State Physics I.
No description available.

PHYS 2430. Quantum Many Body Theory.
No description available.

PHYS 2450. Exchange Scholar Program.
Fall PHYS2450 S01 14072 Arranged 'To Be Arranged' Spr PHYS2450 S01 23585 Arranged 'To Be Arranged'

PHYS 2710. Seminar in Research Topics.
Instruction via reading assignments and seminars for graduate students on research projects. Credit may vary. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

PHYS 2711. Seminar in Research Topics.
See Seminar In Research Topics (PHYS 2710) for course description. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

PHYS 2970. Preliminary Examination Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.

PHYS 2980. Research in Physics.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

PHYS 2981. Research in Physics.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

PHYS 2990. Thesis Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.

Political Science

POL 0010. Introduction to the American Political Process.
This course is designed to be an introduction to the American political process, broadly defined. We will cover topics including but not limited to: Constitution, Federalism, Federal Budget, Congress, Presidency, Bureaucracy, Judiciary, Civil Rights, Civil Liberties, Public Opinion, Media, Interest Groups, Political Parties, Campaigns, Elections, and Participation. See POLS0010 S01 23815 MW 6:30-7:50(16) (W. Schiller)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
POL S 1010. Introduction to Political Thought.
What is justice? What is freedom? What is the basis of political authority? What is the nature of the best regime? Why should we obey the laws? When may we legitimately resist? These and other perennial questions of political life are explored. Readings include Aristotle, Machiavelli, Hobbes, Locke, Rousseau, Marx, and J.S. Mill. WRIT
Fall POLS1010 S01 14423 TTh 10:30-11:50(13) (A. Gourevitch)

POL S 0200. Introduction to Comparative Politics.
Introduces students to the sub-field of comparative politics or politics within states. Topics include types of regimes (i.e., democratic, authoritarian-with-adjacents, totalitarian); transitions to democracy; collapse of democratic regimes; democratizing, revolutionary and ethnic challenges to the state; and globalization. The course also pays attention to modes of analysis in comparative politics. Cases will be drawn from various regions, including Western and Eastern Europe, Asia, Africa, the Middle East, and Latin America.
Spr POLS2000 S01 23818 TTh 1:00-2:20(10) (L. Cook)

POL S 220. City Politics.
Bosses, reformers, states, bureaucrats, politicians, the poor, the homeless, and the citizen. An introduction to the major themes of urban politics.
Spr POLS2200 S01 23839 TTh 10:30-11:50(09) (J. Morone)

POL S 0400. Introduction to International Politics.
This course provides a basic introduction to the central theoretical perspectives and debates in international relations. The second part of the course applies these models to current problems in international relations, including globalization, state failure, humanitarian intervention, NGOs, terrorist networks, environmental issues, and possible future change in international politics.
Fall POLS4000 S01 14409 MWF 11:00-11:50(04) (J. Branch)

POL S 0500. Foundations of Political Analysis.
This course provides an introduction for undergraduate students to the methods that political scientists (and other social scientists) use to generate and analyze explanations about the world around us. This course will provide you with the tools to evaluate critically social science research, and it will improve your ability to pose and answer research questions of your own. Both quantitative and qualitative approaches are covered. Not open to first year students.
Fall POLS5000 S01 14426 TTh 1:00-2:20(10) (R. Weitz-Shapiro)

POL S 0820B. The Politics of Leadership.
Many people are placed in leadership positions but most never become real leaders. What separates leaders and non-leaders? What are the characteristics of a real leader? The course will focus on American politics and investigate two institutional arenas: the presidency and congress. Several case studies will be investigated where people use different skills to perform leadership roles. Among the factors to be considered are: personal qualities, prior preparation, selection of a challenge and the use of rhetorical skills. Enrollment limited to 20 first year students. FYS
Fall POLS0820BS01 14432 M 3:00-5:20(15) (R. Cobb)

POL S 0820D. Freedom.
What is freedom? Is it important? How do we know it? What should we do about it? We will analyze the different conceptions of liberty - liberal egalitarian, classical liberal, Marxist, and fascist views. We will determine how the various aspects of freedom - political, personal, psychological, economic, and moral - are complementary, and determine what sorts of institutions promote or undermine these aspects. Enrollment limited to 20 first year students. FYS WRIT
Fall POLS0820DS01 14439 W 3:00-5:20(17) (J. Tomasi)

This course is about the "underside" of globalization. It introduces key sectors of the illicit global economy, including the clandestine flow of drugs, arms, people, body parts, arts and antiquities, endangered species, and toxic waste. The course compares these illicit sectors across time and place, and evaluates the practice and politics of state regulatory efforts. Particular attention is given to the role of the U.S. in the illicit global economy.
Fall POLS1020 S01 14412 MWF 1:00-1:50(08) (P. Andreas)

POL S 1035. Democracy and Its Nineteenth Century Critics.
What exactly is democracy, or "the rule of the people"? Our unreflective support for democracy often blinds us to the fact that historically, democracy has not always been viewed favorably, but rather, with skepticism—particularly as it was rising to the forefront of political life in the United States and Western Europe in the 19th century. This course investigates claims about democracy through historical and philosophical readings. What exactly is democracy? How is it justified (or not)? How is democracy related to representation, gender, and class? We investigate these questions through Burke, Paine, Wollstonecraft, de Tocqueville, Marx, Mill, Taylor, and Nietzsche.
Fall POLS1035 S01 16495 F 3:00-5:20(05) (J. lkuta)

POL S 1045. American Political Thought.
This course will explore key themes that have (re)defined life in this country since its beginning, such as liberty, democracy, religion, and race. We will read core documents like the Declaration of Independence, along with important works by thinkers like John Winthrop, the Founding Fathers, Tocqueville, Lincoln, and more recent authors like Robert Dahl. Our goal is to understand what they thought the American enterprise was and should be. Can the country meet their expectations? This course assumes a basic familiarity with American government and history, that is, with important dates and events, as well as certain concepts and institutions. Enrollment limited to 30.
Spr POLS1045 S01 25577 MWF 11:00-11:50(04) (J. Bandoch)

POL S 1050. Ethics and Public Policy.
Examines moral foundations of important policy issues in the American national context as well as at Brown. Considers issues like: What is the just distribution of resources and opportunities in society? And complementary policy issues like: affirmative action, immigration, public provision of health care and social welfare. Asks whether/how liberal democracies can come to consensus on contentious moral issues like abortion, and what the ethical roles of politicians and citizens are in such struggles.
Spr POLS1050 S01 25588 MWF 8:00-8:50(01) 'To Be Arranged'

POL S 1090. Polarized Politics.
Focus will be on growing partisan polarization in American politics. Existence of polarization in institutions like House of Representatives, Senate, the presidency, federal courts, media, and religion will be examined. Emphasis will include the roles of political elites, non-elites, lobbyists, money in politics, red states/blue states, House and Senate rules, particular pressures created by budget, domestic, foreign policy, defense and homeland security issues. Requires extensive reading, detailed paper, take-home final and exam class participation. Expectation to remain informed about current events as they apply to partisan polarization and to weigh the impacts of polarized politics on a democratic nation.
Fall POLS1090 S01 16497 TTh 2:30-3:50(11) (R. Aренберг)

POL S 1150. Prosperity: The Ethics and Economics of Wealth Creation.
What is prosperity? Whom does prosperity benefit? Which institutions and attitudes produce prosperity? What is the relation of prosperity to other values such as efficiency, happiness, equality, fairness, religious faith or personal freedom? This course explores the problem of prosperity from a variety of disciplinary perspectives: philosophical, economic, historical, religious, and literary. No prerequisites. All students welcome; first and second year students especially encouraged.
Fall POLS1150 S01 14428 TTh 2:30-3:50(11) (J. Tomasi)

This course examines governmental powers under the United States Constitution, addressing the powers of Congress, the President, and the courts, as well as the relationship between the national and state governments. The primary reading materials will be leading Supreme Court cases, supplemented by additional reading materials on history and legal theory. The course will consider the role of the courts in enforcing constitutional principles in a democratic system, as well as theories of democratic representation and constitutional change.
Fall POLS1160 S01 16108 Th 10:30-11:50(13) (S. Calabresi)
POLS 1240. Politics, Markets and States in Developing Countries.
How can we explain fundamental differences in economic performance and policy across developing countries in the face of Globalization? Why are some countries praised as economic “miracles,” yet others seem mired in inescapable stagnation? This course addresses these questions by introducing the basic topics, concepts, and theoretical approaches that comprise the field of political economy of development. The course draws on case studies from Asia, Africa, and Latin America.
Fall POLS1240 S01 14410 MWF 11:00-11:50(04) (R. Snyder)

POLS 1260. Maps and Politics.
How do maps affect politics, and vice versa? Maps fundamentally shape the way that we see our world and how we interact politically, economically, and socially, but maps are also shaped by political actors, interests, and institutions. This course will consider historical and contemporary issues that link maps and politics, including the connections between mapping and nation-states, colonialism, warfare, democratic politics, and indigenous rights. The course is suitable for all students with an interest in the topic.
Spr POLS1260 S01 23843 TTh 2:30-3:50(11) (J. Branch)

POLS 1275. Democracy and Democratization.
In 1975, 35 countries across the globe were democratic. In 2011, that number was 165. This class seeks to explain this important shift. Why do some countries transition to democracy while others do not? Among countries that become democracies, why do some remain so, while others backtrack into authoritarianism? And what defines a democracy, anyway? To answer these questions, this course draws on theory and examples from Latin America, Africa, Southeast Asia, and the Middle East. By the end of the course, students will be able to evaluate academic theories and apply them to understand and interpret historical and current events.
Spr POLS1275 S01 25251 MWF 2:00-2:50(07) (R. Weitz-Shapiro)

POLS 1280. Politics, Economy and Society in India.
This course will concentrate on three aspects of the “Indian experience”: democracy, ethnic and religious diversity, and political economy. With a brief exception, India has continued to be democratic since 1947. No developing country matches India’s democratic record. Second, remarkable cultural, ethnic and religious diversity marks India’s social landscape, and influences its politics. Third, Indian economy has of late been going through a serious economic transformation, drawing comparisons with China. Is the comparison valid?
Spr POLS1280 S01 23841 TTh 10:30-11:50(09) (A. Varshey)

POLS 1290. The Rise of China.
This course examines the causes and consequences of China’s societal transformation and emergence as a global power. Employing perspectives from comparative politics, international relations, and economics, the course explores the connections between China’s domestic transformation and its integration with the global system. Lectures and readings cover the historical antecedents of China’s rise, the contemporary relationship between state and citizen, the nature of China’s global competitiveness, and likely future avenues for socio-political change.
Spr POLS1290 S01 25654 TTh 2:30-3:50(11) (E. Steinfeld)

POLS 1315. Social Groups in American Politics.
In this course, students examine the politics of social groups in order to gain a broader perspective of the American political process. Topics can vary, and include a review of the major developments in American politics for historically discriminated groups including women.
Spr POLS1315 S01 25589 TTh 6:30-7:50(12) (K. Tate)

POLS 1390. International Organization and World Politics.
Examines the institutions and the processes by which states and other actors seek to provide “governance” in the international system. The course explores the history of, and various theoretical perspectives on, the role of the UN and other international organizations in the state system. It also considers their roles in a range of political, military, economic, environmental, and humanitarian issues.
Spr POLS1390 S01 23816 MWF 11:00-11:50(04) (N. Tannenwald)

POLS 1475. War and Peace.
Why is armed force used in international politics? What are the causes of war, the conditions for peace? How do political, moral and legal discourse shape the possibilities for peace? What is the role of violence in the formation of modern statehood and the contemporary international order? What are the interrelations between war and peace within a continuum of violence: what justifies both war and peace? When is military violence a solution to conflict, how is peace sustained? What are the psychological, social and economic effects of military conflict? What is the nature of military violence in peacetime?
Fall POLS1475 S01 16498 TTh 6:30-7:50(14) (A. Becker)

POLS 1500. The International Law and Politics of Human Rights.
Human rights have become an increasingly central issue in global politics. This course introduces students to the law and politics of international human rights. It examines the gradual construction of an international human rights regime and its influence on international politics. The course seeks to understand how and why human rights standards have come into being and how they change over time. Drawing on historical and contemporary cases from around the world, the course will survey the actors and organizations, including states, international organizations, and non-state actors, involved in the promotion of human rights around the globe, as well as obstacles to such promotion. It will review competing conceptions of human rights, whether human rights are universal, problems of enforcement, and the role of human rights in foreign policy. Major topics include civil and political rights; economic, social and cultural rights; genocide, torture, women’s rights, humanitarian intervention, and the international criminal court.
Fall POLS1500 S01 14411 MWF 10:00-10:50(03) (N. Tannenwald)

POLS 1550. War and Politics.
This course provides an examination of the intersection between political ends and military means. This includes an overview of theories of military strategy and combat tactics including challenges related to terrorism, insurgency and counter-insurgency. The bulk of the class will cover, in depth, historical details of specific conflicts from the Peloponnesian War through the recent wars in Iraq and Afghanistan. Detailed discussion of the evolution of specific weapon systems and their impact on military tactics will be included. Student will be required to watch several films as part of the course requirements.
Fall POLS1550 S01 15842 MWF 12:00-12:50(12) (R. McDermott)

POLS 1560. American Foreign Policy.
This course provides an overview of American Foreign Policy since World War I. The emphasis will be on defense and security policy, and not on foreign economic policy. This course covers significant historical events and personalities over the course of the twentieth century. When events dictate, part of any given daily class may be devoted to current events in American Foreign Policy, with emphasis on their historical source and context. Prerequisite: POLS 1440.
Spr POLS1560 S01 23817 MWF 12:00-12:50(05) (R. McDermott)

POLS 1760. Infrastructure Policy.
The focus is on transportation infrastructure: roads, bridges, rail, transit and airports. How has our infrastructure developed over the past two centuries? Which presidents have been leaders? How does Obama compare with his predecessors? Who are the key actors in congress and bureaucracy that control the distribution of money? What are the key interest groups?
Fall POLS1760 S01 14407 MW 8:30-9:50(02) (R. Cobb)

POLS 1770. Education, Inequality, and American Democracy.
How has public education affected the performance and development of American democracy? How has American democracy affected the performance and development of public education? How do inequalities in American society mediate the relationship between democracy and education? This course will examine these questions and the controversies they raise by examining ideas about the role of education in democratic society, the development of American public schools, the dynamics posed by inequalities in American schooling, and policy interventions designed to address educational inequalities.
Fall POLS1770 S01 14427 TTh 1:00-2:20(10) (S. Moffitt)

POLS 1780. Use of Symbols in American Politics.
What do a flag, Martin Luther King, Jr. and socialized medicine have in common? They are all political symbols that have produced a strong public response. The political process is complicated beyond the understanding of most. But it becomes manageable when converted into sets of
conflicting symbols. How does the public learn about political symbols? What is their role in the policy making process? Three types of symbols will be considered: community, regime and situational symbols. Course coverage will be limited to American domestic politics.

POLS 1820J. Dynamics of Agenda Building. How do new issues make the political agenda? Why aren’t elections crucial? Who are the “problem pushers” and “solution savers”? How are they linked? What factors determine the life of an issue? The key processes include problem identification, conflict expansion through issue redefinition, the role of institutional actors and issue activists. Focus limited to domestic American politics. Prerequisite: POLS 0010 or 0100. Enrollment limited to 20 juniors and seniors. WRIT

POLS 1821G. Representation, Parties and Interest Groups. Examination of the role of political parties and interest groups in translating the will of citizens into policy outcomes. Covers the extent to which voters use party as a guideline, the possibility of a viable third party at the Presidential level, the effect of parties on Presidential/Congressional relations, and the interaction of interest groups and parties in politics. Enrollment limited to 20 juniors and seniors concentrating in Political Science and Public Policy. WRIT

POLS 1821I. Rhode Island Government and Politics. Students participate in an approved internship in Rhode Island State Politics. Students will be expected to work 8-10 hours a week in an office of state government and, at the end of the semester, reflect on what they’ve learned. Enrollment limited to 20 senior Political Science concentrators. Instructor permission required.

POLS 1821M. War in Film and Literature. This course introduces students to a study of warfare, and some of the central issues raised in war, through the use of movies and novels. Central themes include civil-military relations, leadership, the role of women in war, managing the homefront as well as issues related to battlefield tactics and strategy. Students will be encouraged to address these topics in applications related to World War I, World War II, and Vietnam in particular. This course will take place in a seminar format which stresses discussion of the relevant materials. Enrollment limited to 20 juniors and seniors concentrating in Political Science. WRIT

POLS 1821O. Politics of Economic Development in Asia. It is accepted that development is not an economic phenomenon. Political processes are tied with economic development. Does the political system affect development? Does democracy slow down economic growth? If countries embrace political freedoms and market-oriented economic policies are tied with economic development. Does the political system affect development? Does democracy slow down economic growth? If countries embrace political freedoms and market-oriented economic reforms, should one expect both to succeed equally? Since the Second World War, an enormous amount of intellectual effort has gone into understanding these issues. Asia has been at the heart of much of this literature. Emphasis will be on China, India and South Korea. Enrollment limited to 20 juniors and seniors concentrating in Political Science or International Relations. WRIT

POLS 1821T. Criminal Justice System. An examination of police, criminal courts, and prisons in the contemporary United States. Major topics include police discretion, plea bargaining, and theories of punishment. We will also examine the politics of crime, including federal efforts to influence these traditional state functions. Major assignments are based in the Rhode Island criminal justice system. Enrollment limited to 20 juniors and seniors concentrating in Political Science or Public Policy. Instructor permission required. WRIT

POLS 1822C. Congress. Takes a comprehensive view of the U.S. Congress, its structure, procedures, elections, parties, constituencies and its interactions with the president and the courts. The Constitution establishes the Congress as the first branch and guardian of the nation’s purse strings. This course will examine the strengths and vulnerabilities of the modern Congress with its highly polarized political parties. Requires extensive reading, a detailed paper and active class participation. Students are expected to pay careful attention to current events in the U.S Congress. Enrollment limited to 20 juniors and seniors in Political Science.

POLS 1822H. Patronage and Corruption in Comparative Perspective. In recent years, the issue of “governance” has attracted increasing attention. Why are some countries more corrupt than others? Why do some governments distribute government programs equitably, while others manipulate them for political ends? The purpose of this class is to characterize, examine, and, to the extent possible, explain the persistence of these “bad governance” practices in many democracies in the developing world. We will draw on examples from Latin America, Africa, and Asia, and we will also make comparisons with appropriate current and historical cases from Western Europe and the United States. Enrollment limited to 20 junior and senior Political Science concentrators. WRIT

POLS 1822K. Laws of Violence. States kill. Law enforcement officers may kill to protect innocent victims. The military kills to protect the nation. And a handful of states still impose the death penalty. These are all lawful killings. This seminar introduces the basic elements of conventional theories of law and state, and explores the centrality that legalized violence plays in both the constitution of law and the state. The goal of the seminar is to identify and examine the constitutive though unstable relation between law and violence. Enrollment limited to 20 juniors and seniors. WRIT

POLS 1822U. War and Human Rights. This seminar will begin by studying the rise and spread of the notion of human rights, examining some of the core debates over human rights, including their enforcement in times of war. It will then turn to the laws of war, focusing especially on the 1949 Geneva Conventions and the challenges posed to the Conventions by the rise of non-state actors wielding significant violence. Topics include child soldiers, war crimes, humanitarian intervention, torture, targeted killings, humanitarianism, and the international justice. Enrollment limited to 20 juniors and seniors concentrating in Political Science or International Relations. WRIT

POLS 1822X. Technology and International Politics. This seminar examines the connections between technological change and international politics. Technologies have always been central to how states conduct war, cooperate with one another, and rule their subjects. We will consider this connection both theoretically and through a number of historical and contemporary case studies of technological changes and their relationship to international politics, including the technologies of warfare, communication, and transport. It is strongly recommended that students have taken the introductory international relations course (POLS 0400) before enrolling in this seminar. Enrollment limited to 20 juniors and seniors. WRIT

POLS 1823F. Between Colonialism and Self-Determination: A History of the International Order. Explores the encounter between ‘Europe’ and the ‘non-Western’ world. The ways in which the Western international order has conceived and managed the encounter with the ‘non-Western,’ ‘developing’ or ‘Third World.’ This encounter has been fraught with violence and war. From the Spanish conquest of the ‘New World’ to the scramble for Africa in the 19th century, Western states have sought to extend their rule overseas by force. International order sanctioned violent colonial dispossession, recognizing titles to Western states – redefining overseas territories as terra nullius – and providing a general justification to colonialism. Enrollment limited to 20 juniors and seniors. WRIT

POLS 1823G. Women, War and. This course provides an examination of the links between the security of women and the security of nations. It explores the productive and reproductive roles of women in society from an evolutionary feminist
perspective which identifies the female body as a site of important societal contestation. It investigates the reciprocal relationship between individual and societal choices and structures in areas as diverse as family law, development, education and the sex trade. Students will be required to watch several films as part of the course requirements. Enrollment limited to 20 juniors and seniors. WRIT

POLS 1823H. Public Opinion.
We will examine public opinion on a variety of current issues. The course’s principal objective is to help students understand the role of public opinion in democratic governments. In addition, students learn how to integrate data analysis into their analysis of public opinion trends. Enrollment limited to 20 juniors and seniors concentrating in Political Science and Public Policy. WRIT

POLS 1823I. Urban Politics and Policy.
In this course, students examine the politics of urban America, and the causes and consequences of urban poverty and inequality. Enrollment limited to 20. WRIT

When are we most free, at work or at leisure? Is work the same as paid employment? Is leisure the same as idleness? When, in turn, are we unfree at work, and what kinds of unfreedom are we subject to that are peculiar to modern life? Such questions press with particular urgency at a time when both unemployment and overwork are major complaints, and when many people find that work takes up the majority of their day yet is unsatisfying. Readings will include philosophers like Aristotle, Bertrand Russell, G.A. Cohen and Charles Taylor, and writings from the sociology of work. Enrollment limited to 20 juniors and seniors. WRIT

POLS 1823L. Human Rights: For and Against.
Should, or do, human rights exist? If so, have they always existed? If not, where did they come from? We will search for historical and philosophical answers to these questions. Natural law and rights were invoked in the aftermath of the Conquest of the Americas, in the American, French and Haitian Revolutions, and in the founding of the United Nations. Yet, inalienable rights have not only had friends but also foes such as Jeremy Bentham or Karl Marx. We will examine how contemporary proponents and critics of human rights view their value and impact on domestic and international politics. Enrollment limited to 20 juniors and seniors. WRIT

POLS 1823M. Democracy Among the Ruins.
In 19th century US, certain kinds of motion/mobility were a new experience which, to some, meant freedom, and to others -- the end of meaning. Democracy was identified WITH speed, mobility, and destruction, specifically, the destruction of established public goods, social arrangements, traditions, laws of land inheritance, identities, and patterns of work. These day, these same things are identified with neoliberalism and are seen as threats to democracy, which is now often identified with slowness, deliberation, and procedure. In this seminar, we read two classic texts that explore these issues: Tocqueville’s Democracy in America and Melville’s Moby-Dick. Enrollment limited to 20 juniors and seniors. WRIT

POLS 1823O. The Political Economy of Renewable Energy.
Given the challenges presented by climate change, environmental degradation, and resource scarcity, virtually everybody agrees the "business as usual" energy production and consumption is no longer tenable. Global-scale innovation has become imperative, particularly in the area of renewable energy. Costs must come down, new solutions must be developed, and new opportunities for deployment must be opened up. But there is more than just technology involved. As this course will demonstrate, energy systems involve the intersection of technologies, markets, domestic political institutions, interest groups, commercial strategies, and international competition. Enrollment limited to 20 juniors and seniors concentrating in Political Science and International Relations, others by instructor permission. WRIT

POLS 1823P. Politics and Philosophy of Ayn Rand.
This seminar will examine the political and philosophical thought of Ayn Rand (1905–1982). We will begin with her political ideology and continue to the philosophical foundations she claims justify that ideology. The latter quarter of the seminar will explore applications of her philosophy to foreign affairs, religion, current events, and areas of student interest. Our sources will include Rand’s non-fiction essays, her novel Atlas Shrugged, the main exposition of her work Objectivism: The Philosophy of Ayn Rand, and criticisms by Robert Nozick and others. Enrollment limited to 20 juniors and seniors. WRIT

POLS 1823Q. Democratic Theory and Globalization.
What should democracy require in a globalized world? Is there a human right to democracy, so that all people should be governed democratically, or are there other legitimate forms of government? Should the United Nations and other international organizations be reformed to become more democratic? What does democracy call for when we affect the lives of people outside of our country? In this course, students will examine the leading ethical debates about democratic theory in an international context. It begins with three influential theories of democracy -- the competitive, participatory, and deliberative -- and applies them to important global issues. Enrollment limited to 20 juniors and seniors. WRIT

Given the challenges presented by climate change, environmental degradation, and resource scarcity, virtually everybody agrees the "business as usual" energy production and consumption is no longer tenable. Global-scale innovation has become imperative, particularly in the area of renewable energy. Costs must come down, new solutions must be developed, and new opportunities for deployment must be opened up. But there is more than just technology involved. As this course will demonstrate, energy systems involve the intersection of technologies, markets, domestic political institutions, interest groups, commercial strategies, and international competition. Enrollment limited to 20 juniors and seniors concentrating in Political Science and International Relations, others by instructor permission. WRIT

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Explores major works that span the range of theoretical approaches and intellectual styles in modern comparative research. Includes in-depth interviews with leading scholars where they reflect on their intellectual formation, their works and ideas, the nuts and bolts of the research process, and the evolution of the field. Enrollment limited to 14. Graduate students only; qualified undergraduates with instructor permission.
Fall POLS2090D S01 14459 T 10:00-12:20(08) (R. Snyder)

POL 2100. Proseminar in American Politics.
Introduction to broad issues in American politics. Topics include the interplay of political institutions in the American setting, the process of policy-making, and the behavior of key actors in American politics. Enrollment limited to 14. Graduate students only; qualified undergraduates with instructor permission.
Fall POLS2100 S01 14461 W 5:00-7:20(17) (J. Morone)

POL 2130. Proseminar in International Relations.
Surveys the main theoretical trajectories and intellectual disagreements that define International Relations as a discipline today. Positions examined include varieties of rationalism and constructivism; realism-liberalism-sociological approaches; and systemic and subsystemic theories. Also considers debates about the contours of contemporary world politics, America and the world, moral issues, and the links between theory and policy. Enrollment limited to 14. Not open to undergraduates.
Fall POLS2130 S01 14460 Th 1:30-3:50(10) (N. Tannenwald)

POL 2140. Post Cold War Conflict.
Course explores the nature and causes of post-Cold War conflict. We’ll discuss the end of the Cold War, as well as prominent contemporary themes, such as the spread of ethnic warfare and humanitarian intervention, the privatization of security provision, and the proliferation of “transnational threats” such as cross-border crime and terrorism. Enrollment limited to 14. Graduate students only; qualified undergraduates with instructor permission.
Spr POLS2140 S01 23860 T 6:00-8:20PM(12) (P. Andreas)

POL 2155. The Political Economy of Labor and Development.
Will examine an array of issues facing labor in today’s global world. Recent developments have created a mix of opportunities and risks for labor in developing countries. Trends have encouraged foreign direct investment and diffusion of global supply chains, which in turn, have promoted economic development and job growth for some groups of workers in some of these countries. Globalization and liberalization have undermined social safety nets, eroded labor and environmental standards, and resulted in greater rates of poverty for other groups of workers in other developing countries. Will address these differences and how to more evenly distribute the benefits. Enrollment limited to 14.
Fall POLS2155 S01 16105 W 9:00-11:20(02) (R. Locke)

POL 2165. Territorial Conflict.
This graduate seminar examines the relationship between territory and conflict. Territorial claims have been central to numerous violent and intractable disputes, both between states and within them. Why, how, and when does territory become the subject of violent conflict? Topics covered in this seminar include the origins of territoriality, historical and contemporary territorial disputes, and theoretical explanations for these conflicts. Graduate students only.
Fall POLS2165 S01 15662 W 2:30-4:50(07) (J. Branch)

This course explores the relationship between economic freedom and social justice. The economic liberties of capitalism have often been said to be in tension with the moral ideal of distributive justice. What are the economic liberties of capitalism and what moral value, if any, do they have? What does a commitment to social justice require? Why are libertarians traditionally skeptical of social justice as a moral ideal? How do liberal conceptions of social justice compare to socialist ones? Can capitalists care about social justice? Should they? Enrollment limited to 14. Open to graduate students concentrating in Political Science.
Spr POLS2170 S01 23861 W 5:00-7:20(14) (J. Tomasi)

POL 2220. Urban Politics.
Covers a number of topics linked to urban politics and urban policy. Topics include the politics of urban education, affordable housing, downtown development. Examines how state and federal policy actions have contributed to the nature of the urban condition; and how race, class and ethnicity are interwoven with urban politics and urban public policy. Enrollment limited to 14. Graduate Students only; all others by permission only.
Spr POLS2220 S01 23862 M 10:00-12:20(03) (M. Orr)

POL 2320. Ethnic Conflict.
What is ethnicity? What does it share with nationalism and in what respects is it different? Why do ethnic groups fight violently and kill wantonly, especially after living peacefully for a long time? Under what conditions do they manage their relations peacefully? Do people participate in ethnic insurgencies because of greed or grievance? Will ethnic groups disappear as modernity proceeds further? These questions will guide our intellectual journey over the semester. Graduate students only; qualified undergraduates with instructor’s permission. Enrollment limited to 14.
Spr POLS2320 S01 23863 T 1:30-3:50(10) (A. Varshey)

POL 2350. Freedom.
Explores the meaning of freedom together with the self-understandings, social practices, and political institutions that underlie and constitute it. Considers literature on freedom from the contemporary liberal, republican, and democratic traditions, including Berlin, Pettit, Arendt, Butler, and others. Open to graduate students only.
Fall POLS2350 S01 14462 T 9:30-11:50(08) (S. Krause)

POL 2360. Ancients and Moderns: Quarrels and Continuities.
Examines the political thought of Plato and Aristotle together with three modern thinkers whose work was especially influenced (or animated) by engagement with these ancient views of politics: Machiavelli, Rousseau, and Nietzsche. In exploring these moderns in particular, we also get a view of early modern, high modern, and postmodern receptions of the ancients. Enrollment limited to 14. Open to graduate students.
Spr POLS2360 S01 23864 T 10:00-12:20(08) (S. Krause)

POL 2375. The Idea of Socialism.
What is distinctive about socialism? Is it the collective ownership of property, the critique of exploitation, the elimination of poverty, or some other principle? This course examines the distinctive moral and social theoretic claims of socialism, and finds points of contact with liberal and democratic theory, through a re-reading of primary texts from Thomas More and Robert Owen to Fourier, Louis Blanc, Karl Marx and Otto Neurath. Though arranged historically, the course will focus on core theoretical questions like exploitation, freedom and community, the role of the state, normative theory and critique, the organization of work, and technology and nature. Enrollment limited to 14.
Fall POLS2375 S01 15665 T 1:00-3:30(10) (A. Gouveitch)

POL 2450. Exchange Scholar Program.
Fall POLS2450 S01 14077 Arranged 'To Be Arranged'
Spr POLS2450 S01 23590 Arranged 'To Be Arranged'

POL 2580. Introduction to Quantitative Research Methods.
This course introduces students to statistical theory and quantitative methods commonly used in political science and public policy. The course focuses on statistical inference using multiple regression analysis and gives students opportunities to become proficient users of the statistical software package Stata as they develop statistical models and analyze their data. Enrollment limited to 14. Open to graduate students in Political Science and Public Policy only.
Spr POLS2580 S01 23865 W 1:30-3:50(06) (S. Moffitt)

POL 2975. Field Survey and Research Design.
An independent study directed by a tenure-line faculty member of the Department of Political Science. Only third-year graduate students may register for the course; it is intended to provide a framework for producing a formal research design modeled on the dissertation prospectus.
Spr POLS2975 S01 23867 W 3:00-5:20(14) (J. Tomasi)
POLS 2976. Field Survey and Research Design.  
An independent study directed by a tenure-line faculty member of the Department of Political Science. Only third-year graduate students may register for the course; it is intended to provide a framework for producing a formal research design modeled on the dissertation prospectus.

POLS 2980. Individual Reading and Research.  
An independent study course directed by a tenure-line faculty member in the Department of Political Science. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

POLS 2990. Thesis Preparation.  
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.

Fall POLS2990 S01 14078 Arranged 'To Be Arranged'
Spr POLS2990 S01 23591 Arranged 'To Be Arranged'

POLS 2991. Thesis Research and Preparation.  
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Portuguese and Brazilian Studies

POBS 0100. Elementary Portuguese.  
Designed for students with little or no preparation in the language. Stresses the fundamental language skills of understanding, speaking, reading and writing. Aspects of Portuguese and Brazilian culture are also presented. Uses a situational/natural approach that emphasizes communication in Portuguese from the very first class. A year course; only in exceptional circumstances is credit given for one semester alone.

Fall POBS1000 S01 15671 MW 2:00-2:50(07) (P. Sobral)
Fall POBS1000 S01 15671 TH 1:00-2:20(07) (P. Sobral)

POBS 0110. Intensive Portuguese.  
A highly intensive course for students with little or no preparation in the language. Stresses the fundamental language skills of understanding, speaking, reading and writing. Aspects of Portuguese and Brazilian culture are also presented. Uses a situational/natural approach that emphasizes communication in Portuguese from the very first class. A two-semester sequence in one semester with ten contact hours each week. Carries double credit and covers the equivalent of two semesters. This course should be chosen, in the fall, by students beginning the study of Portuguese as sophomores who would like to participate in the Brown-in-Brazil Program as juniors. Offered every semester.

Fall POBS1110 S01 15672 MW 10:00-10:50(03) (P. Sobral)
Fall POBS1110 S01 15672 TH 10:30-11:50(03) (P. Sobral)
Fall POBS1110 S01 15672 MW 1:00-1:50(03) (P. Sobral)
Spr POBS1110 S01 24925 TH 9:00-10:20(04) (P. Sobral)
Spr POBS1110 S01 24925 MW 11:00-11:50(04) (P. Sobral)
Spr POBS1110 S01 24925 MW 1:00-1:50(04) (P. Sobral)

POBS 0200. Elementary Portuguese.  
Designed for students with little or no preparation in the language. Stresses the fundamental language skills of understanding, speaking, reading and writing. Aspects of Portuguese and Brazilian culture are also presented. Uses a situational/natural approach that emphasizes communication in Portuguese from the very first class. A year course; only in exceptional circumstances is credit given for one semester alone. Prerequisite: POBS 0100.

Spr POBS2020 S01 24926 MW 2:00-2:50(07) (P. Sobral)
Spr POBS2020 S01 24926 TH 1:00-2:20(07) (P. Sobral)

POBS 0400. Writing and Speaking Portuguese.  
Designed to improve the students’ ability in contemporary spoken and written Portuguese. Using such cultural items as short stories, plays, films, videos, newspaper and magazine articles, and popular music, students discuss a variety of topics with the aim of developing good communication skills. Attention also given to developing writing ability. A systematic review of Portuguese grammar is included. Prerequisite: POBS 0200, or POBS 0110, or placement. Conducted in Portuguese. Completion of POBS 0400 is the minimum requirement for participation in the Brown-in-Brazil Program. Offered every semester.

Fall POBS0400 S01 15674 MWV 11:00-11:50(04) (P. Sobral)
Fall POBS0400 S01 15674 MW 12:00-12:50(04) (P. Sobral)
Spr POBS0400 S01 24927 MW 10:00-10:50(03) (P. Sobral)
Spr POBS0400 S01 24927 TH 10:30-11:50(03) (P. Sobral)

POBS 0610. Mapping Portuguese-Speaking Cultures: Brazil.  
Selected literary and cultural texts that serve as vehicles for a deeper understanding of Brazilian society. Literary materials will be taken from several genres and periods with special attention to contemporary writings. Other media such as film and music will also be included. Considerable emphasis on strengthening speaking and writing skills. Prerequisite: POBS 0400, placement or instructor’s permission. Conducted in Portuguese.

Fall POBS0610 S01 15675 TH 2:30-3:50(11) (P. Sobral)

POBS 0620. Mapping Portuguese-Speaking Cultures: Portugal and Africa.  
Selected literary and cultural texts that serve as vehicles for a deeper understanding of Portuguese and Luso-African societies. Literary materials will be taken from several genres and periods with special attention to contemporary writings. Other media such as film and music will also be included. Considerable emphasis on strengthening speaking and writing skills. Prerequisite: POBS 0400, placement or instructor’s permission. Conducted in Portuguese.

Spr POBS0620 S01 24928 TH 2:30-3:50(11) (L. Simas-Almeida)

POBS 0720. Racial and Gender Politics in Contemporary Brazil (AFRI 0710A).  
Interested students must register for AFRI 0710A.

Spr POBS0720 S01 25426 Arranged 'To Be Arranged'

POBS 0810. Belonging and Displacement: Cross-Cultural Identities.  
Focuses on the representation of immigrants, migrants and other “border crossers” in contemporary literature from Brazil and other countries. How do people respond to the loss of home and the shift to a new culture? Is "going home" possible? How do individuals deal with their dual or triple identities? Piñon, Lispector, Sciar, Rushdie, Sahín, Cristina Garcia, V. S. Naipaul and others. Conducted in English. Enrollment limited to 20 first year students. FYS WRIT

Fall POBS0810 S01 15676 TH 9:00-10:20(08) (P. Sobral)

We will analyze how a new mindset that would later be called modernity slowly emerged from the medieval world and how the trials and errors of the 15th and 16th century navigators helped shape that transformation. The seminar is interdisciplinary insofar as the readings will include developments in astronomy, geography, shipbuilding, mathematics, philosophy, as well as what could be called early anthropolgy, as stepping stones to the first scientific revolution. Conducted in English. Enrollment limited to: 20. Reserved for First Year students. FYS LILE WRIT

Fall POBS0910 S01 15684 M 3:00-5:20(15) (O. Almeida)

Interested students must register for HIST 0971M.

Fall POBS0971M S01 16168 Arranged 'To Be Arranged'

POBS 1030. Portuguese Stylistics: Advanced Language Study and Creative Writing.  
An intensive writing course covering basic genres: letter, short essay, diary, short story, and poetry. Students write five pages per week on five different preassigned topics that range over a wide variety of subjects. Exposes students to idiomatic and stylistic writing in a multitude of areas. Other media such as film and music will also be included. Considerable emphasis on strengthening speaking and writing skills. Prerequisite: POBS 0400, placement or instructor’s permission. Conducted in Portuguese.

Fall POBS1030 S01 15677 T 12:00-2:20(10) (L. Simas-Almeida)

POBS 1090. Portuguese-speaking Cultures Via Film.  
We will view and discuss films from Brazil, Lusophone Africa, Portugal and other regions as vehicles to understand the cultural diversity of Portuguese-speaking countries. Readings will include related fiction and non-fiction focusing on immigration, gender, race, family dynamics and social inequality. Students will write a series of short papers and develop a final project in consultation with the instructor. Particular attention will...
be paid to contemporary Brazilian cinema. Prerequisite: POBS 0610, 0620, 1030, or 1080, or instructor permission. Enrollment limited to 20. Conducted in Portuguese.

POBS 1210. Afro-Brazilians and the Brazilian Polity (AFRI 1210). Interested students must register for AFRI 1210.

Fall POBS1210 S01 16167 Arranged 'To Be Arranged'

POBS 1500I. Fiction and History (COLT 1810G). Interested students must register for COLT 1810G.

Spr POBS1500I S01 25424 Arranged 'To Be Arranged'

POBS 1600A. The Afro-Luso-Brazilian Triangle (AFRI 1020C). Interested students must register for AFRI 1020C.

Spr POBS1600AFS01 25425 Arranged 'To Be Arranged'


Spr POBS1600H S01 25423 Arranged 'To Be Arranged'

POBS 1600P. The Last Empire: Portuguese Colonialism and Decolonization in Comparative Perspective.

Adopting a comparative perspective, this course gives special emphasis to political, ideological and military dimensions of colonial rule in Africa. The first part deals with the evolution of Portuguese colonialism since World War II. The second part focuses on the process of decolonization after 1974, integrating the dissolution of the Portuguese Empire in the international context of the Cold War. Conducted in English.

Spr POBS1600PF S01 25246 T 4:00-6:20(16) 'To Be Arranged'

POBS 1600S. 17th Century Portuguese World.

Analyzes the major historical events that influenced the Portuguese world under Habsburg rule and during the baroque movement. To question definition of Empire, nation, national identity, colonial spaces. It will examine Brazil during the Dutch invasion; the expectations of a future independence from the yoke of Spain; political, economic and religious situation after the Portuguese restoration in 1640; political and economic struggle that followed; the Portuguese Inquisition and the missionary efforts undertaken in Brazil; the prophetic and messianic expectations of the Iberian world (Catholic and Jewish); and the political and cultural aspects of seventeenth-century Ibero-American baroque culture. Conducted in Portuguese.

Spr POBS1600SF S01 25243 F 1:00-3:20(06) 'To Be Arranged'

POBS 1601F. Portuguese Literature and Cinema.

This course consists of two main parts: studying the cinematographic adaptations of Portuguese literary texts; and examining the presence of a cinematographic influence in contemporary Portuguese novels. We will conclude with the study of films by Manoel de Oliveira. This is to trace the history of the inter-semiotic relationship between literature and the seventh art. To involve the analysis of diverse theories and methodological approaches in regards to the filmic adaptation of literary texts, (re)creative component of the transposition; to instill critical methods that will enable the student to analyze literary texts full of narrative techniques modeled on screen.

Fall POBS1601FS01 16416 F 11:00-1:20(04) 'To Be Arranged'

POBS 1670. History of Brazil (HIST 1670).

Interested students must register for HIST 1670.

Fall POBS1670 S01 16158 Arranged 'To Be Arranged'

POBS 1720. Literacy, Culture, and Schooling for the Language Minority Student.

Focuses on increasing awareness of the intersection of language and literacy, the sociocultural influences on literacy development, and the application of diverse strategies that support the acquisition of second-language literacy. Combines a theoretical exploration of literacy processes and methodological implications with a clinical requirement of four hours weekly in a second-language field-teaching practicum. Conducted in English.

Spr POBS1720 S01 24933 T 4:00-6:20(16) (S. Smith)

POBS 1740. Artful Teaching: Intersecting the Arts with Foreign and Second Language Acquisition.

How can we create meaningful experiences for those learning a foreign or second language? What makes the creative arts (art)culate so powerfully and naturally with foreign and second language acquisition? How do the arts enable students to become aware of surrounding cultures while simultaneously acquiring a new language? This course will explore connections between the arts—visual, literary and performing—and language acquisition in a combined workshop and seminar approach. Readings will include authors Sheridan Blau, Augusto Boal, Shirley Brice Heath, Paulo Freire, Jan Mandell, Twyla Tharp, Jeffrey D. Wilhem and others.

Spr POBS1740 S01 25428 F 9:30-11:50(03) (P. Sobral)

POBS 1800F. The Lusophone World and the Struggle for Modernity.

A study of classical writings from the Portuguese-speaking world dealing with the issue of modernity, focusing particularly on the Counter-Reformation and Baroque paradigms versus the Enlightenment. Portuguese, Brazilian and African writers such as Antero de Quental, Sérgio Buarque de Holanda, Vianna Moog, Amílcar Cabral and others will be read critically and in a comparative approach. Conducted in Portuguese. Enrollment limited to 40.

Spr POBS1800F S01 24934 Arranged (O. Almeida)


Interested students must register for HIST 1951.

Spr POBS1951 S01 25430 Arranged 'To Be Arranged'

POBS 1970. Reading and Guided Study.

Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.


This independent study course is designed for students working on honors projects. Written permission of the concentration advisor (Prof. Sobral) is required. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

POBS 2010A. Language Theory and Curriculum Development.

Focuses on the application of language theory, methodology, and curriculum development procedure for classes enrolling English language learners. Participants focus on setting appropriate goals and objectives aligned with learning standards and develop appropriate curricula in several subject areas. Conducted in English.

Fall POBS2010A S01 15702 Th 4:00-6:20(16) (M. Pacheco)

POBS 2020D. Theories in First and Second Language Acquisition.

Theory and current research relating to first and second language acquisition and learning are examined from a pedagogical perspective. Focuses on both learning and teaching a second language. Conducted in English.

Fall POBS2020D S01 15701 T 4:00-6:20(18) (S. Smith)

POBS 2020E. Research Seminar in ESL Education.

Focuses on preparing students to conduct qualitative research in diverse educational settings. As a final project, students develop a comprehensive framework for a self-designed study. Conducted in English.

Fall POBS2020ES01 16181 T 4:00-6:20(18) (M. Pacheco)

POBS 2120A. ESL Methodology Assessment and Evaluation.

An overview of the current principles, practices and approaches that inform assessment and evaluation for English language learners. Participants engage in class activities that duplicate selected assessment approaches and identify strategies for integrating assessment with planning and instruction appropriate to the language proficiency of students. Participants explore assessment research and theoretical background for an understanding of the complexity of evaluating student achievement. Conducted in English.

Spr POBS2120A S01 24932 Th 4:00-6:20(17) (M. Pacheco)

POBS 2500B. Portuguese Overseas Encounters.

A critical analysis of some classic Portuguese travel writings from the 16th to the 20th century. The readings include Zurara, Camões, Fernão Mendes Pinto, História Trágico-Marítima, Ramallo Ortigão, Raul
Brandão, as well as the contemporary Pedro Rosa Mendes. Conducted in Portuguese.

Fall POBS2500G S01 15693 T 6:00-8:20PM(12) (O. Almeida)

POBS 2500G. Nation and Narration.
The invention and transformation of the idea of Brazil as a nation narrative texts since the middle of the 19th century. Manuel Antônio de Almeida, José de Alencar, Adolfo Caminha, Machado de Assis, Monteiro Lobato, Mário de Andrade, Adalzira Bittencourt, Antônio Callado and João Ubaldo Ribeiro. Theoretical texts by Benedict Anderson, Homi Bhabha, Edward Said, Eric Hobsbawn, Frantz Fanon, Roberto Schwarz and others.

Conducted in Portuguese.
Spr POBS2500G S01 25208 M 3:00-5:20(13) (L. Valente)

POBS 2500K. Senses and Sensibilities in the Nineteenth Century Portuguese Novel.
The works to be read are representative of the major literary trends in 19th century Portuguese literature. They will be analyzed with a focus on literary aesthetics, but also on meanings (or senses), both culturally and personally, by exploring the textual construction of emotions, i.e., the engagement of sensibilities in the written word. Authors to be studied include Almeida Garrett, Camilo Castelo Branco and Eça de Queirós.

Conducted in Portuguese.
Fall POBS2500K S01 15678 M 3:00-5:20(15) (L. Simas-Almeida)

POBS 2600B. Saramago and His Contemporaries.
Focuses mainly on the "oeuvre" of José Saramago, the recently deceased Portuguese Nobel Prize winner. Four other well-known Portuguese writers (Vergílio Ferreira, Agustina Bessa-Luís, António Lobo Antunes, Lidia Jorge) are also studied as a way of contextualizing Saramago's work but, more importantly, for their own merit as outstanding novelists. Complementary readings will mostly consist of theoretical texts concerning an approach to contemporary novels based on the nexus between history and fiction on the one hand, and the construction of emotions in literature on the other. Conducted in Portuguese. Enrollment limited to 25.
Spr POBS2600B S01 24931 Th 4:00-6:20(17) (L. Simas-Almeida)

This seminar will examine the major novels, short story collections, and crônicas by the Brazilian writer Clarice Lispector and analyze the development of her literary voice and her unique language. Reading her work through and beyond the existential, feminist and poststructuralist views manifested in the best critical and theoretical analyses of her work, this seminar will focus especially upon her passionate struggle with language as well as her genre-breaking narratives, alongside her ontological quest for narrative subjectivity. Seminar presentations and papers will explore these issues with the aim of understanding Clarice's spiritual and philosophic impulses as well as her original linguistic contribution to Brazilian and World Literatures. Conducted in Portuguese.
Fall POBS2600M S01 15681 W 3:00-5:20(17) (N. Vieira)

POBS 2600R. Modernization of Brazilian Drama—Nelson Rodrigues' Legacy of Performance and Consciousness.
Reading psychological, mythical and Carica plays by Nelson Rodrigues will serve to define his legacy in the modernization of the Brazilian Stage and his influence on dramatists of the 60s and 70s. Exploring NR's inspiration from Greek tragedy to Freudian consciousness and aesthetic Expressionism, discussions and presentations will focus upon social ritual, fetish and taboos Rodrigues staged to unmask Brazilian society. Filmed/ taped plays and criticism will be analyzed via performance studies theory for interpreting modes of conscious performativity as tools for cultural Expressionism, discussions and presentations will focus upon social ritual, and his influence on dramatists of the 60s and 70s. Exploring NR's will serve to define his legacy in the modernization of the Brazilian Stage and his influence on dramatists of the 60s and 70s. Exploring NR's inspiration from Greek tragedy to Freudian consciousness and aesthetic Expressionism, discussions and presentations will focus upon social ritual, fetish and taboos Rodrigues staged to unmask Brazilian society. Filmed/ taped plays and criticism will be analyzed via performance studies theory for interpreting modes of conscious performativity as tools for cultural

Spring POBS2600R S01 26245 W 3:00-5:20(14) (N. Vieira)

POBS 2970. Preliminary Examination Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.
Fall POBS2970 S01 14075 Arranged "To Be Arranged"
Spr POBS2970 S01 23588 Arranged "To Be Arranged"

POBS 2980. Reading and Guided Study.
Reading in Portuguese language, literature, civilization, and bilingual studies. Conducted via Portuguese readings and discussions. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Fall POBS2990 S01 14076 Arranged "To Be Arranged"
Spr POBS2990 S01 23589 Arranged "To Be Arranged"

Public Health

PHP 0030. Health of Hispaniola.
Two developing countries, Dominican Republic and Haiti, have widely differing health outcomes despite centuries of shared experience on the Caribbean Island of Hispaniola. This course will examine the history, politics, economics, culture, international relations, demography, and geography, as well as epidemiology and health services, to demonstrate that multiple factors, both recent and long-standing, determine the present health of these populations. Enrollment limited to 20 first year students. Instructor permission required. FYS WRIT
Spr PHP0030 S01 24846 Th 3:00-7:50(12) (T. Empkie)

PHP 0050. Pain and the Human Condition: Exploring the Science, Medicine, and Culture of Pain.
Pain is a universal human experience, yet it is highly subjective. For most, pain represents an occasionally unpleasant, self-limited experience. However, for others, chronic pain persists beyond the recovery from an injury or as a result of a chronic health condition. Persons with chronic pain often describe their pain as permeating every aspect of their lives. While an active area of research, pain remains a significant challenge to the individual seeking treatment, the health care provider and society. This multidisciplinary course introduces students to scientific, medical, and public health aspects of pain and explores personal narratives and cultural meanings of pain. Enrollment limited to 20 first year students. FYS WRIT
Fall PHP0050 S01 16562 Th 1:00-2:20(10) (N. Trivedi)

PHP 0310. Health Care in the United States.
Introduction to the health care delivery system. An overview of the U.S. health care financing, delivery and regulatory system. Considers the interaction between paying for and providing and assuring the quality of health services; changes in one component of the system inevitably affect the others. Addresses the balance between employer funded health insurance, publicly funded health insurance and the consequences of not being insured. Seven discussion sections arranged during the semester. Open to undergraduates only.
Spr PHP0310 S01 24780 MW 11:00-11:50(04) (I. Wilson)

PHP 0320. Introduction to Public Health.
An introductory overview of the U.S. Public Health System with an emphasis on the core functions of public health, challenges and strategies for working with communities, and specific health issues that impact the health of the population. Presents a comprehensive overview of the environmental and behavior factors associated with health promotion and disease prevention.
Fall PHP0320 S01 15423 MW 11:00-11:50(04) (M. Clark)

PHP 1070. The Burden of Disease in Developing Countries.
Defines and critically examines environmental, epidemiologic, demographic, biomedical, and anthropological perspectives on health and disease in developing countries. Emphasis on changes in the underlying causes of morbidity and mortality during economic development. Focuses on the biosocial ecology of diseases. Required major term paper worth 50% of final grade is scholarly centerpiece of course. Weekly discussion sections and small group research projects supplement the two exams and term paper. Guest lecturers cover different diseases and public health perspectives. Enrollment limited to 65. DVPS LILE WRIT
Fall PHP1070 S01 15424 MW 8:30-9:50(02) (S. McGarvey)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
**PHP 1100. Comparative Health Care Systems.**
Focuses on principles of national health system organization and cross-national comparative analysis. Emphasizes application of comparative models to the analysis of health and health-related systems among nations at varying levels of economic development and health care reform. Addresses research questions related to population health and systems' performance. Questionnaire completion required for Freshman and Sophomore students. Enrollment limited to 30.
S01 24781 T 12:00-2:20(10) (S. Allen)

**PHP 1320. Survey Research in Health Care.**
An introduction to the methodology of survey research as it is conducted by social scientists and epidemiologists. Provides an overview of all aspects of study design and instrument development as well as an introduction to statistical analysis of survey data. Prerequisite: PHP 0320. Students should fulfill the department's statistics requirement prior to taking, or concurrently with, this course.
Fall PHP1320 S01 15425 TTh 10:30-11:50(13) (V. Mor)

**PHP 1350. Prisoner Health Inside Out.**
Correctional institutions are reservoirs of physical and mental illness. 60% of prisoners are substance involved; 50% suffer from mental illness; 34% are addicted. Infectious disease rates top ten times those of the general public. Nine million prisoners—overwhelmingly uninsured and poor, predominantly men of color—return to their communities annually. The public health implications of these numbers are staggering. This course brings together some of the nation's top researchers in correctional health and substance use and addiction with the state's senior prison administrators to examine the extraordinary health challenges—and care and treatment possibilities—our epidemic of incarceration has created.
Fall PHP1350 S01 16588 Th 4:00-6:20(16) (N. Zaller)

**PHP 1400. HIV/AIDS in Africa: A Multidisciplinary Approach to Support HIV/AIDS Care and Treatment Programs.**
The course is designed to introduce students to the field of environmental health, and demonstrate how environmental health is integrated into health care, social services and the environment. The matrix approach juxtaposes public health content (e.g., infectious disease) and public health tools (e.g., behavioral theory, policy/advocacy/epidemiology/quality improvement/program planning) using case studies. It aims to strengthen students’ capacity to apply a population-based viewpoint to public health practice. Prerequisite: PHP 0320. Enrollment limited to 40.
Spr PHP1530 S01 24811 M 3:00-5:20(13) (P. Nolan)

**PHP 1540. Alcohol Use and Misuse.**
Reviews the epidemiology of alcohol use, abuse, and dependence and examines its neurobiological and behavioral underpinnings. Covers etiology including physiological, genetic, psychological and social-cultural influences, and prevention, brief intervention and treatment considerations. Course background in psychology, sociology, or community health is recommended. Recommended prerequisites: PHP 0320 and CLPS 0010. Enrollment limited to 20 juniors, seniors, and graduate students.
Fall PHP1540 S01 15426 TTh 9:00-10:20(08) (K. Carey)

**PHP 1600. Obesity in the 21st Century: Causes, Consequences and Countermeasures.**
The scope of obesity knowledge is too large to cover during one single course, therefore we will focus primarily on obesity-related health outcomes, including the state of the science of obesity, obesity epidemiology, the social and behavioral correlates of obesity, obesity stigma, policy and interventions across population groups. The readings for this course are multi-disciplinary in nature and integrate epidemiological, biological, sociological, political and philosophical perspectives. This course is specific to the United States and thusly all readings will reflect this contextual focus. Enrollment limited to 30.
Spr PHP1600 S01 25220 Th 4:00-6:20(17) (A. Keita)

**PHP 1680. Pathology to Power: Disability, Health and Community.**
This course offers a comprehensive view of health and community concerns experienced by people with disabilities. Guest speakers, site visits, and hands on field research involving interactions with people with disabilities will facilitate the students gaining a multi-layered understanding of the issues faced by people with disabilities and their families.
Fall PHP1680 S01 15427 W 3:00-5:20(17) (S. Skeels)

**PHP 1680K. Introduction to Conducting Clinical Research.**
This course is intended to help students become familiar with the design and implementation of clinical research, including ethical and logistical processes related to collecting data and interpretation of published medical literature. In addition to weekly sessions, the course requires 4-6 hours weekly in the Emergency Department at Rhode Island Hospital enrolling patients in clinical trials. As students will be directly exposed to patient and clinical care, the course is limited to 12 students for the semester. Interested students should contact the course director to be considered for enrollment. Not open to first year students. Instructor permission required.
Spr PHP1680K S01 25064 M 5:00-7:20(13) (F. Beaudoin)

**PHP 1680T. Translation, Diffusion and Cultural Relevance of Health Promotion Interventions.**
Intended to help students become familiar with three key aspects of disease prevention/health promotion programs: (1) how findings from “basic” behavioral and social science (BSS) research are tested for effectiveness in real-life settings (translation); (2) how programs with demonstrated effectiveness, in one or more local settings, are introduced and adopted more broadly (diffusion); and (3) how cultural relevance is involved in both translation and diffusion. Translation and Diffusion will comprise the two main sections of the semester. Cultural relevance will be a theme integrated into each part of the course. Appropriate for BSSI, MPH, and advanced undergraduate students with coursework in public/ community health. Open to juniors and seniors only.
Spr PHP1680T S01 24812 TTh 11:00-12:20(09) (W. Rakowski)

**PHP 1700. Current Topics in Environmental Health.**
This course is designed to introduce students to the field of environmental health, and demonstrate how environmental health is integrated into various aspects of our lives, both directly and indirectly. Topics to be covered include: toxic metals, vector-borne disease, food safety, water quality, radiation, pesticides, air quality, hazardous waste, risk assessment, and the role of the community in environmental health. Several topics...
will be presented by guest speakers so that students can learn from the expertise of professionals in the field. Enrollment limited to 40.

**PHP 1740. Principles of Health Behavior and Health Promotion Interventions.**
Examines health behavior decision-making and elements for design of health promotion interventions. Covers theories of health behavior (focusing on primary and secondary prevention), principles of intervention design, and reading of research literature. Emphasizes psychological, social, and proximate environmental influences on individuals' health-related behaviors. Restricted to juniors, seniors, and graduate students. Prerequisite: PHP 0320 or equivalent. Enrollment limited to 25.

**PHP 1800. TRI-Lab Seminar on Healthy Early Childhood Development: A Team Approach.**
This seminar, open by invitation only to participants in the TRI-Lab program, will investigate a range of topics related to the healthy development of children from pregnancy through school entry, including the prevalence and determinants of major health and developmental concerns of infants and young children as well as key state and federal programs designed to address them. Readings, lectures, discussions, and in-class exercises will be used to foster collaborative inquiry by students, faculty, and community participants. Students will develop projects aimed at advancing or refining solutions to key healthy early childhood development challenges in Rhode Island.

**PHP 1910. Community Health Senior Seminar.**
Disparities in health and health care have been documented in the U.S. and globally. Students will develop a needs assessment relevant to health disparities at the local or global level; systematically review, synthesize, and critique a body of literature; use knowledge and tools from previous public health classes to pose a research question, and then find, create, and manipulate data to perform appropriate analysis; interpret and present study results; and learn to work collaboratively towards a specific public health research goal. Prerequisite: PHP 0310, 0320, and 1320. Open to Senior Community Health concentrators only.

**PHP 1970. Independent Study.**
A special project may be arranged in consultation with an individual faculty sponsor. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

**PHP 1980. Honors Thesis Preparation.**
Two semesters of PHP 1980, Honors Thesis Preparation, will be devoted to the development and implementation of an Honors project, and of the writing of the Honors Thesis for the Community Health Concentration.

This course provides an introduction to the concepts and scope of public health nutrition with a focus mainly on the U.S. Students will gain an understanding of the science behind national dietary recommendations and learn about dietary assessment methods, determinants of food intake, and interventions to improve diet. The course will emphasize the ways in which environment and policy can influence the nutritional status of diverse population groups. It will also focus on controversial topics in nutrition and will employ hands-on activities such as self-dietary assessment, in-class debates, evaluation of popular media and individual presentation of nutrition topics of interest. Enrollment limited to 25 juniors, seniors, and graduate students.

**PHP 2030. Clinical Trials Methodology.**
We will examine the modern clinical trial as a methodology for evaluating interventions related to treatment, rehabilitation, prevention and diagnosis. Topics include the history and rationale for clinical trials, ethical issues, study design, protocol development, sample size considerations, quality assurance, statistical analysis, systematic reviews and meta-analysis, and reporting of results. Extensively illustrated with examples from various fields of health care research. Recommended prerequisites: introductory epidemiology and statistics. Pre-requisites: PHP 2120, and either PHP 2508, 2510, or 2520. Open to graduate students only.

**PHP 2040. Applied Research Methods.**
Emphasizes the theory of sampling and survey methods and their application to public health research. Topics include: survey design and planning; principles of sampling and survey terminology; questionnaire construction; protection of human subjects; data collection (including interviewing and data coding procedures); and application, presentation, and evaluation of results. Suggested prerequisites: PHP 2120, and either PHP 2508 or 2510. Open to graduate students only.

**PHP 2060. Qualitative Methods in Health Research.**
Introduces qualitative approaches to data collection and analysis in health research. Methods covered include: participant observation, key-informant interviews, focus groups, innovative data collection strategies, and non-obstructive measures. Students will use applied projects to develop skills in qualitative data collection and management, interviewing, transcript analysis using computerized software, triangulation between qualitative and quantitative data, and report preparation for qualitative studies. Enrollment limited to 20 graduate students.

**PHP 2070. Public Health/Community Service Internship.**
The course is an introduction to the history, organization, resources, core values, and issues of public health and health care. This course aimed at advancing or refining solutions to key healthy early childhood development challenges in Rhode Island.

**PHP 2080. Ethical and Legal Issues in Public Health.**
Uses case study strategies to: identify key ethical principles, values, legal authorities and regulation relevant to public health practice and research; evaluate public health research designs in terms of ethical and legal principles; conduct ethical analyses of public health interventions by identifying potential ethical and legal concerns and conflicts; and employ strategies for working effectively with special populations, including the design of culturally appropriate interventions. Open to graduate students only.

**PHP 2090. Scientific Writing in Public Health.**
Addresses methodological and operational issues associated with developing research studies in epidemiology (including clinical trials). Students prepare protocols for research studies in human populations with attention to ethical guidelines and regulations. Students critique completed proposals, are exposed to existing systems for submission and review of funding applications, as well as controversial issues such as conflict of interest. Prerequisite: PHP 2120. Enrollment limited to 10 graduate students. Students must be accepted to the Clinical and Translational Research Institute. S/NC

**PHP 2120. Introduction to Methods in Epidemiologic Research.**
Epidemiology quantifies patterns and determinants of human population health, with a goal of reducing the burden of disease, injury, and disability. An intensive first course in epidemiological methods, students learn core principles of study design and data analysis through critiques of published epidemiological studies as well as hands on practice through weekly exercises and assignments. This is a graduate level course aimed at advanced undergraduate and graduate students in epidemiology. Students are not open to first year students or sophomores but may be available for advanced undergraduates with the instructor's permission.

**PHP 2130. Human Biology for Public Health.**
This course provides basic principles of human biology and its applications to public health. Examples of biology topics include the cardiovascular system, endocrine system, immune system, nervous system, genetics, cancer, cardiovascular disease, HIV/AIDS, and depression. Examples of applied topics include strengths and weaknesses of using biomarkers,
accuracy and precision of biological measures, quality assurance and quality control methods for using biomarkers for public health research. Mixed teaching methods are used, including small group discussions, problem-based learning and guest lectures. Prerequisite: PHP 2120 (may be taken concurrently) or instructor permission. Enrollment limited to 20 graduate students.

Spr PHP2130  S01  24830  T  1:00-3:20(10)  (E. Loucks)

The overall objective of this course is to provide students with a strong foundation in epidemiologic research methods. This is the first of a two- or four-course sequence in epidemiologic methods aimed at students who expect to eventually conduct their own epidemiologic research. There will be a strong quantitative focus in this course. By the end of the foundations course, students should be sufficiently familiar with epidemiologic research methods to begin to apply these methods to their own work. Prerequisite: PHP 2507 or 2510 (either may be taken concurrently); the typical student will also have some introductory knowledge of epidemiology.

Fall PHP2150  S01  16317  TTh  10:30-11:50(13)  (E. Triche)

PHP 2170. Injury As A Public Health Problem.
Injury causes significant morbidity and mortality in the U.S. and across the globe. However, injuries are both violent and non-violent – are eminently preventable. The overarching objective of this course is to enable students to understand the epidemiology of injury and violence, as well as strategies to improve public health through injury prevention. Prerequisite: PHP 2120 (may be taken concurrently) or instructor permission. Enrollment limited to 20 graduate students.

Fall PHP2170  S01  16083  M  1:00-3:20(06)  (M. Ranney)

PHP 2180. Interpretation and Application of Epidemiology.
This advanced graduate seminar extends methodologic training in epidemiology and integrates it with subject matter knowledge to enhance inferences about epidemiologic research and its application to policy. Students will build on a foundation of methods training through Intermediate Epidemiology (PHP 2200) with selected advanced methods topics such as meta-analysis, imputation, and the tools of clinical epidemiology. Each week, a new methodologic topic will be introduced and we will develop a specific application of epidemiology to causal inference and policy. Prerequisite: PHP 2200. Open to graduate students only.

Spr PHP2180  S01  24833  W  2:30-4:50(07)  (D. Savitz)

This second course in epidemiologic methods reinforces the concepts and methods taught in PHP 2150, with in-depth instruction in issues of study design, assessing threats to study validity including confounding and selection bias, and analyzing data with standard regression models. The course emphasizes hands-on learning and includes a combination of didactic lectures, discussions of methodologic papers, and a required laboratory component where students will learn to apply the concepts learned in class to real-world problems. Prerequisites: PHP 2150 and either 2510 or 2507, or permission of the instructor. Co-requisite: PHP 2511 or 2508.

Spr PHP2200  S01  24835  MW  1:00-2:20(06)  (G. Wellenius)

PHP 2220B. Nutritional Epidemiology.
Although epidemiology is logically equipped to address the dietary causes of disease, the complex nature of diet has posed an unusually difficult challenge to this discipline. This course will focus on the methodological challenges that epidemiologists face in studying dietary factors as determinants of chronic diseases. Dietary assessment methods, biomarkers, and anthropometric measures will be reviewed. Substantive material and up-to-date issues will be used as examples. The course will consist of lectures and exercises to develop basic skills to allow students to have a strong grounding in this field. Open to graduate students only.

Fall PHP2220B  S01  16136  T  1:00-3:20(10)  (D. Michaud)

PHP 2220E. Topics in Environmental and Occupational Epidemiology.
This course introduces students to the epidemiologic study of historical and contemporary environmental/occupational agents, focusing on study design, biases, and methodological tools used to evaluate and extend the evidence linking exposures to human disease. The course will discuss applications, strengths, and limitations of different study designs and their use in studying specific environmental agents. Didactic lectures and student-led discussions will be used to provide students with a basic understanding of and the tools to apply/extend their knowledge of specific environmental agents (cell phones and endocrine disruptors) and special topics (children’s neurodevelopment and epigenetics). Prerequisite: PHP 2120 or equivalent.

Spr PHP2220E  S01  24837  W  9:30-11:50(02)  (J. Braun)

PHP 2222. Genetics, Human Population and Diseases.
The purpose of this course is: 1) to introduce students to genetics, genomics and various designs of genetic studies of human diseases, and 2) to discuss selected topics in challenges and advances in human genetic studies. Some prior knowledge with genetics or epidemiology is preferred. This course may be most appropriate for second year MPH, ScM, or PhD students, as well as first-year graduate students and advanced undergraduate students with previous exposure to introductory epidemiology and biostatistics. Prerequisite: introductory-level statistical analyses and epidemiology courses, such as PHP 2507 or 2510, and 2120 or 2150. Undergraduates need permission of instructor to register. Enrollment limited to 20.

Fall PHP2222  S01  16406  F  9:30-11:50(02)  (Y. Huang)

PHP 2240. Methods of Environmental Epidemiology.
In this course, students will understand, implement, and interpret the design and analysis tools commonly used in environmental epidemiology. Topics to be discussed include cohort, time-series, case-crossover, and panel study designs, modeling of flexible dose-effect relationships, consequences of measurement error and missing data, and analyses of effects of exposures with unknown latencies. Although these methods will be presented in the context of estimating the health effects of environmental exposures, many of these methods are readily applied to other fields. Prerequisite: PHP 2200 or instructor permission. Open to graduate students only.

Fall PHP2240  S01  15569  W  1:00-3:20(06)  (G. Wellenius)

PHP 2250. Advanced Quantitative Methods in Epidemiologic Research.
This course provides students with conceptual and quantitative tools based on counterfactual theory to make causal inference using data obtained from observational studies. Causal diagrams will be used to provide alternative definitions of and inform correcting for common biases. Non-, semi-, and fully parametric methods for addressing these biases will be discussed. These methods include standard regression, instrumental variables, propensity scores, inverse probability weighting, and marginal structural models. Settings when such methods may not be appropriate will be emphasized. Prerequisite: PHP 2200 and 2511; or PHP 2200 and 2508; or instructor permission. Enrollment limited to 25 graduate students.

Fall PHP2250  S01  15571  TTh  10:30-11:50(13)  (C. Howe)

This course provides students with fundamental principles of behavioral and social research methodology for understanding the determinants of public health problems, and for executing and testing public health interventions. We will focus on experimental methods, observational studies, and qualitative approaches. We will develop skills in understanding and interpreting data—both quantitative and qualitative. Throughout the course we will emphasize ethical, cultural, and professional issues for designing public health interventions. Prior coursework in research methodology and quantitative methods is recommended but not required. Open to graduate students and advanced undergraduates. Enrollment limited to 15.

Fall PHP2300  S01  15572  W  1:00-3:20(06)  (D. Operario)

PHP 2325. Place Matters: Exploring Community-Level Contexts on Health Behaviors, Outcomes and Disparities.
There is growing recognition among researchers, public health practitioners and policymakers that place matters for health behaviors and health outcomes. But what is place, and why does it matter? As with many health-related outcomes, the prevalence of ill health is unequally distributed across populations with certain features playing significant roles on health. In this course, we will explore the features of community environments and the associations with health behaviors (e.g. physical activity, preventive care, alcohol, sexual behaviors) and health outcomes (e.g. obesity, cardiovascular disease and mental health). This course is...
specific to the US and all readings reflect this focus. Enrollment limited to 25.

Fall PHP2325 S01 16123 M 9:00-11:20(02) (A. Keita)

PHP 2340. Behavioral and Social Science Theory for Health Promotion
This course will help students become familiar with behavioral and social science theories commonly used for planning disease prevention/health promotion interventions. In addition to review of specific theories, topics to be discussed include: how theories are developed and tested; challenges and potential pitfalls in using theory for intervention planning; and creation of causal diagrams based on concepts from theories. Undergraduates need permission of instructor; priority will be for Community Health concentrators. Enrollment limited to 25.

Fall PHP2340 S01 15573 Th 12:00-2:20(10) (D. Williams)

PHP 2350. Economics of Medical Therapies: Health Policy and Practice.
Introduces methods and applications of decision analysis, cost-effectiveness analysis, and benefit-cost analysis in public health policy and practice, including health care technology assessment, medical decision making, and health resource allocation. Examines technical features of these methods, problems associated with implementing them, and advantages and pitfalls in their application in setting public health policy. Open to juniors, seniors, and graduate students.

Spr PHP2350 S01 24839 W 12:30-2:50(05) (J. Bentover)

PHP 2360. Designing and Evaluating Public Health Interventions.
Aims to develop skills in designing and evaluating public health interventions. Levels of intervention include the individual; families or small groups; organizations such as schools, worksites, health care settings; communities; social marketing and health communications; policy and environmental changes. Will identify personal and environmental factors that affect public health and discuss needs assessment, formative research, cultural sensitivity, behavior change theories, intervention mapping, process and impact/outcome evaluation and dissemination. Students will critique intervention studies and gain experience in developing a hypothetical behavior change intervention. Graduate students and AB-MPH undergraduates only.

Spr PHP2360 S01 24840 W 3:00-5:20(14) (K. Gans)

PHP 2370. Etiology of Substance Use Disorders.
This course will help students become familiar with behavioral, genetic, neurobiological, and cultural factors related to the onset and course of substance use disorders. In addition to review of specific theories, empirical evidence supporting models will be covered as will the integration of evidence across models. Priority will be given to postdoctoral fellows.

Fall PHP2370 S01 15575 F 1:00-3:20(06) (P. Monti)

This class will explore Health Communication, with a focus on behavioral and social science interventions delivered through health communication programs. The course is structured so that basic building blocks (i.e., definitions of health communication, public health context for health communications interventions, theories of health communication and health behavior change) are presented sequentially early in the semester. Students will synthesize knowledge and demonstrate their understanding of the role of health communication through a final research project. Seniors with concentration in Community Health may enroll with instructor's permission. Enrollment limited to 20 graduate and medical students.

Spr PHP2380 S01 24841 M 2:30-4:50(07) (K. Carey)

PHP 2390. Quantitative Methods for Behavioral and Social Sciences Intervention Research.
This course provides broad coverage of the quantitative methods used in behavioral intervention research ranging from descriptive data analysis to longitudinal methods. Students will learn to conduct, interpret, and write up a range of statistical procedures including basic psychometrics, t-tests and ANOVAs, correlations, and multiple regression. Students also will be introduced to more advanced techniques used for longitudinal data analysis in order to understand their common uses in behavioral intervention research. The course provides students in the Master's program in Behavioral and Social Sciences Intervention the requisite skills to conduct analyses of behavioral data as part of their Master's Thesis. Enrollment limited to 15 graduate students in the BSSI Master's program and the MPH program.

Fall PHP2390 S01 15714 F 9:30-11:50(03) (C. Kahler)

Reviews the development of the health care delivery, financing and regulatory control systems in the U.S. and reviews the literature on the relationship between health system structure and the services used and health outcomes that populations experience. A case-study approach is used to understand the inter-relationship between financing, delivery and regulatory components of the health system and their implication for public health by drawing on epidemiological, economic, political and sociological principals. Prerequisites: Graduate standing or PHP 0310 or PHP 0070 (not available to first year students or sophomores). Instructor permission required.

Fall PHP2400 S01 15582 F 9:30-11:50(02) (C. Koller)

PHP 2410E. Medicare: A Data Based Policy Examination.
This course will explore the role of Medicare as America's health insurer for the elderly and disabled and the impact of relevant Medicare insurance claims data, examining how Medicare policy changes in financing and regulation have affected the delivery and receipt of medical services.

At the end of the course students will: 1) know the history of important Medicare policy changes; 2) be able to construct aggregated patient case mix acuity adjusted measures of provider quality using insurance claims data; 3) be able to conduct policy analyses using Medicare claims data that are sensitive to standardized coding schemes. Enrollment limited to 15 graduate students. Prerequisite: PHP 2120, 2508, or 2510. Instructor permission required.

Spr PHP2410E S01 25250 Arranged (V. Mor)

PHP 2430. Analysis of Population Based Datasets.
Epidemiologic, health services, and social research often conducts "secondary analysis" of existing population-based datasets. Benefits include their representative sampling frames allowing generalizability to larger populations, timeliness, and lower cost. In addition, computer technology makes it possible to link some databases providing richer sources of information. There are several technical and methodological concerns when conducting "secondary analysis." Students will download, link, and analyze several data sets to understand the advantages of these data for health policy analysis as well as understand and apply different analytic methods. Familiarity with statistical analysis software is required. Prerequisites: PHP 2120, and either PHP 2508 (may be taken concurrently) or 2510. Open to graduate and medical students only.

Spr PHP2430 S01 24843 Arranged (E. Triche)

Systematic reviews and meta-analyses are increasingly used to inform decisions at all levels of healthcare, from the bedside to policy-making. This course picks up after PHP 2415 (Introduction to Evidence-based Medicine) that introduced basic concepts and simple meta-analysis of parallel arm randomized trials with dichotomous or continuous outcomes. The emphasis is on the quantitative synthesis of more complex data, including survival data, diagnostic tests, genetic/omic outcomes, and multivariate data (multiple outcomes, time-points or treatments – network meta-analysis). In addition to pre-requisites, students should have clinical background or training in basic concepts in medicine (must discuss with instructor), and facility with a statistical programming environment: R or Stata.

Fall PHP2435 S01 16674 Th 1:00-3:20(10) (T. Trikalinos)

PHP 2440. Introduction to Pharmacovigilence.
The course will focus on substantive topics in pharmacovigilence, including relevant principles of pharmacology, inference from spontaneous case reports, study design considerations, premarketing pharmacovigilence, common data sources for pharmacovigilenceologic studies, drug utilization review, adherence, and the development, implementation, and assessment of therapeutic risk management policies. The course will also focus on issues in pharmacovigilence, including the legal and historical basis of pharmacovigilence, evaluation of individual adverse drug events, signal detection, active safety surveillance, and
The quality of health care in the United States is in urgent need of improvement. This course will focus on the science of measuring and improving the quality of health care. Topics will include quality assessment, patient safety, medical errors, public reporting, financial incentives, organizational change, and health care disparities. Students will engage in a team-based quality improvement project. Open to graduate and medical students only.

Fall PHP2450 S01 16110 M 3:30-5:50(15) (A. Trivedi)

**PHP 2451. Exchange Scholar Program.**

*To Be Arranged*

**PHP 2470. Topics in Clinical, Translational and Health Services Research.**

Through a combination of mini-courses and seminars, students will explore concepts, gain knowledge and develop skills in a variety of public health areas. To receive a half credit for this course, students will be required to successfully complete 70 units. Units must be pre-determined by the course instructor and the unit instructor. Units are generally based on the number of in-person contact hours and the number of outside of class/homework hours required for a mini-course or seminar. Students must receive special permission from the instructor or be accepted to the Clinical and Translational Research Summer Institute to enroll.

Fall PHP2470 S01 15607 Arranged (P. Vivier)

**PHP 2480. Selected Topics in Global Health Economics.**

This course will survey selected topics in global health economics. It is designed to introduce students to specific issues, theory and practice of health economics at the global level. The first part of the course will survey research papers on econometric methods in global health including: field experiments, instrumental variables, propensity score matching and regression discontinuity. The second part will discuss current topics such as: conditional economic incentives for providers and consumers, social health insurance, public goods, and externalities. Prerequisites: PHP 2511 and ECON 1110, or equivalent. Enrollment limited to 8 graduate students. Instructor permission required.

Spr PHP2480 S01 25379 F 3:00-5:20(15) (O. Galarraga)

**PHP 2490. Methods in Pharmacoeconomics.**

This course will cover applications of epidemiologic methods to the study of medical interventions (drugs, vaccines, devices, and procedures), focusing on advanced methods. We will use formal frameworks of causal inference. The course will focus on substantive topics in pharmacoeconomics, including design and analytic strategies to overcome the limitations of common data sources. Other topics include the assessment of therapeutic risk management policies. Although a clinical background will be useful, it is not required. Prerequisites: PHP 2120, or PHP 2150 and 2200; and PHP 2507, 2510, or 2520; and PHP 2508 or 2511; or instructor permission. Enrollment limited to 20.

Spr PHP2490 S01 25563 M 9:30-11:50(02) (D. Dore)

**PHP 2507. Biostatistics and Applied Data Analysis I.**

The objective of the year long, two-course sequence is for students to develop the knowledge, skills and perspectives necessary to analyze data in order to answer a public health question. The year long sequence will focus on statistical principles as well as the applied skills necessary to answer public health questions using data, including: data acquisition, data analysis, data interpretation and the presentation of results. Through lectures, labs and small group discussions, this fall semester course will focus on identifying public health data sets, refining research questions, univariate and bivariate analyses and presentation of initial results. Prerequisite: understanding of basic math concepts and terms; basic functional knowledge of Stata. Enrollment limited to 50 MPH, CTR, and BSSI students. Instructor permission required.

Fall PHP2507 S01 15586 W 6:00-8:00PM(16) (A. Gjelsvik)

**PHP 2508. BioStatistics and Data Analysis II.**

Biostatistics and Applied Data Analysis II is the second course in a year-long, two-course sequence designed to develop the skills and knowledge to use data to address public health questions. The courses are specifically for students in the Brown MPH program, and the training programs in Clinical and Translational Research. The sequence is completed in one academic year, not split across two years. The courses focus on statistical principles as well as the applied skills necessary to answer public health questions using data, including: acquisition, analysis, interpretation and presentation of results. Prerequisite: PHP 2507. Enrollment limited to 48. Instructor permission required.

Spr PHP2508 S01 24847 Arranged (A. Gjelsvik)

**PHP 2510. Principles of Biostatistics and Data Analysis.**

Intensive first course in biostatistical methodology, focusing on problems arising in public health, life sciences, and biomedical disciplines. Summarizing and representing data; basic probability; fundamentals of inference; hypothesis testing; likelihood methods. Inference for means and proportions; linear regression and analysis of variance; basics of experimental design; nonparametrics; logistic regression. Open to advanced undergraduates with permission from the instructor.

Fall PHP2510 S01 15591 Th 9:00-10:20(08) (C. Bauer)

**PHP 2511. Applied Regression Analysis.**

Applied multivariate statistics, presenting a unified treatment of modern regression models for discrete and continuous data. Topics include multiple linear and nonlinear regression for continuous response data, analysis of variance and covariance, logistic regression, Poisson regression, and Cox regression. Prerequisite: APMA 1650 or PHP 2510. Open to advanced undergraduates with permission from the instructor.

Spr PHP2511 S01 24848 Arranged (J. Horgan)

**PHP 2520. Statistical Inference I.**

First of two courses that provide a comprehensive introduction to the theory of modern statistical inference. PHP 2520 presents a survey of fundamental ideas and methods, including sufficiency, likelihood based inference, hypothesis testing, asymptotic theory, and Bayesian inference. Measure theory not required. Open to advanced undergraduates with permission from the instructor.

Fall PHP2520 S01 15592 Th 2:30-3:50(11) (J. Hogan)

**PHP 2530. Bayesian Statistical Methods.**

Surveys the state of the art in Bayesian methods and their applications. Discussion of the fundamentals followed by more advanced topics including hierarchical models, Markov Chain Monte Carlo, and other methods for sampling from the posterior distribution, robustness, and sensitivity analysis, and approaches to model selection and diagnostics. Features nontrivial applications of Bayesian methods from diverse scientific fields, with emphasis on biomedical research. Prerequisites: APMA 1650, PHP 2510, PHP 2511, or equivalent. Open to advanced undergraduates with permission from the instructor.

Fall PHP2530 S01 25593 MW 9:00-10:20(02) (R. Gutman)

**PHP 2540. Advanced Methods for Multivariate Analysis.**

Survey of modern statistical methods for analysis of multivariate and high-dimensional data. Topics include inference for multivariate normally distributed data, methods for data reduction, classification and clustering, multiple comparisons for high-dimensional data, analysis of multidimensional contingency tables, and functional data analysis. Applications to diverse areas of scientific research, such as genomics, biomarker evaluation, and neuroscience will be featured. Prerequisites: APMA 1650 and 1660; or PHP 2520. Open to advanced undergraduates with permission from the instructor.

Spr PHP2540 S01 24849 Arranged (‘To Be Arranged’)

**PHP 2580. Statistical Inference II.**

This sequence of two courses provides a comprehensive introduction to the theory of modern inference. PHP 2580 covers such topics as non-parametric statistics, quasi-likelihood, resampling techniques, statistical learning, and methods for high-dimensional Bioinformatics data. Prerequisite: PHP 2520. Open to advanced undergraduates with permission from the instructor.

Spr PHP2580 S01 24850 Arranged (‘To Be Arranged’)

**PHP 2601. Linear and Generalized Linear Models.**

Generalized linear models provide a unifying framework for regression. Important examples include linear regression, log-linear models, and logistic regression. GLMs for continuous, binary, ordinal, nominal,
and count data. Topics include model parameterization, parametric and semiparametric estimation, and model diagnostics. Methods for incomplete data are introduced. Computing with modern software is emphasized. Prerequisites: APMA 1650 or PHP 2520. Open to advanced undergraduates with permission from the instructor.

Fall PHP2601 S01 15594 TTh 1:00-2:20(10) (X. Luo)
Fall PHP2601 S01 15594 Th 1:00-2:20(10) (X. Luo)

PHP 2602. Analysis of Lifetime Data.
Comprehensive overview of methods for inference from censored event time data, with emphasis on nonparametric and semiparametric approaches. Topics include nonparametric hazard estimation, semiparametric proportional hazards models, frailty models, multiple event processes, with application to biomedical and public health data. Computational approaches using statistical software are emphasized. Prerequisites: PHP 2510 and 2511, or equivalent. Open to advanced undergraduates with permission from the instructor.
Spr PHP2602 S01 24851 Arranged 'To Be Arranged'

PHP 2604. Statistical Methods for Spatial Data.
This course covers a variety of topics for spatial data, including data visualization, Bayesian hierarchical models, spatial models, as well as the computation techniques and statistical software to implement these models. Examples of applications will include, but are not limited to, spatial modeling of data from epidemiology, environmental studies and social sciences. Prerequisites: APMA 1650-1660 or PHP 2510-2511, and MATH 0520; some experience with scientific computing.
Spr PHP2604 S01 24852 Arranged (C. Bauer)

PHP 2620. Statistical Methods in Bioinformatics, I.
Introduction to statistical concepts and methods used in selected areas of bioinformatics. Organized in three modules, covering statistical methodology for: (a) analysis of microarray data, with emphasis on application in gene expression experiments, (b) proteomics studies, (c) analysis of biological sequences. Brief review and succinct discussion of biological subject matter will be provided for each area. Available software will be introduced. Intro level statistics (PHP 2507/2508 or PHP 2510/2511) recommended. Other students should contact instructor. Intro to software R and Bioconductor tools provided in lab. Open to advanced undergraduates with permission from the instructor.
Spr PHP2620 S01 24853 Arranged (Z. Wu)

PHP 2690D. Advanced Topics in Biostatistics: Practical Tools for Data Analysis.
Designed for graduate and advanced undergraduate students who will be analyzing data and want to develop a practical hands-on toolkit. Topics including data collection and management, exploratory data analysis, fitting and checking models, simulation, handling missing data and presentation of results will be developed through a series of case studies based on different types of data requiring a variety of statistical methods. Statistical programming techniques including functions, graphs and tables will be emphasized. Students should have familiarity with basic concepts of statistics through regression. Permission of instructor required.
Fall PHP2690D S01 16180 MW 10:30-11:50(03) (C. Schmid)

PHP 2950. Doctoral Seminar in Public Health.
The purpose of this seminar is to facilitate discussions of current scientific literature in epidemiology, biostatistics, health services, and public health in general. The main goal is to expose students to current methodological issues and controversies in epidemiology, biostatistics, health services, and public health, in an effort to integrate knowledge across disciplines. This seminar is by instructor permission only and is only open to doctoral students in Epidemiology, Biostatistics and Health Services Research.
Fall PHP2950 S01 15618 M 12:00-12:50(12) (T. Trikalinos)
Spr PHP2950 S01 24854 M 12:00-12:50(05) 'To Be Arranged'

PHP 2980. Graduate Independent Study and Thesis Research.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

PHP 2985. MPH Independent Study for Thesis Preparation and Research.
This optional half credit course may be taken up to two times during preparation for the MPH degree. It provides MPH students with self-directed thesis research and preparation time under the guidance of a thesis advisor. Prior to taking this course the student and advisor must reach agreement as to what constitutes satisfactory completion of the course (e.g., completion of a satisfactory literature review, attainment of specific thesis benchmarks, or completion of the thesis). Please check Banner for the correct section number and CRN to use when registering for this course.

PHP 2990. Thesis Preparation.
No description available.
Fall PHP2990 S01 14071 Arranged 'To Be Arranged'
Spr PHP2990 S01 23584 Arranged 'To Be Arranged'

PHP XLIST. Courses of Interest to Concentrators in Community Health.

Public Policy and American Institutions

PPAI 0100. Introduction to Public Policy.
An overview of policymaking and policy analysis in the contemporary United States. The course begins with an examination of traditional justifications for government action. We will then examine the discipline of policy analysis that has arisen to design and evaluate public policies. We will also consider critiques of the rational method and ask questions about how policy expertise fits into the political system. The course ends with classic works on organizations and implementation. Not open to graduate students. WRIT
Spr PPAI0100 S01 24895 TTh 10:30-11:50(09) (V. Cooley)

Who determines how public policy is made? Do public policies reflect what voters want, or do lobbyists, politicians, and bureaucrats really make the decisions? What factors motivate these different actors? This course examines public policy from the perspective of comparative politics. Over the course of the semester, we will examine policy making in the US and a number of industrialized countries in Western Europe and Japan. Topics studied include immigration policy, education policy, and family policy. Enrollment limited to 20 first year students. FYS WRIT
Fall PPAI0700J S01 15331 Th 3:00-5:20(16) (A. Pennock)

Broad overview of public policy analysis and program evaluation with emphasis on methodological issues involved in the analysis and assessment of government programs. Illustrations are drawn from a variety of substantive policy areas. Prerequisite: PPAI 0100, and POLS 1600 or EDUC 1110 or SOC 1100 or ECON 1620, or written permission of instructor. Enrollment limited to 40 Political Science and Public Policy concentrators.
Spr PPAI1200 S01 24850 MW 8:30-9:50(02) (A. Pennock)

PPAI 1700B. Social Welfare Policy in the United States.
Exposes students to the key challenges for social welfare policy-making in the United States. Particular attention will be given to the formulation and administration of prominent welfare, health, and education policies. Course materials also will explore how demographic and economic trends affect the implementation of social welfare policies. Instructor permission required. WRIT
Fall PPAI1700B S01 15328 T 9:30-11:50(08) (T. Devine)

PPAI 1700F. Economics and Public Policy.
An economic analysis of major social programs in the United States. Topics include the possibility of market failure in the private sector, the redistribution of income, and incentive effects created by the programs. Specific policy issues to be examined are welfare reform, Medicaid, school finance reform, and the Earned Income Tax Credit (EITC). Enrollment limited to 20.
Spr PPAI1700F S01 24915 T 9:30-11:50(08) (T. Devine)

PPAI 1700J. GIS and Public Policy.
An introduction to the theory and practice of social science Geographic Information Systems (GIS) as applied to public policy analysis. Topics include: the geographical basis of policy issues, spatial mapping, and the use of ArcView software to study policy problems.
Spr PPAI1700J S01 25325 TTh 2:30-3:50(11) (J. Combs)
PPAI 1700K. Health Policy Challenges.
Introduces students to the U.S. health care system. Focuses on how the organization, financing, and market structure of the system affect the key issues of access, cost, quality, and equity of care. Specific issues include minority and vulnerable populations, technology, risk adjustment, managed care, long-term care, ethics, and public health. Enrollment limited to 20 juniors and seniors.
Spr PPAI1700K S01 24910 F 3:00-5:20(15) 'To Be Arranged'

Explores policy issues facing cities today and examines how the private, public, and nonprofit sectors have mobilized in selected cities to address these issues. Topics include jobs and economic development, education, public safety, and regional approaches. Focuses on The Providence Plan, a joint city-state revitalization initiative designed to address the problems of urban poverty. Comparisons with similar programs in other cities.
Fall PPAI1700R S01 15326 T 6:00-8:20PM(14) (P. McGuigan)

PPAI 1700S. Policies Affecting Working Families.
Examines sociological and economic factors and current policies contributing to conflict between caring and earning which affects working families in the U.S. Investigates dynamic landscape of the American family and costs of providing and caring for family members. Considers government’s and employers’ roles in shaping policies, cross-national comparison of American policies with other leading nations, and links between policies and outcomes. Enrollment limited to 20.
Fall PPAI1700S S01 15320 W 3:00-5:20(17) (R. Loya)

PPAI 1700T. Good Government.
An applied ethics course specifically for students with backgrounds in Public Policy, it will emphasize the primary themes of good government: openness, deliberation, and integrity. Students will develop an essay on good government and do research for case studies of ethical dilemmas involving public servants. Prerequisite: PPAI 0100 (or equivalent). Instructor permission required.
Fall PPAI1700T S01 15318 M 3:00-5:20(15) (R. Cheti)

PPAI 1700V. Nonprofit Organizations.
Contemporary nonprofits and their role in community building and shaping public policy are central to this course. Topics include how strong coalitions impact housing, welfare and children’s policy, organizing empowered communities, the influential and engaged donor and building the value of nonprofits. Case studies will be featured and new nonprofit models will be conceptualized to strategically address critical human need. Enrollment limited to 20 juniors, seniors, and graduate students concentrating in Public Policy.
Fall PPAI1700V S01 15327 W 9:00-11:20(02) (W. Allen)

PPAI 1700Y. Crisis Management.
Introduces future policymakers to the multifaceted decision-making process in which governments, businesses, advocacy organizations, and the public are thrust into the throes of a policy crisis. Various crisis management theories, key stakeholders in a crisis situation, and the positive and negative effects of various strategies are analyzed. Enrollment limited to 20 junior and senior concentrators in Public Policy.
Fall PPAI1700Y S01 15334 F 3:00-5:20(05) (D. Preston)

PPAI 1700Z. State and Local Government.
Examines state and local politics and government in the United States. The first part of the course examines the historical underpinning and division of power of the major political actors, institutions, and processes through both institutionalist perspectives. The second part focuses on the role of states in shaping significant policy areas including civil unions, education, healthcare, welfare, and the environment.
Fall PPAI1700Z S01 15396 T 4:00-6:20(18) (E. Godwin)

A “silver tsunami” is coming. Soon 20% of US residents will be over the age of 65. Governmental policy makers and business leaders are scrambling to adapt as the aging population reshapes the demand for services and products and threatens to unravel the social safety net. This course will investigate the aging wave, analyze its impact on both private and public organizations through case study review, and consider implications for future management and policy. Emphasis will be on “social entrepreneurship” – practical solutions and their implementation within organizations. Enrollment limited to 20, preference given to graduate students, public policy concentrators, and seniors.
Fall PPAI1701D S01 15390 M 6:00-8:20PM(16) (S. Gresham)

PPAI 1701H. Congressional Leadership, Parties and Public Policy.
Focuses on the Congressional leadership, parties in Congress and their impact on political interactions, and public policy. The course will examine the relationship between the leadership in the Congress and the powerful elements in the House and Senate such as committee chairmen and the party caucuses as well as the media and lobbyists. Emphasis is on the dynamic interplay among these actors and their impact on the ability of the institution to respond effectively to address critical national priorities such as the federal debt, health reform implementation, nuclear proliferation and global warming. Enrollment limited to 20 juniors, seniors and graduate students.
Spr PPAI1701H S01 24909 F 9:30-11:50(03) (R. Arenberg)

PPAI 1701J. Policy Implementation.
Why do well-intentioned policies sometimes produce unfortunate results? This course will examine how policies designed by elected officials, bureaucrats, and courts are translated into practice through implementation, how successful policies are implemented or fail to produce intended effects, and how policy implementation bears on democratic governance. The course will consider policy implementation across policy domains, with recurring attention to k-12 education policy. Enrollment is limited to 20.
Spr PPAI1701J S01 25584 Th 3:00-5:20(11) (S. Moffit)

PPAI 1701K. Governance in the Academy: A University at Work in the 21st Century.
Focuses on understanding and evaluating the governance of the modern university. Brown will be used as one example to illustrate and illuminate various aspects of university governance. Themes of leadership, effective decision-making, priority-setting, planning, conflict and crisis management, and optimal organizational structure and behavior will be discussed. Students will be well-versed in the language, structure, roles of actors, and general operations of university governance and equipped to analyze and assess the strengths and weaknesses of various models. Students with an interest in pursuing a career in academia or other non-profit organizations will benefit from this course. Enrollment limited to 20 juniors and seniors. Spr PPAI1701K S01 24898 M 3:00-5:20(13) 'To Be Arranged'

PPAI 1701M. Juvenile Justice Institutions and Policy.
Examines the historical and legal development of the juvenile justice system and provides an overview of delinquency theory. These frameworks are used to study the major institutions and current policy issues in the juvenile justice system. Special topics include teen and family courts, age of jurisdiction, racial disparities in juvenile justice, and female delinquency. Students engage in a semester-long project to develop a policy brief addressing a current issue in juvenile justice. Enrollment limited to 20 juniors and seniors. Instructor permission required. WRIT Fall PPAI1701M S01 15323 T 3:00-5:20(18) (V. Cooley)

PPAI 1701O. Labor Market Policy.
Students will learn how to use basic economics models to analyze important labor market policy questions. Topics will include minimum wages, payroll tax cuts, training subsidies, unemployment insurance, negative income taxes, and others. Students will also learn how to find and interpret important labor market data (for example, unemployment rates, payroll employment numbers, and wages) which are used by policy analysts to evaluate local and national labor markets. Prerequisite: ECON 1110, ECON 1130, or EDUC 1130; or instructor permission. Enrollment limited to 20.
Spr PPAI1701O S01 24654 Th 9:30-11:50(08) (T. Devine)

PPAI 1701P. Inequality, Poverty, and Public Policy in the United States.
The course uses a multi-disciplinary social science approach to examine the intersections of racial and gender inequality, poverty, and public policy in the United States. The course is an advanced reading seminar that explores various approaches to theorizing, measuring, and researching poverty and inequality. The course also critically examines the role of historic public policies in reinforcing existing inequalities and evaluates
policies and strategies to reduce poverty and inequality. Enrollment limited to 20 juniors and seniors. DVPS
Spr PPAI1701P S01 24901 Th 6:00-8:20PM(17) (R. Loya)

PPAI 1701Q. Leading Social Ventures - Social Entrepreneurship in Action.
Intractable social problems across the globe demand new, impactful solutions. Social entrepreneurs, driven by passion to change the world, fuse social missions and savvy business practices to create enterprises that solve these complex challenges. Leading Social Ventures is designed for students who are leading social ventures or aspire to create and lead them. "Action learning" means students will apply educational content to a specific venture in the early stage of development. Students will work on a venture that they have created or select an existing early-stage venture among provided choices. Enrollment limited to 25. Spr PPAI1701Q S01 24918 W 3:00-5:20(14) 'To Be Arranged'

PPAI 1701W. Race and Public Policy.
Racial inequality is a fact of life in the United States. Evidence from a range of social science studies suggests that African Americans, and increasingly Latinos, are more likely than whites to experience a range of social and economic challenges, from school suspension and drop out, to arrest and incarceration, and the death penalty. In this course, you will develop a deeper and more nuanced understanding of racial inequality as a public policy problem. Enrollment limited to 20 juniors and seniors. DVPS WRIT
Fall PPAI1701W S01 16537 Th 6:00-8:20PM (D. Blanding)

PPAI 1910. Social Entrepreneurship.
This course introduces students to social innovation and social entrepreneurship and engages them in identifying significant issues, problems and solutions that drive social change. It helps students understand the competencies that are needed to be a transformative social entrepreneur and proven tools and strategies to create high performance, high impact entrepreneurial enterprises that offer bold solutions to complex contemporary problems. It highlights unique models of social enterprise from strictly non-profit, through those developing products or services that produce revenue in support of a social goal, to socially responsible for-profit companies. It emphasizes how enterprises are created and sustained. Enrollment limited to 50. Not open to students who have taken ENGN 1930Q.

An application is required. Please complete and submit the application here: http://bit.ly/TkhoJP. Deadline for applications is 5:00PM on Friday, January 25, 2013. To be eligible for a position in the class, you must attend the first class on January 24 at 9:00AM. Accepted students will be notified on Monday, January 28. Students who do not attend class on Tuesday, January 29 will forfeit their spot in the class to a student admitted from a wait list.
Spr PPAI1910 S01 24913 TTh 9:00-10:20(08) (W. Allen)

PPAI 1970. Independent Reading and Research.
Supervised reading or research. Specific program arranged in terms of the student's individual needs and interests. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

PPAI 1971. Independent Reading and Research.
See Independent Reading And Research (PPAI 1970) for course description. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

PPAI 1990. Public Policy Colloquium.
An advanced two-semester research seminar for senior honors candidates in the public policy and American institutions concentration. Participants jointly consider strategies appropriate to researching and writing a senior paper before proceeding to individual research on topics they choose. Each participant is required to present a summary of his or her work to the colloquium.
Fall PPAI1990 S01 15399 Arranged(12) (R. Cheit)

See Public Policy Colloquium (PPAI 1990) for course description.
Spr PPAI1991 S01 24919 Arranged 'To Be Arranged'

Studies how political, social, and economic institutions structure policymaking. Covers a variety of policy areas such as education, health care, technology policy, welfare, and social policy.
Fall PPAI2000 S01 15332 Th 3:00-5:20(16) (S. Moffitt)

Examines issues in government spending and tax policy. Conceptual topics include the normative assignment of responsibility with federal systems and the equitable distribution of income. Specific policy applications are covered.
Fall PPAI2010 S01 14768 TTh 1:00-2:20(10) (T. Devine)

Explores how organizations use budgets and management tools to achieve broader social, economic, and political objectives. It is designed to show how these techniques can be used to improve organizational performance.
Fall PPAI2020 S01 14766 MW 8:30-9:50(02) (P. Marino)

PPAI 2030. Statistics.
Covers social and economic statistics and their role in public policy research. Among the topics explored are descriptive and inferential statistics, measurement, sampling, and multivariate analysis. Open to graduate students in Public Policy or Political Science.
Fall PPAI2030 S01 15322 Th 10:30-11:50(13) (A. Pennock)
Fall PPAI2030 S01 15322 Th 10:30-11:50(13) (A. Pennock)

PPAI 2035. Statistics II for Public Policy Analysis.
The course introduces students to the use of multiple regression analysis and program evaluation for analyzing data in the social sciences. We will study a variety of designs for empirical public policy analysis, from random assignment to quasi-experimental evaluation methods, and students will have the opportunity to analyze actual datasets. We will also study the strengths and weaknesses of alternative evaluation strategies.
Spr PPAI2035 S01 25406 MW 1:00-2:20(06) 'To Be Arranged'

PPAI 2040. Policy Analysis.
Investigates policy analysis and program evaluation with emphasis on assessment of government programs.
Spr PPAI2040 S01 25405 TTh 10:30-11:50(09) (E. Godwin)

PPAI 2045. Environmental Policy Analysis.
The first half of the course focuses on the economic principles imbedded in the environmental problems facing local, state, and national societies across the globe. Key concepts include common-pool resources, public goods, market failures, and the valuation of costs and benefits across environmental policies. The second half of the course builds upon the economic foundation through the integration of statistical and financial techniques common in the evaluation and management of environmental policies. Throughout the semester the course will require students to accurately apply these quantitative methods to problem sets and case studies drawn from past and present environmental policy debates.
Fall PPAI2045 S01 16587 M 10:00-12:20(03) (E. Godwin)

PPAI 2150. Strategic Communication.
Teaches students communication skills for social change, and examines how individuals and organizations frame issues in order to effect change.
Spr PPAI2150 S01 24651 M 3:00-5:20(13) (E. Burke Bryant)

PPAI 2540. Urban Economic Policy.
This course will introduce students to the economic analysis of urban policy. We will use economic theory to analyze why cities exist, where they grow, and how activities are spatially arranged within urban areas. As we ask each of these questions, we will examine how public policy can influence the outcome and review empirical evidence. As time allows, we will also examine the economics of poverty, housing, and other issues within the urban context. Prerequisite: PPAI 2010 or instructor permission.
Spr PPAI2540 S01 24652 M 9:30-11:50(02) (T. Devine)

PPAI 2550. Managing and Leading in Public Affairs.
Examines issues related to leading and managing in the realm of public affairs, covering foundation topics such as: honor, ethics, and accountability; management and organizational theory; organizational
behavior; managerialism, performance, and strategic management; leadership; personnel management and social equity. Examining tools for effective relationship and networking building, cases will be used to apply concepts learned.

**Fall** PPAI2550 S01 14767 Th 9:30-11:50(08) (J. Sattery-Bownds)

**PPAI 2600. Social Science Data Technologies.** Covers the applied use of data sources and computer software programs. Its goals are to teach students how to use common software packages and access policy-relevant data.

**Fall** PPAI2600 S01 15649 Th 4:00-6:20(16) (J. Combs)

**Spr** PPAI2600 S01 24912 TTh 1:00-2:20(10) 'To Be Arranged'

**PPAI 2650. Congress and the Federal Budget: Procedure, Politics and Public Policy.** Focus is on the federal budget process, political interactions, and public policy outcomes. The budget represents nearly one-quarter of GDP, making those decisions central to the functioning of our democracy and the health of our economy. Emphasis is on the Congressional budget process, appropriations process, and revenue decision-making because the Constitution establishes Congress as the guardian of the nation’s purse strings.

**Fall** PPAI2650 S01 16028 F 9:30-11:50(03) (R. Arenberg)

**PPAI 2700. Advanced Organizational and Management Strategies.** This discussion-intensive graduate-level seminar focuses on a wide range of contemporary theories and practices in organizational and management strategies. Topics include organizational structure and design, communication, culture and diversity, change management, stakeholder relations, long-term strategic planning, as well as workforce development and leadership identification, development and succession strategies. Course assignments include team-developed reports and oral presentations. Enrollment limited to 18 Public Policy Graduate students and junior and senior Public Policy concentrators; other students by instructor permission.

**Spr** PPAI2700 S01 24902 W 6:00-8:20PM(18) 'To Be Arranged'

**PPAI 2750. Mediation, Negotiation, and Arbitration Strategies.** This graduate-level seminar is a synthesis of negotiation, arbitration, and mediation theories and practices as applied to public policy professionals. Course topics include interagency negotiation and cooperation, professional and workplace negotiations, agreements in legislative and advocacy environments, using non-governmental bargaining partners, role of government regulators, and international and cross-cultural agreements. Emphasis on analysis of ethical issues and strategies in the planning, formulation, and implementation of negotiated agreements. Enrollment limited to 16. Instructor permission required.

**Fall** PPAI2750 S01 15329 W 6:00-8:20PM(16) (R. Kerbel)

**PPAI 2755. Ethical Issues in Policy Analysis.** A greater understanding of the moral dimensions of public policy can improve the assessment of policy alternatives. Course begins with a brief overview of various ethical theories, with particular attention given to distributive justice and utilitarianism. Uses a variety of domestic policy case studies to identify and examine the role of ethics in policy analysis and policy choice. The latter part of the course will discuss the ethical conduct and responsibilities of policy professionals. Open to graduate students only.

**Spr** PPAI2755 S01 24896 Th 4:00-6:20(17) (V. Cooley)

**PPAI 2800. Internship.** Practical job experience in the public, private, or non-profit sector.

**Fall** PPAI2800 S01 15398 Arranged

**Spr** PPAI2800 S01 24920 Arranged (J. Sattery-Bownds)

**PPAI 2900. Research Workshop.** Group research projects centering on topics organized by the instructor. Students will be organized into small teams that will undertake research projects such as policy analysis, evaluation studies, organizational assessments, or data projects. Results of these projects will be presented in the seminar.

**Fall** PPAI2900 S01 15397 T 12:00-2:20(10) (W. Allen)

**Spr** PPAI2900 S01 24911 T 6:00-8:20PM(12) (P. McGuigan)

**PPAI 2980. Graduate Independent Study.** Please check Banner for the correct section number and CRN to use when registering for this course.

**PPAI XLIST. Courses of Interest to Concentrators in Public Policy.**

**Religious Studies**

**RELS 0040. Great Contemplative Traditions of Asia.** Introduction to the critical study of contemplative practices and experiences emphasizing philosophical and scientific analyses of works from the major Asian contemplative traditions of South and East Asian Buddhism and Chinese Daoism in historical context. Theoretical studies of mysticism and studies from the psychological sciences will be included.

**Fall** RELS0040 S01 14719 TTh 2:30-3:50(11) (H. Roth)

**RELS 0055. Modern Problems of Belief.** Some say it is impossible to be both a modern person and a religious person. What are the assumptions behind this claim? And what is it about the modern (or postmodern) era that, according to some, has made religion difficult to believe in? These questions will be discussed as we explore the ways religion has been understood in Western culture from the Enlightenment to the present. We will read such influential thinkers as Hume, Kant, Hegel, Kierkegaard, Marx, Nietzsche, Freud, Durkheim, Buber, and Woody Allen. Each figure has left a decisive mark on the way we think about religion.

**Fall** RELS0055 S01 14141 MWF 2:00-2:50(07) (M. Cladis)

**RELS 0058. Christianity and Culture.** The aim of this introductory level lecture course is to interrogate the relationship between culture and religion. The foundation for our study will be exemplary works by major cultural critics and theologians since the early 19th century. Our focus will be on forms of cultural criticism put forward by interdisciplinary thinkers that attempted to gain a better grasp of both modern social crises and sources of communal joy. The course shall rehearse debates in cultural studies, theology, postmodernism, and politics.

**Fall** RELS0058 S01 15673 W 1:00-1:50(06) (A. Willis)

**REL 0071. Believers, Agnostics, and Atheists in Contemporary Fiction (JUDS 0050A).** Interested students must register for JUDS 0050A.

**Fall** RELS0071 S01 15851 Arranged 'To Be Arranged'

**RELS 0080. Gender, Power, God(s).** A comparison of women’s and men’s practices, experiences and beliefs, focusing on patterns observable in a range of religions. Special attention paid to the ways religions participate in diverse constructions of gender (ideas about masculine and feminine), and how these relate to the construction and exercise of power and authority. Specific traditions and historical periods studied vary from year to year. Examples may include: leadership in African American churches; Buddhist monastics; early Christian asceticism; evangelical Christian organizations; medieval and early modern Christian witchcraft accusations; Hindu devotions for husbands and brothers; the turn to orthodoxy among contemporary Jewish women and men; the mosque movement in contemporary Islam; village kamiis in Okinawa (Japan); the Shakers, Zar and Bori possession in North Africa and the Caribbean. DVPS LILE WRIT

**Spr** RELS0080 S01 24010 TTh 10:30-11:50(09) (R. Kraemer)

**RELS 0085B. Dead and Loving It: The Cult of the Saints in the Eastern Mediterranean (CLAS 0210P).** Interested students must register for CLAS 0210P.

**Fall** RELS0085B S01 16308 Arranged 'To Be Arranged'

**RELS 0087. Religion in America.** From Native American traditions and Puritan migrations in the seventeenth century to Barack Obama’s “crypto-Islam” and debates over gay rights in the twenty-first, American history is religious history. For centuries, religion has shaped how Americans have carried out their everyday lives, interacted with others, understood themselves, and perceived the wider world. Focusing primarily on religious life in the United States, this course invites students to explore the relationship between religion and...
society in North America by addressing key questions and critical tensions surrounding such issues as race, ethnicity, science, gender, capitalism, pluralism, sexuality, and secularism.

Fall RELS0087 S01 16603 MWF 10:00-10:50(03) (D. Vaca)

RELS 0090F. Friendship in the Ancient World
How have ancient societies understood friendship, and how do ancient ideas about friendship differ from or resemble those of contemporary Westerners? This seminar, a comparative investigation of the ways in which friendship has been represented in the Hebrew Bible, Mesopotamian literature, and Greco-Roman texts, will address these and other questions through study of materials such as the Epic of Gilgamesh, the Iliad, the Book of Ruth, 1 and 2 Samuel (on Jonathan and David), the Wisdom of Ben Sira (Sirach), and Aristotle’s Nicomachean Ethics. Enrollment limited to 20 first year students. FYS WRIT

Fall RELS0090F S02 16339 M 3:00-5:20(15) (S. Olyan)

RELS 0090G. Women and Religion in Classical India: From Commoner to Queen, Courtesan and Nun.
Classical Indian religious law books present a rather grim view of the options of women. Famously, for example, they declare that women can have no independence—religious, legal or otherwise. As girls, they are under the authority of their fathers; as wives, the authority of the husbands; and as widows, that of their sons. The seminar will look at a variety of other sources—Buddhist and Jain texts and stories, classical Indian plays and literature, and, importantly, a range of inscriptions which record the behavior of actual Indian women—to see if this view was anything more than theory. Enrollment limited to 20 first year students. FYS

Fall RELS0090G S01 15976 T 4:00-6:20(18) (G. Schopen)

RELS 0090H. The Bible and Social Media.
The success of the Protestant Reformation has been linked to the invention of the printing press. The Bible’s translation into vernacular languages and its mass production meant that for the first time, people could read and interpret the scriptures outside the Church. Now, the internet and social media such as Facebook and Twitter give people a new way to access, interpret, and use the Bible at home. This course will examine the Bible’s use within social media in American culture. We’ll look at tweeting the Bible, blogging, podcasting, and the popularity of Bible memes through sites like tumblr and reddit. Enrollment limited to 20 first year students. FYS

Spr RELS0090H S01 25216 T 12:00-2:30(10) (N. Denzey)

RELS 0100. Introduction to Buddhism.
An introductory survey of Buddhist teachings and practices, with emphasis on Asian developments. Readings will comprise a combination of primary and secondary sources and genres including sutras, narratives, and commentaries.

Spr RELS0100 S01 24011 MWF 11:00-11:50(04) (J. Sawada)

RELS 0130. The Hindu Tradition.
After a brief look at our earliest evidence, we focus on the three most prominent Hindu gods during the last two millennia: enlightenment, righteous action, and loving, often passionate devotion—and the variety of practices undertaken to realize them. These include study, meditation, music, drama, image worship, asceticism, and nonviolence. Attention to issues of gender, caste, and untouchability. DVPS LILE

Fall RELS0130 S01 14135 TTh 1:00-2:20(10) (G. Schopen)

A study of the dynamic relation between religion and nature. Religion, in this course, includes forms of spirituality within and outside the bounds of conventional religious traditions (for example, Buddhism and Christianity, on the one hand; ecofeminism and nature writing on the other). Topics in this study of religion, philosophy, and ecology will include environmental justice, environmental degradation, and depictions of humans in relation to the natural world. Enrollment limited to 20.

Spr RELS0260 S01 24012 TTh 2:30-3:50(11) (M. Cladis)

RELS 0290D. Women, Sex and Gender in Islam.
This course is a survey of women in Islamic society from the medieval to the modern worlds. Using a variety of non-fiction, fiction and film sources, we will address issues such as women and Islamic law, women’s bodies and images of Muslim women in the Muslim world; contemporary feminism and movements in Islam, the question of secularism, veiling, and others. Preference given to students with prior university level coursework in Islam. Examples include RELS 0150, 0640, 1520. Enrollment limited to 50.

DVPS LILE

Fall RELS0290D S01 14132 TTh 10:30-11:50(13) (N. Khalek)

RELS 0325. Judaism, Christianity and the Bible.
No book in human history has exercised as much influence as the Bible. Over the past 2,000 years, people have killed and died for the Bible, and it continues to exercise a powerful if contested role in modern politics. Yet how did it achieve this power? This course will trace the development of the Hebrew Bible (Old Testament) from its origins in ancient Israel to its development about five hundred years later as a foundational text of both Judaism and Christianity. The focus will be on how Jews and early Christians throughout antiquity understood and ascribed authority to the Bible. WRIT

Fall RELS0325 S01 15232 MWF 12:00-12:50(12) (M. Satlow)

RELS 0365. God and Poetry (JUDS 0820).
Interested students must register for JUDS 0820.

Fall RELS0365 S01 15854 Arranged ‘To Be Arranged’

RELS 0365A. Introduction to Biblical Hebrew (JUDS 0090A).
Interested students must register for JUDS 0090A.

Fall RELS0365A S01 15852 Arranged ‘To Be Arranged’

RELS 0365B. Readings in Biblical Hebrew (JUDS 0090B).
Interested students must register for JUDS 0090B.

Spr RELS0365B S01 25115 Arranged ‘To Be Arranged’

How and why Christianity emerged in various forms in the ancient Mediterranean. Insights from religious studies, gender studies, literary studies, anthropology, and other fields. Careful critical readings of New Testament books, non-canonical gospels, early Christian letters, ancient apocalypses. Topics include: Jewish contexts; representations of Jesus; Paul and early communities; Christians and imperial Rome; gender constructions; canonization; eventual separation of Christianity and Judaism. Open to all students. LILE WRIT

Fall RELS0400 S01 14724 MWF 11:00-11:50(04) (N. Denzey)

RELS 0410. Christianity in Late Antiquity.
The communal struggles, personal rivalries, and theological conflicts that shaped Christianity in its formative centuries: heresy and orthodoxy, hierarchy and charisma, gender and class, persecution and martyrdom, paganism and classical tradition, creeds and councils, asceticism and the body, church and state, eastern and western Christianity. Focused in the 2nd through 6th centuries A.D. WRIT

Spr RELS0410 S01 24013 MWF 12:00-12:50(05) (S. Harvey)

RELS 0600. Islam and Modernity.
Lupe Fiasco, Al-Jazeera News, Mos Def, and reality shows produced by Ryan Seacrest: Contemporary Islam is now having an impact on modern culture in unprecedented ways. Islam is often said to be the fastest growing religion in America, and is second to Christianity in all the countries of Western Europe. In this class we will study the contemporary life, culture and thought of Muslims in America and Europe. We will begin with exploring Muslims and the Islamic faith in the Americas from the Atlantic slave trade, and move to the present, WRIT

Spr RELS0600 S01 24014 MWF 10:00-10:50(03) (N. Khalek)

RELS 0750. Death and the Afterlife in the Ancient World.
This course focuses on the evolution of beliefs and rituals related to death in and around the Mediterranean, including Egyptian, Greek, and Roman cultures. Using an interdisciplinary approach, we combine methodologies from Anthropology, Classics, and Religious Studies. Topics include myths of the afterlife; books of the dead, magic, and death rituals: divination, heaven, hell, and Last Judgment, and the impact of Christianization on Roman understandings of death.

Spr RELS0750 S01 24015 T 4:00-6:20(16) (N. Denzey)

MLK, Jr. and Malcolm X are two iconic figures in the pantheon of black religious leadership. Their profoundly influential ideas about justice, freedom, democracy and racism, along with their activist strategies of
personal biographies have generated extraordinary interest over the past 50 years. Despite this, the rich and complex tradition out of which their ideas and world-views evolve; the 300 year old religious strategies and practices employed by African-Americans have been understudied, disconnected from our understanding of their significance. This course will examine these traditions and these two central figures' roles within them in order to shed important light on both. DVPS LILE WRIT

RELS 0845. Religious Freedom in America
"Religious freedom," former Secretary Hillary Rodham Clinton remarked in 2009, "provides a cornerstone for every healthy society." It is, Clinton continued, "a founding principle of our nation." As Clinton's remarks illustrate, the concept of religious freedom is central to how people perceive the history of the United States and its position in the world today. But what is religious freedom? Does it actually exist? Has it ever? This seminar invites students to ask and answer these and other questions about the contested concept, engaging such varied issues as race, secularism, law, media, money, pluralism, and foreign policy.

Fall RELS0845 S01 16604 M 3:00-5:20(15) (D. Vacca)

RELS 0911. Buddhism in India.
A course in the social and doctrinal history of Buddhism from its origin up to its disappearance in India, based not only on texts but also on archaeological, art historical, and inscriptive sources. Both formal doctrine and actual practices will be examined, and equal weight will be given to both what learned Buddhists wrote and ordinary Buddhists did, saw and made. Knowledge of Indian languages not required. DVPS

Spr RELS0911 S01 25218 TTh 9:00-10:20(08) (G. Schopen)

RELS 0920. The Bhagavad Gîtâ (CLAS 0855).
Interested students must register for CLAS 0855.

Fall RELS0920 S01 16753 Arranged 'To Be Arranged'

RELS 0925. Mythology of India (CLAS 0850).
Interested students must register for CLAS 0850.

Spr RELS0925 S01 25842 Arranged 'To Be Arranged'

Intensive introduction to classical and contemporary theories of religion and the principal methods for the study of religion. Junior seminar for religious studies concentrators. Enrollment limited to 25. WRIT

Spr RELS1000 S01 25287 F 9:30-11:50(03) (T. Lewis)

RELS 1050A. Problems in Israelite Religion and Ancient Judaism (JUDS 1625).
Interested students must register for JUDS 1625.

Fall RELS1050A S01 16022 Arranged 'To Be Arranged'

RELS 1130. Philo.
Examines Philo's life and writing, and their importance for the study of Judaism and Christianity in antiquity. How typical was Philo? How did he interpret the Bible? How does his thought "fit" into the religious landscape of the first century CE? Focuses on reading Philo's writings, but will also survey scholarly approaches to Philo. Knowledge of Greek helpful.

Spr RELS1130 S01 24019 Th 4:00-6:20(17) (M. Satlow)

RELS 1150. Religion in the Dead Sea Scrolls.
An examination of the Dead Sea scrolls and the archaeology of Qumran with a particular focus on the religious aspects of this community. How did the authors of these scrolls envision their relationship with the divine? How did they worship? How did they understand religious and moral perfection? This class will have an additional section for graduate students. Enrollment limited to 20. WRIT

Fall RELS1150 S01 16609 Arranged 'To Be Arranged'

RELS 1170B. The Talmud (JUDS 1630).
Interested students must register for JUDS 1630.

Spr RELS1170B S01 25116 Arranged 'To Be Arranged'

RELS 1345. Writing Lives in Late Antiquity: Jerome and Augustine (LATN 1120E).
Interested students must register for LATN 1120E.

Fall RELS1345 S01 16309 Arranged 'To Be Arranged'

The history of Christianity has often been the history of doctrine, the development of scripture and institution and canon, not the history of human experience. This course looks into what it meant to be Christian in the first centuries of Christianity's development, through taking literally a "subterranean view" on the surprising things that "being Christian" meant to ordinary individuals – men, women and children – in the city's underground spaces where this religion flourished. Prerequisite: RELS 0110 or 0400 or 0410 or 1300. Enrollment limited to 20.

Fall RELS1365 S01 14725 T 4:00-6:20(18) (N. Denzey)

RELS 1385. Religion and Postmodernity.
This advanced seminar treats the central ideas in the thought of Zizek, Sloterdijk, Bauman, and others. It will pay particular attention to the idea of God in the works of Derrida, Foucault, and Deleuze as it filters through these contemporary, popular efforts. Students will trace some of the normative aspects of a postmodern ethics and theology by looking at "Emergent" churches, "New Thought", and post-foundational Christian theology in practice.

Spr RELS1385 S01 25217 W 3:00-5:20(14) (A. Willis)

RELS 1390. Looking at Religion on the Ground. Literate religions are still too often studied almost exclusively on the basis of their formal—usually canonical—literature and the textual products of their elite and learned representatives. While useful, this utilizes only a narrow band of possible sources and excludes too often what religious people, from commoner to king, actually do or make or see. To get at these things more closely, other kinds of sources must be used: archeological, inscriptive, art historical and architectural. The seminar will read and discuss a wide range of scholarly works that have used these kinds of sources and watch how they can change our understanding.

Spr RELS1390 S01 25235 T 4:00-6:20(16) (G. Schopen)

RELS 1435. The Confucian Mind (EAST 1420).
Interested students must register for EAST 1420.

Spr RELS1435 S01 25117 Arranged 'To Be Arranged'

RELS 1440. Themes in Japanese Buddhism.
An exploration of critical themes and debates in the study of Japanese Buddhism. Participants become conversant with the key features of medieval Japanese thought as well as the strengths and weaknesses of established conceptual models in Japanese Buddhist studies. Readings include primary texts in English translation and modern secondary interpretations. Recommended: a course in Buddhism or East Asian religions.

Fall RELS1440 S01 14145 W 3:00-5:20(17) (J. Sawada)

Interested students must register for HIST 1978V.

Fall RELS1510 S01 16109 Arranged 'To Be Arranged'

RELS 1530C. Interpreting the Self: Biography in Medieval Arabic Literature.
What compels a person to write the story of a life—their own or someone else’s? How do they use exciting, improbable, or salacious details to make that life story interesting? Most importantly, how does the concept of "biography," our own or a famous person’s, affect how we conceive of ourselves? These are all questions medieval authors of Arabic literature answered when they compiled one of the most impressive biographical traditions in history. From the "Life of Muhammad" to the fantastical Lives of Saints and Mystics in 15th-century Cairo, "Interpreting the Self" is an exploration of medieval Arabic biographical literature. DVPS LILE

Fall RELS1530C S01 14982 W 3:00-5:20(17) (K. Khalek)

From the revolutionary era of the late eighteenth century through the fall of the Berlin Wall in 1989, music and religion have been complexly interwoven with the political struggles of modernity. Focusing on Germany, the course asks, How have the relations between religion and the arts, particularly music, shifted in Western modernity? Has music come to perform functions—providing consolation or uniting a people—formerly associated closely with religion? How have music and religion informed...
be a changed outcome within life still to be lived. Fearful sorrow at life's tragedies, to sad yet fervent hope that there might to supplication to penance; from grief at the finality of death's loss, to poems negotiated grief by presenting an arc of lamentation: from mourning and penance, found in hymns, homilies, dramatic narrative poetry, prayers, focus on late antique Greek and Syriac poetic articulations of lamentation

Grief was an emotion religiously engaged during the late antique era in America, giving special attention to issues in current debate.

Is America fundamentally defined by Romanticism? We will explore the sustained legacies of Romanticism in America, giving special attention to the topic of religion, by reading such authors as Emerson, Margaret Fuller, Thoreau, Whitman, and Fredrick Douglas; William James, George Santayana, and W.E.B. Du Bois; and Terry-Tempest Williams, Barry Lopez, and Wendell Berry.

Critical examination of major approaches to the study of religion, especially those of the anthropology and the history of religions, with attention to issues in current debate.

Directed reading and research arranged with individual faculty. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Required of seniors in the honors program. Open to others only by arrangement. Please check Banner for the correct section number and CRN to use when registering.

Directed reading and research arranged with individual faculty. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Critical examination of major approaches to the study of religion, especially those of the anthropology and the history of religions, with attention to issues in current debate.

Pro-Seminar on the Study of Jews and Judaism in the Greco-Roman Mediterranean. A graduate level introduction to the study of Jews and Judaism in the Mediterranean orbit from the Hellenistic period through the late Roman Empire. Topics include overviews of sources, materials, methods and theories, including current debates about terminology (Jews/Judeans/ Judaism). Required of all RAM graduate students admitted in 2011 and after. Not open to undergraduates.

Critical examination of major approaches to the study of religion, especially those of the anthropology and the history of religions, with attention to issues in current debate.

Renaissance and Early Modern Studies
SCSO 1000. Introduction to Science and Society: Theories and Controversies.
What is "science"? How do scientific ideas become knowledge? What is the nature of scientific objectivity, how can it be compromised? What is a scientific community, scientific consensus, and scientific authority? What roles does science play in our culture, and how is science related to other social institutions and practices? The interdisciplinary field of science studies is introduced through exploration of topics that include: gender and race, psychiatric classification, the drug industry, science and religion, and the use of nuclear weapons during World War II. Enrollment limited to 30 sophomores, juniors and seniors; other may enroll with permission of instructor.
Spr SCS01000 S01 25417 TTh 10:30-11:50(09) (J. Richards)

SCSO 1120. International Health: Anthropological Perspectives (ANTH 1310).
Interested students must register for ANTH 1310.
Spr SCS01120 S01 25675 Arranged "To Be Arranged"

SCSO 1152. Astronomy, Divination and Politics in the Ancient World (AWAS 1700).
Interested students must register for AWAS 1700.
Fall SCS01152 S01 15945 Arranged "To Be Arranged"

SCSO 1153. Ancient Babylonian Magic and Medicine (AWAS 1500).
Interested students must register for AWAS 1500.
Spr SCS01153 S01 25873 Arranged "To Be Arranged"

Interested students must register for ENVS 1410.
Spr SCS01290 S01 25198 Arranged "To Be Arranged"

Interested students must register for GNSS 1960B.
Spr SCS01340 S01 25872 Arranged "To Be Arranged"

SCSO 1380. Science, Medicine and Technology in the 17th Century (HIST 1495).
Interested students must register for HIST 1495.
Fall SCS01380 S01 15937 Arranged "To Be Arranged"

SCSO 1381. War and Medicine since the Renaissance (HIST 1496).
Interested students must register for HIST 1496.
Spr SCS01381 S01 25189 Arranged "To Be Arranged"

SCSO 1384. Science in the Marketplace (HIST 1783).
Interested students must register for HIST 1783.
Spr SCS01384 S01 25843 Arranged "To Be Arranged"

SCSO 1520. Philosophy of Quantum Mechanics (PHIL 1620).
Interested students must register for PHIL 1620.
Fall SCS01520 S01 16085 Arranged "To Be Arranged"

SCSO 1521. Epistemology (PHIL 1750).
Interested students must register for PHIL 1750.
Fall SCS01521 S01 16086 Arranged "To Be Arranged"

SCSO 1522. Philosophy of Science (PHIL 1590).
Interested students must register for PHIL 1590.
Spr SCS01522 S01 25381 Arranged "To Be Arranged"

SCSO 1700A. From Magic Mushrooms to Big Pharma: Anthropology of Drugs (ANTH 1880).
Interested students must register for ANTH 1880.
Fall SCS01700A S01 15944 Arranged "To Be Arranged"

SCSO 1700B. Environmental Justice: Science + Political Economy of Environmental Health + Social Justice(ENVS1720).
Interested students must register for ENVS 1720.
Spr SCS01700B S01 25190 Arranged "To Be Arranged"

SCSO 1700F. Health Inequality in Historical Perspective (BIOL 1920B).
Interested students must register for BIOL 1920B.
Fall SCS01700F S01 16031 Arranged "To Be Arranged"
SCSO 1700H. Native American Environmental Health Movements (ETHN 1890J)
Interested students must register for ETHN 1890J.
Fall SCSO1700HS01 16264 Arranged 'To Be Arranged'

SCSO 1700I. Global Ideas of Race in the History of the Biological, Medical and Human Sciences (HIST 1978E).
Interested students must register for HIST 1978E.
Fall SCSO1700S01 16038 Arranged 'To Be Arranged'

Interested students must register for HIST 1978F.
Spr SCSO1700JS01 25347 Arranged 'To Be Arranged'

SCSO 1700L. From Frankenstein to Einstein: Literature and Science from 1800 to 1950 (ENGL 1560R).
Interested students must register for ENGL 1560R.
Spr SCSO1700LS01 25191 Arranged 'To Be Arranged'

SCSO 1700M. Gender, Science, and Society.
This seminar introduces students to interdisciplinary approaches to the role of gender in science and society. It uses an integrated natural and social scientific Problem-Based Learning pedagogy to explore real-world problems like validating knowledge about sexual difference, the relationship between politics and science, and the characterization of biomedical disorders like hormone imbalance and depression. The class will be broken into groups that evenly consist of natural and social science concentrators in order to approach problems from natural and social scientific perspectives. Students will learn critical scholarship including gender studies, feminist theory, and science and technology studies. Enrollment limited to 20.
Fall SCSO1700MS01 16649 W 3:00-5:20(17) (B. Panikkar)

SCSO 1700P. Neuroethics.
In this course, we will examine ethical, social, and philosophical issues raised by developments in the neurosciences. Topics will include: neurodevelopment and the emergence of persons; the impact of child abuse on brain development; aging, brain disease, and mental decline; life extension research; strategies and technologies for enhancement of human traits; "mind-reading" technologies; agency, autonomy, and excuse from responsibility; error and bias in memory; mind control; neuroscientific and evolutionary models of religious belief and moral judgement. Enrollment limited to 20. Instructor permission required.
Fall SCSO1700PS01 16600 T 4:00-6:20(18) (J. Poland)

Interested students must register for HIST 1978W.
Spr SCSO1700QS01 25845 Arranged 'To Be Arranged'

SCSO 1700R. Community Engagement with Health and the Environment (AMST 1700I).
Interested students must register for AMST 1700I.
Spr SCSO1700RS01 25871 Arranged 'To Be Arranged'

SCSO 1900. Senior Seminar in Science and Society.
This is an advanced seminar that uses a Problem Based Learning style pedagogy to explore real-world problems inSTS. To solve assigned problems students will want to explore critical scholarship in areas such as laboratory studies, feminist science and technology studies, the rhetoric and discourse of science and technology, expertise and the public understanding of science. Course is intended for Science and Society senior concentrators, but is open to others with appropriate background. Enrollment limited to 20.
Fall SCSO1900 S01 15840 Th 4:00-6:20(16) (H. Cook)

Independent research and reading work in Science and Society is available to students who have completed introductory and intermediate level work in Science and Society. A decision to enroll must be made via consultation with the concentration advisor and the faculty advisor for the course. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Prerequisite: SCSO 1400. Open to junior and senior concentrators in Science and Society; instructor permission required. S/NC.

Independent reading and research work in Science and Society is available to students who have completed introductory and intermediate level work in Science and Society. A decision to enroll must be made via consultation with the concentration advisor and the faculty advisor for the course. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Prerequisite: SCSO 1400. Open to junior and senior concentrators in Science and Society; instructor permission required.

SCSO XLIST. Courses of Interest to Students Concentrating in Science and Society.
Fall 2013
The following related courses, offered in other departments, may be of interest to students concentrating in Science and Society. Please see the course listing of the sponsoring department for times and locations.

History of Art and Architecture
HIAA 1910D Water and Architecture
History
HIST 09711 Science in Darwin's World
HIST 1311 Land Use and Capitalism
HIST 1970C African Environmental History
HIST 1190 The Roots of Modern Science

Philosophy
PHIL 1300 Philosophy of Mathematics

Sociology
SOSC 1871O Law, Innovation and Entrepreneurship

Slavic Languages

Czech

CZCH 0100. Introductory Czech.
Introduces the performance of basic tasks in Standard Czech, highlights of Czech culture, and a worldview of a nation uniquely located on the threshold of western and eastern Europe. Emphasis on oral communication. Five meetings per week and use of audio/visual materials. Enrollment limited to 18.
Fall CZCH0100 S01 15504 MWF 2:00-2:50(07) (M. Fidler)

CZCH 0200. Introductory Czech.
Introduces the performance of basic tasks in Standard Czech, highlights of Czech culture, and a worldview of a nation uniquely located on the threshold of western and eastern Europe. Emphasis on oral communication. CZCH 0200 includes readings of annotated literary texts on the Web. Five meetings per week and use of audio/visual materials. Enrollment limited to 18.
Spr CZCH0200 S01 24698 MWF 2:00-2:50(07) (M. Fidler)

CZCH 0610B. Psychosis of Occupation in the Czech Lands.
Discussion of the Occupation period during WWII. The course is built around a Czech New Wave classic film about an eccentric director of a crematorium in Prague, who turns into a fanatic collaborator under the terror and demagogy of the regime. We will also read excerpts from the original literary text on which the film was based, and work with the Czech National Corpus. Separate language tasks given to students of two proficiency levels (2nd, 3rd year). Conducted in Czech. The course is for students who completed CZCH0410 or the equivalent. Enrollment limited to 18.
Spr CZCH0610BS01 24699 Arranged (M. Fidler)

Polish

PLSH 0150. Introductory Polish.
Introduction to Polish language and culture. Oral and written communication in Polish; emphasis on the literary and everyday culture of Poland. Five meetings per week, plus use of audio, video, and web materials. Enrollment limited to 18.
Fall PLSH0150 S01 15814 MWF 10:00-10:50(03) (M. Harrison)
Fall PLSH0150 S01 15814 TTh 12:00-12:50(03) (M. Harrison)
Spr PLSH0150 S01 25056 Arranged (M. Harrison)
PLSH 0410. Intermediate Polish.
This course is for students who have completed first-year Polish. In this course you will further develop skills in speaking, reading, writing and understanding Polish. By the end of this course, you will be able to carry on basic conversations in Polish on many topics from your daily life. You will be able to write notes and simple letters to Polish friends or keep a journal in Polish. You will also have the skills to read basic texts. Prerequisite: PLSH 0150. Enrollment limited to 18.
Fall PLSH0410 S01 15980 MWF 11:00-11:50(04) (M. Harrison)
Fall PLSH0410 S01 15980 MWF 11:00-11:50(04) (M. Harrison)

Russian

RUSS 0100. Introductory Russian.
Introduction to Russian language and culture. Oral and written communication in Russian; emphasis on the literary and everyday culture of Russia and the former U.S.S.R., including the changes that have reshaped everyday life for citizens of Russia. Five meetings per week, plus use of audio, video, and web materials. Enrollment limited to 18.
Fall RUSS0100 S01 15348 MWF 9:00-9:50(15) (L. Debenedette)
Fall RUSS0100 S01 15348 TTh 9:30-10:20(15) (L. Debenedette)
Fall RUSS0100 S02 16050 MWF 10:00-10:50(15) (L. Debenedette)
Fall RUSS0100 S02 16050 TTh 12:00-12:50(15) (L. Debenedette)

RUSS 0110. Intensive Russian.
Intensively-paced introduction to Russian language and culture; completes one year of study in one semester (RUSS 0110 + RUSS 0100-0200). Comprehension and use of contemporary Russian; fundamentals of Russian grammar; vocabulary acquisition; focus on oral communication. Introduces aspects of everyday culture of Russia and the former U.S.S.R. Ten to fifteen hours weekly work outside the classroom. Enrollment limited to 18.
Spr RUSS0110 S01 25505 MWF 10:00-10:50(03) (L. Debenedette)

RUSS 0200. Introductory Russian.
Introduction to Russian language and culture. Oral and written communication in Russian; emphasis on the culture of Russia and the former U.S.S.R., including the changes that have reshaped everyday life for citizens of Russia. Five meetings per week, plus use of audio, video, and Web materials. Prerequisite: RUSS 0100 or RUSS 0250. Enrollment limited to 18.
Spr RUSS0200 S01 24677 MWF 9:00-9:50(16) (L. Debenedette)
Spr RUSS0200 S01 24677 TTh 12:00-12:50(16) (L. Debenedette)
Spr RUSS0200 S02 25358 MWF 11:00-11:50(16) (L. Debenedette)
Spr RUSS0200 S02 25358 TTh 12:00-12:50(16) (L. Debenedette)

RUSS 0300. Intermediate Russian.
Continues development of language proficiency while broadening understanding of contemporary Russian culture via readings in literature and history. Expansion of vocabulary for dealing with conversational topics and review of Russian grammar. Features literary and nonliterary readings in Russian, as well as video and computer resources. Five class meetings per week. Prerequisite: RUSS 0110 or RUSS 0200 or RUSS 0250 or placement by exam. Enrollment limited to 18.
Fall RUSS0300 S01 15349 MWF 11:00-11:50(04) (L. Debenedette)
Fall RUSS0300 S01 15349 MWF 11:00-11:50(04) (L. Debenedette)

RUSS 0320C. Demons and Angels in Russian Literature.
The literary images of fallen angels, as well as various poetic demonologies in Russian literature extend from the medieval apocrypha, up to famous works of the twentieth-century literature, like, for example, Bulgakov's Master and Margarita or Dostoevsky's Demons. Although, the Russian literary angels are in many respects related to their Western counterparts, the apocalyptic character of Russian spiritual culture makes them in many respects unique. Examining these images, the course addresses the important questions concerning the human condition in general. Angels as one critic said, "represent something that was ours and that we have the potential to become again"; their essence is otherness. Consequently, their literary representations explore the possibilities of human existence as well as its central paradigms like, love, rebirth, mortality, or 'fallenness.' The course will analyze the images of angels and fallen angels (devils) in the works of the nineteenth and the twentieth-century Russian prose, visual art, and film - from romanticism to 'postmodemism' - in the context of the world literature and culture. Authors to be studied: Byron, Lermontov, Balzac, Dostoevskii, Sologub, Bulgakov, Nabokov, Erfoeef. We will also discuss films by Tarkovsky and Wenders, Russian icons, and paintings by Vrubel. In English. Enrollment limited to 20 first year students. DVPS FYS LILE
Fall RUSS0320C S01 15663 W 3:00-5:20(17) (M. Oklot)

RUSS 0320E. Crime and Punishment through Literature.
The seminar will explore how texts of different epochs and cultures, ranging from Ancient to Modern and from drama to poem, novel, and film treat the issues of transgression, punishment, justice, and forgiveness. We will examine each text both in terms of its artistic merit and its place within its cultural and historical milieu. Enrollment limited to 20 first-year students. FYS WRIT
Fall RUSS0320E S01 15344 M 3:00-5:20(15) (V. Golstein)

RUSS 0400. Intermediate Russian.
Continues development of language proficiency while broadening understanding of Russian culture via readings in literature and history. Includes expansion of vocabulary for dealing with conversational topics and review of Russian grammar. Features literary and nonliterary readings in Russian, as well as video and computer resources. Five class meetings per week. Prerequisite: RUSS 0300 or placement by exam. Enrollment limited to 18.
Spr RUSS0400 S01 24673 MWF 11:00-11:50(04) (L. Debenedette)
Spr RUSS0400 S01 24673 TTh 9:30-10:20(04) (L. Debenedette)

RUSS 0500. Advanced Russian.
Examines selected topics in Russian culture and history as depicted in readings, the media, and Russian and Soviet films. Language work emphasizes increasing facility with spoken Russian and developing writing skills. Includes work on advanced grammar and syntax. Five class meetings per week. Prerequisites: RUSS 0530 or RUSS 0400 or placement. Enrollment limited to 18.
Fall RUSS0500 S01 15350 TTh 12:00-12:50(10) (L. Debenedette)
Fall RUSS0500 S01 15350 MWF 11:00-11:50(10) (L. Debenedette)

RUSS 0600. Advanced Russian.
Examines selected topics in Russian culture and history as depicted in readings, the media, and Russian and Soviet films. Language work emphasizes increasing facility with spoken Russian and developing writing skills. Includes work on advanced grammar and syntax. Four class meetings per week. Prerequisites: RUSS 0500 or placement. Enrollment limited to 18.
Spr RUSS0600 S01 24597 TTh 1:00-1:50(06) (L. Debenedette)
Spr RUSS0600 S01 24597 MWF 1:00-1:50(06) (L. Debenedette)

RUSS 1000. Russian Modernism and the Arts.
Russian culture in a period of revolutionary upheaval: developments in literature, film, design, visual and applied arts. Avant-garde experimentation and the creation of tradition: primitivism, futurism, constructivism, and other movements in literature and the arts. Spr RUSS1000 S01 25738 TTh 1:00-2:20(10) (M. Oklot)

RUSS 1110. Special Topics in Russian Studies I: Advanced Reading and Conversation.
An advanced course recommended for students who are either planning to go or are returning from abroad. Focus on Russian culture as seen through the prism of Russian poetry. Extensive classroom discussion and frequent writing assignments. Prerequisite: RUSS 0600 or written permission. May be repeated once with permission from the instructor. Enrollment limited to 18.
Fall RUSS1110 S01 15664 MWF 12:00-12:50(05) (L. Debenedette)

RUSS 1120. Special Topics in Russian Studies II: Advanced Reading and Conversation.
A continuation of Russian 1110. Examines aspects of Russian culture as manifested in Russian literature. Readings range from fairy tales to contemporary works. Extensive classroom discussion and frequent writing assignments. Prerequisite: RUSS 1110, 1700, or written permission. May be repeated once with permission of the instructor. Enrollment limited to 18.
Spr RUSS1120 S01 24914 Arranged (L. Debenedette)
RUSS 1200. Russian Fantasy and Science Fiction. Survey of Russian literature, from fairy tales, utopias, and dream sequences to science fiction, which depict altered states of reality. Readings in English, supplemented with films in March and April. Seminar with emphasis on discussion. Russian concentrators and graduate students expected to cover most of the readings in Russian. Familiarity with Russian literary history is not required.

RUSS 1250. Russian Cinema. This seminar will provide a chronological overview of Russian cinema from its beginning to the present. The films will be considered against the background of some historical, political, and theoretical readings. The students will also be encouraged to juxtapose Russian and non-Russian films in order to evaluate the place of Russian cinema within a global film culture. Enrollment limited to 20.

RUSS 1290. Russian Literature in Translation I: Pushkin to Dostoevsky. Survey of major works of Russian literature of the early and mid-19th century. Authors to be studied include Karamzin, Pushkin, Lermontov, Gogol, Turgeniev, Leskov, and Dostoevsky. Lectures and discussion. No knowledge of Russian required. Discussion sections to be arranged. WRIT Fall RUSS1290 S01 15430 TTh 10:30-11:50(13) (A. Mikhailovic)

RUSS 1340. The Russian Novel. Mikhail Bulgakov’s Master and Margarita, Andrei Bely’s Petersburg, and Fedor Sologub’s Petry Demon are read in depth as 20th-century milestones in the development of Russian novel—particularly as continuation and reaction to the prose of Nikolai Gogol and Fedor Dostoevsky, which opens the course. Other authors included in the course: Nabokov, Platonov, Erofeev. In English.

RUSS 1470. New Russia: Culture and Politic in Post-Soviet Space. Political and cultural aspects of transition from the authoritarian Soviet state to democracy. This transition will take considerable effort and time and will require change in people’s mentality. Enrollment limited to 20.

RUSS 1860. Chekhov. Commemorating the hundredth anniversary of the death of the great Russian playwright and short-story writer, this course will examine Chekhov’s innovations in the genre of the short story and in modern theatre, as well as his ongoing influences in world literature. Themes include the nature of the Chekhovian comic, subversion of the dominant literary and cultural paradigms and myths, representations of gender and sexuality. In English.

RUSS 1960. Independent Study. Independent research project on topics related to Russian culture. Enrollment permitted only after the written proposal (instructions in the department office) is submitted to the Concentration Advisor and Chair of the department (deadline: the last day of Add a course without fee period during the semester when the project is undertaken). Please check Banner for the correct section number and CRN to use when registering for this course. Each section limited to 10 students; instructor permission required.

RUSS 1967. Russian Postmodernism. This course will focus on Russian postmodern literature from the 1960s to the present. We will explore the extent to which its themes and experimental stylistic techniques unmask the sense of fragmentation, disorientation and instability that characterize late 20th-century and contemporary Russia. The fictions studied (including film) offer parodies of philosophical and ideological discourses; reveal an obsession with bodily functions, sexuality, and violence; and playfully reinterpret the grand “metanarratives” of Russian culture. We will relate these trends in Russian fiction to broader discourses of the postmodern in the West. Authors include: Bitov, Erofeev, Limonov, Sorokin, Pelevin, Kabakov, Petrushevskaya, Tolstaya. DVPS LILE WRIT Fall RUSS1967 S01 16169 TTh 2:30-3:50(11) (M. Oklot)

RUSS 2410. Movements and Genres in Russian Literary Culture. Seminar. Critical reading of selected texts from the Baroque period through the first half of the 19th century. Analysis is based on study of the infrastructure of each work and the external influences of the period. Conducted mainly in Russian, with a focus on Russian critical terminology and approaches.

RUSS 2720D. Derzhavin and His Epoch. No description available.

RUSS 2970. Preliminary Examination Preparation. For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.

RUSS 2980. Advanced Reading and Research. Only for graduate students. Independent research project on topics related to Russian culture. Enrollment permitted only after the written proposal (instructions in the department office) is submitted to the DGS and Chair of the department (deadline: the last day of Add a course without fee period during the semester when the project is undertaken). Please check Banner for the correct section number and CRN to use when registering for this course. Each section limited to 10 students; instructor permission required.

RUSS 2990. Thesis Preparation. For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.

Slavic

SLAV 1300. Sociolinguistics (with Case Studies on the Former USSR and Eastern Europe). This seminar course examines the relationship between language and society: e.g. gender and language, politeness, terms of address, conversational analysis, dialects and language, language variation and social class, language policies and their consequences, language and national/ethnic identity. Case-study readings cover (but are not limited to) linguistic situations in East Europe, Russia, and the former republics of the USSR. Knowledge of Slavic languages not required. Open to advanced undergraduate and graduate students. Freshmen and sophomores who demonstrate their knowledge of the basic notions in linguistics or their familiarity with the former USSR and East Europe may enroll with the instructor’s written permission. Enrollment limited to 20. DVPS LILE WRIT Fall SLAV1300 S01 15507 F 3:00-5:20(05) (M. Fidler)

SLAV 1790. Central Europe: An Idea and its Literature. Central Europe has been defined by seismic historical events from the collapse of the Habsburg Monarchy to the fall of the Berlin Wall. The focus of the course is on literary strategies that developed in the face of political upheaval and cultural crisis. Focusing on Central European literature and theatre, we ask: what does it mean to be a Central European writer? Where do the cultural boundaries of Central Europe lie? Can we talk about Central European writing as a distinctive phenomenon in world literature? We will read J.Roth, Celan, Schulz, Witkacy, Gombrowicz, Babel, Handke, Hrabal, Kundera, Milosz, Kiš. In English. Enrollment limited to 20.

SLAV 1970. Central Europe: An Idea and its Literature. Central Europe has been defined by seismic historical events from the collapse of the Habsburg Monarchy to the fall of the Berlin Wall. The focus of the course is on literary strategies that developed in the face of political upheaval and cultural crisis. Focusing on Central European literature and theatre, we ask: what does it mean to be a Central European writer? Where do the cultural boundaries of Central Europe lie? Can we talk about Central European writing as a distinctive phenomenon in world literature? We will read J.Roth, Celan, Schulz, Witkacy, Gombrowicz, Babel, Handke, Hrabal, Kundera, Milosz, Kiš. In English. Enrollment limited to 20.

SLAV 1950. Independent Study. Independent research project on topics in Slavic Studies. Enrollment permitted only after the written proposal (instructions in the department office) is submitted to the DGS and Chair of the department (deadline: the last day of Add a course without fee period during the semester when the project is undertaken). Please check Banner for the correct section number and CRN to use when registering for this course. Each section limited to 10 students; instructor permission required.
SLAV 1081. Independent Research in the Slavic Language(s). Independent research on various topics in Slavic cultures. Reading, discussion, research must be done in the chosen Slavic language (Czech/ Russian). Close work with faculty on project is expected. Prerequisites: minimum RUSS0600/CZCH 0610 (3rd year-level) or placement evaluation by Russian or Czech language coordinator. Enrollment permitted only after the written proposal (instructions in the department office) is submitted to the Concentration Advisor and Chair of the department (deadline: the last day of Add a course without fee period during the semester when the project is undertaken). Each section limited to 10 students; instructor permission required.

SLAV 1990. Senior Thesis. Only for Slavic concentrators writing their senior theses. For requirements and schedule, contact the department. Each section limited to 10 senior Slavic Studies concentrators.

SLAV 2450. Exchange Scholar Program. Fall SLAV2450 S01 14085 Arranged "To Be Arranged"

SLAV 2970. Preliminary Examination Preparation. For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination. Fall SLAV2970 S01 14086 Arranged "To Be Arranged"
Spr SLAV2970 S01 23597 Arranged "To Be Arranged"

SLAV 2980. Advanced Reading and Research. Only for graduate students. Independent research project on topics in Slavic Studies. Enrollment permitted only after the written proposal (instructions in the department office) is submitted to the DGS and Chair of the department (deadline: the last day of Add a course without fee period during the semester when the project is undertaken). Please check Banner for the correct section number and CRN to use when registering for this course. Each section limited to 10 students; instructor permission required.

SLAV 2990. Thesis Preparation. For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. Fall SLAV2990 S01 14087 Arranged "To Be Arranged"
Spr SLAV2990 S01 23598 Arranged "To Be Arranged"

SLAV XLIST. Courses of Interest to Concentrators in Slavic Languages.

Sociology

SOC 0010. Perspectives on Society. An introduction to the discipline of sociology from a macro perspective. Students explore how different sociological paradigms lead to contrasting understandings of capitalism, the state, class, race, and gender. In addition, students learn new ways to think about social problems in the United States, in the developing world, and in world history. Spr SOC0010 S01 23773 MWF 11:00-11:50(04) (R. Smith)

SOC 0020. Perspectives on Social Interaction: An Introduction to Social Psychology. An introduction to the discipline of sociology examining the individual in social situations. Explores the social development of the person, the development of interpersonal relationships, and the problems of integrating the individual and social system. For each area, the personal and situational factors that bear upon the issue are investigated. The objective is to deepen understanding of the behavior of people in a social context. WRIT Fall SOC0020 S01 14351 MWF 1:00-1:50(06) (G. Elliott)

SOC 0130. American Heritage: Democracy, Inequality, and Public Policy. America professes equality but exhibits many forms of inequality in schools, race relations, and income. An examination of contrasting elements of American society and a review of the role sociology plays in public debate. To illuminate the debates, key topics, such as welfare, immigration, affirmative action, and environmental equity are considered. Fall SOC0130 S01 14352 MWF 11:00-11:50(04) (M. White)

SOC 0170. The Family. The state of the contemporary family generates debate within and beyond sociology. That debate is considered by examining different definitions of family, changing gender roles within the family, and the family in cross-cultural context. Special issues include new family forms, such as gay and lesbian families and biological and step-parenthood, as well as changing patterns of work and housework. Spr SOC0170 S01 25229 MWF 10:00-10:50(03) (C. Spearin)

SOC 0300C. The Nature of Community. What is community? How can it best be organized and developed? How can communities contribute to social justice? This course investigates such questions by examining the nature of community life, rights and responsibilities of individuals in relation to communities, approaches to community service, and the roles of leadership, ritual, and narrative in community building. Enrollment limited to 20 first year students. FYS WRIT Spr SOC0300C S01 25511 M 3:00-5:20(13) (A. Dill)

SOC 0300D. Who Am I?. A study of self in contemporary society. We examine the structural and situational forces that shape the self and their impact on personal development, orientations to the world, and interpersonal behavior; we investigate the development of the self as a way of being in the world that makes everyday doings and, ultimately, society, possible. Enrollment limited to 20 first year students. Instructor permission required. FYS WRIT Spr SOC0300D S01 23774 TTh 1:00-2:20(10) (G. Elliott)

SOC 0300K. Inequalities and Health. We start from the assumption that the social organization of society shapes definitions and experiences of health and illness, the distribution of diseases, and the responses to them. We explore the relevance of social structure and social interaction to health and well-being, emphasizing socioeconomic status, race, ethnicity, gender, and social contexts such as relationships, families, schools, and neighborhoods. This is not a "sociology of medicine" course. It will not emphasize the profession of medicine, health care policy, or health care organizations. Enrollment limited to 20 first year students. Instructor permission required. FYS WRIT Fall SOC0300K S01 14356 M 3:00-5:20(15) (S. Short)

SOC 0300L. Environment and Society in Africa. This seminar will actively examine contemporary environmental issues in Africa. The African setting is a key site for the world's environmental challenges and polices, with a large number of highly visible and valued flora, fauna, and ecosystems. At the same time, Africa nations are severely pressed with competing social issues: poverty, economic development, health, refugees. How can these be reconciled? What roles do the many actors play? This course is multidisciplinary in orientation and broad in scope geographically. Seminar discussion admits a variety of perspectives. Readings span a wide variety of approaches. Enrollment limited to 20 first year students. S/N: FYS Spr SOC0300L S01 23775 W 3:00-5:20(14) (M. White)

SOC 1010. Classical Sociological Theory. Why do we follow social rules and conventions? And how is social change – that is, the making of new rules and expectations – possible? When we respond to rules, do we act as free-willing individuals or do we follow social structures we have no control over? These questions have motivated generations of sociologists, but many of the arguments have been already developed by the four "forefathers" of sociology: Karl Marx, Max Weber, Emile Durkheim, and Georg Simmel. Looking at the transformations around them – the rise of capitalism, the modern nation-state, rational bureaucracy, the metropolitan, the decline of religion, and much more – they developed arguments that allow us to better understand ourselves, our actions, and the contemporary political, economic and social transformations around us. WRIT Fall SOC1010 S01 14357 TTh 9:00-10:20(08) (P. Henry)

SOC 1020. Methods of Social Research. This course introduces students to the frameworks and methods of conducting sociological research -- from both a qualitative and quantitative perspective. The aim is that students develop the skills to ask and answer interesting and important questions about sociological phenomena. The focus is on designing and executing research, from identifying an
interesting question and reviewing the relevant literature, to collecting and analyzing data, to drawing reliable inferences and presenting meaningful results. There is a heavy focus on reading and discussing academic research and working in research teams. By the end of the semester students will complete their own research projects.

Spr SOC1020 S01 23776 MWF 9:00-9:50(02) (C. Spearin)

SOC 1060. Leadership in Organizations.

What is leadership? What makes a great leader? Can leadership be learned? Improved? This course explores various theoretical approaches to leadership using a combination of lectures and case-study analysis. Additionally, it aims at developing your personal leadership skills by using self-exploration and reflection, self-assessment instruments, role-play, and feedback from peers. Enrollment limited to 100.

Fall SOC1060 S01 16076 MWF 6:30-7:50(14) (O. Shraga)

SOC 1080. Groups in Organizations.

Teamwork has become increasingly popular in organizations. Whether structured into the organizational makeup, or temporarily established around specific projects, teams are a critical competency of organizations. They are considered an effective performance unit, and expected to efficiently cope with the fast changes and demands of today's corporate environment. However, deriving the full benefits from teamwork requires correct management of its processes and dynamics. This course dwells on selected issues in team development, internal processes, and members' behavior, as well as management skills needed to effectively lead teams; therefore it can benefit anyone who works in a group, whether as a student or in the business world. Enrollment limited to 35.

Fall SOC1080 S01 16077 MW 6:30-7:50(17) (O. Shraga)


Introduction to descriptive and inferential statistics: measures of central tendencies and variability, sampling, tests of significance, correlation, and regression. Also includes the use of computers in data analysis. Knowledge of elementary algebra is assumed. Enrollment is limited to 144 students.

Fall SOC1100 S01 14359 MWF 12:00-12:50(12) (C. Spearin)
Spr SOC1100 S01 23777 TTh 10:30-11:50(09) (D. Lindstrom)

SOC 1117. Focus Groups for Market and Social Research.

This course introduces students to a range of qualitative research methods commonly used in market and social science research. It is designed to provide students with a skill set that will allow them to conduct and design market and social research that gets below the surface of the traditional survey. Focus groups, ethnographic observation and user-centered research are widely used in product design, communications, marketing and entrepreneurship research. Students will learn and practice all of the methods introduced in the course by conducting a semester-long research project, will gain insight into which methods are most appropriate for particular research needs.

Fall SOC1117 S01 14361 TTh 6:30-7:50(14) (L. Dicarlo)


This course brings design thinking into conversation with qualitative research methods, examining the elements of a comprehensive perspective of context. It introduces students to design research methods, ethnographic research methods, and how they work together. Students will learn how to use these methods to identify and engage in "deep hanging out" with the problem, gap or inefficiency in question. They will then move on to patient contextualized opportunity identification for meaningful innovation. By the end of the course, students will have developed a process for effective, through innovation context analysis. Relevant for designers of products, services, organizations and experience. LILE Spr SOC1118 S01 25652 W 6:00-8:20PM(18) (L. Dicarlo)

SOC 1120. Market and Social Surveys.

This course covers the theory and practice of survey research. Topics include questionnaire design and formatting; sample design and selection; interviewing techniques; data base design and data entry; and elementary data analysis and report production. Students individually design and conduct a survey on a topic of their choice, and collectively conduct and analyze a sample survey of the Brown student population. Prerequisite: SOC 1100 or equivalent.

Fall SOC1120 S01 14360 MWF 10:00-10:50(03) (C. Spearin)


Introduction to data and research methods for private and public sector organizations. Data used in market research include trends in the population of consumers, economic trends, trends within sectors and industries, analyses of product sales and services, and specific studies of products, promotional efforts, and consumer reactions. Emphasizes the use of demographic, GIS, and other available data.

Spr SOC1260 S01 23813 TTh 9:00-10:20(08) (D. Hogan)

SOC 1270. Race, Class, and Ethnicity in the Modern World.

Applies sociological analysis to understand present and historical cases of ethnic and race relations and conflicts. Topics addressed are the social construction of race and ethnicity; historical processes of racialization; ethnic conflict and the nation state; and the linkages between race, class, and social mobility. Focuses on racial and ethnic relations in the U.S., but also has a strong international comparative component.

Spr SOC1270 S01 25260 MWF 10:00-2:50(07) (J. Itzigsohn)

SOC 1311. Micro-Organizational Theory: Social Behavior in Organizations.

Micro-Organizational Theory focuses on the human dynamics of organizations as natural systems. It examines how individual attitudes, actions, and interactions make a difference for organizational processes and outcomes. This focus is contrasted with more macro-level approaches, which take the organization (instead of the individual) as the primary unit of analysis. For example, studies of organizations from an economic perspective are typically concerned with the performance of the organization relative to its competitors. Studies of organizations from a macro-sociological focus are typically concerned with an organization's routines and structures, contextualized by the broader environment. SOC 1311 takes a more micro and meso perspective that asks questions such as, "why do individuals in organization behave the way they do, how does this affect the organizations of which they are a part and how, in turn, are individuals affected by their organizations?"

Fall SOC1311 S01 14362 TTh 10:00-1:20(10) (M. Suchman)


This course examines the growing body of theoretical and empirical research on the sociology of organizations. Lectures and discussions will cover a wide range of perspectives and draw examples from a wide range of organizational settings -- corporations, non-profits, political parties, public agencies, the military, professions, and voluntary associations. The goal is to survey the many different ways in which sociologists think about and study organizational life. Optional readings and assignments will also allow students to develop a more intensive command of specific sub-fields, should they wish to do so.

Spr SOC1315 S01 23779 MWF 1:00-1:50(06) (M. Fennell)

SOC 1330. Remaking the City.

Cities are being reshaped by immigration, economic restructuring, and other forces. This course reviews these changes from several perspectives, including the patterns and causes of change, the role of politics and public policy, and how different groups of people (by class, race, and national origin) manage under the new conditions. Readings will emphasize historical and cross-national comparisons.

Spr SOC1330 S01 23780 MW 8:30-9:50(02) (J. Logan)


An introduction to the fundamental principles and methods of geographic information systems (GIS). Topics include (a) handling different types of geographic datasets, (b) geo-analytical and modeling tools in GIS, (c) conceptual and theoretical aspects of GIS application development, and (d) errors and uncertainty analysis of GIS applications. Laboratory assignments and the project work provide hands on experiences in GIS. Enrollment limited to 24 juniors and seniors. Instructor permission required. WRIT

Fall SOC1340 S01 15236 MW 8:30-9:50(02) (R. Franklin)

SOC 1420. Violence and Society.

The course focuses on the personal and structural sources and consequences of violence in the U.S. We investigate three levels of violence: interpersonal; institutional, wherein social institutions do violence

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
to individuals or groups; and structural, examining the structures of society that tolerate or promote violence, both within the society and toward other societies. Next, we examine the culture of violence that permeates our society, including the mass media and violence. WE focus on specific forms of violence in our society, including gang violence, bullying, violence within schools, sex trafficking, war, religious violence, and terrorism. WRIT
Fall SOC1420 S01 14365 TTh 2:30-3:50(11) (G. Elliott)
SOC 1550. Sociology of Medicine.
The sociopolitical context within which health, illness, and medical care are defined. Sociological materials are used to examine current developments in the health care field. Emphasis on identifying social and political forces that impinge upon the delivery systems and tracing their impact on the roles of practitioners and the health of their clients.
Fall SOC1550 S01 16024 TTh 9:00-10:20(08) (R. Smith)
SOC 1620. Globalization and Social Conflict.
Examines the effect globalization is having on the economies and societies of the developed and developing world. Focuses in particular on how new forms of global production and networking are transforming the traditional role of the nation-state, creating new dynamics of wealth distribution, and generating new sources of social conflict and political contestation, including transnational movements. WRIT
Spr SOC1620 S01 23781 TTh 1:00-2:20(10) (P. Heller)
SOC 1870A. Investing in Social Change.
Philanthropy -- "giving away money" -- sounds attractive and simple. But the very acts of contributing and receiving resources affect dynamics and relationships among all involved. We explore philanthropic strategies, social change, the sociological dimensions of philanthropy in historic and current practice. Students engage in teams to investigate a particular community concern, design an investment strategy, recommend the investment of grant dollars. Instructor permission required. Course enrollment is by application only. Applications can be found at swearercenter.brown.edu shortly before the start of class. Students who pre-register must still be selected through the application process and attend the first class meeting. Enrollment limited to 18. WRIT
Fall SOC1870A S02 16290 TTh 2:30-3:50(11) (A. Dill)
SOC 1870E. Alternatives to Violence.
We examine nonviolence as a method for resolving serious social conflict. We consider psychological and sociological approaches to understanding why people choose violence, as a precursor to studying theories of nonviolence. We investigate practitioners of nonviolence throughout history and analyze nonviolence as a response to such issues as the death penalty, war, and terrorism.
Spr SOC1870E S01 23785 W 3:00-5:20(14) (G. Elliott)
SOC 1870S. Sociology of Gender.
Gender is among the most prominent organizing principles in our society. From the day they are born—and even earlier as the result of reproductive technologies—on through to the day they die, individuals are gendered. Instead of understanding gender as a set of behaviors derived from innate, fixed biological differences between men and women, this course analyzes gender as a social arrangement shaped by social actors, organizations, and institutions. Drawing from social science research, the course analyzes everyday interactions of intimacy, language, and identity issues, as well as macro structures like the economy, religion, and education, to understand how they affect notions of gender. The course sustains an analysis of sexuality because ideas of femininity and masculinity are constructed around notions of “appropriate” sexual conduct and relations. Although this course focuses on everyday life in this country, the class will explore the production and institutionalization of gender relations in historical moments and spaces beyond the U.S. Enrollment limited to 20 juniors and seniors.
Spr SOC1870S S01 25399 T 4:00-6:20(16) (R. Smith)
SOC 1871D. Sophomore Seminar in Sociology of Development.
This seminar provides an introduction to the study of development. It looks at the diversity of understandings of the concept of development as well as its practical importance in the world. Students will read texts that present pressing questions and issues concerning development practices, policies, and theories. Efforts to connect broad theoretical debates to understanding contemporary problems will be encouraged. Enrollment limited to 20 sophomores. WRIT
Spr SOC1871D S01 23789 M 3:00-5:20(13) (J. Iltizgohn)
SOC 1871N. Military Health: The Quest for Healthy Violence.
As an institution, the military trains individuals to conduct violence while remaining, at least ideally, healthy. From the standpoint of the organization, the successful soldier is someone who is good at violence at the same time that he or she is mentally and physically fit. Enrollment limited to 20.
Fall SOC1871N S01 16117 T 4:00-6:20(18) (R. Smith)
SOC 1871O. Law, Innovation and Entrepreneurship.
This seminar explores the relationship between legal institutions and macro-organizational change. The course devotes particular attention to the legal and organizational processes that shape (and are shaped by) the emergence of new technologies, new enterprises, and new industries. Although discussions may touch on technical aspects of law and/or entrepreneurship, most topics and materials focus on the general sociological processes that underlie changing organizational environments. The seminar is aimed at advanced students who have some prior familiarity with the sociology of law is helpful, but not essential. Through shared and individual readings, weekly discussions, and e-mail dialogues, the course provides an opportunity for students to refine and extend their thinking on important and controversial topics at the intersection of the contemporary organizational and socio-legal literatures. Prerequisite: SOC 1030 required (waivable by permission of instructor). Enrollment limited to 20 juniors, seniors, and graduate students.
Fall SOC1871O S01 16099 M 3:00-5:20(15) (M. Suchman)
SOC 1871R. Knowledge Networks and Global Transformation.
How do refined knowledge and the social relations that organize and distribute influence changes in the institutions, inequalities and cultural systems and practices that define particular world regions and global formations? And how do global transformations influence the trajectories of knowledge production themselves? We will examine particular knowledge-identified agents, including universities, research institutes, think tanks, and professional associations, to consider why they approach global transformations in the way that they do. And we will consider how particular kinds of global transformations, from the end of the cold war and the transformation of information/communication technology to the last financial crisis, affect knowledge production itself. By exploring intersections between global complexity and reflexivity in this fashion, we hope to increase our own capacities for seeing the world not only as it is, but how knowledge might be used in making better alternatives for the future. Enrollment limited to 20 juniors and seniors. WRIT
Spr SOC1871R S01 23996 Th 4:00-6:20(17) (M. Kennedy)
SOC 1871S. Legacies of Inequality: The U.S. and Beyond.
Does education equalize or widen gaps between people and nations? Has mass imprisonment reduced crime or exacerbated U.S. racial inequality? Does biology determine destiny, or is society more fluid? This course introduces theory and research on social inequality, emphasizing temporal dimensions of social differentiation. Attention will be paid to the characteristics we are given (race, sex), those we achieve (education, income), and institutions and policies we encounter throughout the life cycle (schools, the justice system). By understanding the complexities of social inequality and the challenges of devising solutions, students will leave as informed citizens, better equipped to enter any profession. Enrollment limited to 20. First year students require instructor permission.
Spr SOC1871S S01 23787 Tht 4:00-6:20(17) (M. Jackson)
SOC 1871W. Geographical Analysis of Society.
Provides an introduction to a geographical approach to understanding the spatial organization of individuals, societies, and economies. The two main emphases are on theories/concepts and applied analytical tools. We will learn about key theories in geography, sociology, and economics that have attempted to organize and classify the spatial structures and interactions across space of social and economic actors and will work with related analytical techniques. Enrollment limited to 20 juniors, seniors, and graduate students. WRIT
Spr SOC1871W S01 23788 M 3:00-5:20(13) (R. Franklin)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
SOC 1871Z. Martial Arts, Culture, and Society.
In this upper level undergraduate course for which there are no prerequisites, we will consider how sociology, and other social sciences, can help us understand martial arts and how martial arts might inform the social sciences. We shall consider how various bodymindful martial practices, their organizations, and their cultures shape, and are shaped by, different structures of power at various levels of society. We concentrate on martial arts because they straddle such an important axial dimension of society around violence. First priority to Sociology Concentrators. Enrollment limited to 20.
Fall 2023 S01 15235 W 3:00-5:20(17) (M. Kennedy)

SOC 1950. Senior Seminar.
Advanced research seminar for sociology concentrators in the second semester of work on an honors thesis. Participants examine methods for analyzing, writing, and presenting thesis material and apply peer review techniques in assessing each other’s work. Culminates in presentation of thesis to the department. Students doing independent study research may also participate with the instructor’s permission. Required for "honors" in sociology. WRIT
Fall 2023 S01 14372 Th 4:00-6:20(16) (M. Kennedy)
Spr 2024 S01 23784 Arranged (M. Kennedy)

Supervised reading or research. Specific program arranged in terms of the student’s individual needs and interests. Required of intensive concentrators; open to others only by written consent of the Chair of the department. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Research seminar for students writing an honors thesis. Under the direction of a faculty advisor, students construct and carry out a research project. The written report of the research is submitted to the advisor for honors consideration. A second reader selected by the thesis advisor certifies that the thesis is of honors quality. Please check Banner for the correct section number and CRN to use when registering for this course.

Research seminar for students writing an honors thesis. Under the direction of a faculty advisor, students construct and carry out a research project. The written report of the research is submitted to the advisor for honors consideration. A second reader selected by the thesis advisor certifies that the thesis is of honors quality. Please check Banner for the correct section number and CRN to use when registering for this course.

SOC 2010. Multivariate Statistical Methods I.
Introduction to probability, descriptive statistics and statistical inference. Coverage of the linear model, its assumptions and potential biases. Emphasis on hypothesis testing, model selection and interpretation through application with real data.
Fall 2023 S01 14373 Th 9:00-12:00(08) (M. White)

SOC 2020. Multivariate Statistical Methods II.
This course is a graduate-level introduction to multivariate regression models for categorical and limited dependent variables. Subject matter includes modeling nominal and ordinal outcomes; truncated distributions; and selection processes. The course also reviews strategies for sample design; handling missing data and weighting in multivariate models. The course employs contemporary statistical software. Special emphasis is placed on model selection and interpretation. Prerequisite: SOC 2010
Spr 2024 S01 23791 T 9:00-12:00(08) (L. Vanwey)

This is a graduate-level course requires students to engage in detailed analysis and critical review of sociological thought of the 19th and early 20th centuries. The class will introduce students to the critical thinking, methodological innovation, and historical imagination of sociological theory by reading the original texts of the forefathers of sociology, including Karl Marx, Max Weber, Emile Durkheim and others.
Fall 2023 S01 14375 T 9:00-12:00(08) (J. Pacewicz)

SOC 2050. Contemporary Sociology.
This class offers a review of some of the most interesting contemporary social theorists and the most intense debates in current sociological thought. It thematically reviews the works of Jurgen Habermas on the public sphere, Michel Foucault on disciplinary and governmental modes of power, Bruno Latour on modernity and modern science, Pierre Bourdieu on field and habitus and among others. No prerequisites.
Spr 2024 S01 23792 Th 9:00-12:00(08) (P. Heller)

An advanced introduction to theoretical and substantive issues in the social scientific study of population. Major areas within sociology are integrated with the study of population, including the comparative-historical analysis of development, family processes, social stratification, ethnicity, ecological studies, and social policy. Primarily for first year Graduate students.
Fall 2023 S01 14374 W 9:00-12:00(02) (D. Hogan)

SOC 2090. Culture and Social Structure.
An analysis of the interrelations of religious ideas, value patterns, and various forms of knowledge on the one hand, and of the societal structures and changes in organizations and roles on the other hand. Offered in alternate years.
Spr 2024 S01 23793 W 9:00-12:00(02) (P. Henry)

The influence of social and economic factors on the development of concepts of health and illness, on the cause and distribution of disease, and on responses to disease. Lay-professional disputes over disease identification and intervention. Implications of medicalization (the expanding social jurisdiction of medicine). The importance of the health care system in American society. Selected issues in recent health policy.
Spr 2024 S01 25512 F 9:00-12:00 (A. Dill)

SOC 2210. Qualitative Methods.
Emphasis on ethnographic field work through participant observation and interviews. Some attention to content analysis and visual sociology. Technical training in developing observational and interview guidelines, data collection, coding, transcript analysis, and computer applications. Strong emphasis on quality writing. Analysis of ethnographic research in book and article format. Attention to recent developments in ethnography, especially reflexivity and autoethnography.
Spr 2024 S01 23794 M 2:00-5:00(07) (J. Pacewicz)

SOC 2230. Techniques of Demographic Analysis.
Procedures and techniques for the collection, evaluation, and analysis of demographic data; measures of population composition, fertility, mortality, and migration; construction of life tables, population and projections, population dynamics; responsible use of demographic methodology. Mandatory S/NC.
Spr 2024 S01 25554 Th 2:00-5:00(11) (M. White)

SOC 2240. Event History Analysis.
An introduction to hazard models and their application to event history data in sociology. Topics include survival distributions, standard parametric models, discrete time approaches, partial likelihood models, and the introduction of covariates. Attention is given to practical application and the estimation of these models with software packages, where possible.
Fall 2023 S01 14376 M 2:00-5:00(07) (D. Lindstrom)

SOC 2430. Fields and Methods of Social Research.
Introduction to strategies sociologists use to formulate theories and conduct methodologically sound research. Hypothesis formulation and research design; special emphasis on identifying causal mechanisms, techniques of operationalization, and choice of relevant comparisons.
Spr 2024 S01 23796 W 2:00-5:00(07) (S. Short)

SOC 2450. Exchange Scholar Program.
Fall 2023 S01 14088 Arranged 'To Be Arranged'
Spr 2024 S01 23599 Arranged 'To Be Arranged'

SOC 2460. Sociology Paper Writing Seminar.
This is a special seminar for graduate students in Sociology on the art of writing research papers for publication. The goals of the course are to: 1) learn the process of writing by drafting or redrafting a complete research
paper, one section at a time 2) participate in the process of critical peer review 3) become knowledgeable about the process of submission/publication in peer-reviewed journals in Sociology and related social science fields 4) become more familiar with the often hidden processes of journal review, publication ethics, and interpreting/responding to editorial decisions.

Fall SOC2480 S01 14378 W 2:00-5:00(07) (S. Short)

SOC 2600. Comparative Historical Analysis. The seminar focuses on the application of theory and method in historical sociology. It will combine the reading of exemplary works, both classical and current, in comparative-historical sociology, with an exploration of historical methods that involves methodological readings but focuses on students' use of archives in their own individual research. For graduate students only.

Fall SOC2600 S01 16045 Th 2:00-5:00(07) (J. Itzigsohn)

SOC 2960C. Urban Sociology. This course will review alternative theoretical perspectives on urban and regional development with an emphasis on variants of ecological and political economy approaches. Substantive topics will include metropolitan restructuring in the U.S. and abroad, growth politics and growth control, neighborhood social networks and collective action, and incorporation of immigrants and minority groups in the metropolis.

Fall SOC2960C S01 14379 T 1:00-4:00(10) (J. Logan)

SOC 2960G. Spatial Data Analysis Techniques in the Social Sciences. Survey course of statistical methods that can be used to analyze spatial and/or clustered data at the individual and aggregate levels. Topics include multilevel analysis; fixed effects approaches; spatial choice; spatial autocorrelation, heterogeneity and dependence. Application with real data. Not a course about Geographic Information Systems (GIS) or mapping techniques. Prerequisites: SOC 2010 and 2020, or equivalents.

Spr SOC2960G S01 23896 T 1:00-4:00(10) (M. Jackson)

SOC 2960H. Demography of the Life Course. This seminar provides an overview of the development and current uses of the life course perspective in studies of demographic behaviors, process and change. Cohorts and age-graded patterns of behavior are considered as are the effects of social institutions, opportunity structures, and behavioral preferences all of which determine alternative life course pathways. Family origins and prior life experiences, along with ethnic/racial, gender, and cultural identities are examined as critical factors giving rise to inter-individual differences in demographic behaviors over the life course. The role of biography and agency in decisions about demographic behaviors and actual experiences are considered, as is their relationship to life course pathways, trajectories, and success. Graduate students and advanced undergraduates with permission.

Spr SOC2960H S01 23797 M 9:00-12:00(02) (D. Hogan)

SOC 2960M. Sociology of Organizations Graduate Seminar. The sociology of organizations offers a burgeoning and vibrant literature, with relevance not only for self-identified organizational sociologists, but also for scholars in fields as diverse as politics, development, industrial relations, finance, education, health care, and the arts. This seminar offers an intensive exploration of the "state of play" in contemporary macro-organizational theory. Shared and individual readings, coupled with weekly discussions and email dialogues, allow students to refine and extend their thinking on a series of important and controversial topics in the recent literature. Although this course has no formal prerequisites, the syllabus is aimed primarily at graduate students who enjoy some prior familiarity with organizational theory, whether in sociology or a kindred discipline. Enrollment limited to 15.

Spr SOC2960M S01 23997 T 6:00-8:30PM(12) (M. Suchman)

SOC 2970. Preliminary Examination Preparation. For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.

Fall SOC2970 S01 14089 Arranged 'To Be Arranged'

Spr SOC2970 S01 23600 Arranged 'To Be Arranged'

SOC 2980. Reading and Research. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

SOC 2981. Reading and Research. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

SOC 2990. Thesis Preparation. For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.

Fall SOC2990 S01 14090 Arranged 'To Be Arranged'

Spr SOC2990 S01 23601 Arranged 'To Be Arranged'

SOC XLIST. Courses of Interest to Students Concentrating in Sociology.

Theatre Arts and Performance Studies

TAPS 0030. Introduction to Acting and Directing. Explores basic acting/directing concepts from a variety of perspectives including the use of the actor's imagination/impulsivity in the creation of truthful, dramatic performance; the body, as a way of knowing and communicating knowledge; and the voice, as a means of discovering and revealing emotion/thought. Areas of emphasis vary with instructor. Please go to the TAPS website for specifics on admission and the mandatory technical requirement. Some evening hours are required. http://brown.edu/academics/theatre-arts-performance-studies/undergraduate-program/required-course-information. Enrollment limited to 18 first year students. Instructor permission required.

Fall TAPS0030 S01 14837 TTh 9:30-11:50(08) (C. Crawford)

Fall TAPS0030 S02 14838 TTh 3:00-5:20(16) (C. Crawford)

Spr TAPS0030 S01 24157 TTh 9:30-11:50(16) (C. Crawford)

Spr TAPS0030 S02 24158 TTh 3:00-5:20(16) (C. Crawford)

TAPS 0080. Anarchy, Activism, and the Avant-Garde: The Politics of Performance. This class explores histories and theories of political performance, primarily within the US in the 20th and 21st centuries. We will engage with performances and productions framed (whether by their creators, critics, or audiences) as political in order to ask larger questions about the stakes of making political claims for theater and performance practice. Enrollment limited to 20.

Fall TAPS0080 S01 16491 MW 2:30-3:50 (L. Goss)

TAPS 0100. Playwriting I. A workshop for students who have little or no previous experience in writing plays. Students will be introduced to a variety of technical and imaginative considerations through exercises, readings and discussions. Course is not open to those who have taken Advanced Playwriting (TAPS 1500, formerly LITR 1010C and TSDA 1500). Enrollment is limited to 14 undergraduates per section. A limited number of spaces are reserved for incoming and transfer students. Instructor permission required. S/NCR. W/RI.

Fall TAPS0100 S01 14863 F 10:00-12:50(03) (K. Yang)

Fall TAPS0100 S02 14866 TTh 1:00-2:20(10) (E. Terry-Morgan)

Spr TAPS0100 S01 24162 T 1:00-3:50(10) 'To Be Arranged'

TAPS 0200. Playwriting II. Emphasis is placed on dramatic conventions, such as monologues, dialogue, mise-en-scene and time. Writing includes frequent exercises of making political claims for theater and performance practice. Enrollment is limited to 14 undergraduates per section. Instructor permission required. S/NCR. W/RI.

Fall TAPS0200 S01 14862 T 1:00-3:50(10) (K. Pearl)

Spr TAPS0200 S01 24171 F 1:00-3:50(06) 'To Be Arranged'

TAPS 0220. Persuasive Communication. Provides an introduction to public speaking, and helps students develop confidence in public speaking through the presentation of persuasive speeches. Primarily for seniors. Limited to 18. Instructor’s permission required. No permission will be given during pre-registration; interested students must meet with the instructor prior to registration.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
students should sign up well in advance on the TAPS 0220 waitlist (form is at http://www.brown.edu/academics/theatre-arts-performance-studies/undergraduate-program/required-course-information) and attend the first day of class. Attendance is mandatory.

The application/waitlist process does not apply to students registering for the Summer term through the Office of Continuing Education.

Fall TAPS0220 S01 14845 MW 09:00-11:50(18) (P. Howell)
Fall TAPS0220 S02 14846 MW 1:00-3:50(18) (P. Howell)
Fall TAPS0220 S03 14847 MW 09:00-11:50(18) (P. Howell)
Fall TAPS0220 S04 14848 MW 1:00-3:50(18) (P. Howell)
Fall TAPS0220 S05 14849 MW 09:00-11:50(18) (H. Vermy)
Spr TAPS0220 S01 24151 MW 09:00-11:50(02) (P. Howell)
Spr TAPS0220 S02 24152 MW 1:00-3:50(08) (P. Howell)
Spr TAPS0220 S03 24153 MW 09:00-11:50(02) (P. Howell)
Spr TAPS0220 S04 24154 MW 1:00-3:50(08) (P. Howell)
Spr TAPS0220 S05 24155 MW 09:00-11:50(02) 'To Be Arranged'

TAPS 0230. Acting.
Focus on elements of dramatic analysis and interpretation as applied to the art of acting, and, by extension, directing. Monologues, scene study, and improvisation are basis for comment on individual problems. Reading of dramatic texts and theory. Substantial scene rehearsal commitment necessary. Attendance mandatory. Not open to first-year students. Enrollment limited to 20. Instructor permission required. S/NC

Fall TAPS0230 S01 14855 MW 12:00-1:50(15) (L. Marshall)
Fall TAPS0230 S02 14856 Th 1:00-2:20(15) (L. Marshall)
Fall TAPS0230 S02 14856 MW 2:00-3:50(15) (L. Marshall)
Fall TAPS0230 S02 14856 Th 2:30-3:50(15) (L. Marshall)
Spr TAPS0230 S01 24147 MW 12:00-1:50(05) (K. Moore)
Spr TAPS0230 S01 24147 Th 1:00-2:20(05) (K. Moore)

TAPS 0250. Introduction to Technical Theatre and Production.
This course is an introduction to the basic principles of stagecraft, lighting and sound technology and the different elements of theatrical design. Instructor permission required. Enrollment limited to 15.

Fall TAPS0250 S01 14839 MWF 10:00-11:50(03) (T. Hett)
Spr TAPS0250 S01 24159 MWF 10:00-11:50(03) (T. Hett)

TAPS 0260. Stage Lighting.
This course is an introduction to stage lighting. Enrollment limited to 20.
Fall TAPS0260 S01 14859 MW 3:00-5:50(15) (T. Hett)

TAPS 0310. Beginning Modern Dance.
Introduction to the art of movement. Focuses on building a common vocabulary based on ballet, vernacular forms, improvisation, Laban movement analysis, American modern dance, and the body therapies. Individual work is explored. One and one-half hours of class, four days a week. Enrollment limited to 40. S/NC.

Fall TAPS0310 S01 14827 MTWTh 1:00-2:20(10) (J. Strandberg)

TAPS 0320. Dance Composition.
Focuses on building the individual's creative voice. A movement vocabulary is developed from Western techniques (ballet, American modern dance, Laban/Bartenieff movement analysis, vernacular forms, space-harmony/movement physics, and the body therapies) along with group improvisations and collaboration with artists in other disciplines. Enrollment limited to 40. S/NC.

Fall TAPS0320 S01 14826 MWF 10:00-11:50(03) (M. Bach-Coulibaly)

TAPS 0330. Mande Dance, Music and Culture.
Examines, by theory and praxis, the techniques and philosophy of dance in Mande culture. Each dance is taught as a highly codified language, with detailed phrasing structures, focus, center, variations of intention, and qualitative choice. The specific ethnicities are studied in relationship to their music and dance variations. Participants must be physically fit. Despite the enrollment limit, if you are interested in taking this class, please show up to the first class, as there is an application process for enrollment. This course requires a $100 lab fee from each student to cover supplies and expenses for performances to be paid directly to the department. More info on how to pay available on first day of class. Enrollment limited to 50. S/NC

Fall TAPS0330 S01 24133 T 6:00-7:50(12) (M. Bach-Coulibaly)
Spr TAPS0330 S01 24133 Th 4:00-5:50(12) (M. Bach-Coulibaly)

TAPS 0510. Introduction to Shakespeare (ENGL 0310A).
Interested students must register for ENGL 0310A. Fall TAPS0510 S01 15996 Arranged 'To Be Arranged'

TAPS 0930A. The Actor's Instrument: Voice and Speech.
A complete and well-seasoned actor has the ability to perform with specificity and ease, both vocally and physically. Specificity comes from an integration of speech and movement technique. Ease is only possible when a mastery of technical skills reaches the point where the actor can integrate them without loss of spontaneity. The goal of this class is to give the student the fundamental techniques of voice and speech in relation to the body. Prerequisite: TAPS 0230. Enrollment limited to 16. Instructor permission required. S/NC.

Prerequisite does not apply to students registering for the Summer term through the Office of Continuing Education.

Spr TAPS0930A S01 24149 MWF 4:00-5:50(14) (T. Jones)

TAPS 0930F. Explorations in Clown and Physical Play.
Participating in this course, you will learn how to value and share your own unique ridiculousness by transforming mistakes into opportunities and limitations into creative expression. Based in physical exploration and improvisation, this work will implore you to recognize your relationship to fear, expand your sense of humor, connect to an audience, and play with abandon. Inspired by various kinds of clowns throughout history, you will begin to create your own vocabulary of play that will organically accumulate into solo and group performance pieces.

Spr TAPS0930F S01 25703 Th 10:00-11:50(03) 'To Be Arranged'

Interested students must register for AFRI 0990.

Spr TAPS0980 S01 25539 Arranged 'To Be Arranged'

TAPS 1000. Intermediate Dance.
Designed to expand the student’s knowledge of and proficiency in dance as an art form. Mainly a studio course, but selected readings, papers, critiques, and field trips are important components of the course. Prerequisite: TAPS 0310 or equivalent. Enrollment limited to 40. S/NC.

Spr TAPS1000 S01 24129 MTWTh 1:00-2:20(08) (J. Strandberg)

TAPS 1100. Stage Management.
To introduce students to the principles and techniques of modern stage management from script selection to closing. Through the study of various models of stage management (both professional and academic), students will develop an appreciation of the role of the stage manager as the facilitator, mediator and organizer of the production process. Students will apply theory learned in the classroom by stage-managing or assistant stage-managing a TAPS production and/or observing other TAPS and Trinity Rep stage managers during the production process. Enrollment limited to 12.

Fall TAPS1100 S01 14850 M 4:00-6:20(15) (B. Reo)

TAPS 1160. Style and Performance.
For qualified sophomores, juniors, and seniors who offer TAPS 0230 as a prerequisite. Period scene study and monologues are basis for comment on individual progress in acting/directing. Extensive reading of dramatic texts and historic research materials. Work in voice, movement, dialect, and poetic text. Substantial commitment necessary for preparation of class scenes. Attendance mandatory. Prerequisite: TAPS 0230. Limited to 20. Instructor’s permission required. No permissions will be given during pre-registration.

Spr TAPS1160 S01 24160 TTh 1:00-2:20(05) (L. Marshall)
Spr TAPS1160 S01 24160 MW 12:00-1:50(05) (L. Marshall)

TAPS 1210. Solo Performance.
An exploration of the challenges and rewards of performing solo. Students research, write, and perform a one-person show. Other projects may include performance art, stand-up comedy, and monologuing. Substantial time commitment. Attendance mandatory. For advanced students with appropriate background and experience. Submit proposal and resume in the fall. For guidelines and information contact...

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
of gender-specific and ethnic hierarchies. Emphasis will be given to the study of ancient and medieval theatre in global perspective. Students will learn fundamentals of performance theory while studying the histories of ancient Greek and Roman theatre, Medieval European ritual, Indian Sanskrit drama and theatrical form, Yoruban traditional performance, and modes of cross-cultural comparison. WRIT.

TAPS 1240. Performance Historiography and Theatre History. This course will provide an introduction to performance history and historiography by concentrating on analysis of dramatic texts, theatrical events, festival performances and "performative" state and religious ceremonies from 1500-1850. We will explore incidents in Asia, the Americas and Europe as related to state consolidation, colonization, incipient nationalism(s), urbanization, cultural negotiation, and the representational practices enacted. Enrollment limited to 35. WRIT.

TAPS 1250. Twentieth-Century Western Theatre and Performance. The study of key figures and movements in 20th-century Western theatre and performance, from approximately 1870 to 2000. We explore naturalism and alternative strategies to realism such as symbolism, futurism, surrealism and constructivism, along with myriad figures in the modern and postmodern "avant-garde." WRIT.

TAPS 1260F. Introduction to Set Design. A survey of the history and concepts of scenic design with emphasis on the art, artists and the social/political movements influencing the major period. Aims to give the designer a foundation in research approaches. Also to provide an examination of stylistic approaches and innovations in the context of the historical period. Enrollment limited to 10.

TAPS 1281A. Director/Designer Collaborative Studio. Students will explore the relationship between director and designer within the production process. The main objective is to improve collaboration and production output by learning the language, tools, and skills involved in each area of discipline so as to enhance creative output. Enrollment limited to 17 students.

TAPS 1281M. Introduction to Costume Construction. An introduction to the study and practice of core costume construction skills. Topics include basic machine, hand sewing and patterning techniques.

TAPS 1290. Introduction to Dance Studies: Sex, Death and Endurance. Dance Studies investigates multiple facets of dance, including choreography, performance, spectatorship, and theory. In this course we will engage with social dances (including hip-hop, tango, and Renaissance dance) and concert dance as we debate dance's use and/or subversion of gender-specific and ethnic hierarchies. Emphasis will be given to choreographic portrayals of the human struggle with love, sickness, and death. We will also consider neuroscientifc approaches to dance spectatorship, particularly as it relates to empathizing with physical pain. This course presumes no prior knowledge of dance. Students with a scientific interest in human anatomy and movement are also encouraged to join.

TAPS 1281V. Spectatorship - Moving Bodies Perceiving Bodies. In this course we will examine the action of perceiving live dance and physical theater. Drawing from perceptual philosophy and psychology, ethnographic studies, affect theory, neuroscience, and critical theory, we will challenge the characterization of spectatorship as a passive affair. Instead, we will consider how social "top-down" and social factors (including ethnicity, cultural habitus, and gender identity) and "bottom-up" and physical factors (such as proximity and athletic or dance training) amalgamate to create our unique perceptual experiences. Special attention will be given to differing articulations of the concept of kinesthetic empathy. Readings include: Sedgwick, Merleau-Ponty, Foucault, Butler, Carlson, and Rancière.

TAPS 1281W. Artists and Scientists as Partners. This course focuses on current research on and practices in arts and healing, with an emphasis on dance and music for persons with Parkinson's Disease (PD) and Autism (ASD). Includes guest lecturers, readings, field trips, and site placements. Admission to class will be through application in order to balance the course between self-identified artists and scientists and those primarily interested in PD and those primarily interested in ASD. Enrollment limited to 30.

TAPS 1300. Advanced Modern Dance. Designed for dancers who have attained an advanced level in any dance technique. The purpose is to help such dancers come to understand both intellectually and kinesthetically the diversity of one of the few indigenous American art forms: modern dance. Enrollment limited to 40. S/NC.

TAPS 1310A. Director/Designer Collaborative Studio. Students will explore the relationship between director and designer within the production process. The main objective is to improve collaboration and production output by learning the language, tools, and skills involved in each area of discipline so as to enhance creative output. Enrollment limited to 17 students.

TAPS 1320. Choreography. Designed for those who have had some experience in composition and would like to work, under supervision, on making dances. Emphasizes making full-length dances for small and large groups and demands a sophisticated use of space, dynamics, and music. Further emphasis on viewing and interpreting classic and contemporary works from a choreographic viewpoint. S/NC.

TAPS 1330. Dance History: The 20th Century. An exploration of the major figures and trends in modern dance. While the main focus of the course is on American Dance, attention is given to earlier European and other dance traditions that have contributed to the American dance heritage. May be of particular interest to Americanists, art historians, dancers, and theatre majors.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
TAPS 1350. Dance Performance and Repertory.
Half course credit each semester. A study of dance repertory through commissioned new works, reconstruction, coaching, rehearsal, and performance. Guest artists and consultants from the American Dance Legacy Institute. Enrollment is by audition. Limited to skilled dancers. Instructor permission required. S/N.C.
Fall TAPS1350 S01 14829 Th 8:00PM-9:50PM (16) (J. Strandberg)
Fall TAPS1350 S01 14829 MW 6:30-9:20PM (16) (J. Strandberg)

TAPS 1360. Dance Performance and Repertory.
A study of dance repertory offered through commissioned new works, reconstruction, coaching, rehearsal, and performance. The course will explore the phenomenology of dance, audience-performer connection, theatre production and dance criticism, among other topics. Enrollment is by audition. Limited to skilled dancers. S/N.C.
Spr TAPS1360 S01 24131 Th 8:00PM-9:50PM (15) (J. Strandberg)
Spr TAPS1360 S01 24131 MW 6:30-9:20PM (15) (J. Strandberg)

TAPS 1370. New Works/World Traditions.
From research to performance, develops new dance theater pieces that are rooted in Mande dance and American dance. Includes study with Mande, American, and European artists in building a body of repertory for the concert stage. May be repeated for credit. By audition. S/N.C.
Fall TAPS1370 S01 14831 SuS 3:00-6:50PM (12) (M. Bach-Coulibaly)
Fall TAPS1370 S01 14831 Th 6:00-7:50PM (12) (M. Bach-Coulibaly)
Fall TAPS1370 S01 14831 T 6:00-10:50PM (12) (M. Bach-Coulibaly)

TAPS 1380. Mise en Scene.
A reconstruction of the idea of a stage and a frame on the evidence of theory, novels, plays, and especially films-the seen and the unseen-using the organizing strategies of mystery. Art's "impossible" brokering of the real and the representational in a dialectic of space is considered from a multiplicity of perspectives in diverse works. Enrollment limited to 20. Instructor permission required.
Spr TAPS1380 S01 24167 W 4:00-6:20PM (14) (S. Golub)

TAPS 1400. Advanced Performance.
An investigation into abstract and nonlinear modes of performance, working from fragmentary and recombined narrative, dramatic, and found sources. Seeks to evolve a conceptual approach to performance of the individual actor-director-writer through supervised and independent exercises and projects. Prerequisite: TAPS 0230. For juniors and especially seniors. Enrollment limited to 20.
Fall TAPS1400 S01 14835 TTh 1:00-2:20PM (10) (S. Golub)
Fall TAPS1400 S01 14835 MW 12:30-2:20PM (10) (S. Golub)

TAPS 1410M. Shakespeare and Philosophy (COLT 1410M).
Interested students must register for COLT 1410M.
Fall TAPS1410MS01 16752 To Be Arranged

TAPS 1420. Global Queer Performance.
What is queer performance from a global perspective? Within the U.S., this might refer to theater, visual and sonic practices, or styles of lesbian, gay, bisexual and transgender will large. In the world outside the U.S., such an identitarian narrative has gained some traction through the discourse of global queering, which renders an understanding of same-sex formations through Pride Parades, pink-dollar tourism, gay marriage and Western-LGBT cultures. There is, however, much debate as to what queer means, and how it translates. This course uses queer performance to consider how we might understand sexual minorities in the U.S. and the world. Enrollment limited to 20 students. WRIT
Fall TAPS1420 S01 14870 W 12:00-2:20PM (05) (E. Lim)

TAPS 1500H. Advanced Writing for Performance.
This course is an intense examination of the craft of writing scripts for the stage from germinal idea through production by analyzing students work in workshops, reading scripts and attending local performances. Students will learn proper script format, story outline and structure, characterization, plot and the nuts and bolts of the script writing business. Moreover, they will write a full-length play or a series of one-acts. They will also be required to read and critique each other's work and bring a significant number of script copies to class for workshop. Prerequisite: TAPS 0100 and 0200. Enrollment limited to 17.
Fall TAPS1500H S01 14872 Th 9:00-12:20PM (08) (M. Gardley)

TAPS 1500L. Screenwriting.
Screenwriting is a course designed to familiarize the neophyte screenwriter with the basic principles of writing for the silver-screen. By closely examining produced films, in-depth readings of both good and bad scripts, and through the writing of our own, we will gain an understanding of how screenplays are written, and written well. The course will provide a foundation in the basics of the three-act act structure, dramatic action, character arc, the revision process, and an introduction to the business of screenwriting. By the end of the semester we will have produced and polished a 10 page/minute manuscript. Enrollment limited to 17.
Fall TAPS1500L S01 25382 Th 9:00-12:20 (M. Gardley)

TAPS 1500L. Acting Together on the World Stage: Writing and Political Performance.
Practical research in art for social change, with an emphasis on writing and composition, resulting in a series of solo and group devised performances (or well articulated proposals). Each week, in-session writing and devising exercises, coupled with a discussion of critical readings and case histories, build to projects that may be constructed solo or in small groups. Final projects may take the form of carefully constructed, achievable plans for long-range implementation. Students will be required to attend special workshops, field trips, and performances as scheduled through this semester; this schedule will be available at the first class. Enrollment limited to 12.
Spr TAPS1500L S01 25419 W 3:00-5:50PM (14) (E. Ehn)

TAPS 1520. Seminar in Theatre Arts.
Seminar designed primarily for senior theatre arts concentrators, required during Semester VII. Topics focus on career planning and theatre arts subjects not dealt with in other courses. Enrollment limited to 25 seniors.
Fall TAPS1520 S01 14864 F 1:00-3:20PM (06) (P. McKelvey)

TAPS 1700C. Advanced RPM Playwriting (AFRI 1050A).
Interested students must register for AFRI 1050A.
Spr TAPS1700C S01 25540 Arranged To Be Arranged

TAPS 1700D. Intermediate RPM Playwriting (AFRI 1050D).
Interested students must register for AFRI 1050D.
Spr TAPS1700D S01 25541 Arranged To Be Arranged

TAPS 1700L. RPM Playwriting (AFRI 1050E).
Interested students must register for AFRI 1050E.
Spr TAPS1700L S01 25542 Arranged To Be Arranged

TAPS 1700V. Voices Beneath the Veil (AFRI 1110).
Interested students must register for AFRI 1110.
Fall TAPS1700V S01 16357 Arranged To Be Arranged

TAPS 1720. Queer Relations: Aesthetics and Sexuality (ENGL 1900R).
Interested students must register for ENGL 1900R.
Fall TAPS1720 S01 16002 Arranged To Be Arranged

TAPS 1970. Independent Reading and Research.
Intensive reading and research on selected topics arranged in terms of special needs and interests of the student. A written proposal must be submitted to the instructor and the chair of the theatre arts department before the project can be approved. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.
To be taken by all students accepted into the theatre arts honors program. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

TAPS 2200L. New Theories for a Baroque Stage.
This course re-conceptualizes and re-models seventeenth-century “baroque” theatricality through the lenses of Russian formalist theory, phenomenology, (post-)surrealist literature and objects, Oulipian literature "baroque" theatricality through the lenses of Russian formalist theory, phenomenology, (post-)surrealist literature and objects, Oulipian literature constraints, Deleuzian theory, ontological-hysteric theatre, film, etc.
Fall TAPS2200L S01 16073 W 4:00-6:20PM (17) (S. Golub)

TAPS 2200M. American LGBT and its Global Other: Performance as Method.
This graduate seminar begins by asking how one comes to an understanding of transnational queerness using performance as a method for its inter-referencing practices. This course will use this familiar
conjecture or gridlock as a way to formulate alternative epistemologies or comparabilities about queer performance. Performance is construed broadly, from new media, film, theatre, ethnography, music, art and dance to festivals, protests and parades. Thinkers, writers and artists from various parts of the world, including those in exile or different diasporas would be considered.

Spr  TAPS2200MS01  25778  W  3:00-5:20(14)  (E. Lim)

TAPS 2310. Graduate Playwriting.
With Word as the bodying forth into social reality of original experience, the structures, purposes and ethical risks of writing for performance are examined; experienced through the reading of each other’s works-in-progress, through the reading of essays and in session exercises. Must be taken by playwriting grad students every semester in residence. May be taken multiple times for credit. Undergraduates will be admitted with permission of the instructor. Contact Eric_Ehn@Brown.edu using "Grad PW" in the subject line. Permission will be given once manuscripts have been reviewed. S/N/C
Fall  TAPS2310  S01  14869  Th  3:30-5:50(18)  (E. Ehn)
Spr  TAPS2310  S01  24168  Th  1:00-4:00(10)  (M. Gardley)

TAPS 2320. Writing is Live Seminar.
The Writing is Live Seminar is a specialty course designed to provide students who are interested in writing for performance with a framework for producing their own work (in collaboration or self-produced) for the Writing is Live Festival and future productions, workshops, and readings. The focus of the class is on understanding the development and application of economics, structure, implementation and staging of performances, as well as marketing strategies and tactics for gaining audience awareness and producing for specific spaces. Enrollment limited to 12 MFA playwriting students.
Fall  TAPS2320  S01  16384  Th  1:00-3:20  (M. Gardley)

This course is open only to students of the Consortium. It will include fundamental exercises, textual analysis, rehearsal techniques, character and scene work designed to provide the student actor with a working method based upon the general principles of the Stanislavsky system. A major part of this course will include rehearsal and performance responsibilities.
Fall  TAPS2500  S01  10778  Arranged  (S. Berenson)
Spr  TAPS2500  S01  20213  Arranged  (S. Berenson)

This course is open only to students of the Consortium. It will provide a progression of exercises to free, develop and strengthen the voice as the actor’s instrument. The classes focus on relaxation, physical awareness, breath, freeing the channel for sound developing the resonators, releasing the voice from the body, articulation, self-expression, and the link to text and acting.
Fall  TAPS2510  S01  10779  Arranged  (S. Berenson)

TAPS 2520. Movement: Form, Center and Balance.
This course is open only to students of the Brown University/Trinity Rep MFA Consortium program. It will develop a physical vocabulary through floor work, choreographed combinations and movement improvisation, helping the actor develop an understanding of space, strength of movement, and physical life onstage.
Fall  TAPS2520  S01  10780  Arranged  (S. Berenson)

TAPS 2530. Directing: Composition and Staging.
This course is open only to the MFA Consortium program. It will include information and exercises addressing how to stage a play, balance the space, and transition from scene to scene. It will also focus on the director’s responsibility to the actors, and ways in which to help them create their roles.
Fall  TAPS2530  S01  10781  Arranged  (S. Berenson)

TAPS 2550. Acting: Realism and Modernism.
This is a two-credit course and is open only to students of the MFA Consortium program. This is a scene study class with an emphasis 20th century playwrights. In addition to the works of Anton Chekhov, students may perform scenes from plays by Tennessee Williams, Arthur Miller, Clifford Odets, Wendy Wasserstein, Peter Parnell, Paula Vogel, Edward Albee and Harold Pinter.
Spr  TAPS2550  S01  20214  Arranged  (S. Berenson)

TAPS 2560. Voice: Phonetics.
This course is open only to students of the Brown University/Trinity Rep MFA Consortium program. The course will teach articulation, self expression, and link to text and acting. Additional work is devoted to speech and diction, with an introduction to the International Phonetic Alphabet (IPA) and a progression through Standard American Speech to rudimentary dialect work.
Spr  TAPS2560  S01  20215  Arranged  (S. Berenson)

TAPS 2570. Movement: Physical Life and Language.
This course is open only to students of the Brown University/Trinity Rep MFA Consortium program. It will help the student incorporate text and physicality in order to create the inner and outer life of a character. Special attention will be given to the student’s repetitive physical patterns, and new ways will be explored in examining the internal and external life of a character.
Spr  TAPS2570  S01  20216  Arranged  (S. Berenson)

TAPS 2580. Directing: Collaboration with the Playwright.
This course is open only to students of the MFA Consortium program. It will focus on issues of collaboration between the playwright and the director. Each director will be assigned to work on a new script in cooperation with a playwright. A workshop production will be staged and open to the public.
Spr  TAPS2580  S01  20217  Arranged  (S. Berenson)

TAPS 2600. Acting: Shakespeare and Moliere.
This is a two-credit course and is open only to students of the MFA Consortium program. This is a scene study class with an emphasis on the problems of style and language in the plays of Moliere and Shakespeare.
Fall  TAPS2600  S01  10782  Arranged  (S. Berenson)

TAPS 2610. Voice: Verse Text.
This course is open only to students of the MFA Consortium program. It will include advanced vocal work and an introduction to singing in performance. Rhythm and rhyme will be explored in relation to lyrics and verse.
Fall  TAPS2610  S01  10783  Arranged  (S. Berenson)

This course is open only to students of the MFA Consortium program. This class will provide a step-by-step understanding and application of The Alexander Technique, which helps to develop body alignment, range of motion, and inner stillness.
Fall  TAPS2620  S01  10784  Arranged  (S. Berenson)

TAPS 2630. Directing: The Director’s Vision.
This course is open only to students of the MFA Consortium program. Under close supervision, students will direct projects at the Consortium. Each student will be responsible for the creation of either a new or an established script. Students will meet regularly with the faculty to discuss process and progress.
Fall  TAPS2630  S01  10785  Arranged  (S. Berenson)

TAPS 2650. Acting: Problems of Style.
This is a two-credit course and is open only to students of the MFA Consortium program. This is a scene study class with an emphasis on the problems of style and language in non-realistic plays. In addition to advanced work on Shakespeare’s texts, the course will explore other playwrights, possibly including Ibsen, Strindberg, Shaw and Beckett.
Spr  TAPS2650  S01  20218  Arranged  (S. Berenson)

This course is open only to students of the MFA Consortium program. Students will work on music, both as soloists and in small groups. The course will address issues of sight reading, breath support, phrasing, and how to stage a song for performance.
Spr  TAPS2660  S01  20219  Arranged  (S. Berenson)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
TAPS 2770. Directing: Practical Application
This course is open only to students of the MFA Consortium program. It will offer basic instruction in many physical areas including, but not limited to stage combat, juggling, mime, tumbling and clowning. May be taken multiple times for credit. Must be taken both semesters in the second and third year.

Spr TAPS2770 S01 20220 Arranged (S. Berenson)

TAPS 2870. Comprehensive Examination Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.
Fall TAPS2870 S01 14091 Arranged 'To Be Arranged'
Spr TAPS2870 S01 23602 Arranged 'To Be Arranged'

TAPS 2795. Thesis Workshop.
For graduate playwrights, in their second and third years, rehearsing and revising their thesis projects. May be taken multiple times for credit. Must be taken both semesters in the second and third year.

TAPS 2980. Graduate Level Independent Reading and Research.
A program of intensive reading and research on selected topics arranged in terms of special needs and interests of the student. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Fall TAPS2980 S01 14092 Arranged 'To Be Arranged'
Spr TAPS2980 S01 23603 Arranged 'To Be Arranged'

University Courses
UNIV 0400. Beyond Narnia: The Literature of C. S. Lewis.
C. S. Lewis was one of the most widely read authors of the 20th Century, yet much of his philosophical, theological and political theories are unfamiliar. His fiction and philosophical writings will be explored to better understand his perspective on modern humanity, the relationship of man to family, the community and the state. C. S. Lewis had a very clear philosophy on the importance of the individual and how he relates to the larger social structures. Morality and the role of individuals as they interface with others around them and their responsibility for working with society both at community level and at the macro-state level will be explored.

Fall UNIV0400 S01 16320 W 3:00-5:20(17) (T. Flanigan)
Fall UNIV0400 S02 16321 F 3:00-5:20(05) (T. Flanigan)

UNIV 1000. Cognitive Neuroscience of Meditation.
We will examine the various technological innovations that drove this research, EEG, PET/MI, and MEG and the central scientific and philosophical challenges presented by it, including: the epistemological status of correlating subjective measures with brain function; the challenges of carrying out and analyzing data from a longitudinal meditation training study; the nature of neuroplasticity; how the brain’s default network is affected by meditation; the neural oscillatory correlates of attentional processes in meditation; how the James-Lang hypothesis is affected by these cognitive neuroscience studies. Instructor permission required.
Spr UNIV1000 S01 25248 M 3:00-5:20(13) (C. Kerr)

UNIV 1520. The Shaping of World Views.
This course will focus on the history and development of neuroscientific studies of meditation. We will examine the various technological innovations that drove this research, EEG, PET/MI, and MEG and the central scientific and philosophical challenges presented by it, including: the epistemological status of correlating subjective measures with brain function; the challenges of carrying out and analyzing data from a longitudinal meditation training study; the nature of neuroplasticity; how the brain’s default network is affected by meditation; the neural oscillatory correlates of attentional processes in meditation; how the James-Lang hypothesis is affected by these cognitive neuroscience studies. Instructor permission required.
Spr UNIV1520 S01 25248 M 3:00-5:20(13) (C. Kerr)
synchronically and diachronically and surveys various explanations for such diversity. Enrollment limited to 30. Conducted in English. WRIT
Spr UNIV1520 S01 24930 MWF 2:00-5:50(07)
(O. Almeida)

UNIV 1700. Transformation of the Research University.
This seminar will focus on recent transformations of the academic, instructional and administrative character of the elite American research universities. Emphasis will be on selected pressure points (such as research funding, diversity, technology, market influence) that drive change and shape the future.
Spr UNIV1700 S01 24436 M 3:00-5:50(13)
(W. Simmons)

Urban Studies

URBN 0210. The City: An Introduction to Urban Studies.
What is special about urban life? How and why do cities differ? How has the way we think about the city changed over time? Can we solve urban problems? This course offers an interdisciplinary approach to the history, physical design, spatial form, economy, government, cultures, and social life of cities in the U.S. and beyond. DVPS LILE WRIT
Fall URBN0210 S01 15485 TTh 2:30-3:50(11)
(J. Pacewicz)

An introduction to Urban Studies and to the city of Providence, this first year seminar explores from an interdisciplinary perspective how cities are broadly conceptualized and studied. Students then focus on urban dwelling, using Providence as a first-hand case study. We comprehensively examine urban life and change, attending to urban history, the diverse configurations of people and place, social and environmental issues, and urban sustainability. In a lively and varied approach to local learning, course activities include lectures, discussion, reading and writing assignments, films and other media, guest speakers, and excursions to local sites. Enrollment limited to 20 first year students. FYS
Fall URBN0230 S01 16548 W 3:00-5:50(17)
(R. Carter)

URBN 1000. Fieldwork in the Urban Community.
A fieldwork course with limited enrollment. Each student undertakes a fieldwork project in close collaboration with a government agency, a nonprofit association, or a planning firm. In weekly seminar meetings, the class examines a series of urban issues and discusses fieldwork methodology. Students also schedule regular appointments with the instructor. Restricted to Urban Studies concentrators. Enrollment limited to 8 during registration. Instructor will select additional 2 students after first day of class. Instructor permission required. WRIT
Spr URBN1000 S01 24766 TTh 1:00-2:20(10)
(J. Pacewicz)

This lecture and discussion course will provide students with an introduction to the history, politics, and culture of United States cities and suburbs from the end of World War II to the close of the twentieth century. Readings are drawn from recent work in the political, social, and cultural history of U.S. cities as well as primary sources rooted in the period under study. DVPS WRIT LILE
Spr URBN1200 S01 24765 MWF 11:00-11:50(04)
(S. Zipp)

URBN 1220. Sustainable Urbanism.
What does sustainability mean in the context of degraded urban areas? Can sustainable development be achieved in cities? This course offers a comprehensive, yet critical understanding of the competing theories and practices of sustainable development as applied to cities. Topics include sprawl, energy-efficient transportation, brownfields, community land trusts, green architecture, renewable energy, air and water pollution, and waste recycling. A weekly studio and practical group projects are planned. Fall URBN1220 S01 16549 MWF 11:00-11:50(04)
(Y. Sungu-Eryilmaz)

URBN 1230. Crime and the City.
This course surveys aspects of crime and policing in the contemporary urban environment. Topics will include community policing strategies from Skid Row in Los Angeles to Times Square in New York City, low-level criminality, neighborhood change, transgression, and the ways in which urban-based subcultures—skateboarders, graffiti writers, gutter punks, gang members and homeless youth—occupy public space. Fall URBN1230 S01 16566 MWF 10:00-10:50(03)
(S. Bloch)

URBN 1870A. American Culture and the City.
This course explores American culture and the way it shapes our cities. Topics include the American dream, race, immigration, urban dilemmas and the seduction of suburbia. We read a book (readings include Alexis de Tocqueville, Richard Wright, Tom Wolfe, and Margaret Atwood); and screen a film (movies include Wall Street, Traffic, Crash, Malcolm X) each week. Prerequisite: POLS 0220. Priority given to Urban Studies concentrators. WRIT
Fall URBN1870A S01 15616 T 12:00-2:20(10)
(J. Morone)

URBN 1870D. Downtown Development.
This seminar examines the development and revitalization of the urban core in the United States with a focus on urban planning. Providence is used as a laboratory to explore development from the perspective of the planner, the developer, and city residents. Important concepts are illustrated through field trips, public meetings, and guest speakers. Enrollment limited to 15 during registration. Instructor will select additional 5 students after first day of class. Instructor permission required. Spr URBN1870D S01 24768 Th 4:30-6:20(17)
(O. Almeida)

URBN 1870M. Urban Regimes in the American Republic.
A probing of topical issues in both their theoretical antecedents and their contemporary manifestations. Examines the intellectual debates and the scholarly controversies surrounding issues of power in the city, urban redevelopment policy, urban poverty, urban educational policy, and race in the city. Enrollment limited to 20. LILE WRIT
Fall URBN1870M S01 15551 M 3:00-5:20(15)
(M. Orr)

URBN 1870N. The Cultural and Social Life of the Built Environment.
This seminar investigates the relationship between people and place. It considers the ways that people create and experience the man-made landscape, how they understand place through various aesthetic forms, and political conflict over space and place. We look mostly at the history and contemporary development of cities and suburbs in the United States. Students will prepare a final project on a specific aspect of the built environment; they will be encouraged to focus their research on Providence or another local community. Enrollment limited to 20. Priority given to Urban Studies concentrators and seniors; instructor permission required otherwise. LILE WRIT
Fall URBN1870N S01 15552 W 3:00-5:20(17)
(S. Zipp)

URBN 1970. Independent Reading and Research.
A specific program of intensive reading and research arranged in terms of the special needs and interests of the student. Open primarily to concentrators, but others may be admitted by written permission. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

This seminar introduces students to independent research and writing skills necessary for successful and timely completion of the honors thesis. Course work includes presentation of one’s own thesis drafts and peer review of classmates’ work. All students who submit an approved honors thesis proposal shall enroll in URBN 1981 for the spring semester of their thesis research and writing. Concentrators may also enroll in the course during semesters 6 or 7 in preparation for the honors thesis, but must present a written proposal in place of chapters. Enrollment limited to 20 juniors and seniors in Urban Studies. S/NC
Spr URBN1981 S01 25211 TTh 6:00-8:00PM(12)
(J. Henderson)

URBN XLIST. Courses of interest to Concentrators in Urban Studies. Fall 2013
The following courses offered by other departments will fulfill Core Discipline and Seminar Course requirements of the Urban Studies concentration. (Please refer to the Urban Studies website to determine which requirements are fulfilled by these courses.)

Please check with the sponsoring department for times and locations.

American Studies
AMST 1611A Making America: Twentieth-Century U.S. Immigrant/Ethnic Literature AMST 16120 Cities of Sound: Place and History in American Pop Music Archaeology and the Ancient World ARCH 1900 The Archaeology of College Hill Economics

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
portfolio. A student may petition for a waiver of this requirement upon submission of a portfolio, either VISA 0100 or 0110 is a prerequisite to any advanced studio course work at Brown or the Rhode Island School of Design. Under certain circumstances a student may petition for a waiver of this requirement upon submission of a portfolio.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
experimental mixed-media projects. Work will be in both black and white and color. Prerequisite: VISA 0100 or VISA 0110. This course restricted to 17 students. Students who are not admitted during pre-registration or were unable to pre-register should attend the first class.
Spr VISA1210G S01 25072 MW 9:00-11:50(02) (L. Tarentino)

VISA 1240. Art of the Book.
Will examine the book, structurally and conceptually, as artist's medium. Students will learn the materials, tools and techniques of making books, as they explore the expressive and narrative possibilities of the book form. Topics and projects may include digital imaging, combining text and image, traditional binding or digital publishing. Pre-requisite: VISA 0100 or 0110 or by permission of instructor. This course restricted to 15 VISA Concentrators, and others by permission of the instructor. 10 seats available during pre-registration. Students who are not admitted during pre-registration or were unable to pre-register should attend the first meeting.
Fall VISA1240 S01 15835 TTh 1:00-4:50(10) (S. Butler)

VISA 1250. Art of the Book.
Will examine the artist's book from the printer/publisher perspective. Students will learn the basics of book design, traditional typographic and the letterpress printing, as they consider the book and its related printed matter in the service of content. The course will be run as a fine press publishing house in which students will produce individual and group projects, including bookplates, broadsides, and books. Studio work will be augmented with field trips, artist visits, and guided exploration of the special collections at the John Hay Library. Prerequisite: VISA 0100 or 0110, and VISA 1240. This course restricted to 15 students. 5 seats will be available during pre-registration. Students who are not admitted during pre-registration or were unable to pre-register should attend the first meeting.
Spr VISA1250 S01 25078 TTh 1:00-4:50(10) "To Be Arranged"

VISA 1310. Painting I.
Designed to accommodate a variety of interests and aptitudes. Provides basic instruction in media and painting procedure, but emphasizes the development of the image as a visual statement. Covers the building of stretchers, basic color principles, and painting media and procedures. Slides and related books and articles are discussed. Individual criticism is given; participation in regularly scheduled group discussions is required. Pre-requisite: VISA 0100 or 0110. This course restricted to 18 VISA Concentrators, and others by permission of the instructor. 10 seats will be available during pre-registration. Students who are not admitted during pre-registration or were unable to pre-register should attend the first class. Not all restrictions apply to students registering for the Summer term through the Office of Continuing Education.
Fall VISA1310 S01 15769 TTh 9:00-12:50(08) (L. Bostrom)
Spr VISA1310 S01 25082 TTh 1:00-4:50(10) (L. Bostrom)

VISA 1320. Painting II.
The advanced class covers information beyond the introductory level. Individual criticism is emphasized. Students are required to complete all structured assignments and to participate in regularly scheduled discussions. Prerequisite: VISA 0100 or VISA 0110, and VISA 1310. This course will be restricted to 18 VISA Concentrators and others by permission of the instructor. 10 seats will be available during pre-registration. Students who are not admitted during pre-registration or were unable to pre-register are advised to attend the first meeting of the class.
Fall VISA1320 S01 15770 MW 1:00-4:50(06) (L. Tarentino)
Spr VISA1320 S01 25081 MW 1:00-4:50(06) (W. Edwards)

VISA 1410. Sculpture: Material Investigations.
This studio course addresses basic sculptural methods, i.e., additive and subtractive modeling, casting, and assemblage, and common sculptural materials, i.e., wood, metal, plaster, and found objects. Demonstrations and workshops on a number of sculptural tools and materials form the foundation for this studio. Students develop sculptural solutions to a given set of problems. Contemporary issues raised in critiques and readings. Extensive outside work is expected. Students are invited to take this course more than once, as the problems can be customized for those with more experience. Prerequisite: VISA 0100 or 0110 or VISA 0130. 10 seats will be available during pre-registration. Students who are not admitted during pre-registration or were unable to pre-register should attend the first meeting of the class.
Fall VISA1410 S01 15771 MW 1:00-4:50(06) (P. Myoda)

VISA 1420. Sculpture: Conceptual Propositions.
This studio course explores a number of contemporary sculptural theories and practices. Students develop sculptural solutions to a given set of problems, using materials and methods of their choosing. Contemporary issues raised in critiques and readings. Completion of VISA 1410 or comparable experience in some type of three-dimensional practice is suggested, but not required. Demonstrations and workshops on a number of sculptural tools and materials will be given as needed. Students are invited to take this course more than once, as the problems can be customized for those with more experience. Extensive outside work expected. Prerequisite: VISA 0100 or VISA 0110 or VISA 0130. 10 seats will be available during pre-registration. Students who are not admitted during pre-registration or were unable to pre-register should attend the first meeting of the class.
Spr VISA1420 S01 25084 MW 1:00-4:50(06) (P. Myoda)

VISA 1510. Photography I.
Introductory course in black and white photography, emphasizing core photographic concepts, possibilities, history, genres, technical information, and techniques. A variety of lens-less and lens based exercises will be introduced blurring the boundaries between the "traditional" sense of photography (as means of mechanical reproduction) and other studio based media such as drawing or painting. Large and medium format cameras will be introduced, but students should have their own 35 mm film camera. Pre-requisite: VISA 0100 or 0110. This course restricted to 15 VISA Concentrators, and others by permission of the instructor. 10 seats will be available during pre-registration. Students who are not admitted during pre-registration or were unable to pre-register should attend the first meeting.
Spr VISA1510 S01 25085 MW 9:00-11:50(02) (T. Ganz)

Will explore digital image processing in color and B&W. Using digital cameras, computer editing software, digital printing, as well as critical analysis of computer digitized images will be covered. The execution of visual problems and in-class presentations as well as theoretical readings allow students to examine the content and function of digital imaging technology and production in modern photography. A digital SLR type camera is required. Prerequisite: VISA 0100, VISA 0110, or VISA 0120. Prerequisite: VISA 0100, VISA 0110, or VISA 0120. This course restricted to 15 VISA Concentrators, and others by permission of the instructor. 10 seats will be available during pre-registration. Students who are not admitted during pre-registration should attend the first meeting. May be repeated once for credit.
Fall VISA1520 S01 15837 MW 1:00-3:50(06) (A. Fillmore)
Spr VISA1520 S01 25086 MW 1:00-3:50(06) (T. Ganz)

This semester will focus on the theme of Physical Computing. This studio course is an intensive introduction to electronic devices for use in artmaking and includes hands-on experience working with sensors, motors, switches, gears, lights, simple circuits, microprocessors and hardware-store devices to create kinetic and interactive works of art. Demonstrations, lectures and critical discussion of work will be given to develop concepts and technical skills. Prerequisite: VISA 0120. This course restricted to 15 students. 10 seats will be available during pre-registration. Students who are not admitted during pre-registration should attend the first meeting. May be repeated once for credit.
Fall VISA1720 S01 16151 MW 1:00-4:50(10) (E. Osborn)

VISA 1800C. Honors Seminar.
Required for students who have been accepted as candidates for honors. The seminar meets weekly to discuss readings and for group critiques. Includes group trips to New York and Boston, to visit galleries, museums, and artists' studios. Instructor permission required. WRIT
Fall VISA1800C S01 16272 MW 10:00-11:50(03) (P. Myoda)
VISA 1800L. Hybrid Art: Performance, Object, and Everyday Life.
How do performance, object, and everyday life overlap and mutually define each other? We will design and build situations/objects asking questions about the relational aspects of our practices. What is the significance of "endurance" or "duration" in relationship to artwork in various media? How does art impact the social spaces (public and private) that we inhabit or that define us. These are only some of the questions that will provoke object-based and time-based experiments in hybrid art across the semester. Enrollment limited to 14. Instructor permission required.

Spr  VISA1800L  S01  25089  MW  1:00-4:50(06)  (R. Fishman)

VISA 1800N. Video Production.
Spr  VISA1800N  S01  25088  TTh  1:00-4:50(10)  (E. Osborn)

Unlike other creative professionals, visual artists don't have agents or managers—you have to do it all yourself. This class will cover business basics including tracking inventory and preparing invoices; taking legal precautions like registering a copyright and drafting consignment forms; using promotional tools; and making career decisions such as choosing the right venue to show your work. Grants, residencies, do-it-yourself strategies and relationships with galleries and nonprofit institutions will be discussed in depth. Discussion and assignments will emphasize community and the practical, hands-on skills necessary to thrive as a visual artist. Prerequisite: VISA 0100 or 0110, in addition to two semesters of VISA studio courses. Enrollment limited to 20 juniors and seniors in Visual Art. WRIT

Spr  VISA1800P  S01  25087  F  1:00-4:50(06)  (H. Bhandari)

VISA 1800T. Communicating Science.
Taught by RISD and Brown Professors with the Science Ctr and the Creative Mind Initiative, this courses explores the pedagogy of using visual media to convey scientific concepts. The goal is to assess the quality of existing material and design new material that fill an educational need and makes science engaging and accessible. Lectures, labs, screenings, discussions, critiques and guest speakers. Student teams collaborate on a series of short exercises leading to the creation of final videos/animations that explain scientific concepts. Projects will be evaluated on accuracy, clarity of explanation, educational value, engagement with the viewer and creativity. Enrollment limited to 12.

Fall  VISA1800T  S01  16410  W  1:00-6:00(06)  (J. Stein)

Work on an approved project leading to the presentation of a portfolio, under supervision of an individual member of the staff. Project proposals must be filed with the department no later than the first week of the semester. Section numbers vary by instructor.

Section numbers vary by instructor.

VISA 2450. Exchange Scholar Program.

VISA XLIST. Courses of Interest to Visual Arts Concentrators.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Africana Studies

The concentration in Africana Studies critically examines the artistic, historical, literary, and theoretical expressions of the peoples and cultures of Africa and the African Diaspora. Central to the work of students and faculty in the concentration is the close collaboration of artists, scholars, and writers in examining relationships between academic and artistic knowledge about the world and human experience. Concentrators work closely with faculty members in developing new knowledge about the world and human existence through the critical and comprehensive study of the peoples and cultures of Africa and the African Diaspora. Concentrators are encouraged to study abroad in Africa, the Caribbean, and/or Latin America and to acquire language competency in a language other than English spoken in Africa and the diaspora.

In order to develop requisite competency, Africana Studies concentrators must complete eight (8) semester-long courses offered by or cross-listed with the Department. Concentrators may also petition the Department to accept other appropriate courses.

Of these courses, the following two Africana Studies courses are required:
- AFRI 0090 An Introduction to Africana Studies (Fall ONLY)
- AFRI 1360 Africana Studies: Knowledge, Texts and Methodology–Senior Capstone Seminar (Spring ONLY)

The Department strongly encourages foreign study in Africa, the Caribbean, and Latin America, during the student’s junior year. While the department actively supports programs in South Africa, Tanzania, Ethiopia, Brazil, and the English-Speaking Caribbean, concentrators must complete at least six (6) courses in residence at Brown. The Department also encourages the acquisition of language competencies, in addition to English, which are spoken in Africa and the Diaspora. Since no continental African language is currently offered at Brown, concentrators who study abroad and acquire certified competency in any African language are welcome to petition the department for competency credit.

Honors

Africana Studies’ concentrators with outstanding records may be admitted to the department’s Honors Program. Prior to the end of the concentrator’s junior year and while working in consultation with a faculty advisor, the student must prepare a work plan. This plan, not to exceed three (3) typewritten pages, must be approved and signed by the faculty advisor who is to direct the Honor’s thesis. At the onset of the senior year, the Honor’s candidate is expected to have become familiar with the secondary works in the field. Secondary readings should be extensive and be incorporated into the work plan. The Honor’s candidate is also expected to complete a research paper of distinguished quality while enrolled in a 1000-level seminar. Participation in the Africana Studies senior-level capstone seminar, AFRI 1360, is required.

For students completing graduation requirements by the end of Semester I (Fall), projects must be submitted by December 1st. For students completing graduation requirements by Semester II (Spring), the project should be submitted by April 20th. By the end of the fourth (4th) week of the concentrator’s seventh (7th) semester, a written proposal approved by the advisor and a secondary reader must be submitted to the concentration advisor. A progress report, prepared and signed by the student and countersigned by the faculty advisor must be presented to the concentration advisor.

American Studies

The concentration in American Studies seeks to understand American society and cultures as emerging from historical and contemporary processes at work in local, national, and global contexts. Concentrators study four broad themes: social structure and the practices of identity, space and place, production and consumption of culture, and science, technology, and everyday life. The concentration is predicated on the ideal of scholarly engagement with the public, so students take junior seminars that engage some aspect of the public humanities such as public policy, memorialization, community studies or civic engagement. Study abroad is supported and encouraged.

A concentrator in American Studies will be able to:
- Analyze texts, contexts, and data from multiple disciplinary and historical perspectives
- Synthesize research as verbal, visual and/or digital presentations
- Explore the theory and/or practice of the engagement of scholarship with a broader public
- Understand how American society and cultures have been and are being shaped by global flows of people, goods and ideas
- Experiment with new media as critical tools for scholarship

Concentrators have gone on to a vast variety of careers, including law, public humanities, politics, public service, academics, business, creative arts, and medicine.

Each concentrator will take 10 courses including a Junior Seminar as one of four seminars. Courses are organized by the four themes and four approaches that define America Studies at Brown. Each concentrator will use this framework to create an individual focus in consultation with the Concentration Advisor.

The focus is the flexible core of the concentration. Here each student builds a coherent and dynamic interdisciplinary structure of related courses that develops his or her compelling interest in some aspect of American experience. The four themes and four approaches provide the foundation on which each student builds a unique concentration in American Studies.

All seniors in the class of 2013 forward will be required to do a capstone electronic portfolio. Some concentrators may elect to do an Honors Thesis. Study abroad is supported and encouraged.

Four Themes and Four Approaches

American Studies at Brown is concerned with four broad themes:

- **Social Structures and the Practices of Identity:** How do communities and individuals come to define themselves, and how do others define them, in terms of, among other categories, nation, region, class, race, ethnicity, gender, sex, religion, age and sexuality? How do organizations and institutions function socially and culturally? What are the roles of social movements, economic structures, politics and government?
- **Space and Place:** How is space organized, and how do people make place? This includes the study of natural and built environments; local, regional, national and transnational communities; and international and inter-regional flows of people, goods, and ideas.
- **Production and Consumption of Culture:** How do people represent their experiences and ideas as culture? How is culture transmitted, appropriated and consumed? What is the role of artists and the expressive arts, including literature, visual arts and performance?
- **Science, Technology, and Everyday Life:** How does work and the deployment of science and technology shape American culture? How do everyday social practices of work, leisure and consumption provide agency for people?

How we study

American Studies at Brown emphasizes four intersecting approaches that are critical tools for understanding these themes:

- **Cultural and Social Analysis:** Reading and analyzing different kinds of texts, including literary, visual, aural, oral, material objects and landscapes. Examining ethnic and racial groups, institutions, organizations and social movements.
- **Global/International Contextualization:** Comprehending the United States as a society and culture that has been shaped by the historical and contemporary flows of people, goods and ideas from around the world and in turn, learning about the various ways in which America has shaped the world.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
• **New Media Understandings:** Understanding the creation of new forms of discourse, new ways of knowing and new modes of social organization made possible by succeeding media revolutions. Using new media as a critical tool for scholarship.

• **Publicly Engaged Scholarship:** Connecting the theory and the practice of publicly-engaged research, understanding and presentation, from community-based scholarship to ethnography, oral history, and museum exhibits. Civic engagement might include structured and reflective participation in a local community or communities or the application of general theoretical knowledge to understanding social issues.

### Anthropology

Anthropology is the study of human beings from all times and all places, offering holistic, comparative, international, and humanitarian perspective. In studying and interpreting the vast range of similarities and differences in human societies and cultures, anthropologists also seek to understand how people themselves make sense of the world in which they live. The Department of Anthropology at Brown is a vibrant, award-winning group of scholars working primarily in the subfields of cultural anthropology, archaeology, and anthropological linguistics. The concentration provides students with a broad introduction to the discipline and includes the major subdisciplines of the field: sociocultural anthropology, archaeology, anthropological linguistics, and biological anthropology.

Concentrators should select their courses in anthropology in consultation with the concentration advisor. At least nine courses in anthropology are required, including:

Select one of the following sociocultural/linguistic anthropology classes: 1
- ANTH 0100 Introduction to Cultural Anthropology
- ANTH 0200 Culture and Human Behavior
- ANTH 0300 Culture and Health
- ANTH 0800 Sound and Symbols: Introduction to Linguistic Anthropology

Select one of the following biological anthropology/archaeology classes: 1
- ANTH 0310 Human Evolution
- ANTH 0500 Past Forward: Discovering Anthropological Archaeology

Select one of the following, normally taken in junior or sophomore year: 1
- ANTH 1900 History of Anthropology: Anthropological Theories
- ANTH 1940 Ethnographic Research Methods
- ANTH 1950 Archaeological Field Work
- ANTH 1621 Material Culture Practicum

A course from the ANTH 1910 Series (Normally taken in senior year) 1
- Five additional Anthropology courses.

Total Credits 9

1 Of the required courses, at least five courses counted toward the concentration must be offered at the 1000-level or above and one course must be on a particular world area.

### Honors

Candidates for honors should apply to the concentration advisor by the end of his or her 6th semester, but no later than the 4th week of the 7th semester. An application consists of a brief statement addressing the focus of a proposed thesis and the names and signatures of two faculty members from the Department of Anthropology who have agreed to serve as the student’s honors committee—one as honors thesis advisor, the other as a reader. Candidates for honors are required to:

1. Fulfill the standard concentration requirements.
2. Take two additional courses, usually, which may be used for thesis preparation.
3. Have a majority of A’s in the concentration.
4. Submit an approved honors thesis.

### Field Work

Concentrators interested in archaeology are urged to obtain training in field archaeology by participating in Brown-sponsored field research, or by participating in an archaeological field school elsewhere.

### Applied Mathematics

The concentration in Applied Mathematics allows students to investigate the mathematics of problems arising in the physical, life and social sciences as well as in engineering. The basic mathematical skills of Applied Mathematics come from a variety of sources, which depend on the problems of interest: the theory of ordinary and partial differential equations, matrix theory, statistical sciences, probability and decision theory, risk and insurance analysis, among others. Applied Mathematics appeals to people with a variety of different interests, ranging from those with a desire to obtain a good quantitative background for use in some future career, to those who are interested in the basic techniques and approaches in themselves. The standard Applied Mathematics concentration leads to either the A.B. or Sc.B. degree. Students may also choose to pursue a joint program with biology, computer science or economics. The undergraduate concentration guide is available here (http://www.dam.brown.edu/undergraduate/documents/UndergraduateGuide_051.pdf).

Both the A.B. and Sc.B. concentrations in Applied Mathematics require certain basic courses to be taken, but beyond this there is a great deal of flexibility as to which areas of application are pursued. Students are encouraged to take courses in applied mathematics, mathematics and one or more of the application areas in the natural sciences, social sciences or engineering. Whichever areas are chosen should be studied in some depth.

### Standard program for the A.B. degree.

**Prerequisites**

- MATH 0090 Introductory Calculus, Part I
- MATH 0100 Introductory Calculus, Part II
- Or their equivalent

**Program**

Ten additional semester courses approved by the Division of Applied Mathematics. These classes must include: 1

- MATH 0180 Intermediate Calculus 1
- MATH 0520 Linear Algebra 2
- APMA 0350 Methods of Applied Mathematics I, II & APMA 0360 Methods of Applied Mathematics I, II 3

Select one course on programming from the following: 4

- APMA 0090 Introduction to Mathematical Modeling
- APMA 0160 Introduction to Scientific Computing
- CSCI 0040 Introduction to Scientific Computing and Problem Solving
- CSCI 0150 Introduction to Object-Oriented Programming and Computer Science
- CSCI 0170 Computer Science: An Integrated Introduction

Five additional courses, of which four should be chosen from the 1000-level courses taught by the Division of Applied Mathematics.

Total Credits 10

1 Substitution of alternate courses for the specific requirements is subject to approval by the division.
2 Concentrators are urged to consider MATH 0540 as an alternative to MATH 0520.
3 APMA 0330, APMA 0340 will sometimes be accepted as substitutes for APMA 0350, APMA 0360.
4 Concentrators are urged to complete their introductory programming course before the end of their sophomore year.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Standard program for the Sc.B. degree.

Program

Eighteen approved semester courses in mathematics, applied mathematics, engineering, the natural or social sciences. These classes must include: ¹

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MATH 0090 Introductory Calculus</td>
<td>2</td>
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<tr>
<td>&amp; MATH 0100 Introductory Calculus</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0180 Intermediate Calculus</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0520 Linear Algebra</td>
<td>2</td>
</tr>
<tr>
<td>APMA 0350 Methods of Applied Mathematics I</td>
<td>1</td>
</tr>
<tr>
<td>&amp; APMA 0360 Methods of Applied Mathematics II</td>
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</tbody>
</table>

Select one senior seminar from the APMA 1930 or APMA 1940 series, or an approved equivalent.

Select one course on programming from the following: ⁴

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>APMA 0090 Introduction to Mathematical Modeling</td>
<td>1</td>
</tr>
<tr>
<td>APMA 0160 Introduction to Scientific Computing</td>
<td>1</td>
</tr>
<tr>
<td>CSCI 0040 Introduction to Scientific Computing and Problem Solving</td>
<td>1</td>
</tr>
<tr>
<td>CSCI 0150 Introduction to Object-Oriented Programming and Computer Science</td>
<td>1</td>
</tr>
<tr>
<td>CSCI 0170 Computer Science: An Integrated Introduction</td>
<td>1</td>
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</table>

Ten additional courses, of which six should be chosen from the 1000-level or higher level courses taught by the Division of Applied Mathematics.

Total Credits | 18

¹ Substitution of alternate courses for the specific requirements is subject to approval by the division.
² Concentrators are urged to consider MATH 0540 as an alternative to MATH 0520.
³ APMA 0330, APMA 0340 will sometimes be accepted as substitutes for APMA 0350, APMA 0360.
⁴ Concentrators are urged to complete their introductory programming course before the end of their sophomore year.

Applied Mathematics-Biology

The Applied Math - Biology concentration recognizes that mathematics is essential to address many modern biological problems in the post genomic era. Specifically, high throughput technologies have rendered vast new biological data sets that require novel analytical skills for the most basic analyses. These technologies are spawning a new "data-driven" paradigm in the biological sciences and the fields of bioinformatics and systems biology. The foundations of these new fields are inherently mathematical, with a focus on probability, statistical inference, and systems dynamics. These mathematical methods apply very broadly in many biological fields including some like population growth, spread of disease, that predate the genomics revolution. Nevertheless, the application of these methods in areas of biology from molecular genetics to evolutionary biology has grown very rapidly in with the availability of vast amounts of genomic sequence data. Required coursework in this program aims at ensuring expertise in mathematical and statistical sciences, and their application in biology. The students will focus in particular areas of biology. The program culminates in a senior capstone experience that pairs student and faculty in creative research collaborations.

Standard program for the Sc.B. degree

Required coursework in this program aims at ensuring expertise in mathematical and statistical sciences, and their application in biology. The students will focus in particular areas of biology. The program culminates in a senior capstone experience that pairs student and faculty in creative research collaborations. Applied Math – Biology concentrators are prepared for careers in medicine, public health, industry and academic research.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
BIOL 0460  Evolutionary Biology
BIOL 1410  Evolutionary Genetics
BIOL 1420  Experimental Design in Ecology
BIOL 1430  The Computational Theory of Molecular Evolution

Other courses with permission.

Genetics
BIOL 0470  Genetics
BIOL 1410  Evolutionary Genetics

Total Credits 17

1 It is recommended that some concentrators take organic chemistry or biochemistry.

**Applied Mathematics-Computer Science**

The Sc.B. concentration in Applied Math-Computer Science provides a foundation of basic concepts and methodology of mathematical analysis and computation and prepares students for advanced work in computer science, applied mathematics, and scientific computation. Concentrators must complete courses in mathematics, applied math, computer science, and an approved English writing course. While the concentration in Applied Math-Computer Science allows students to develop the use of quantitative methods in thinking about and solving problems, knowledge that is valuable in all walks of life, students who have completed the concentration have pursued graduate study, computer consulting and information industries, and scientific and statistical analysis careers in industry or government. This degree offers a standard track and a professional track.

**Requirements for the Standard Track of the Sc.B. degree.**

**Prerequisites - two semesters of Calculus, for example**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>MATH 0090</td>
<td>Introductory Calculus, Part I</td>
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<tr>
<td>MATH 0100</td>
<td>Introductory Calculus, Part II</td>
<td>1</td>
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<tr>
<td>MATH 0170</td>
<td>Advanced Placement Calculus</td>
<td>1</td>
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**Concentration Requirements (17 courses)**

**Core-Math:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MATH 0180</td>
<td>Intermediate Calculus</td>
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<tr>
<td>or MATH 0350</td>
<td>Honors Calculus</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0520</td>
<td>Linear Algebra</td>
<td>1</td>
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<tr>
<td>or MATH 0540</td>
<td>Honors Linear Algebra</td>
<td>1</td>
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<tr>
<td>or CSCI 0530</td>
<td>Directions: The Matrix in Computer Science</td>
<td>1</td>
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</table>

**Core-Applied Mathematics:**

<table>
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<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>APMA 0350</td>
<td>Methods of Applied Mathematics I, II</td>
<td>1</td>
</tr>
<tr>
<td>APMA 0360</td>
<td>Methods of Applied Mathematics I, II</td>
<td>1</td>
</tr>
<tr>
<td>APMA 1170</td>
<td>Introduction to Computational Linear Algebra</td>
<td>1</td>
</tr>
<tr>
<td>or APMA 1180</td>
<td>Introduction to Numerical Solution of Differential Equations</td>
<td>1</td>
</tr>
</tbody>
</table>

**Core-Computer Science:**

Select one of the following Series:

**Series A**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 0150</td>
<td>Introduction to Object-Oriented Programming and Computer Science</td>
<td>2</td>
</tr>
<tr>
<td>&amp; CSCI 0160</td>
<td>and Introduction to Algorithms and Data Structures</td>
<td>2</td>
</tr>
</tbody>
</table>

**Series B**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 0170</td>
<td>Computer Science: An Integrated Introduction</td>
<td>1</td>
</tr>
<tr>
<td>&amp; CSCI 0180</td>
<td>and Computer Science: An Integrated Introduction</td>
<td>1</td>
</tr>
</tbody>
</table>

**Series C**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 0190</td>
<td>Accelerated Introduction to Computer Science</td>
<td>1</td>
</tr>
</tbody>
</table>

and an additional CS course not otherwise used to satisfy a concentration requirement; (this course may be CSCI 0180, an intermediate-level CS course, or a 1000-level course)

Select three of the following intermediate-level courses, one of which must be math-oriented and one systems-oriented:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 0220</td>
<td>Introduction to Discrete Structures and Probability (math)</td>
<td>3</td>
</tr>
<tr>
<td>CSCI 0320</td>
<td>Introduction to Software Engineering (systems)</td>
<td>3</td>
</tr>
<tr>
<td>CSCI 0310</td>
<td>Introduction to Computer Systems (systems)</td>
<td>3</td>
</tr>
<tr>
<td>or CSCI 0330</td>
<td>Introduction to Computer Systems</td>
<td>3</td>
</tr>
<tr>
<td>CSCI 0450</td>
<td>Introduction to Probability and Computing (math)</td>
<td>3</td>
</tr>
<tr>
<td>CSCI 0510</td>
<td>Models of Computation (math)</td>
<td>3</td>
</tr>
</tbody>
</table>

Three 1000-level Computer Science courses. These three courses must include a pair of courses with a coherent theme. A list of approved pairs may be found at the approved-pairs web page. You are not restricted to the pairs on this list, but any pair not on the list must be approved by the director of undergraduate studies.

Total Credits 17

**Requirements for the Professional Track of the Sc.B. degree.**

The requirements for the professional track include all those of the standard track, as well as the following:

Students must complete two two-to-four-month full-time professional experiences, doing work that is related to their concentration programs. Such work is normally done within an industrial organization, but may also be at a university under the supervision of a faculty member.

On completion of each professional experience, the student must write and upload to ASK a reflective essay about the experience addressing the following prompts, to be approved by the student’s concentration advisor:

- Which courses were put to use in your summer’s work? Which topics, in particular, were important?
- In retrospect, which courses should you have taken before embarking on your summer experience? What are the topics from these courses that would have helped you over the summer if you had been more familiar with them?
- Are there topics you should have been familiar with in preparation for your summer experience, but are not taught at Brown? What are these topics?
- What did you learn from the experience that probably could not have been picked up from course work?
- Is the sort of work you did over the summer something you would like to continue doing once you graduate? Explain.
- Would you recommend your summer experience to other Brown students? Explain.

**Applied Mathematics-Economics**

The Applied Mathematics-Economics concentration is designed to reflect the mathematical and statistical nature of modern economic theory and empirical research. This concentration has two tracks. The first is the advanced economics track, which is intended to prepare students for graduate study in economics. The second is the mathematical finance track, which is intended to prepare students for graduate study in finance, or for careers in finance or financial engineering. Both tracks have A.B.
Standard program for the A.B. degree (Advanced Economics track) - through the class of 2015:

Prerequisites:
- MATH 0100 Introductory Calculus, Part II
- MATH 0520 Linear Algebra

Course Requirements:

Applied Math Requirements

(a) 
- APMA 0350 Methods of Applied Mathematics I, II
- APMA 0360 and Methods of Applied Mathematics I, II

Select one of the following:
- APMA 0160 Introduction to Scientific Computing
- CSCI 0040 Introduction to Scientific Computing and Problem Solving
- CSCI 0150 Introduction to Object-Oriented Programming and Computer Science
- CSCI 0170 Computer Science: An Integrated Introduction

Select one of the following:
- APMA 1200 Operations Research: Probabilistic Models
- APMA 1210 Operations Research: Deterministic Models
- APMA 1650 Statistical Inference I

(b) 
- APMA 1200 Operations Research: Probabilistic Models
- APMA 1210 Operations Research: Deterministic Models
- APMA 1650 Statistical Inference I

Economics Requirements:
- ECON 1130 Intermediate Microeconomics (Mathematical)
- ECON 1210 Intermediate Macroeconomics
- ECON 1630 Econometrics I

Two 1000-level courses from the "mathematical-economics" group, below:
- ECON 1170 Welfare Economics
- ECON 1225 Advanced Macroeconomics: Monetary, Fiscal, and Stabilization Policies
- ECON 1465 Market Design: Theory and Applications
- ECON 1470 Bargaining Theory and Applications
- ECON 1640 Econometrics II
- ECON 1650 Financial Econometrics
- ECON 1750 Investments II
- ECON 1759 Data, Statistics, Finance
- ECON 1820 Behavioral Economics
- ECON 1840 Theory of Economic Growth
- ECON 1860 The Theory of General Equilibrium
- ECON 1870 Game Theory and Applications to Economics

One additional 1000-level economics course.

Total Credits 12

No course may be used to simultaneously satisfy (a) and (b).

APMA 0330 and APMA 0340 may be substituted with advisor approval.

Or ECON 1110 with permission.

Standard program for the Sc.B. degree (Advanced Economics track) - through the class of 2015:

Prerequisites:
- MATH 0100 Introductory Calculus, Part II
- MATH 0520 Linear Algebra

Course requirements:

Applied Mathematics requirements:

(a) 
- APMA 0350 Methods of Applied Mathematics I, II
- APMA 0360 and Methods of Applied Mathematics I, II

Select one of the following:
- APMA 0160 Introduction to Scientific Computing
- CSCI 0040 Introduction to Scientific Computing and Problem Solving
- CSCI 0150 Introduction to Object-Oriented Programming and Computer Science
- CSCI 0170 Computer Science: An Integrated Introduction

Select one of the following:
- APMA 1200 Operations Research: Probabilistic Models
- APMA 1210 Operations Research: Deterministic Models
- APMA 1650 Statistical Inference I

(b) 
- APMA 1200 Operations Research: Probabilistic Models
- APMA 1210 Operations Research: Deterministic Models
- APMA 1650 Statistical Inference I

Select two of the following:
- APMA 1200 Operations Research: Probabilistic Models
- APMA 1210 Operations Research: Deterministic Models
- APMA 1650 Statistical Inference I

Economics requirements:
- ECON 1130 Intermediate Microeconomics (Mathematical)
- ECON 1210 Intermediate Macroeconomics
- ECON 1630 Econometrics I

Three 1000-level courses from the "mathematical-economics" group, below:
- ECON 1170 Welfare Economics
- ECON 1225 Advanced Macroeconomics: Monetary, Fiscal, and Stabilization Policies
- ECON 1465 Market Design: Theory and Applications
- ECON 1470 Bargaining Theory and Applications
- ECON 1640 Econometrics II
- ECON 1650 Financial Econometrics
- ECON 1750 Investments II
- ECON 1759 Data, Statistics, Finance
- ECON 1820 Behavioral Economics
- ECON 1840 Theory of Economic Growth
- ECON 1860 The Theory of General Equilibrium

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Select two 1000-level courses from the "financial economics" group:
- ECON 1630
- ECON 1210
- ECON 1130

Economics Requirements:
Select one of the following:
- APMA 1650
- APMA 1200

(b) Applied Mathematics requirements:
Select one of the following:
- APMA 0360
- APMA 0350

Total Credits 15
1 No course may be used to simultaneously satisfy (a) and (b).
2 APMA 0330 and APMA 0340 may be substituted with advisor approval.
3 Or ECON 1110 with permission.

Standard program for the A.B. degree (Mathematical Finance track) - through the class of 2015:

Prerequisites:
- MATH 0100: Introductory Calculus, Part II
- MATH 0520: Linear Algebra

Requirements:
Applied Mathematics requirements:
(a) APMA 0350 & APMA 0360 Methods of Applied Mathematics I, II
and Methods of Applied Mathematics I, II 1
Select one of the following:
- APMA 0160: Introduction to Scientific Computing
- CSCI 0040: Introduction to Object-Oriented Programming and Computer Science
- CSCI 0150: Introduction to Scientific Computing and Problem Solving
- CSCI 0170: Computer Science: An Integrated Introduction
- APMA 1650: Statistical Inference I

(b) Select one of the following:
- APMA 1180: Introduction to Numerical Solution of Differential Equations
- APMA 1330: Methods of Applied Mathematics III, IV
- APMA 1660: Statistical Inference II
- APMA 1670: Statistical Analysis of Time Series
- APMA 1680: Nonparametric Statistics
- APMA 1690: Computational Probability and Statistics
- APMA 1700: The Mathematics of Insurance
- APMA 1720: Monte Carlo Simulation with Applications to Finance
- MATH 1010: Analysis: Functions of One Variable

Economics Requirements:
- ECON 1130: Intermediate Microeconomics (Mathematical) 2
- ECON 1210: Intermediate Macroeconomics
- ECON 1630: Econometrics I

Select two 1000-level courses from the "financial economics" group:

- ECON 1650: Financial Econometrics
- ECON 1710: Investments I
- ECON 1720: Corporate Finance
- ECON 1750: Investments II
- ECON 1759: Data, Statistics, Finance
- ECON 1760: Financial Institutions
- ECON 1765: Finance, Regulation, and the Economy: Research
- ECON 1770: Fixed Income Securities
- ECON 1780: Corporate Strategy
- ECON 1790: Corporate Governance and Management

Select one 1000-level course from the "mathematical economics" group:

- ECON 1170: Welfare Economics
- ECON 1225: Advanced Macroeconomics: Monetary, Fiscal, and Stabilization Policies
- ECON 1465: Market Design: Theory and Applications
- ECON 1470: Bargaining Theory and Applications
- ECON 1640: Econometrics II
- ECON 1650: Financial Econometrics
- ECON 1750: Investments II
- ECON 1759: Data, Statistics, Finance
- ECON 1810: Economics and Psychology
- ECON 1820: Behavioral Economics
- ECON 1850: Theory of Economic Growth
- ECON 1860: The Theory of General Equilibrium
- ECON 1870: Game Theory and Applications to Economics

Total Credits 12
1 APMA 0330 and APMA 0340 may be substituted with advisor approval.
2 Or ECON 1110 with permission.
3 No course may be used to simultaneously satisfy the "financial economics" and the "mathematical economics" requirements.

Standard program for the Sc.B. degree (Mathematical Finance track) - through the class of 2015:

Prerequisites:
- MATH 0100: Introductory Calculus, Part II
- MATH 0520: Linear Algebra

Course requirements:
Applied Mathematics requirements:
(a) APMA 0350 & APMA 0360 Methods of Applied Mathematics I, II
and Methods of Applied Mathematics I, II 1
Select one of the following:
- APMA 0160: Introduction to Scientific Computing
- CSCI 0040: Introduction to Object-Oriented Programming and Computer Science
- CSCI 0150: Introduction to Scientific Computing and Problem Solving
- CSCI 0170: Computer Science: An Integrated Introduction
- APMA 1650: Statistical Inference I

(b) Select one of the following:
- APMA 1180: Introduction to Numerical Solution of Differential Equations
- APMA 1330: Methods of Applied Mathematics III, IV
- APMA 1660: Statistical Inference II
- APMA 1670: Statistical Analysis of Time Series
- APMA 1680: Nonparametric Statistics
- APMA 1690: Computational Probability and Statistics
- APMA 1700: The Mathematics of Insurance
- APMA 1720: Monte Carlo Simulation with Applications to Finance
- MATH 1010: Analysis: Functions of One Variable

Economics requirements:
- ECON 1130: Intermediate Microeconomics (Mathematical) 2

Select two 1000-level courses from the "financial economics" group:

- ECON 1650: Financial Econometrics
- ECON 1710: Investments I
- ECON 1720: Corporate Finance
- ECON 1750: Investments II
- ECON 1759: Data, Statistics, Finance
- ECON 1760: Financial Institutions
- ECON 1765: Finance, Regulation, and the Economy: Research
- ECON 1770: Fixed Income Securities
- ECON 1780: Corporate Strategy
- ECON 1790: Corporate Governance and Management

Select one 1000-level course from the "mathematical economics" group:

- ECON 1170: Welfare Economics
- ECON 1225: Advanced Macroeconomics: Monetary, Fiscal, and Stabilization Policies
- ECON 1465: Market Design: Theory and Applications
- ECON 1470: Bargaining Theory and Applications
- ECON 1640: Econometrics II
- ECON 1650: Financial Econometrics
- ECON 1750: Investments II
- ECON 1759: Data, Statistics, Finance
- ECON 1810: Economics and Psychology
- ECON 1820: Behavioral Economics
- ECON 1850: Theory of Economic Growth
- ECON 1860: The Theory of General Equilibrium
- ECON 1870: Game Theory and Applications to Economics

Total Credits 12
1 APMA 0330 and APMA 0340 may be substituted with advisor approval.
2 Or ECON 1110 with permission.
3 No course may be used to simultaneously satisfy the "financial economics" and the "mathematical economics" requirements.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Select three 1000-level courses from the "financial economics" group: 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>APMA 1650</td>
<td>Statistical Inference I</td>
<td>1</td>
</tr>
</tbody>
</table>

Select one of the following: 1

- APMA 1200 Operations Research: Probabilistic Models
- APMA 1210 Operations Research: Deterministic Models
- APMA 1660 Statistical Inference II
- APMA 1670 Statistical Analysis of Time Series
- APMA 1680 Nonparametric Statistics
- APMA 1690 Computational Probability and Statistics
- APMA 1700 The Mathematics of Insurance
- MATH 1010 Analysis: Functions of One Variable

Economics Requirements:

- ECON 1130 Intermediate Microeconomics (Mathematical) Or 1
- ECON 1110 with permission.

Select two 1000-level courses from the "mathematical economics" group: 2

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1650</td>
<td>Financial Econometrics</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1710</td>
<td>Investments I</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1720</td>
<td>Corporate Finance</td>
<td></td>
</tr>
<tr>
<td>ECON 1750</td>
<td>Investments II</td>
<td></td>
</tr>
<tr>
<td>ECON 1759</td>
<td>Data, Statistics, Finance</td>
<td></td>
</tr>
<tr>
<td>ECON 1760</td>
<td>Financial Institutions</td>
<td></td>
</tr>
<tr>
<td>ECON 1765</td>
<td>Finance, Regulation, and the Economy: Research</td>
<td></td>
</tr>
<tr>
<td>ECON 1770</td>
<td>Fixed Income Securities</td>
<td></td>
</tr>
<tr>
<td>ECON 1780</td>
<td>Corporate Strategy</td>
<td></td>
</tr>
<tr>
<td>ECON 1790</td>
<td>Corporate Governance and Management</td>
<td></td>
</tr>
</tbody>
</table>

Select one of the following: 1

- APMA 0330 and APMA 0340 may be substituted with advisor approval.

No course my be used to simultaneously satisfy (a) and (b).

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Course Requirements:

Applied Mathematics Requirements

(a) 1

APMA 0350 & APMA 0360 Methods of Applied Mathematics I, II 2

Select one of the following:

APMA 0160 Introduction to Scientific Computing (preferred)
CSCI 0040 Introduction to Scientific Computing and Problem Solving (preferred)
CSCI 0150 Introduction to Object-Oriented Programming and Computer Science
CSCI 0170 Computer Science: An Integrated Introduction

Select one of the following:

APMA 1200 Operations Research: Probabilistic Models
APMA 1210 Operations Research: Deterministic Models
APMA 1650 Statistical Inference I

(b) 1

Select two of the following:

APMA 1200 Operations Research: Probabilistic Models
APMA 1210 Operations Research: Deterministic Models
APMA 1660 Statistical Inference II
APMA 1670 Statistical Analysis of Time Series
APMA 1680 Nonparametric Statistics
APMA 1690 Computational Probability and Statistics
APMA 1700 The Mathematics of Insurance
MATH 1010 Analysis: Functions of One Variable

Economics Requirements:

ECON 1130 Intermediate Microeconomics (Mathematical) 3
  Or ECON 1110 with permission

ECON 1210 Intermediate Macroeconomics

ECON 1630 Econometrics I

Three 1000-level courses from the "mathematical-economics" group: 3

ECON 1170 Welfare Economics
ECON 1225 Advanced Macroeconomics: Monetary, Fiscal, and Stabilization Policies
ECON 1465 Market Design: Theory and Applications
ECON 1470 Bargaining Theory and Applications
ECON 1640 Econometrics II
ECON 1650 Financial Econometrics
ECON 1750 Investments II
ECON 1759 Data, Statistics, Finance
ECON 1810 Economics and Psychology
ECON 1820 Behavioral Economics
ECON 1850 Theory of Economic Growth
ECON 1860 The Theory of General Equilibrium
ECON 1870 Game Theory and Applications to Economics

One 1000-level course from the "data methods" group: 1

ECON 1305 Economics of Education: Research
ECON 1310 Labor Economics
ECON 1360 Health Economics
ECON 1390 Research Methods for Economists
ECON 1410 Urban Economics
ECON 1510 Economic Development
ECON 1520 The Economic Analysis of Institutions
ECON 1530 Health, Hunger and the Household in Developing Countries
ECON 1640 Econometrics II
ECON 1650 Financial Econometrics

ECON 1759 Data, Statistics, Finance
ECON 1765 Finance, Regulation, and the Economy: Research

Two additional 1000-level economics courses

Total Credits 16

1 No course may be used to simultaneously satisfy (a) and (b).
2 APMA 0330 and APMA 0340 may be substituted with advisor approval.

Standard program for the A.B. degree
(Mathematical Finance track) - class of 2016 and beyond

Prerequisites:

MATH 0100 Introductory Calculus, Part II
MATH 0520 Linear Algebra

Course Requirements:

Applied Mathematics Requirements

(a)

APMA 0350 & APMA 0360 Methods of Applied Mathematics I, II 2

Select one of the following:

APMA 0160 Introduction to Scientific Computing (preferred)
CSCI 0040 Introduction to Scientific Computing and Problem Solving (preferred)
CSCI 0150 Introduction to Object-Oriented Programming and Computer Science
CSCI 0170 Computer Science: An Integrated Introduction

APMA 1200 Operations Research: Probabilistic Models
APMA 1650 Statistical Inference I

(b) 1

Select two of the following:

APMA 1200 Operations Research: Probabilistic Models
APMA 1210 Operations Research: Deterministic Models
APMA 1660 Statistical Inference II
APMA 1670 Statistical Analysis of Time Series
APMA 1680 Nonparametric Statistics
APMA 1690 Computational Probability and Statistics
APMA 1700 The Mathematics of Insurance
MATH 1010 Analysis: Functions of One Variable

Economics Requirements:

ECON 1130 Intermediate Microeconomics (Mathematical) 3
  Or ECON 1110 with permission

ECON 1210 Intermediate Macroeconomics

ECON 1630 Econometrics I

Three 1000-level courses from the "mathematical-economics" group: 3

ECON 1170 Welfare Economics
ECON 1225 Advanced Macroeconomics: Monetary, Fiscal, and Stabilization Policies
ECON 1465 Market Design: Theory and Applications
ECON 1470 Bargaining Theory and Applications
ECON 1640 Econometrics II
ECON 1650 Financial Econometrics
ECON 1750 Investments II
ECON 1759 Data, Statistics, Finance
ECON 1810 Economics and Psychology
ECON 1820 Behavioral Economics
ECON 1850 Theory of Economic Growth
ECON 1860 The Theory of General Equilibrium
ECON 1870 Game Theory and Applications to Economics

One 1000-level course from the "data methods" group: 1

ECON 1305 Economics of Education: Research
ECON 1310 Labor Economics
ECON 1360 Health Economics
ECON 1390 Research Methods for Economists
ECON 1410 Urban Economics
ECON 1510 Economic Development
ECON 1520 The Economic Analysis of Institutions
ECON 1530 Health, Hunger and the Household in Developing Countries
ECON 1640 Econometrics II
ECON 1650 Financial Econometrics

ECON 1759 Data, Statistics, Finance
ECON 1765 Finance, Regulation, and the Economy: Research

Two additional 1000-level economics courses

Total Credits 16

1 No course may be used to simultaneously satisfy (a) and (b).
2 APMA 0330 and APMA 0340 may be substituted with advisor approval.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Select two of the following:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>APMA 1650</td>
<td>Applied Mathematics</td>
</tr>
<tr>
<td>APMA 1200</td>
<td>Operations Research</td>
</tr>
<tr>
<td>APMA 1650</td>
<td>Statistical Inference I</td>
</tr>
</tbody>
</table>

Select one of the following:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>&amp; APMA 0360</td>
<td>Advanced Macroeconomics</td>
</tr>
<tr>
<td></td>
<td>Monetary, Fiscal, and Stabilization Policies</td>
</tr>
<tr>
<td>CSCI 0040</td>
<td>Introduction to Numerical Solution of Differential Equations</td>
</tr>
<tr>
<td></td>
<td>(Mathematical Finance track) - class of 2016</td>
</tr>
</tbody>
</table>

Select one 1000-level course from the "data methods" group:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1759</td>
<td>Data, Statistics, Finance</td>
</tr>
<tr>
<td>ECON 1810</td>
<td>Economics and Psychology</td>
</tr>
<tr>
<td>ECON 1910</td>
<td>Behavioral Economics</td>
</tr>
<tr>
<td>ECON 1850</td>
<td>Theory of Economic Growth</td>
</tr>
<tr>
<td>ECON 1860</td>
<td>The Theory of General Equilibrium</td>
</tr>
<tr>
<td>ECON 1870</td>
<td>Game Theory and Applications to Economics</td>
</tr>
</tbody>
</table>

Select one 1000-level course from the "mathematical economics" group:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>APMA 1180</td>
<td>Introduction to Numerical Solution of Differential Equations</td>
</tr>
<tr>
<td>APMA 1330</td>
<td>Methods of Applied Mathematics III, IV</td>
</tr>
<tr>
<td>APMA 1660</td>
<td>Statistical Inference II</td>
</tr>
<tr>
<td>APMA 1670</td>
<td>Statistical Analysis of Time Series</td>
</tr>
<tr>
<td>APMA 1680</td>
<td>Nonparametric Statistics</td>
</tr>
<tr>
<td>APMA 1690</td>
<td>Computational Probability and Statistics</td>
</tr>
<tr>
<td>APMA 1700</td>
<td>The Mathematics of Insurance</td>
</tr>
<tr>
<td>APMA 1720</td>
<td>Monte Carlo Simulation with Applications to Finance (preferred)</td>
</tr>
<tr>
<td>MATH 1010</td>
<td>Analysis: Functions of One Variable</td>
</tr>
</tbody>
</table>

Economics Requirements:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1130</td>
<td>Intermediate Microeconomics (Mathematical) 1</td>
</tr>
<tr>
<td>ECON 1110</td>
<td>with permission</td>
</tr>
<tr>
<td>ECON 1210</td>
<td>Intermediate Macroeconomics</td>
</tr>
<tr>
<td>ECON 1630</td>
<td>Econometrics I</td>
</tr>
<tr>
<td>ECON 1650</td>
<td>Financial Econometrics</td>
</tr>
<tr>
<td>ECON 1710</td>
<td>Investments I</td>
</tr>
<tr>
<td>ECON 1720</td>
<td>Corporate Finance</td>
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<td>ECON 1750</td>
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<td>Data, Statistics, Finance</td>
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<tr>
<td>ECON 1760</td>
<td>Financial Institutions</td>
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<tr>
<td>ECON 1765</td>
<td>Finance, Regulation, and the Economy: Research</td>
</tr>
<tr>
<td>ECON 1770</td>
<td>Fixed Income Securities</td>
</tr>
<tr>
<td>ECON 1780</td>
<td>Corporate Strategy</td>
</tr>
<tr>
<td>ECON 1790</td>
<td>Corporate Governance and Management</td>
</tr>
</tbody>
</table>

Select three 1000-level courses from the "financial economics" group:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1500</td>
<td>Financial Econometrics</td>
</tr>
<tr>
<td>ECON 1520</td>
<td>Accounting and Corporate Finance</td>
</tr>
<tr>
<td>ECON 1530</td>
<td>Financial Institutions</td>
</tr>
<tr>
<td>ECON 1540</td>
<td>Investments</td>
</tr>
<tr>
<td>ECON 1550</td>
<td>Financial Accounting</td>
</tr>
<tr>
<td>ECON 1560</td>
<td>Financial Economics</td>
</tr>
<tr>
<td>ECON 1570</td>
<td>Corporate Finance</td>
</tr>
<tr>
<td>ECON 1580</td>
<td>The Theory of Economic Growth</td>
</tr>
<tr>
<td>ECON 1590</td>
<td>Game Theory and Applications to Economics</td>
</tr>
</tbody>
</table>

Select two 1000-level courses from the "mathematical economics" group:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>APMA 1180</td>
<td>Introduction to Numerical Solution of Differential Equations</td>
</tr>
<tr>
<td>APMA 1330</td>
<td>Methods of Applied Mathematics III, IV</td>
</tr>
<tr>
<td>APMA 1660</td>
<td>Statistical Inference II</td>
</tr>
<tr>
<td>APMA 1670</td>
<td>Statistical Analysis of Time Series</td>
</tr>
<tr>
<td>APMA 1680</td>
<td>Nonparametric Statistics</td>
</tr>
<tr>
<td>APMA 1690</td>
<td>Computational Probability and Statistics</td>
</tr>
<tr>
<td>APMA 1700</td>
<td>The Mathematics of Insurance</td>
</tr>
<tr>
<td>APMA 1720</td>
<td>Monte Carlo Simulation with Applications to Finance (preferred)</td>
</tr>
<tr>
<td>MATH 1010</td>
<td>Analysis: Functions of One Variable</td>
</tr>
</tbody>
</table>

Undergraduate Concentrations

Statistical Inference I
Operations Research: Probabilistic Models
Computer Science: An Integrated Introduction
Introduction to Object-Oriented Programming and Computer Science
Introduction to Scientific Computing and Problem Solving (preferred)
Introduction to Scientific Computing and Problem Solving
Analysis: Functions of One Variable

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Archaeology and the Ancient World is the most exploratory of the concentration tracks, and this option emphasizes material culture studies across the full spectrum of the ancient world. Classical Archaeology is intended for those interested chiefly in the ‘classical’ civilizations of the Mediterranean (Greece and Rome), as well as for those interested in both earlier (prehistoric) and later (medieval) periods in that geographic region. Egyptian and Ancient Western Asian Archaeology is intended for those interested chiefly in the cultures of Egypt and Ancient Western Asia (the ancient ‘Near East’ – Anatolia, the Levant, Mesopotamia), from prehistoric through Islamic times.

Honors and Capstone Requirement

Admission to candidacy for honors in the concentration is granted on the following basis: 3.7 GPA for Economics courses, and a 3.5 GPA overall. To graduate with honors, a student must write an honors thesis in the senior year following the procedures specified by the concentration (see Economics Department website). Beginning with the class of 2016, students not writing an honors thesis must complete an alternative senior capstone project and obtain the approval of a faculty sponsor.

Professional Track

The requirements for the professional track include all those of the standard track, as well as the following:

Students must complete two two-to-four month full-time professional experiences, doing work that is related to their concentration programs. Such work is normally done within an industrial organization, but may also be at a university under the supervision of a faculty member.

On completion of each professional experience, the student must write and upload to ASK a reflective essay about the experience addressing the following prompts, to be approved by the student’s concentration advisor:

- Which courses were put to use in your summer’s work? Which topics, in particular, were important?
- In retrospect, which courses should you have taken before embarking on your summer experience? What are the topics from these courses that would have helped you over the summer if you had been more familiar with them?
- Are there topics you should have been familiar with in preparation for your summer experience, but are not taught at Brown? What are these topics?
- What did you learn from the experience that probably could not have been picked up from course work?
- Is the sort of work you did over the summer something you would like to continue doing once you graduate? Explain.
- Would you recommend your summer experience to other Brown students? Explain.

Archaeology and the Ancient World

The concentration in Archaeology and the Ancient World provides an opportunity to explore the multi-faceted discipline of archaeology while examining the critical early civilizations of the so-called ‘Old World’ – that is, the complex societies of the Mediterranean, Egypt, and Ancient Western Asia. Students will learn about the art, architecture, and material culture of the ancient world, exploring things of beauty and power, as well as the world of the everyday. Concentrators will also learn “how to do” archaeology - the techniques of locating, retrieving and analyzing ancient remains - and consider how material culture shapes our understanding of the past. Concentrators are encouraged to pursue research opportunities through summer fieldwork, museum experience, or independent study projects.

The concentration, with its three distinct but overlapping tracks, is intended to allow students flexibility in structuring their own path through this diverse field of study. The concentration is also designed to allow students to build progressively upon what they have learned, moving from introductory courses to upper level seminars.

The three tracks are: Archaeology and the Ancient World; Classical Archaeology; and Egyptian and Ancient Western Asian Archaeology.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Astronomy

Along with Greek, Latin, and Mathematics, Astronomy counts as one of the oldest continuously taught subjects in the Brown curriculum. It is the study of the properties of stars, galaxies, and the Universe, and as such combines elements from the disciplines of both Physics and Planetary Geology. Students pursuing this concentration complete introductory coursework in classical mechanics, relativity, and astrophysics, along with mathematics and electromagnetism. They go on to complete courses in stellar and extragalactic astrophysics as well as cosmology. Facilities available to concentrators include the historic Ladd Observatory.

Standard concentration for the A.B. degree

Eleven or twelve courses are required (depending on the satisfaction of prerequisites).

<table>
<thead>
<tr>
<th>Program</th>
<th>Select one of the following mathematics courses:</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MATH 0520 Linear Algebra</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MATH 0540 Honors Linear Algebra</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PHYS 0720 Methods of Mathematical Physics</td>
<td></td>
</tr>
<tr>
<td></td>
<td>APMA 0330 Methods of Applied Mathematics I, II</td>
<td></td>
</tr>
<tr>
<td></td>
<td>APMA 0340 Methods of Applied Mathematics I, II</td>
<td></td>
</tr>
</tbody>
</table>

Select two of the following astrophysics courses:

- PHYS 1100 Introduction to General Relativity
- PHYS 1250 Stellar Structure and the Interstellar Medium
- PHYS 1270 Extragalactic Astronomy and High-Energy Astrophysics
- PHYS 1280 Introduction to Cosmology

Three additional 1000- or 2000-level courses in physics or a related field, suggestions:

- APMA 1670 Statistical Analysis of Time Series
- ENGN 1860 Advanced Fluid Mechanics
- GEOL 0810 Planetary Geology
- GEOL 1810 Physics of Planetary Evolution
- MATH 1060 Differential Geometry
- PHYS 0500 Advanced Classical Mechanics
- PHYS 0560 Experiments in Modern Physics
- PHYS 1410 Quantum Mechanics A
- PHYS 1510 Advanced Electromagnetic Theory
- PHYS 1530 Thermodynamics and Statistical Mechanics
- PHYS 1560 Modern Physics Laboratory

Total Credits 11-12

1 PHYS 0050 and PHYS 0060 can be taken in lieu of PHYS 0160

Biochemistry & Molecular Biology

How does life work at the molecular level? This question is at the core of the concentration program Biochemistry and Molecular Biology. In earlier years of this discipline, the focus was on structure and function of proteins, nucleic acids, lipids, carbohydrates and small molecules such as vitamins. Today the logical approach and tools of biochemical science are being expanded to new areas in neuroscience, developmental biology, immunology, pharmacology and synthetic biology (the design of analogs of biological systems). Training in biochemistry begins with a foundation in mathematics, physics, chemistry and biology. Some courses offered in other departments, including engineering, geology and computer science, are also useful. A key component of this program is the year of hands-on research carried out in collaboration with a faculty member here at Brown. Faculty sponsors are drawn from both the Chemistry Department and the Division of Biology and Medicine, and include basic science and clinical faculty.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Standard program for the Sc.B. degree

Students must take twenty courses in biology, chemistry, and physics, including the following core requirements, some of these may be fulfilled with AP credits.

Three courses in mathematics, statistics and/or computer science, typically including MATH 0090, MATH 0100, or equivalent) 1

Two courses in physics, typically: 1

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0030</td>
<td>Basic Physics</td>
</tr>
<tr>
<td>or PHYS 0050</td>
<td>Foundations of Mechanics</td>
</tr>
<tr>
<td>or ENGN 0030</td>
<td>Introduction to Engineering</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0040</td>
<td>Basic Physics</td>
</tr>
<tr>
<td>or PHYS 0060</td>
<td>Foundations of Electromagnetism and Modern Physics</td>
</tr>
<tr>
<td>or ENGN 0040</td>
<td>Dynamics and Vibrations</td>
</tr>
</tbody>
</table>

Three courses in physical and organic chemistry: 3

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 0330</td>
<td>Equilibrium, Rate, and Structure</td>
</tr>
<tr>
<td>CHEM 0350</td>
<td>Organic Chemistry</td>
</tr>
<tr>
<td>0330/0360</td>
<td></td>
</tr>
</tbody>
</table>

One course in biophysical or related chemistry: 1

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 0400</td>
<td>Biophysical and Bioorganic Chemistry</td>
</tr>
<tr>
<td>or CHEM 0500</td>
<td>Inorganic Chemistry</td>
</tr>
<tr>
<td>or CHEM 1660</td>
<td>Instrumental Analysis with Environmental Applications</td>
</tr>
<tr>
<td>-or-</td>
<td></td>
</tr>
<tr>
<td>GEOL 1660</td>
<td>Instrumental Analysis with Environmental Applications</td>
</tr>
</tbody>
</table>

Three courses in biochemistry: 3

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 0280</td>
<td>Introductory Biochemistry</td>
</tr>
<tr>
<td>BIOL 1270</td>
<td>Advanced Biochemistry</td>
</tr>
<tr>
<td>CHEM 1230</td>
<td>Chemical Biology</td>
</tr>
<tr>
<td>or CHEM 1240</td>
<td>Biochemistry</td>
</tr>
</tbody>
</table>

Select two electives from any quantitative science or mathematics course relevant to biochemistry (including courses on the preceding list) and approved by a concentration advisor. 2

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1950/1960</td>
<td>Directed Research/Independent Study</td>
</tr>
<tr>
<td>-or-</td>
<td></td>
</tr>
<tr>
<td>CHEM 0970/0980</td>
<td>Undergraduate Research</td>
</tr>
</tbody>
</table>

Suggested Elective Courses:

Students are required to take six (6) elective courses: four (4) taken from the chart below and two (2) from any science or mathematics course relevant to biochemistry, cell and molecular biology from the suggested courses below:

Biology Electives:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 0200</td>
<td>The Foundation of Living Systems</td>
</tr>
<tr>
<td>BIOL 0470</td>
<td>Genetics</td>
</tr>
<tr>
<td>BIOL 0500</td>
<td>Cell and Molecular Biology</td>
</tr>
<tr>
<td>BIOL 0530</td>
<td>Principles of Immunology</td>
</tr>
<tr>
<td>BIOL 0800</td>
<td>Principles of Physiology</td>
</tr>
<tr>
<td>BIOL 1050</td>
<td>Biology of the Eukaryotic Cell</td>
</tr>
<tr>
<td>BIOL 1090</td>
<td>Polymer Science for Biomaterials</td>
</tr>
<tr>
<td>BIOL 1100</td>
<td>Cell Physiology and Biophysics</td>
</tr>
<tr>
<td>BIOL 1110</td>
<td>Topics in Signal Transduction</td>
</tr>
<tr>
<td>BIOL 1200</td>
<td>Protein Biophysics and Structure</td>
</tr>
<tr>
<td>BIOL 1150</td>
<td>Stem Cell Engineering</td>
</tr>
<tr>
<td>BIOL 1260</td>
<td>Physiological Pharmacology</td>
</tr>
<tr>
<td>BIOL 1290</td>
<td>Cancer Biology</td>
</tr>
<tr>
<td>BIOL 1540</td>
<td>Molecular Genetics</td>
</tr>
<tr>
<td>BIOL 1560</td>
<td>Virology</td>
</tr>
</tbody>
</table>

Neuroscience Electives: 2

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEUR 1020</td>
<td>Principles of Neurobiology</td>
</tr>
</tbody>
</table>

Chemistry Electives:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 0500</td>
<td>Inorganic Chemistry</td>
</tr>
<tr>
<td>CHEM 1140</td>
<td>Physical Chemistry: Quantum Chemistry</td>
</tr>
<tr>
<td>CHEM 1220</td>
<td>Computational Tools in Biochemistry and Chemical Biology</td>
</tr>
<tr>
<td>CHEM 1230</td>
<td>Chemical Biology</td>
</tr>
<tr>
<td>CHEM 1240</td>
<td>Biochemistry</td>
</tr>
<tr>
<td>CHEM 1450</td>
<td>Advanced Organic Chemistry</td>
</tr>
</tbody>
</table>

Quantitative Science or Mathematics Electives: 2

Select two electives from any quantitative science or mathematics course relevant to biochemistry (including courses on the preceding list) and approved by a concentration advisor.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
</table>

Total Credits: 20

1. Note that the mathematics and physics requirements may be satisfied by Advanced Placement credit.
2. Or any NEUR course in Cell, Genetics, Molecular Biology, or Development.

Biology

The Biology concentration enables students to study, in depth and in breadth, the science of life and living matter. Whether pursuing the A.B. or Sc.B. in biology, students can expect to learn broadly in the discipline through a selection of courses in three areas: cell and molecular biology, structure and function, and organismal biology. In addition, students pursuing the ScB complete a thematic cluster through which they gain an in-depth understanding of a particular biological subfield (examples include immunobiology, ecology and evolutionary biology, and biotechnology). The concentration also emphasizes practical skills and experimental design. Concentrators are therefore required to take at least three courses with a laboratory or fieldwork component. Within all of these requirements, students have a high degree of flexibility and choice. Broad research opportunities are also available across several departments within the basic sciences as well.

Standard program for the A.B. Biology

The concentration program for the A.B. in Biology consists of four prerequisite courses in math and chemistry and ten courses in biological sciences, including courses in each of the following three areas: Area 1: Cell/Molecular Biology, Area 2: Structure/Function, and Area 3: Organismal Biology. Beyond the area requirement, students may choose up to two, upper-level science courses from an approved selection for science concentrators.

Prerequisites: 1

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 0330</td>
<td>Equilibrium, Rate, and Structure</td>
</tr>
<tr>
<td>CHEM 0350</td>
<td>Organic Chemistry</td>
</tr>
<tr>
<td>MATH 0090</td>
<td>Introductory Calculus, Part I (or equivalent placement)</td>
</tr>
</tbody>
</table>

One of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0100</td>
<td>Introductory Calculus, Part II</td>
</tr>
<tr>
<td>MATH 0170</td>
<td>Advanced Placement Calculus (or equivalent placement)</td>
</tr>
</tbody>
</table>

Or a statistics course, to be approved by the concentration advisor.

Core courses: 2

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 0200</td>
<td>The Foundation of Living Systems (AP credit accepted, placement test available)</td>
</tr>
</tbody>
</table>

The Area requirement must be fulfilled by taking at least one course in each of these groups: 3

Area 1 (Cell/Molecular Biology)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 0280</td>
<td>Introductory Biochemistry</td>
</tr>
<tr>
<td>BIOL 0470</td>
<td>Genetics</td>
</tr>
<tr>
<td>BIOL 0500</td>
<td>Cell and Molecular Biology</td>
</tr>
<tr>
<td>BIOL 0510</td>
<td>Introductory Microbiology</td>
</tr>
</tbody>
</table>

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Undergraduate Concentrations

**BIOL 0530** Principles of Immunology
**BIOL 1050** Biology of the Eukaryotic Cell
**BIOL 1100** Cell Physiology and Biophysics
**BIOL 1310** Developmental Biology
**NEUR 1020** Principles of Neurobiology

**Area 2 (Structure/Function)**
**BIOL 0320** Vertebrate Embryology
**BIOL 0400** Biological Design: Structural Architecture of Organisms
**BIOL 0440** Plant Organism
**BIOL 0800** Principles of Physiology
**BIOL 1100** Cell Physiology and Biophysics
**BIOL 1880** Comparative Biology of the Vertebrates
**NEUR 0010** The Brain: An Introduction to Neuroscience

**Area 3 (Organismal Biology)**
**BIOL 0380** The Ecology and Evolution of Infectious Disease
**BIOL 0390** Vertebrate Evolution and Diversity
**BIOL 0400** Biological Design: Structural Architecture of Organisms
**BIOL 0410** Invertebrate Zoology
**BIOL 0420** Principles of Ecology
**BIOL 0430** The Evolution of Plant Diversity
**BIOL 0475** Conservation Medicine
**BIOL 0480** Evolutionary Biology
**BIOL 1410** Evolutionary Genetics
**BIOL 1430** The Computational Theory of Molecular Evolution
**BIOL 1800** Animal Locomotion
**BIOL 1880** Comparative Biology of the Vertebrates
**ENVS 0455** Coastal Ecology and Conservation
**ENVS 0490** Environmental Science in a Changing World

Six additional courses chosen from BIOL and/or NEUR offerings for concentrators

Options within the Core may include up to two related sciences which are approved courses for science concentrators, as follows: 4
**GEOL 0220** Physical Processes in Geology (or above)
**CHEM 0360** Organic Chemistry (or above)
**CLPS 0110** Mechanisms of Animal Behavior (formerly PSYC 0500)
**CLPS 0400** Brain Damage and the Mind (formerly PSYC 0470)
**CLPS 0410** Principles of Behavioral Neuroscience (formerly PSYC 0750)
**CLPS 1140** Psychophysiology of Sleep and Dreams (formerly PSYC 1020)
**CLPS 1193** Laboratory in Genes and Behavior (formerly PSYC 1040)
**CSCI 0040** Introduction to Scientific Computing and Problem Solving (and above)
**APMA 0330** Methods of Applied Mathematics I, II (and above (except APMA 0420))
**MATH 0180** Intermediate Calculus (and above)
**PHYS 0470** Electricity and Magnetism (and above)

Courses in the history or philosophy of science (e.g., HIST 1190); also a course from the BIOL 1920 series and others by permission of instructor.

Statistics:
**SOC 1100** Introductory Statistics for Social Research
**CLPS 0900** Quantitative Methods in Psychology (formerly COGS/PSYC 0900)
**APMA 0650** Essential Statistics

**EDUC 1110** Introductory Statistics for Education Research and Policy Analysis
**ECON 1620** Introduction to Econometrics

<table>
<thead>
<tr>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
</tr>
</tbody>
</table>

1  AP scores of 4 or above may substitute Math courses.
2  At least two biology and/or neuroscience courses must be above 1000-level. EXCLUSIONS: BIOL 1920 and BIOL 2840. *Courses numbered below BIOL 0100 do not carry concentration credit. At least three of the biology and/or neuroscience courses must include laboratory or fieldwork. BIOL 1950/1960, (Directed Research) may be included, but is not required. If a lab project, this can count for one of the three lab course requirements, and one advanced course.
3  No substitutions per above Area list. If a course is listed in more than one area, it may be used to fulfill one of those, the other must be fulfilled by a different course.
4  See listing on website for options. Related courses must be above prerequisite level, and suitable for science concentrators.

**Honors:** Honors in biology requires a thesis and presentation based on a research project (conducted via BIOL 1950/BIOl 1960), and quality grades in the concentration. Guidelines, a manual, and information on faculty research are available in the Biology Undergraduate Affairs Office (Arnold, Room 124) or at the Research Projects Collection, found at http://biology.brown.edu/bug/honors.

**Standard Program for the Sc.B. Biology**
The concentration program for the Sc.B. in Biology consists of five prerequisite courses in math and chemistry and ten courses in biological sciences, including courses in each of the following three areas:

- **Area 1: Cell/Molecular Biology**
- **Area 2: Structure/Function**
- **Area 3: Organismal Biology**

The biological science requirement also requires research (BIOL 1950/BIOl 1960), which should reflect the advanced cluster.

**Prerequisites:** 1
**MATH 0990** Introductory Calculus, Part I 1
**MATH 0100** Introductory Calculus, Part II (or equivalent placement) 1
**or MATH 0170** Advanced Placement Calculus 1

**CHEM 0360** Organic Chemistry (and above) 1

Select one of the following series: 2
**PHYS 0030** and Basic Physics
& **PHYS 0040**
**PHYS 0050** and Foundations of Mechanics
& **PHYS 0060**
**ENGN 0030** and Foundations of Electromagnetism and Modern Physics
& **ENGN 0040**

**Core Courses:** 2
**BIOL 0200** The Foundation of Living Systems 1
**BIOL 1950/1960** Directed Research/Independent Study 3 1

The Area requirement must be fulfilled by taking at least one course in each of these groups:

- **Area 1 (Cell/Molecular Biology)**
- **Area 2 (Structure/Function)**
- **Area 3 (Organismal Biology)**

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Area 3 (Organismal Biology)

BIOL 0380 The Ecology and Evolution of Infectious Disease
BIOL 0390 Vertebrate Evolution and Diversity
BIOL 0400 Biological Design: Structural Architecture of Organisms
BIOL 0410 Invertebrate Zoology
BIOL 0420 Principles of Ecology
BIOL 0430 The Evolution of Plant Diversity
BIOL 0475 Conservation Medicine
BIOL 0480 Evolutionary Biology
BIOL 1410 Evolutionary Genetics
BIOL 1430 The Computational Theory of Molecular Evolution
BIOL 1800 Animal Locomotion
BIOL 1880 Comparative Biology of the Vertebrates
ENVS 0455 Coastal Ecology and Conservation
ENVS 0490 Environmental Science in a Changing World

Five additional courses chosen from BIOL and/or NEUR offerings for concentrators.

Options within the Core may include up to two related sciences which are approved courses for science concentrators, as follows: 4

GEOL 0220 Physical Processes in Geology (or above)
CHEM 0360 Organic Chemistry
CLPS 0110 Mechanisms of Animal Behavior (formerly PSYC 0500)
CLPS 0400 Brain Damage and the Mind (formerly PSYC 0470)
CLPS 0410 Principles of Behavioral Neuroscience (formerly PSYC 0750)
CLPS 1140 Psychophysiology of Sleep and Dreams (formerly PSYC 1020)
CLPS 1193 Laboratory in Genes and Behavior (formerly PSYC 1049)
CSCI 0040 Introduction to Scientific Computing and Problem Solving (and above)
APMA 0330 Methods of Applied Mathematics I, II (and above (except APMA 0420))
MATH 0180 Intermediate Calculus (and above)
PHYS 0470 Electricity and Magnetism (and above)

Courses in the history or philosophy of science (e.g., HIST 1190); also a course from the BIOL 1920 series and others by permission of instructor.

Statistics:
SOC 1100 Introductory Statistics for Social Research
CLPS 0900 Quantitative Methods in Psychology (formerly COGS/PSYC 0990)
APMA 0650 Essential Statistics
EDUC 1110 Introductory Statistics for Education Research and Policy Analysis
ECON 1620 Introduction to Econometrics

Thematic Cluster Courses:

Three additional biological sciences courses (not including BIOL 1950/1960 research) that form a logical thematic cluster. Examples of thematic clusters include: Molecular Biology; Immunology; Ecology and Evolutionary Biology; Physiology and Biotechnology; Neurobiology; Physical Sciences. 5

Total Credits 18

1 AP scores of 4 or 5 may substitute Math courses.
2 At least two biology and/or neuroscience courses must be above 1000-level. EXCLUSIONS: BIOL 1920 and BIOL 2840. *Courses numbered below BIOL 0100 do not carry concentration credit. At least three of the biology and/or neuroscience courses must include laboratory or fieldwork. No substitutions per above Area lists. If a course is listed in more than one area, it may be used to fulfill one of those; the other must be fulfilled by a different course.
3 If substantial research is carried out away from Brown, it must be approved by an appropriate Brown BioMed faculty member but does not carry course credit toward the Core program.
4 See listing on website for options. Related sciences must be above prerequisite level, and suitable for science concentrators.
5 At least two, and preferably all three, must be above 1000-level. Courses used for the cluster, must be approved by an advisor and/or Dean Thompson.

Honors: Honors in biology requires a thesis and presentation based on a research project (conducted via BIOL 1950/BIOI 1960), and quality grades in the concentration. Guidelines, a manual, and information on faculty research are available in the Biology Undergraduate Affairs Office (Arnold, Room 124) or at the Research Projects Collection, found at http://biology.brown.edu/bug/honors.

Stipulations for Biology Programs:

1. For double concentrations, no more than two courses may overlap (i.e., be used to meet requirements of both) programs, prerequisites excepted.
2. No more than two semesters of directed research may be used as concentration credits. Each does count as an individual core towards the program, but only carry one lab credit towards the three required.
3. Transfer or study abroad courses may be used within the program, subject to approval of advisor, and Dean Thompson.

Biomedical Engineering

Biomedical Engineering is an interdisciplinary concentration designed for students interested in applying the methods and tools of engineering to the subject matter of biology and the life sciences. It is administered jointly by the School of Engineering and the Division of Biology and Medicine. The educational objectives of Biomedical Engineering are to prepare students for careers of useful service to society, to engage committed scholars in the productive application of the tools of engineering to the subject matter of biology across the spectrum of research and teaching, to provide opportunities for teamwork, open ended problem-solving and critical thinking. The objectives prepare students 1) well versed in the basic sciences of mathematics, physics, and chemistry; 2) fluent in contemporary biology; comfortable with its reductionist traditions and its movement toward a molecular understanding, and familiar with its experimental assays; 3) educated in the tools and skill-sets of engineers, particularly the ability to quantify, synthesize, and integrate, and able to apply these tools both theoretically and experimentally to living systems and other subject matter in biology; 4) well prepared to complete their education and training in further study at the graduate or professional level; and conditioned to recognize the need for such further work; and 5) endowed with the attributes of an education in a leading liberal arts institution: the ability to think clearly, decide fairly, and communicate effectively.

Standard program for the Sc.B. degree

Foundational Courses (all required)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 0030</td>
<td>Introduction to Engineering</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 0040</td>
<td>Dynamics and Vibrations</td>
<td>1</td>
</tr>
</tbody>
</table>

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Biophysics is that it is a quantitative science that requires a significant level of competence in physics, chemistry, mathematics, and biology. These areas therefore form the required background coursework for this program, and should serve as a springboard to an advanced focus, developed in consultation with a concentration advisor. Advanced foci may include structure-function relations of macromolecules, biomechanics of cell cytoskeleton, biotechnology for drug and gene delivery, molecular mechanisms of membrane transport, sensory signal transduction, for examples. The program also requires a capstone research project that reflects this focus and may be drawn from collaborative research opportunities offered by faculty in biology, chemistry, or physics departments. Additional detailed information about the field of Biophysics may be found at: http://www.biophysics.org/AboutUs/Biophysics/tabid/517/Default.aspx.

### Standard program for the Sc.B. degree

#### Requirements

Select one of the following Series:

<table>
<thead>
<tr>
<th>PHYS 0050</th>
<th>Foundations of Mechanics</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0060</td>
<td>Foundations of Electromagnetism and Modern Physics</td>
</tr>
</tbody>
</table>

Select one of the following:

<table>
<thead>
<tr>
<th>PHYS 0070</th>
<th>Analytical Mechanics</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0160</td>
<td>Introduction to Relativity and Quantum Physics</td>
</tr>
</tbody>
</table>

Select one of the following:

<table>
<thead>
<tr>
<th>CHEM 0330</th>
<th>Equilibrium, Rate, and Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 0350</td>
<td>Organic Chemistry</td>
</tr>
<tr>
<td>CHEM 0360</td>
<td>Organic Chemistry</td>
</tr>
</tbody>
</table>

Select two additional biology courses chosen with approval of the advisor. Examples include courses in:

**Cell Biology**

- BIOL 0500 Cell and Molecular Biology
- BIOL 1050 Biology of the Eukaryotic Cell
- BIOL 1200 Protein Biophysics and Structure

**Physiology**

- BIOL 0800 Principles of Physiology
- BIOL 1100 Cell Physiology and Biophysics
- BIOL 1190 Synaptic Transmission and Plasticity
- NEUR 1020 Principles of Neurobiology

**Pharmacology**

- BIOL 1260 Physiological Pharmacology

**Biotechnology**

- BIOL 1090 Polymer Science for Biomaterials
- BIOL 1120 Biomaterials
- BIOL 1140 Tissue Engineering

Select six additional intermediate or advanced level courses, chosen from biology (e.g., biochemistry, genetics, physiology, physics, chemistry, and/or computer science and mathematics). Examples include:

**Biology**

- BIOL 0280 Introductory Biochemistry
- BIOL 0470 Genetics
- BIOL 0800 Principles of Physiology
- BIOL 1190 Synaptic Transmission and Plasticity

**Physics**

- PHYS 0500 Advanced Classical Mechanics
- PHYS 0560 Experiments in Modern Physics
- PHYS 1410 Quantum Mechanics A
- PHYS 1420 Quantum Mechanics B
- PHYS 1610 Biological Physics

**Mathematics**

- MATH 0520 Linear Algebra

---

1. Advanced students can replace one math course with CHEM 0360.
2. Advanced students (premeds) can replace with BIOL 0470, BIOL 0530, or other biology courses.
Applied Mathematics
APMA 0330  Methods of Applied Mathematics I, II
APMA 0340  Methods of Applied Mathematics I, II
APMA 0350  Methods of Applied Mathematics I, II
APMA 0360  Methods of Applied Mathematics I, II

Chemistry
CHEM 1230  Chemical Biology
CHEM 1450  Advanced Organic Chemistry
A course from the CHEM 1560 series.

Select at least one semester (two are recommended) of Directed Research

Biology
BIOL 1950/1960  Directed Research/Independent Study

Chemistry
CHEM 0970/0980  Undergraduate Research

Physics
PHYS 1990  Senior Conference Course

Total Credits 19

Business, Entrepreneurship and Organizations

Business, Entrepreneurship and Organizations (BEO), formerly Commerce, Organizations and Entrepreneurship (COE) is a multidisciplinary concentration that provides a rigorous and synergistic program in the study of commercial activity grounded in economics, sociology and engineering. BEO focuses on the formation, growth, and organization of new ventures, innovation in commercial applications, financial markets and the marketplace, and management and organizational theory. Concentrators seek to understand the basic principles, approaches and vocabulary relevant to the study of entrepreneurship from the disciplines of economics, organizational sociology and engineering. Building on this multidisciplinary base, students develop specialized expertise in one of the three disciplinary approaches, with special emphasis on critical reasoning and quantitative research methods. In senior year capstone projects, students apply and integrate multi-disciplinary learning by working in groups on real world projects, including the creation of new ventures.

The three tracks of the concentration are as follows:

1. Business Economics
2. Organizational Studies
3. Entrepreneurship and Technology Management

Upon completion of all concentration requirements, students receive the Bachelor of Arts (A.B.) degree in Business, Entrepreneurship and Organizations.

The Curriculum

Business Economics Track

Foundation Requirements
ECON 0110  Principles of Economics 1
ECON 1110  Intermediate Microeconomics 1
SOC 1311  Micro-Organizational Theory: Social Behavior in Organizations 1
SOC 1315  Macro-Organizational Theory: Organizations in Social Context 1
ENGN 0020  Transforming Society-Technology and Choices for the Future 1
or ENGN 0030  Introduction to Engineering 1
ENGN 1010  The Entrepreneurial Process: Innovation in Practice 1

Math and Statistics Requirements
MATH 0090  Introductory Calculus, Part I 1

Track Requirements
ECON 1620  Introduction to Econometrics 1

One Data Methods-intensive course from the following list: 1
ECON 1310/1130  Labor Economics
ECON 1360  Health Economics
ECON 1390  Research Methods for Economists
ECON 1510  Economic Development
ECON 1520  The Economic Analysis of Institutions
ECON 1630  Econometrics I
ECON 1640  Econometrics II
ECON 1650  Financial Econometrics
ECON 1750  Investments II
ECON 1759  Data, Statistics, Finance
ECON 1765  Finance, Regulation, and the Economy: Research

One 1000-level economics course, including a second data methods intensive course from the list above
1 Capstone: one-semester required
1 Or an optional two-semester capstone from the BEO 1930 and 1940 series

Total Credits 15

Organizational Studies Track

Foundation Requirements
ECON 0110  Principles of Economics 1
ECON 1110  Intermediate Microeconomics 1
SOC 1311  Micro-Organizational Theory: Social Behavior in Organizations 1
SOC 1315  Macro-Organizational Theory: Organizations in Social Context 1
ENGN 0020  Transforming Society-Technology and Choices for the Future 1
or ENGN 0030  Introduction to Engineering 1
ENGN 1010  The Entrepreneurial Process: Innovation in Practice 1

Math and Statistics Requirements
MATH 0090  Introductory Calculus, Part I 1
SOC 1100  Introductory Statistics for Social Research 1
or APMA 0650  Essential Statistics 1
or ECON 1620  Introduction to Econometrics 1

Track Requirements
One Introduction to Research Methods course (selected from the following): 1
SOC 1050  Methods of Research in Organizations
SOC 1020  Methods of Social Research

One Advanced Research Methods course (selected from the following): 1
SOC 1120  Market and Social Surveys
SOC 1117  Focus Groups for Market and Social Research
SOC 1260  Market Research in Public and Private Sectors
SOC 1871F  Principles and Methods of Geographic Information Systems
SOC 2020  Multivariate Statistical Methods II
SOC 2220  Advanced Quantitative Methods of Sociology Analysis
SOC 2240  Event History Analysis

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
ANTH 1940 Ethnographic Research Methods
ANTH 1941 Context Research for Innovation
ECON 1390 Research Methods for Economists
ECON 1630 Econometrics I
EDUC 1100 Introduction to Qualitative Research Methods
EDUC 1160 Evaluating the Impact of Social Programs
PHP 1320 Survey Research in Health Care
PPAI 1200 Policy Analysis and Program Evaluation

One Advanced Organization Studies course (selected from the following):

One from:
- SOC 1060 Leadership in Organizations
- SOC 1080 Groups in Organizations
- SOC 1540 Human Needs and Social Services
- SOC 1870A Investing in Social Change
- SOC 1871M Theories of the Third Sector and Civil Society
- SOC 1871O Law, Innovation and Entrepreneurship
- SOC 2060 Complex Organizations and Health Policy
- SOC 2960M Sociology of Organizations Graduate Seminar
- CLPS 1730 Psychology in Business and Economics
- PPAI 1700V Nonprofit Organizations
- PPAI 1700Y Crisis Management
- PPAI 2550 Managing and Leading in Public Affairs

Two Organization-Relevant Electives (selected from the following):

Any from:
- SOC 1114 Law and Society
- SOC 1410 Aging and the Quality of Life
- SOC 1550 Sociology of Medicine
- SOC 1870L The Myth of Markets: Exploring the Social Side of Economics
- SOC 1871C Sociology of the Legal Profession
- AMST 1610A American Advertising: History and Consequences
- EDUC 1020 The History of American Education
- EDUC 1040 Sociology of Education
- EDUC 1150 Education, the Economy and School Reform
- EDUC 1200 History of American School Reform
- EDUC 1650 Policy Implementation in Education
- EDUC 1730 American Higher Education in Historical Context
- ETHN 1890C Business, Culture, and Globalization: An Ethnographic Perspective
- PHP 2400 The U.S. Health Care System: Case Studies in Financing, Delivery, Regulation and Public Health
- POLS 1150 Prosperity: The Ethics and Economics of Wealth Creation
- POLS 1240 Politics, Markets and States in Developing Countries
- POLS 1820W Market Liberalism: Origins, Principles and Contemporary Applications
- PPAI 1700B Social Welfare Policy in the United States
- PPAI 1700K Health Policy Challenges
- PPAI 1700R Urban Revitalization: Lessons from the Providence Plan
- PPAI 1701C Corporate Power and Global Order: Regulation and Policy in the Transnational Economic Sphere
- PPAI 1701D Aging and Public Policy: The Impact of an Aging Society on Public and Private Sector Organizations
- PPAI 1910 Social Entrepreneurship

Or an optional two-semester capstone from the BEO 1930 and 1940 series

Entrepreneurship and Technology Management Track

Foundation Requirements

- ECON 0110 Principles of Economics
- ECON 1110 Intermediate Microeconomics
- SOC 1311 Micro-Organizational Theory: Social Behavior in Organizations
- SOC 1315 Macro-Organizational Theory: Organizations in Social Context
- ENGN 0030 Introduction to Engineering
- ENGN 1010 The Entrepreneurial Process: Innovation in Practice

Math and Statistics Requirements

- MATH 0200 Intermediate Calculus (Physics/Engineering)
- or APMA 0330 Methods of Applied Mathematics I, II
- SOC 1100 Introductory Statistics for Social Research
- or APMA 0650 Essential Statistics
- or ECON 1620 Introduction to Econometrics

Track Requirements

One gateway course in Engineering or another physical science

Five courses that develop expertise in a technical subfield

Capstone: two-semesters required

For specific gateway and subfield courses, refer to the BEO website.

Technical subfields include Biotechnology/Biomaterials, Information Technology and Computer Engineering, Energy and the Environment, and others.

Chemical Physics

Chemical Physics is an interdisciplinary field at the crossroads of chemistry and physics and is administered jointly by the two departments. The concentration provides students with a broad-based understanding in fundamental molecular sciences, as well as a background for graduate studies in physical chemistry, chemical physics, or molecular engineering. Concentrators are required to take twenty courses in chemistry, physics, and mathematics, although approved courses in applied mathematics, biology, computer science, geological sciences, or engineering may be substitutes. Chemical Physics concentrators are also advised to take at least six courses in the humanities and social sciences. Chemical Physics concentrators at all levels (first-year through seniors) are actively involved in research with faculty members in both departments.

Standard program for the Sc.B. degree

Twenty-one semester courses in chemistry, physics, and mathematics, with a minimum of four semester courses in mathematics. Core courses are:

- CHEM 0330 Equilibrium, Rate, and Structure
- CHEM 0350 Organic Chemistry
- CHEM 0500 Inorganic Chemistry
- CHEM 1140 Physical Chemistry: Quantum Chemistry
- PHYS 0070 Analytical Mechanics
- PHYS 0160 Introduction to Relativity and Quantum Physics
- PHYS 0470 Electricity and Magnetism

Select one of the following laboratory courses:

- CHEM 1160 Physical Chemistry Laboratory
- PHYS 0560 Experiments in Modern Physics
- PHYS 1560 Modern Physics Laboratory

Select one course in statistical mechanics:

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
The required/recommended courses for the three tracks are given below.

## Concentrating in Chemistry – Three tracks

### Chemistry Track:
- CHEM 0330  Equilibrium, Rate, and Structure  
- CHEM 0350  Organic Chemistry  
- CHEM 0360  Organic Chemistry  
- CHEM 0500  Inorganic Chemistry  
- CHEM 0970  Undergraduate Research  
- CHEM 0980  Undergraduate Research  
- CHEM 1140  Physical Chemistry: Quantum Chemistry  
- CHEM 1150  Physical Chemistry: Thermodynamics and Statistical Mechanics  
- CHEM 1160  Physical Chemistry Laboratory  
- MATH 0180 or equivalent  
- Two Physics courses  
- Seven electives (at least three must be in Chemistry)  

### Chemical Biology Track:
- CHEM 0330  Equilibrium, Rate, and Structure  
- CHEM 0350  Organic Chemistry  
- CHEM 0360  Organic Chemistry  
- CHEM 0400  Biophysical and Bioinorganic Chemistry  
- CHEM 0970  Undergraduate Research  
- CHEM 0980  Undergraduate Research  
- CHEM 1140  Physical Chemistry: Quantum Chemistry  
- CHEM 1230  Chemical Biology  
- CHEM 1240  Biochemistry  
- BIOL 0280  Introductory Biochemistry  
- MATH 0180 or equivalent  
- Two Physics courses  
- Select three of the following:  
  - BIOL 0470  Genetics  
  - BIOL 0500  Cell and Molecular Biology  
  - BIOL 0510  Introductory Microbiology  
  - BIOL 0530  Principles of Immunology  
  - BIOL 0800  Principles of Physiology  
  - NEUR 1020  Principles of Neurobiology  
- Three other electives  

### Materials Chemistry Track:
- CHEM 0330  Equilibrium, Rate, and Structure  
- CHEM 0350  Organic Chemistry  
- CHEM 0360  Organic Chemistry  
- CHEM 0500  Inorganic Chemistry  
- CHEM 0970  Undergraduate Research  
- CHEM 0980  Undergraduate Research  
- CHEM 1060  Advanced Inorganic Chemistry  
- CHEM 1140  Physical Chemistry: Quantum Chemistry  
- CHEM 1150  Physical Chemistry: Thermodynamics and Statistical Mechanics  
- CHEM 1700  Nanoscale Materials: Synthesis and Applications  
- MATH 0180 or equivalent  
- Two Physics courses  
- BIOL 1090  Polymer Science for Biomaterials  
- Five electives, at least two must be chemistry courses  

### Standard program for the A.B. degree

- CHEM 0330  Equilibrium, Rate, and Structure  
- CHEM 0350  Organic Chemistry  
- CHEM 0360  Organic Chemistry  
- CHEM 0400  Biophysical and Bioinorganic Chemistry  
- CHEM 0970  Undergraduate Research  
- CHEM 0980  Undergraduate Research  
- CHEM 1140  Physical Chemistry: Quantum Chemistry  
- CHEM 1150  Physical Chemistry: Thermodynamics and Statistical Mechanics  
- CHEM 1160  Physical Chemistry Laboratory  
- Two Physics courses  
- Three other electives  

### Total Credits

1

1 Other approved courses in applied mathematics, biology, computer science, geological sciences, or engineering may be substituted for some of the twenty-one.

Students are advised to take at least six courses in the humanities and social sciences.

### Chemistry

The Chemistry concentration offers courses and research opportunities that range from fundamental studies involving the characterization and preparation of synthetic and naturally occurring molecules, to interdisciplinary studies at the interfaces of chemistry with biology, medicine, physics, engineering, and nanoscience. As early as their first year, undergraduates are able to work one-on-one or in small groups with faculty members on cutting edge research projects. The Sc.B. degree provides a thorough foundation for further graduate study or for entry-level technical positions in each area. Students seeking the Sc.B. may either pursue the standard Chemistry concentration or one of the two optional tracks: Chemical Biology or Materials Chemistry. Students may also pursue the A.B. degree in Chemistry, which provides a core education in the discipline.

### Standard program for the A.B. degree

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 0330</td>
<td>Equilibrium, Rate, and Structure</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 0350</td>
<td>Organic Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 0360</td>
<td>Organic Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 0500</td>
<td>Inorganic Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 1140</td>
<td>Physical Chemistry: Quantum Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 1150</td>
<td>Physical Chemistry: Thermodynamics and Statistical Mechanics</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 1160</td>
<td>Physical Chemistry Laboratory</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Two advanced science/math electives</td>
<td>2</td>
</tr>
<tr>
<td>Total Credits</td>
<td></td>
<td>9</td>
</tr>
</tbody>
</table>

1 Note that the physical chemistry courses (CHEM 1140, CHEM 1150, CHEM 1160) have mathematics and physics prerequisites.

2 At least one must be a chemistry course. BIOL 0280 is credited as an elective for the chemistry concentration.

### Standard program for the Sc.B. degree

The Chemistry Department offers three tracks for the Sc.B. Chemistry Concentration – a Chemistry track, a Chemical Biology track and a Materials Chemistry track. These tracks are not separate concentrations – your degree will still be an Sc.B. in Chemistry. The Chemical Biology track is designed for students who have a strong interest in the interface of chemistry with biology. The Materials Chemistry track is designed for students who have a strong interest in the interface of chemistry with nanoscience and materials science.

**Concentrating in Chemistry – Three tracks**

The required/recommended courses for the three tracks are given below.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1150</td>
<td>Physical Chemistry: Thermodynamics and Statistical Mechanics</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 1530</td>
<td>Thermodynamics and Statistical Mechanics</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0190</td>
<td>Advanced Placement Calculus (Physics/Engineering)</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0200</td>
<td>Intermediate Calculus (Physics/Engineering)</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0520</td>
<td>Linear Algebra</td>
<td>1</td>
</tr>
<tr>
<td>Seven courses, primarily at the 1000 or 2000 level, in chemistry or physics.</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Select two semesters of independent study:</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>CHEM</td>
<td>Undergraduate Research</td>
<td></td>
</tr>
<tr>
<td>PHYS 0970/0980</td>
<td>Senior Conference Course</td>
<td></td>
</tr>
<tr>
<td>Total Credits</td>
<td></td>
<td>21</td>
</tr>
</tbody>
</table>

1 Other approved courses in applied mathematics, biology, computer science, geological sciences, or engineering may be substituted for some of the twenty-one.

Students are advised to take at least six courses in the humanities and social sciences.

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For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Classics

Classics focuses on the languages, literature, history, and culture of Greco-Roman antiquity. It provides specialized training for students intending to enter graduate school, and a broad liberal education for those with more general interests. Students may choose to study Ancient Greek, Latin, Sanskrit, or Modern Greek and gain knowledge in literature, mythology, ancient history, philosophy, and religion. Students may either pursue the standard Classics concentration - the most popular choice - or they may pursue one of the four optional tracks: Greek, Latin, and Sanskrit. Concentrators are strongly encouraged to integrate their studies in various fields of Classics by writing a senior thesis, by participating in an undergraduate seminar, or by undertaking a senior capstone project. All tracks except "Greek and Latin" and "Sanskrit" require the satisfactory completion of eight courses as described below. Programs are flexible and students are encouraged to discuss their plans with the concentration advisor. The introductory courses in Greek and Latin may not usually be counted toward a concentration.

Classics

One course in Greek or Latin on the 1000-level or above. 1
Select one of the following series: 2
CLAS 1210 & CLAS 1220 Death of Alexander and The History of Greece from Archaic Times to
CLAS 1310 & CLAS 1320 Roman History I: The Rise and Fall of an Imperial

Five other courses in classics, including classical archaeology, Greek, Latin, Sanskrit, or related areas to be approved by the concentration advisor. 5

Total Credits 8

Greek

Four Greek courses on the 1000-level or above, at least one of which is to be: 4
GREK 1810 Early Greek Literature or GREK 1820 Fifth Century Survey
CLAS 1210 The History of Greece from Archaic Times to the Death of Alexander
CLAS 1220 The History of Greece from Archaic Times to The Death of Alexander

Two additional courses in classics, including classical archaeology, Greek, Latin, or related areas to be approved by the concentration advisor. 2

Total Credits 8

Latin

Four Latin courses on the 1000-level or above, at least one of which is to be: 4
LATN 1810 or LATN 1820 Survey of Republican Literature or Survey of Roman Literature II: Empire
CLAS 1310 Roman History I: The Rise and Fall of an Imperial Republic
CLAS 1320 Roman History II: The Roman Empire and Its Impact

Two additional courses in classics, including classical archaeology, Greek, Latin, or related areas to be approved by the concentration advisor. 2

Total Credits 8

Greek and Latin

Four Latin courses on the 1000-level or above, at least one of which is to be: 4
LATN 1810 or LATN 1820 Survey of Republican Literature or Survey of Roman Literature II: Empire
Four Greek courses on the 1000-level or above, at least one of which is to be: 4
GREK 1810 Early Greek Literature or GREK 1820 Fifth Century Survey
CLAS 1210 The History of Greece from Archaic Times to the Death of Alexander
CLAS 1220 The History of Greece from Archaic Times to The Death of Alexander
CLAS 1310 Roman History I: The Rise and Fall of an Imperial Republic
CLAS 1320 Roman History II: The Roman Empire and Its Impact

Total Credits 12

Sanskrit 1

Four 1000-level courses in Sanskrit. 4
The requirements for Classics, Greek, or Latin with the provision that courses in Sanskrit beyond the first four may count towards the "five other courses" required of concentrators in Classics, or the "two additional courses" required of concentrators in Greek and of concentrators in Latin. 8

Total Credits 12

1 Students interested in Sanskrit may compare the concentration in South Asian Studies - Ancient India.

Honors

Students may earn honors in the concentration by presenting a satisfactory thesis, for the preparation of which they will ordinarily enroll in the relevant 1970 and 1990 courses; these courses may not be used to satisfy the standard requirements for a concentration. In order to qualify for honors, students must maintain a B average overall.

Cognitive Neuroscience

Cognitive neuroscience is the study of higher cognitive functions in humans and their underlying neural bases. It is an integrative area of study drawing primarily from cognitive science, psychology, neuroscience, and linguistics. There are two broad directions that can be taken in this concentration - one is behavioral/experimental and the other is computational/modeling. In both, the goal is to understand the nature of cognition from a neural perspective. The standard concentration for the Sc.B. degree requires courses on the foundations, systems level, and integrative aspects of cognitive neuroscience as well as laboratory and elective courses that fit within a particular theme or category such as general cognition, vision, language or computational/modeling.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Concentrators must also complete a senior seminar course or an independent research course. Students may also participate in the work of the Brown Institute for Brain Science, an interdisciplinary program that unites ninety faculty from eleven departments.

**Standard program for the ScB degree**

**Concentration Courses**

A total of 16 courses are required for the concentration. Each student is required to pass 9 courses designed to introduce students to the foundations (5), systems level and integrative aspects (4) which uniquely define cognitive neuroscience; two laboratory courses; four elective courses; and either a senior seminar course CLPS 1900 or an independent research course. The laboratory and elective courses should fit within a particular theme or category such as general cognition, vision, language, or computational/modeling. The design of the concentration and selection of courses should be made in consultation with the faculty advisor.

**Foundation Courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 0200</td>
<td>The Foundation of Living Systems</td>
<td>1</td>
</tr>
<tr>
<td>CLPS 0200</td>
<td>Human Cognition (formerly COGS 0420)</td>
<td>1</td>
</tr>
<tr>
<td>Select one of the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLPS 0900</td>
<td>Quantitative Methods in Psychology (formerly COGS/PSYC 0900)</td>
<td>1</td>
</tr>
<tr>
<td>APMA 1650</td>
<td>Statistical Inference I</td>
<td>1</td>
</tr>
<tr>
<td>CLPS 2906</td>
<td>Experimental Design (formerly PSYC 2060)</td>
<td></td>
</tr>
<tr>
<td>MATH 0090</td>
<td>Introductory Calculus, Part I (or equivalent)</td>
<td>1</td>
</tr>
<tr>
<td>NEUR 0010</td>
<td>The Brain: An Introduction to Neuroscience</td>
<td>1</td>
</tr>
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</table>

**Systems Level and Integrative Courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CLPS 0400</td>
<td>Mind and Brain: Introduction to Cognitive Neuroscience (formerly COGS 0720)</td>
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</tr>
<tr>
<td>CLPS 0470</td>
<td>Brain Damage and the Mind (formerly PSYC 0470)</td>
<td>1</td>
</tr>
<tr>
<td>CLPS 1291</td>
<td>Computational Cognitive Science</td>
<td>1</td>
</tr>
<tr>
<td>CLPS 1492</td>
<td>Computational Cognitive Neuroscience (formerly COGS 1460)</td>
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<tr>
<td>or APMA 0410</td>
<td>Mathematical Methods in the Brain Sciences</td>
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<tr>
<td>NEUR 1030</td>
<td>Neural Systems</td>
<td>1</td>
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**Laboratory Courses (select two):**

<table>
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<tr>
<th>Course</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>CLPS 1192</td>
<td>Experimental Analysis of Animal Behavior and Cognition (formerly PSYC 1200)</td>
<td>2</td>
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<tr>
<td>CLPS 1193</td>
<td>Laboratory in Genes and Behavior (formerly PSYC 1040)</td>
<td>2</td>
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<tr>
<td>CLPS 1290</td>
<td>Laboratory in Cognitive Processes (formerly COGS 1530)</td>
<td>2</td>
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<tr>
<td>CLPS 1490</td>
<td>Functional Magnetic Resonance Imaging: Theory and Practice (formerly PSYC 1840)</td>
<td>2</td>
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<tr>
<td>CLPS 1491</td>
<td>Neural Modeling Laboratory (formerly COGS 1020)</td>
<td>2</td>
</tr>
<tr>
<td>CLPS 1510</td>
<td>Psychology of Hearing (formerly PSYC 1190)</td>
<td>2</td>
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<tr>
<td>CLPS 1690</td>
<td>Laboratory in Developmental Psychology (formerly COGS 1610)</td>
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<tr>
<td>CLPS 1791</td>
<td>Laboratory in Social Cognition (formerly PSYC 1540)</td>
<td>2</td>
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<tr>
<td>CLPS 1890</td>
<td>Laboratory in Psycholinguistics (formerly COGS 1450)</td>
<td>2</td>
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<tr>
<td>CLPS 1891</td>
<td>Research Methods in Physiologic and Acoustic Phonetics (formerly COGS 1240)</td>
<td>2</td>
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<tr>
<td>CLPS 1970</td>
<td>Directed Reading in Cognitive, Linguistic and Psychological Sciences (formerly COGS 1980)</td>
<td>2</td>
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<tr>
<td>NEUR 1970</td>
<td>Independent Study</td>
<td>2</td>
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<tr>
<td>NEUR 1600</td>
<td>Experimental Neurobiology</td>
<td>2</td>
</tr>
<tr>
<td>NEUR 1650</td>
<td>Structure of the Nervous System</td>
<td>2</td>
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<td>NEUR 1670</td>
<td>Neuropsychology and Synaptic Transmission</td>
<td>2</td>
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<tr>
<td>NEUR 1680</td>
<td>Computational Neuroscience</td>
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**Electives:**

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<tr>
<th>Course</th>
<th>Title</th>
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<tr>
<td>CLPS 0040</td>
<td>Mind and Brain: Introduction to Cognitive Neuroscience (formerly COGS 0720)</td>
</tr>
<tr>
<td>CLPS 0210</td>
<td>Human Thinking and Problem-Solving (formerly COGS 0480)</td>
</tr>
<tr>
<td>CLPS 0220</td>
<td>Making Decisions (formerly COGS 0500)</td>
</tr>
<tr>
<td>CLPS 0410</td>
<td>Principles of Behavioral Neuroscience (formerly PSYC 0750)</td>
</tr>
<tr>
<td>CLPS 0500</td>
<td>Perception and Mind (formerly COGS/PSYC 0440)</td>
</tr>
<tr>
<td>CLPS 0600</td>
<td>Child Development (formerly PSYC 0810)</td>
</tr>
<tr>
<td>CLPS 0610</td>
<td>Children’s Thinking: The Nature of Cognitive Development (formerly COGS 0630)</td>
</tr>
<tr>
<td>CLPS 0800</td>
<td>Language and the Mind (formerly COGS 0450)</td>
</tr>
<tr>
<td>CLPS 1100</td>
<td>Animal Cognition (formerly PSYC 1800)</td>
</tr>
<tr>
<td>CLPS 1130</td>
<td>Psychology of Timing (formerly PSYC 1790)</td>
</tr>
<tr>
<td>CLPS 1140</td>
<td>Psychophysiology of Sleep and Dreams (formerly PSYC 1020)</td>
</tr>
<tr>
<td>CLPS 1150</td>
<td>Memory and the Brain</td>
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<tr>
<td>CLPS 1180B</td>
<td>Biology of Communication (formerly PSYC 1750A)</td>
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<tr>
<td>CLPS 1200</td>
<td>Thinking (formerly COGS 1520)</td>
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<tr>
<td>CLPS 1210</td>
<td>Human Memory and Learning (formerly COGS 1560)</td>
</tr>
<tr>
<td>CLPS 1220</td>
<td>Concepts and Categories (formerly COGS 1870)</td>
</tr>
<tr>
<td>CLPS 1230</td>
<td>Seminar in Decision Making (formerly COGS 1860Y)</td>
</tr>
<tr>
<td>CLPS 1240</td>
<td>Reasoning and Problem Solving (formerly COGS 1880)</td>
</tr>
<tr>
<td>CLPS 1241</td>
<td>Causal Reasoning (formerly COGS 1860C)</td>
</tr>
<tr>
<td>CLPS 1320</td>
<td>The Production, Perception, and Analysis of Speech (formerly COGS 1230)</td>
</tr>
<tr>
<td>CLPS 1470</td>
<td>Mechanisms of Motivated Decision Making</td>
</tr>
<tr>
<td>CLPS 1480C</td>
<td>Cognitive Control Functions of the Prefrontal Cortex</td>
</tr>
<tr>
<td>CLPS 1500</td>
<td>Ecological Approach to Perception and Action (formerly COGS 1380)</td>
</tr>
<tr>
<td>CLPS 1510</td>
<td>Psychology of Hearing (formerly PSYC 1190)</td>
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<tr>
<td>CLPS 1520</td>
<td>Computational Vision</td>
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<tr>
<td>CLPS 1530</td>
<td>3D Shape Perception (formerly COGS 1860B)</td>
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<tr>
<td>CLPS 1570</td>
<td>Perceptual Learning</td>
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<tr>
<td>CLPS 1590</td>
<td>Visualizing Vision (formerly COGS 1440)</td>
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<tr>
<td>CLPS 1610</td>
<td>Cognitive Development (formerly COGS 1180)</td>
</tr>
<tr>
<td>CLPS 1611</td>
<td>Cognitive Development in Infancy (formerly COGS 1620)</td>
</tr>
<tr>
<td>CLPS 1620</td>
<td>Developmental Cognitive Neuroscience (formerly COGS 1190)</td>
</tr>
<tr>
<td>CLPS 1650</td>
<td>Child Language Acquisition (formerly COGS 1430)</td>
</tr>
<tr>
<td>CLPS 1800</td>
<td>Language Processing (formerly COGS 1410)</td>
</tr>
<tr>
<td>CLPS 1810</td>
<td>Syntactic Theory and Syntactic Processing (formerly COGS 1420)</td>
</tr>
<tr>
<td>CLPS 1820</td>
<td>Language and the Brain (formerly COGS 1480)</td>
</tr>
<tr>
<td>CLPS 1821</td>
<td>Neuroimaging and Language (formerly COGS 1840B)</td>
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<tr>
<td>NEUR 0650</td>
<td>Biology of Hearing</td>
</tr>
<tr>
<td>NEUR 1680</td>
<td>Computational Neuroscience</td>
</tr>
<tr>
<td>NEUR 1740</td>
<td>The Diseased Brain: Mechanisms of Neurological and Psychiatric Disorders</td>
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<tr>
<td>NEUR 1930A</td>
<td>Cognitive Neuroscience: Motor Learning</td>
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<tr>
<td>NEUR 1930B</td>
<td>From Neurophysiology to Perception</td>
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<tr>
<td>NEUR 1930F</td>
<td>Brain Interfaces for Humans</td>
</tr>
<tr>
<td>NEUR 1940D</td>
<td>Higher Cortical Function</td>
</tr>
</tbody>
</table>

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
I. Standard program for the A.B. degree: 13 courses

We recommend that prospective concentrators register for one student to engage in a specific research project in the focus area of their wish to develop a stronger background in Cognitive Science and requires studying human mental processes and acquiring a research orientation and Philosophy. The A.B. program is primarily for students interested in fields including Anthropology, Applied Math, Education, Neuroscience, Linguistic, and Psychological Sciences department with a diverse subset focus area of study, potentially integrating coursework from the Cognitive, relevant to Cognitive Science research. Students then create their own language, and cognitive neuroscience, as well as a set of methods as perception, action, memory, cognition, speech, and language, as well as the development and evolution of those processes. Students must become knowledgeable in four areas of emphasis: perception, cognition, language, and cognitive neuroscience, as well as a set of methods relevant to Cognitive Science research. Students then create their own focus area of study, potentially integrating coursework from the Cognitive, Linguistic, and Psychological Sciences department with a diverse subset of fields including Anthropology, Applied Math, Education, Neuroscience, and Philosophy. The A.B. program is primarily for students interested in studying human mental processes and acquiring a research orientation to the study of the mind. The Sc.B. program is designed for students who wish to develop a stronger background in Cognitive Science and requires students to engage in a specific research project in the focus area of their choosing. We recommend that prospective concentrators register for one of the gateway courses and at least one other core course in their first or second year.

I. Standard program for the A.B. degree: 13 courses

<table>
<thead>
<tr>
<th>Primarily Computational/Modeling:</th>
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<tbody>
<tr>
<td>APMA 1360 Topics in Chaotic Dynamics</td>
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<tr>
<td>CLPS 1291 Computational Cognitive Science</td>
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<tr>
<td>CLPS 1470 Mechanisms of Motivated Decision Making</td>
<td></td>
</tr>
<tr>
<td>CLPS 1492 Computational Cognitive Neuroscience (formerly COGS 1460)</td>
<td></td>
</tr>
<tr>
<td>CLPS 1550 The Psychology of Aversion (formerly PSYC 1520)</td>
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<tr>
<td>CSCI 1410 Introduction to Artificial Intelligence</td>
<td></td>
</tr>
<tr>
<td>CSCI 1430 Introduction to Computer Vision</td>
<td></td>
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<tr>
<td>CSCI 1460 Introduction to Computational Linguistics</td>
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<tr>
<td>CSCI 1480 Building Intelligent Robots</td>
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<tr>
<td>CSCI 1950A Computational Modeling and Algorithmic Thinking</td>
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<tr>
<td>ENGN 1220 Neuroengineering</td>
<td></td>
</tr>
<tr>
<td>ENGN 1610 Image Understanding</td>
<td></td>
</tr>
<tr>
<td>NEUR 1680 Computational Neuroscience</td>
<td></td>
</tr>
</tbody>
</table>

One senior seminar course CLPS 1900 or an independent research course. 1

Total Credits 16

1 Note: Students wishing to pursue a computational/modeling track are encouraged to take APMA 1650.
2 Please note that due to enrollment limits in some lab courses, priority may be given to concentrators in that department. Students should therefore be prepared to choose from the other laboratory options.
3 May be used for only one laboratory credit
4 Normally only one elective course that is below the 1000-level may count towards the elective courses required. An appropriate (but additional) laboratory course may be used in lieu of one of the four elective courses. Appropriate Topics course offerings (not listed above) may also count as electives with the approval of the concentration advisor.
5 Students are advised to take APMA 0330 (Methods of Applied Analysis I) and APMA 0340 (Methods of Applied Analysis II) as their two supporting science courses. Note that MATH 0100 is a prerequisite for these courses. See CLPS listings (above) for other computational/modeling courses. See CLPS topics listing for other computational/modeling courses.

Honors
Students who would like to pursue a degree with honors are normally expected to have half of their grades as A (or equivalent) within the concentration and are required to satisfactorily complete a written thesis and an oral presentation.

Cognitive Science
The field of Cognitive Science uses scientific methods of experimentation, computational modeling, and brain imaging to study mental abilities such as perception, action, memory, cognition, speech, and language, as well as the development and evolution of those processes. Students must become knowledgeable in four areas of emphasis: perception, cognition, language, and cognitive neuroscience, as well as a set of methods relevant to Cognitive Science research. Students then create their own focus area of study, potentially integrating coursework from the Cognitive, Linguistic, and Psychological Sciences department with a diverse subset of fields including Anthropology, Applied Math, Education, Neuroscience, and Philosophy. The A.B. program is primarily for students interested in studying human mental processes and acquiring a research orientation to the study of the mind. The Sc.B. program is designed for students who wish to develop a stronger background in Cognitive Science and requires students to engage in a specific research project in the focus area of their choosing. We recommend that prospective concentrators register for one of the gateway courses and at least one other core course in their first or second year.

I. Standard program for the A.B. degree: 13 courses

<table>
<thead>
<tr>
<th>Gateway</th>
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<tbody>
<tr>
<td>CLPS 020 Approaches to the Mind: Introduction to Cognitive Science (formerly COGS 0010) (or alternative, with permission of Concentration Advisor)</td>
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Required core courses

<table>
<thead>
<tr>
<th>CORE IN COGNITION</th>
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<tbody>
<tr>
<td>CLPS 0200 Human Cognition (formerly COGS 0420)</td>
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<table>
<thead>
<tr>
<th>CORE IN LINGUISTICS</th>
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<tbody>
<tr>
<td>CLPS 0030 Introduction to Linguistic Theory (formerly COGS 0410)</td>
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<table>
<thead>
<tr>
<th>CORE IN PERCEPTION</th>
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<tbody>
<tr>
<td>CLPS 0500 Perception and Mind (formerly COGS/PSYC 0440)</td>
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</table>

Select one of the following: 1

<table>
<thead>
<tr>
<th>CORE IN COGNITIVE NEUROSCIENCE</th>
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<tbody>
<tr>
<td>NEUR 0010 The Brain: An Introduction to Neuroscience</td>
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<tr>
<td>CLPS 0040 Mind and Brain: Introduction to Cognitive Neuroscience (formerly COGS 0720)</td>
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Required courses in skills and methodology

One Experimental Laboratory such as: 1

<table>
<thead>
<tr>
<th>One Basic Computational Course such as:</th>
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<tr>
<td>CLPS 1090 Research Methods in Psychology (formerly PSYC 1090)</td>
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<tr>
<td>CLPS 1190 Techniques in Physiological Psychology (formerly PSYC 1030)</td>
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<tr>
<td>CLPS 1290 Laboratory in Cognitive Processes (formerly COGS 1530)</td>
<td></td>
</tr>
<tr>
<td>CLPS 1490 Functional Magnetic Resonance Imaging: Theory and Practice (formerly PSYC 1840)</td>
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<tr>
<td>CLPS 1590 Visualizing Vision (formerly COGS 1440)</td>
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<tr>
<td>CLPS 1690 Laboratory in Developmental Psychology (formerly COGS 1610)</td>
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<tr>
<td>CLPS 1890 Laboratory in Psycholinguistics (formerly COGS 1450)</td>
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One Basic Computational Course such as: 1

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<thead>
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<th>One course in Statistical Analysis such as:</th>
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<tr>
<td>CLPS 0900 Quantitative Methods in Psychology (formerly COGS/PSYC 0090)</td>
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<tr>
<td>APMA 1650 Statistical Inference I</td>
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Required Capstone

| CLPS 1900 Senior Seminar in Cognitive Science (formerly COGS 1950) | 1 |

Electives 2

Choose four from the following:

<table>
<thead>
<tr>
<th>Electives 2</th>
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<tbody>
<tr>
<td>ANTH 1800 Sociolinguistics, Discourse and Dialogue</td>
<td></td>
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<tr>
<td>APMA 1360 Topics in Chaotic Dynamics</td>
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<tr>
<td>APMA 1650 Statistical Inference I</td>
<td></td>
</tr>
<tr>
<td>APMA 1660 Statistical Inference II</td>
<td></td>
</tr>
<tr>
<td>APMA 1670 Statistical Analysis of Time Series</td>
<td></td>
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<tr>
<td>APMA 1680 Nonparametric Statistics</td>
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<tr>
<td>APMA 1690 Computational Probability and Statistics</td>
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<tr>
<td>BIOL 0480 Evolutionary Biology</td>
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</tr>
<tr>
<td>NEUR 0650 Biology of Hearing</td>
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</tbody>
</table>

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
PHIL 1630  Mathematical Logic  
PHIL 1690  The Problem of Free Will  
PHIL 1700  British Empiricists  
PHIL 1750  Epistemology  
PHIL 1760  Philosophy of Language  
PHIL 1770  Philosophy of Mind  
PHIL 1780  Philosophy of Biology  
PHIL 1880  Advanced Deductive Logic

Total Credits 13

1 Note: Students cannot use an AP Statistics course in lieu of this requirement. APMA0650 and SOC 1100 will not fulfill this requirement.

2 In most cases, electives must be at the 1000-level and must show coherence and provide the concentrator with depth in one or more focus areas. Only one course below the 1000-level can be included in this list, and only with permission of the concentration advisor. Students are strongly encouraged to work out their program of electives with the concentration advisor.

II. Standard program for the Sc.B. degree: 18 Courses

Gateway:
- CLPS 0020  Approaches to the Mind: Introduction to Cognitive Science (formerly COGS 0010) (or alternative, with permission of the Concentration Advisor)

Require Core Courses:
- CORE IN COGNITION
  - CLPS 0200  Human Cognition (formerly COGS 0420)
- CORE IN LINGUISTICS
  - CLPS 0030  Introduction to Linguistic Theory (formerly COGS 0410)
- CORE IN PERCEPTION
  - CLPS 0500  Perception and Mind (formerly COGS/PSYC 0440)

Select one of the following:
- 1

CORE IN COGNITIVE NEUROSCIENCE
- NEUR 0010  The Brain: An Introduction to Neuroscience
- CLPS 0040  Mind and Brain: Introduction to Cognitive Neuroscience (formerly COGS 0720)

Required courses in skills and methodology:
One Experimental Laboratory course such as:
- CLPS 0190  Research Methods in Psychology (formerly PSYC 1090)
- CLPS 1190  Techniques in Physiological Psychology (formerly PSYC 1030)
- CLPS 1192  Experimental Analysis of Animal Behavior and Cognition (formerly PSYC 1200)
- CLPS 1290  Laboratory in Cognitive Processes (formerly COGS 1530)
- CLPS 1490  Functional Magnetic Resonance Imaging: Theory and Practice (formerly PSYC 1840)
- CLPS 1590  Visualizing Vision (formerly COGS 1440)
- CLPS 1690  Laboratory in Developmental Psychology (formerly COGS 1610)
- CLPS 1890  Laboratory in Psycholinguistics (formerly COGS 1450)

One Basic Computation Course such as:
- CLPS 1291  Computational Cognitive Science
- CLPS 1491  Neural Modeling Laboratory (formerly COGS 1020)
- CLPS 1492  Computational Cognitive Neuroscience (formerly COGS 1460)
- CSCI 0040  Introduction to Scientific Computing and Problem Solving
- CSCI 0150  Introduction to Object-Oriented Programming and Computer Science
Undergraduate Concentrations

Choose four from the following:

Electives

ANTH 0800  Sound and Symbols: Introduction to Linguistic Anthropology

ANTH 1800  Sociolinguistics, Discourse and Dialogue

APMA 1650  Probability I

APMA 1660  Probability II

APMA 1670  Probability and Statistics

APMA 1680  Nonparametric Statistics

APMA 1690  Computational Probability and Statistics

Biol 0480  Evolutionary Biology

NEUR 0650  Biology of Hearing

NEUR 1030  Neural Systems

NEUR 1040  Developmental Neurobiology

NEUR 1660  Neural Basis of Cognition

NEUR 1680  Computational Neuroscience

CLPS 0100  Learning and Conditioning (formerly PSYC 0900)

CLPS 0210  Human Thinking and Problem-Solving (formerly COGS 0480)

CLPS 0220  Making Decisions (formerly COGS 0500)

CLPS 0400  Brain Damage and the Mind (formerly PSYC 0470)

CLPS 0510  Perception, Illusion, and the Visual Arts (formerly COGS 0110)

CLPS 0530  Making Visual Illusions

CLPS 0600  Child Development (formerly PSYC 0810)

CLPS 0610  Children’s Thinking: The Nature of Cognitive Development (formerly COGS 0630)

CLPS 0800  Language and the Mind (formerly COGS 0450)

CLPS 1100  Animal Cognition (formerly PSYC 1800)

CLPS 1130  Psychology of Timing (formerly PSYC 1790)

CLPS 1200  Thinking (formerly COGS 1520)

CLPS 1210  Human Memory and Learning (formerly COGS 1560)

CLPS 1211  Human and Machine Learning (formerly COGS 1680)

CLPS 1220  Concepts and Categories (formerly COGS 1870)

CLPS 1240  Reasoning and Problem Solving (formerly COGS 1880)

CLPS 1241  Causal Reasoning (formerly COGS 1860C)

CLPS 1400  The Neural Bases of Cognition (formerly PSYC 1880)

CLPS 1470  Mechanisms of Motivated Decision Making

CLPS 1500  Ecological Approach to Perception and Action (formerly COGS 1380)

CLPS 1510  Psychology of Hearing (formerly PSYC 1190)

CLPS 1520  Computational Vision

CLPS 1530  3D Shape Perception (formerly COGS 1860B)

CLPS 1540  Human Factors (formerly COGS 1160)

CLPS 1600  History and Theories of Child Development (EDUC 1710)

CLPS 1610  Cognitive Development (formerly COGS 1180)

CLPS 1611  Cognitive Development in Infancy (formerly COGS 1620)

CLPS 1620  Developmental Cognitive Neuroscience (formerly COGS 1190)

CLPS 1621  The Developing Brain (formerly PSYC 1750C)

CLPS 1630  Perceptual Development

CLPS 1650  Child Language Acquisition (formerly COGS 1430)

CLPS 1730  Psychology in Business and Economics

CLPS 1800  Language Processing (formerly COGS 1410)

CLPS 1810  Syntactic Theory and Syntactic Processing (formerly COGS 1420)

CLPS 1820  Language and the Brain (formerly COGS 1480)

CLPS 1821  Neuroimaging and Language (formerly COGS 1840B)

CLPS 1970  Directed Reading in Cognitive, Linguistic and Psychological Sciences (formerly COGS 1980)

Most topics in courses in CLPS (See Concentration Advisor for details)

CSCI 0220  Introduction to Discrete Structures and Probability

CSCI 0510  Models of Computation

CSCI 1230  Introduction to Computer Graphics

CSCI 1410  Introduction to Artificial Intelligence

CSCI 1480  Building Intelligent Robots

EDUC 1260  Emotion, Cognition, Education

EDUC 1270  Adolescent Psychology

ENGN 1220  Neuroengineering

ENGN 1570  Linear System Analysis

ENGN 1580  Communication Systems

ENGN 1610  Image Understanding

PHIL 1520  Consciousness

PHIL 1550  Decision Theory: Foundations and Applications

PHIL 1590  Philosophy of Science

PHIL 1630  Mathematical Logic

PHIL 1690  The Problem of Free Will

PHIL 1700  British Empiricists

PHIL 1750  Epistemology

PHIL 1760  Philosophy of Language

PHIL 1770  Philosophy of Mind

PHIL 1780  Philosophy of Biology

PHIL 1880  Advanced Deductive Logic

At least one semester of Independent Study CLPS 1970, OR participation in a directed reading related to Cognitive Sciences (CLPS 1980) OR participation in an ISP or GISP related to Cognitive Science (subject to approval from the concentration advisor). See Section IV for more details.

A coherent program of at least four (4) additional courses in the life sciences (e.g., cognitive science, psychology, or biology), physical sciences, mathematics, and/or applied mathematics that supports the student’s area(s) of study.

Total Credits 18

III. Degrees with Honors

Students interested in honors under either the A.B. or ScB. programs should identify a faculty honors sponsor and sign up with the concentration advisor during Semester 6. Although there is no minimum grade point average to enter the program, admission to the program is limited to students who have accumulated a strong academic record and is at the discretion of the department. It is expected that honors candidates will conduct a year-long research project under the direction of a faculty sponsor in the CLPS department culminating in a written thesis and oral examination at the end of Semester 8. Students doing honors work must enroll for CLPS 1970 or for two terms, typically in semesters 7 and 8.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
IV. Independent Study

Independent Study is encouraged for the A.B. degree and required for the Sc.B. degree. Students should sign up for CLPS 1970 or CLPS 1980 with a faculty advisor who is a member of the CLPS Department. Arrangements should be made in Semester 6 for students expecting to do independent study during Semesters 7 and/or 8. CLPS1970 or CLPS1980 can count as electives for the concentration requirements.

Cognitive Science concentrators may use at most two credits of CLPS 1970 or CLPS 1980 towards their degree. Students in the A.B. program can use these two credits to satisfy electives. Students in the Sc.B. program must use one of these credits to satisfy the Independent Study requirement (Requirement B in Section II above), and may use the second to satisfy an elective or one of the four additional courses (Requirement C in Section II).

V. Comments

Both the A.B. and the Sc.B. programs in Cognitive Science reflect recent national trends in the field and the breadth of the course offerings and faculty research interests at Brown. A broadly trained cognitive scientist must possess certain methodological skills, including knowledge of computational methods and research methods (statistics and laboratory techniques), which are incorporated in our skills and methodology requirement. In addition, a cognitive scientist must be conversant in the four major focus areas studied in the field: perception, cognition, languages and cognitive neuroscience. Electives ensure that concentrators have the opportunity to investigate at least one particular area in depth. Finally, the concentration provides an integrative experience to all of its concentrators through the capstone senior seminar. The program is designed to provide the flexibility for each student to design a program that will meet her/his needs and interests.

The Sc.B. program is designed for students who wish to bring a stronger background in general science and a research orientation to their study of cognitive science. Sc.B. candidates must also acquire first-hand experience in doing cognitive science research through an independent study project.

Community Health

Community Health is an interdisciplinary concentration through which students examine a variety of issues, including population health and disease, health policy, cross-cultural and international aspects of health, the organizational and social structures through which health services are delivered and received, and the public health system. Courses in the concentration allow students to explore the ways in which the social, political, behavioral and biological sciences contribute to the understanding of patterns of population distributions of health and disease. The concentration also provides students with courses in basic research methodology requirement. In addition, a cognitive scientist must be conversant in the four major focus areas studied in the field: perception, cognition, languages and cognitive neuroscience. Electives ensure that concentrators have the opportunity to investigate at least one particular area in depth. Finally, the concentration provides an integrative experience to all of its concentrators through the capstone senior seminar. The program is designed to provide the flexibility for each student to design a program that will meet her/his needs and interests.

The Sc.B. program is designed for students who wish to bring a stronger background in general science and a research orientation to their study of cognitive science. Sc.B. candidates must also acquire first-hand experience in doing cognitive science research through an independent study project.

Environmental Health and Policy Electives (Students must select one of the following):

- PHP 1700 Current Topics in Environmental Health
- BIOL 1820 Environmental Health and Disease
- ENVS 0410 Environmental Stewardship
- ENVS 1410 Environmental Law and Policy
- ENVS 1710 Environmental Health and Policy
- ENVS 1720 Environmental Justice: The Science and Political Economy of Environmental Health and Social Justice
- ETHN 1890J Native American Environmental Health Movements

U.S. Health Care Organization and Policy Electives (Students must select one of the following):

- PHP 1520 Emergency Medical Systems: An Anatomy of Critical Performance
- PHP 1530 Case Studies in Public Health: The Role of Governments, Communities and Professions
- ECON 1360 Health Economics
- SOC 1315 Macro-Organizational Theory: Organizations in Social Context
- SOC 1540 Human Needs and Social Services
- SOC 1550 Sociology of Medicine

Global Health Electives (Students must select one of the following courses):

- PHP 1070 The Burden of Disease in Developing Countries
- PHP 1100 Comparative Health Care Systems
- PHP 1500 Global Health Nutrition
- ANTH 0300 Culture and Health
- ANTH 1020 AIDS in Global Perspective
- ANTH 1310 International Health: Anthropological Perspectives
- HMAN 1970G International Perspectives on NGOs, Public Health, and Health Care Inequalities

Social and Behavioral Science for Prevention Electives (Students must select one of the following):

- PHP 1010 Doctors and Patients - Clinical Communication in Medicine
- PHP 1400 HIV/AIDS in Africa: A Multidisciplinary Approach to Support HIV/AIDS Care and Treatment Programs
- PHP 1540 Alcohol Use and Misuse
- PHP 1600 Obesity in the 21st Century: Causes, Consequences and Countermeasures
- PHP 1680N Tobacco, Smoking, and the Evil Empire
- PHP 1680T Translation, Diffusion and Cultural Relevance of Health Promotion Interventions
- PHP 1740 Principles of Health Behavior and Health Promotion Interventions
- PHP 1920 Social Determinants of Health
- PHP 2310 Physical Activity and Public Health
- PHP 2320 Environmental and Policy Influences on the Obesity Epidemic
- PHP 2330 Behavioral and Social Approaches to HIV Prevention
- PHP 2340 Behavioral and Social Science Theory for Health Promotion
- PHP 2360 Designing and Evaluating Public Health Interventions
- PHP 2380 Health Communication
- ENVS 1700A Working with Communities: Cultural Competence and Ethics
- SOC 1871H Social Perspectives on HIV/AIDS

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Human Biology/Physiology Electives (Students must select one of the following):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 0030</td>
<td>Principles of Nutrition</td>
</tr>
<tr>
<td>BIOL 0200</td>
<td>The Foundation of Living Systems</td>
</tr>
<tr>
<td>BIOL 0470</td>
<td>Genetics</td>
</tr>
<tr>
<td>BIOL 0530</td>
<td>Principles of Immunology</td>
</tr>
<tr>
<td>BIOL 0800</td>
<td>Principles of Physiology</td>
</tr>
<tr>
<td>NEUR 0010</td>
<td>The Brain: An Introduction to Neuroscience</td>
</tr>
</tbody>
</table>

AP Credit for Biology satisfies this requirement. If AP credit is used to satisfy the Human Biology/Physiology Elective, another concentration elective must be taken in its place.

Statistics Electives (Students must select one of the following):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 0850</td>
<td>Essential Statistics</td>
</tr>
<tr>
<td>BIOL 0495</td>
<td>Statistical Analysis of Biological Data</td>
</tr>
<tr>
<td>CLPS 0900</td>
<td>Quantitative Methods in Psychology (formerly COGS/PSYC 0090)</td>
</tr>
<tr>
<td>ECON 1620</td>
<td>Introduction to Econometrics</td>
</tr>
<tr>
<td>ECON 1630</td>
<td>Econometrics I</td>
</tr>
<tr>
<td>ENVS 1100</td>
<td>Statistical Methods for the Natural and Social Environmental Sciences</td>
</tr>
<tr>
<td>MATH 1610</td>
<td>Probability</td>
</tr>
<tr>
<td>POLS 1600</td>
<td>Political Research Methods</td>
</tr>
<tr>
<td>SOC 1100</td>
<td>Introductory Statistics for Social Research</td>
</tr>
</tbody>
</table>

AP Credit for Statistics does not satisfy this requirement.

Note: Statistics is a pre-requisite to PHP 1320 and PHP 1910.

Approved Electives (Students must select two electives):

The two additional electives may be selected from the approved courses in four areas listed above (Environmental Health & Policy; US Health Organization & Policy; Global Health; or Social & Behavioral Science for Prevention) or the approved general electives listed below.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHP 0030</td>
<td>Health of Hispaniola</td>
</tr>
<tr>
<td>PHP 0040</td>
<td>Addiction: The Causes, Cures and Consequences of Substance Abuse in Modern Society</td>
</tr>
<tr>
<td>PHP 1680I</td>
<td>Pathology to Power: Disability, Health and Community</td>
</tr>
<tr>
<td>PHP 1680J</td>
<td>The Race To Inner Space: Conflating Science, Politics, and Economics To Promote Brain Health</td>
</tr>
<tr>
<td>PHP 1680K</td>
<td>Introduction to Conducting Clinical Research</td>
</tr>
<tr>
<td>PHP 1680M</td>
<td>The Epidemiology of Violence and its Consequences</td>
</tr>
<tr>
<td>ANTH 1242</td>
<td>Bioethics and Culture</td>
</tr>
<tr>
<td>BIOL 0040</td>
<td>Nutrition for Fitness and Physical Activity</td>
</tr>
<tr>
<td>BIOL 0180</td>
<td>The Biology of AIDS</td>
</tr>
<tr>
<td>BIOL 0190E</td>
<td>Botanical Roots of Modern Medicine</td>
</tr>
<tr>
<td>BIOL 0475</td>
<td>Conservation Medicine</td>
</tr>
<tr>
<td>BIOL 0860</td>
<td>Diet and Chronic Disease</td>
</tr>
<tr>
<td>BIOL 1920B</td>
<td>Health Inequality in Historical Perspective</td>
</tr>
<tr>
<td>BIOL 1920C</td>
<td>Social Contexts of Disease</td>
</tr>
<tr>
<td>BIOL 1920D</td>
<td>Race, Difference and Biomedical Research: Historical Considerations</td>
</tr>
<tr>
<td>ENVS 0490</td>
<td>Environmental Science in a Changing World</td>
</tr>
<tr>
<td>GNSS 1960B</td>
<td>Health and Healing in American History</td>
</tr>
<tr>
<td>PPAI 1700J</td>
<td>GIS and Public Policy</td>
</tr>
<tr>
<td>PPAI 1700K</td>
<td>Health Policy Challenges</td>
</tr>
<tr>
<td>PPAI 1700V</td>
<td>Nonprofit Organizations</td>
</tr>
<tr>
<td>SOC 0300B</td>
<td>Environment and Society</td>
</tr>
<tr>
<td>SOC 0300E</td>
<td>HIV/AIDS: Politics, Culture and Society</td>
</tr>
<tr>
<td>SOC 0300F</td>
<td>Unequal From Birth: Child Health From a Social Perspective</td>
</tr>
<tr>
<td>SOC 0300K</td>
<td>Inequalities and Health</td>
</tr>
<tr>
<td>SOC 1250</td>
<td>Perceptions of Mental Illness</td>
</tr>
</tbody>
</table>

SOC 1410 Aging and the Quality of Life
SOC 1870D Aging and Social Policy
SOC 1871F Principles and Methods of Geographic Information Systems
SOC 1871N Military Health: The Quest for Healthy Violence

Total Credits: 12

Honors. An Honors track is available for students who qualify. Honors track students are also required to enroll in PHP 1980 in both semesters of their senior year to conduct research and write the honors thesis.

Inquiries: Sarah Hemond (Sarah_Hemond@brown.edu).

### Comparative Literature

The concentration in Comparative Literature enables students to study literature in cross-cultural perspectives. The aim of the program is to encourage students to study a varied and illustrative range of literary topics rather than the total development of a single literary tradition. True to the spirit of Brown’s New Curriculum, a concentration in Comparative Literature affords great academic freedom. For example: advanced courses in any literary department at Brown count for concentration credit; although English is commonly one of the languages that students apply to their Comparative Literature studies, basically any language—ancient or modern—supported at Brown may form part of a Comparative Literature concentration program. In essence, concentrators study a generous range of literary works—from Western cultures, both ancient and modern, to Chinese, Japanese, and Arabic—and develop a focused critical understanding of how cultures differ from one another. Comparative Literature differs from other literature concentrations largely through its international focus and its broad-gauged view of art and culture in which the study of languages is combined with the analysis of literature and literary theory. All students take a course in literary theory and have the opportunity to complete a senior essay.

There are three concentration tracks in Comparative Literature, as follows:

**Track 1: Concentration in Comparative Literature with two languages**
- Complete prerequisites(s) for taking 1000-level courses in your two languages by Semester V (students working in non-European languages may be allowed more latitude; be sure to consult a concentration advisor about constructing an individualized plan).
- Comparative Literature 1210, Introduction to the Theory of Literature.
- TEN advanced literature courses (generally 1000-level courses), including Comparative Literature 1210 and:
  - At least TWO courses in the literature of each of your languages, and the remainder drawn chiefly from among the offerings of Comparative Literature and English, and other national literature departments.
  - ONE COURSE chiefly devoted to EACH of the three major literary genres: poetry, drama and narrative.
  - ONE literature course chiefly devoted to EACH OF THREE of the following five historical periods:
    - Antiquity
    - Middle Ages
    - Renaissance/Early Modern
    - Enlightenment
    - Modern. Please note that the 19th, 20th, and 21st centuries count as one period, the Modern Period.

**Track 2: Concentration in Comparative Literature with three languages**
- Complete prerequisites(s) for taking 1000-level courses in your two languages by Semester V (students working in non-European languages may be allowed more latitude; be sure to consult a concentration advisor about constructing an individualized plan).
- Complete the same requirement for your third language before Semester VII (the above proviso for students working in non-European languages also holds here).
- Comparative Literature 1210, Introduction to the Theory of Literature.
- TEN advanced literature courses (generally 1000-level courses), including Comparative Literature 1210 and:

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
a. At least TWO courses in the literature of each of your languages, and the remainder drawn chiefly from among the offerings of Comparative Literature and English, and other national literature departments.

b. ONE COURSE chiefly devoted to EACH of the three major literary genres: poetry, drama and narrative.

c. ONE literature course chiefly devoted to EACH OF THREE of the following five historical periods:
   • Antiquity
   • Middle Ages
   • Renaissance/Early Modern
   • Enlightenment
   • Modern. Please note that the 19th, 20th, and 21st centuries count as one period, the Modern Period.

Track 3: Concentration in Literary Translation

• Complete prerequisites(s) for taking 1000-level courses in your two languages by Semester V (students working in non-European languages may be allowed more latitude; be sure to consult a concentration advisor about constructing an individualized plan).

• Comparative Literature 1210, Introduction to the Theory of Literature.

• Comparative Literature 1710 (Comparative Literature 2720 strongly urged).

• ONE course or MORE in Linguistics, drawn from among these courses:
  Cognitive, Linguistic and Psychological Sciences 0410, Anthropology 0800, English 1210, Hispanic Studies 1210 or an acceptable substitute.

• FIVE or SIX advanced literature courses (generally 1000-level courses), including Comparative Literature 1210 and:
  a. At least TWO courses in the literature of each of your languages, and the remainder drawn chiefly from among the offerings of Comparative Literature and English, and other national literature departments.
  b. ONE COURSE chiefly devoted to EACH of the three major literary genres: poetry, drama and narrative.
  c. ONE literature course chiefly devoted to EACH OF THREE of the following five historical periods:
     • Antiquity
     • Middle Ages
     • Renaissance/Early Modern
     • Enlightenment
     • Modern. Please note that the 19th, 20th, and 21st centuries count as one period, the Modern Period.

• TWO workshops or MORE in Creative Writing

• A senior project to consist of:
  A substantial work in translation (length will vary depending upon language and genre).
  A critical introduction outlining the method used and specific problems encountered, and commenting on the history of the original work together with other translations, if any. For thesis, the student may register for COLT 1990, which will be taken in addition to the ten required courses listed above. Successful completion of the thesis constitutes Honors. (See Guidelines for Honors Theses).

For additional information, please visit the Comparative Literature website (http://www.brown.edu/Departments/Comparative_Literature/) or see the Concentration Advisor, Professor Stephanie Merrim.

Computational Biology

Computational biology involves the analysis and discovery of biological phenomena using computational tools, and the algorithmic design and analysis of such tools. The field is widely defined and includes foundations in computer science, applied mathematics, statistics, biochemistry, molecular biology, genetics, ecology, evolution, anatomy, neuroscience and visualization. The program educates the student liberally in these fields, building on a foundation of coursework that may then focus via several possible tracks. The program offers four tracks: computational genomics, biological sciences, molecular modeling and applied mathematics and statistical genomics. The program requires a senior capstone experience that pairs students and faculty in creative research collaborations.

Standard program for the Sc.B. degree

**Prerequisites**

- MATH 0100 Introductory Calculus, Part II (or equivalent) 1
- or MATH 0170 Advanced Placement Calculus 1
- BIOL 0200 The Foundation of Living Systems (or equivalent) 1

**General Core Course Requirements**

- CHEM 0330 Equilibrium, Rate, and Structure 1
- BIOL 0470 Genetics (prerequisite BIOL 0200 or equivalent) 1
- BIOL 0280 Introductory Biochemistry 1
- or BIOL 0500 Cell and Molecular Biology 1

- CSCI 0150 Introduction to Object-Oriented Programming and Computer Science (no prerequisite) 1
- CSCI 0160 Introduction to Algorithms and Data Structures (prerequisite CSCI 0150) 1
- or CSCI 0170 Computer Science: An Integrated Introduction 1
- CSCI 0180 Computer Science: An Integrated Introduction (prerequisite CSCI 0170) 1
- or CSCI 0190 Accelerated Introduction to Computer Science 1
- CSCI 0220 Introduction to Discrete Structures and Probability 1

- APMA 1650 Statistical Inference I 1

**Computational Biology Core Course Requirements**

- CSCI 1810 Computational Molecular Biology (prerequisites: (CSCI 0160, or CSCI 0180, or CSCI 0190) and CSCI 0220) 1

- APMA 1080 Inference in Genomics and Molecular Biology 1

**Capstone Experience**

- BIOL 1950/1960 Directed Research/Independent Study 1

**Six courses in one of the following four tracks:**

- Computational Genomics Track: 2
  - Three of the following:
    - CSCI 1230 Introduction to Computer Graphics
    - CSCI 1270 Database Management Systems
    - CSCI 1410 Introduction to Artificial Intelligence
    - CSCI 1550 Probability and Computing: Randomized Algorithms and Probabilistic Analysis
    - CSCI 1570 Design and Analysis of Algorithms
    - or other Computer Science courses approved by the concentration advisor

  - Three of the following:
    - CSCI 0310 Introduction to Computer Systems
    - CSCI 0320 Introduction to Software Engineering
    - CSCI 1820 Algorithmic Foundations of Computational Biology
    - PHP 2620 Statistical Methods in Bioinformatics, I
    - APMA 1660 Statistical Inference II
    - BIOL 1430 The Computational Theory of Molecular Evolution

- Biological Sciences track 3
  At least four courses comprising a coherent theme in one of the following areas: Biochemistry, Ecology, Evolution, or Neurobiology.
  Select two courses from the following:
  - CSCI 1820 Algorithmic Foundations of Computational Biology
  - PHP 2620 Statistical Methods in Bioinformatics, I
  - APMA 1660 Statistical Inference II
  - BIOL 1430 The Computational Theory of Molecular Evolution

- Molecular Modeling Track: 4

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
intelligence, databases, distributed systems, graphics, mobile computing, range from traditional topics, such as analysis of algorithms, artificial theoretical computer science with depth in specialized areas. These areas range of topics, from outer space to the workings of the human mind. In
judged to be outstanding by the faculty member supervising the work. To be a candidate for honors, a student must have a course record judged
of the program. A minimum of one semester of independent study is required, although many students may conduct a full year of independent study.
This track is designed for students whose interests lie in the development of algorithms and high-quality software (tools and systems) for biological applications.
This track is designed for students whose interests lean more towards systems) for biological applications.
This track is designed for students whose interests focus on extracting information from genomic and molecular biology data, and modeling the dynamics of these systems. Substitution of more advanced courses with consent of advisor is permitted.
Honors:
To be a candidate for honors, a student must have a course record judged to be excellent by the concentration advisor and must complete a thesis judged to be outstanding by the faculty member supervising the work.
Computer Science
Computer science is now a critical tool for pursuing an ever-broadening range of topics, from outer space to the workings of the human mind. In most areas of science and in many liberal arts fields, cutting-edge work depends increasingly on computational approaches. The undergraduate program at Brown is designed to combine breadth in practical and theoretical computer science with depth in specialized areas. These areas range from traditional topics, such as analysis of algorithms, artificial intelligence, databases, distributed systems, graphics, mobile computing, networks, operating systems, programming languages, robotics and security, to novel areas including games and scientific visualization.
Requirements for the Standard Track of the Sc.B. degree
Prerequisites (1 or 2 courses)
Two semesters of Calculus, for example:
MATH 0090 & MATH 0100
MATH 0090 & MATH 0170
Concentration Requirements (15 courses)
Core-Computer Science:
Select one of the following introductory course Series: 2
Series A
CSCI 0150 & CSCI 0160 Introduction to Object-Oriented Programming and
Computer Science and Introduction to Algorithms and Data Structures
Series B
CSCI 0170 & CSCI 0180 Computer Science: An Integrated Introduction
and Computer Science: An Integrated Introduction
Series C
CSCI 0190 Accelerated Introduction to Computer Science and an additional CS course not otherwise used to satisfy a concentration requirement; this course may be CSCI 0180, an intermediate-level course, or an advanced course
Select three of the following intermediate-level courses, one of which must be math-oriented and one systems-oriented: 3
CSCI 0220 Introduction to Discrete Structures and Probability (math)
CSCI 0320 Introduction to Software Engineering (systems)
CSCI 0330 Introduction to Computer Systems (systems)
or CSCI 0310 Introduction to Computer Systems
CSCI 0450 Introduction to Probability and Computing (math)
CSCI 0510 Models of Computation (math)
Additional Computer Science Courses: 1
Select one theoretical computer science course: 2
CSCI 1490 Introduction to Combinatorial Optimization
CSCI 1510 Introduction to Cryptography and Computer Security
CSCI 1550 Probability and Computing: Randomized Algorithms and Probabilistic Analysis
CSCI 1570 Design and Analysis of Algorithms
CSCI 1590 Introduction to Computational Complexity
CSCI 1760 Introduction to Multiprocessor Synchronization
CSCI 1950H Computational Topology
CSCI 1950J Introduction to Computational Geometry
CSCI 1820 Algorithmic Foundations of Computational Biology
Select one artificial intelligence course: 2
CSCI 1410 Introduction to Artificial Intelligence
CSCI 1430 Introduction to Computer Vision
CSCI 1460 Introduction to Computational Linguistics
CSCI 1480 Building Intelligent Robots
CSCI 1490 Introduction to Combinatorial Optimization
CSCI 1580 Information Retrieval and Web Search
CSCI 1950F Introduction to Machine Learning
Select one computer science systems course: 2
CSCI 1230 Introduction to Computer Graphics
CSCI 1260 Introductory Compiler Construction

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Requirements for the Professional Track of the Sc.B. degree.

The requirements for the professional track include all those of the standard track, as well as the following:

Students must complete two two-to-four-month full-time professional experiences, doing work that is related to their concentration programs. Such work is normally done within an industrial organization, but may also be at a university under the supervision of a faculty member.

On completion of each professional experience, the student must write and upload to ASK a reflective essay about the experience addressing the following prompts, to be approved by the student’s concentration advisor:

- Which courses were put to use in your summer’s work? Which topics, in particular, were important?
- In retrospect, which courses should you have taken before embarking on your summer experience? What are the topics from these courses that would have helped you over the summer if you had been more familiar with them?
- Are there topics you should have been familiar with in preparation for your summer experience, but are not taught at Brown? What are these topics?
- What did you learn from the experience that probably could not have been picked up from course work?

- Is the sort of work you did over the summer something you would like to continue doing once you graduate? Explain.
- Would you recommend your summer experience to other Brown students? Explain.

Requirements for the Standard Track of the A.B. degree.

Prerequisites

Two semesters of Calculus, for example:

- MATH 0090 and MATH 0100
- Advanced Placement Calculus

Concentration Requirements (9 courses)

Core Computer Science:

Select one of the following series:

**Series A**

1. CSCI 0150 Introduction to Object-Oriented Programming and Computer Science
2. CSCI 0160 Introduction to Algorithms and Data Structures

**Series B**

1. CSCI 0170 Computer Science: An Integrated Introduction
2. CSCI 0180 Computer Science: An Integrated Introduction

**Series C**

1. CSCI 0190 Accelerated Introduction to Computer Science

Three intermediate courses from the following, of which one must be math-oriented and one must be systems-oriented:

**Core Computer Science:**

- CSCI 0220 Introduction to Discrete Structures and Probability (math)
- CSCI 0320 Introduction to Software Engineering (systems)
- CSCI 0330 Introduction to Computer Systems (systems)
- CSCI 0450 Introduction to Probability and Computing (math)
- CSCI 0510 Models of Computation (math)
- CSCI 0530 Directions: The Matrix in Computer Science

Four additional courses in computer science or related areas are required.

Total Credits

1. Three must be advanced courses (at the 1000-level or higher), the fourth may be either an intermediate-level course not used to satisfy a core requirement or an advanced course. These three courses must include a pair of courses forming a coherent theme. A list of pre-approved pairs may be found at the approved-pairs web page (http://cs.brown.edu/ugrad/concentrations/approvedpairs.html). You are not restricted to pairs on this list, but any pair not on the list must be approved by the director of undergraduate studies.

Requirements for the Professional Track of the A.B. degree.

The requirements for the professional track include all those of the standard track, as well as the following:

Students must complete two two-to-four-month full-time professional experiences, doing work that is related to their concentration programs. Such work is normally done within an industrial organization, but may also be at a university under the supervision of a faculty member.

On completion of each professional experience, the student must write and upload to ASK a reflective essay about the experience addressing the following prompts, to be approved by the student’s concentration advisor:

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
• Which courses were put to use in your summer’s work? Which topics, in particular, were important?
• In retrospect, which courses should you have taken before embarking on your summer experience? What are the topics from these courses that would have helped you over the summer if you had been more familiar with them?
• Are there topics you should have been familiar with in preparation for your summer experience, but are not taught at Brown? What are these topics?
• What did you learn from the experience that probably could not have been picked up from course work?
• Is the sort of work you did over the summer something you would like to continue doing once you graduate? Explain.
• Would you recommend your summer experience to other Brown students? Explain.

### Computer Science-Economics

The joint Computer Science-Economics concentration exposes students to the theoretical and practical connections between computer science and economics. It prepares students for professional careers that incorporate aspects of economics and computer technology and for academic careers conducting research in areas that emphasize the overlap between the two fields. Concentrators may choose to pursue either the A.B. or the Sc.B. degree. While the A.B. degree allows students to explore the two disciplines by taking advanced courses in both departments, its smaller number of required courses is compatible with a liberal education. The Sc.B. degree achieves greater depth in both computer science and economics by requiring more courses, and it offers students the opportunity to creatively integrate both disciplines through a design requirement. In addition to courses in economics, computer science, and applied mathematics, all concentrators must fulfill the Computer Science department’s writing requirement by passing a course that involves significant expository writing.


**Prerequisites (3 courses):**

- MATH 0100 Introductory Calculus, Part II
- MATH 0520 Linear Algebra
- or MATH 0540 Honors Linear Algebra
- or CSCI 0530 Directions: The Matrix in Computer Science
- ECON 0110 Principles of Economics

**Required Courses (17 courses):**

- CSCI 0450 Introduction to Probability and Computing
- or APMA 1650 Statistical Inference I

Select one of the following Series:

**Series A**

- CSCI 0150 Introduction to Object-Oriented Programming and Computer Science
- & CSCI 0160 and Introduction to Algorithms and Data Structures

**Series B**

- CSCI 0170 Computer Science: An Integrated Introduction
- & CSCI 0180

**Series C**

- CSCI 0190 Accelerated Introduction to Computer Science
- and an additional CS course not otherwise used to satisfy a concentration requirement; this course may be CSCI 0180, an intermediate-level CS course, or a 1000-level course.

Two of the following intermediate courses, one of which must be math-oriented and one systems-oriented.

- CSCI 0220 Introduction to Discrete Structures and Probability (math)
- CSCI 0320 Introduction to Software Engineering (systems)
- CSCI 0330 Introduction to Computer Systems (systems)
- or CSCI 0310 Introduction to Computer Systems
- CSCI 0510 Models of Computation (math)

A pair of CS courses with a coherent theme.

An additional CS course that is either at the 1000-level or is an intermediate course not already used to satisfy concentration requirements.

**ECON 1130** Intermediate Microeconomics (Mathematical)
**ECON 1210** Intermediate Macroeconomics
**ECON 1630** Econometrics I

Three courses from the “mathematical economics” group:

- ECON 1170 Welfare Economics
- ECON 1225 Advanced Macroeconomics: Monetary, Fiscal, and Stabilization Policies
- ECON 1465 Market Design: Theory and Applications
- ECON 1470 Bargaining Theory and Applications
- ECON 1640 Econometrics II
- ECON 1650 Financial Econometrics
- ECON 1750 Investments II
- ECON 1759 Data, Statistics, Finance
- ECON 1810 Economics and Psychology
- ECON 1820 Behavioral Economics
- ECON 1850 Theory of Economic Growth
- ECON 1860 The Theory of General Equilibrium
- ECON 1870 Game Theory and Applications to Economics and any graduate Economics course

Two additional 1000-level Economics courses

Capstone Course in either Computer Science or Economics

**Total Credits**

17

1 A list of pre-approved pairs may be found at the approved-pairs web page (http://www.cs.brown.edu/ugrad/concentrations/approvedpairs.html). You are not restricted to pairs on this list, but any pair not on the list must be approved by the CS director of undergraduate studies.

2 Or ECON 1110, with permission.

3 A one-semester course, normally taken in the student’s last undergraduate year, in which the student (or group of students) use a significant portion of their undergraduate education, broadly interpreted, in studying some current topic (preferably at the intersection of computer science and economics) in depth, to produce a culminating artifact such as a paper or software project.

### Standard Program for the A.B. degree:

**Prerequisites (3 courses):**

- MATH 0100 Introductory Calculus, Part II
- MATH 0520 Linear Algebra
- or MATH 0540 Honors Linear Algebra
- or CSCI 0530 Directions: The Matrix in Computer Science
- ECON 0110 Principles of Economics

**Required Courses (13 courses):**

- CSCI 0450 Introduction to Probability and Computing
- or APMA 1650 Statistical Inference I

Select one of the following Series:

**Series A**

- CSCI 0150 Introduction to Object-Oriented Programming and Computer Science
- & CSCI 0160 and Introduction to Algorithms and Data Structures

**Series B**

- CSCI 0170 Computer Science: An Integrated Introduction
- & CSCI 0180

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
and upload to ASK a reflective essay about the experience addressing the
On completion of each professional experience, the student must write
be at a university under the supervision of a faculty member.
Such work is normally done within an industrial organization, but may also
doing work that is related to their concentration programs.
The requirements for the professional track include all those of the
advisor belongs to, at the respective departments' websites.
Students who meet stated requirements are eligible to write an honors
thesis in their senior year. Students should consult the listed honors
requirements of whichever of the two departments their primary thesis
produces graduates with expertise in the study of development, most
concentrators combine their coursework with first-hand experience in
the developing world. Course selection should balance analytic training
with local and historical knowledge. Therefore, courses must be taken
in at least three social science disciplines to achieve an interdisciplinary
approach to these processes of change.

Development Studies
Development Studies examines the interaction of social, economic
and political development in contemporary societies and is therefore,
necessarily an interdisciplinary enterprise. Development Studies
concentrators develop the skills and knowledge best suited to their
chosen geographical area of interest, emphasizing what is historically and
culturally distinctive about the region and how its development reflects
general processes of socio-economic change. While the concentration
produces graduates with expertise in the study of development, most
concentrators combine their coursework with first-hand experience in
the developing world. Course selection should balance analytic training
with local and historical knowledge. Therefore, courses must be taken
in at least three social science disciplines to achieve an interdisciplinary
approach to these processes of change.

Requirements
Concentrators in Development Studies must complete a total of 11
courses based on the following general guidelines. Any course may be
substituted by a similar course approved by the Deputy Director.

CORE 4
DEVL 1000/ Seminar in Development Studies
SOC 1871
DEVL 1500 Methods in Development Research
DEVL 1980 Thesis Writing in Development Studies
ECON 0510 Development and the International Economy

Disciplinary Courses 2
The courses must focus on different regions. Substitutions approved
by the Deputy Director.

ANTH 1229 Democracy and Difference: Political Anthropology,
Citizenship and Multiculturalism
ANTH 1310 International Health: Anthropological Perspectives
ANTH 1320 Anthropology and International Development:
Ethnographic Perspectives on Poverty and Progress
ECON 1210 Intermediate Macroeconomics
ECON 1500 Current Global Macroeconomic Challenges
ECON 1540 International Trade
ECON 1550 International Finance
ECON 1560 Economic Growth
ECON 1850 Theory of Economic Growth
POLS 1240 Politics, Markets and States in Developing
Countries
POLS 1450 Development in Theory and Practice
POLS 1460 International Political Economy
SOC 0150 Economic Development and Social Change
SOC 1600 Comparative Development
SOC 1620 Globalization and Social Conflict

Advanced Seminar 1

• In retrospect, which courses should you have taken before embarking
on your summer experience? What are the topics from these courses
that would have helped you over the summer if you had been more familiar with them?
• Are there topics you should have been familiar with in preparation for
your summer experience, but are not taught at Brown? What are these
topics?
• What did you learn from the experience that probably could not have
been picked up from course work?
• Is the sort of work you did over the summer something you would like to
continue doing once you graduate? Explain.
• Would you recommend your summer experience to other Brown
students? Explain.

Honors
Students who meet stated requirements are eligible to write an honors
thesis in their senior year. Students should consult the listed honors
requirements of whichever of the two departments their primary thesis
advisor belongs to, at the respective departments’ websites.

Professional Track
The requirements for the professional track include all those of the
standard track, as well as the following:
Students must complete two two-to-four-month full-time professional
experiences, doing work that is related to their concentration programs.
Such work is normally done within an industrial organization, but may also
be at a university under the supervision of a faculty member.
On completion of each professional experience, the student must write
and upload to ASK a reflective essay about the experience addressing the
following prompts, to be approved by the student’s concentration advisor:
• Which courses were put to use in your summer’s work? Which topics, in
particular, were important?

CSCI 0170 & CSCI 0180 Computer Science: An Integrated Introduction
and Computer Science: An Integrated Introduction
Series C
CSCI 0190 Accelerated Introduction to Computer Science
and an additional CS course not otherwise used to satisfy a
concentration requirement; this course may be CSCI 0180, an
intermediate-level course, or a 1000-level course.
Two of the following intermediate courses, one of which must be math-
oriented and one systems-oriented:
CSCI 0220 Introduction to Discrete Structures and Probability
(math)
CSCI 0320 Introduction to Software Engineering (systems)
CSCI 0330 or CSCI 0310 Introduction to Computer Systems
CSCI 0510 Models of Computation (math)
Two additional CS courses; at least one must be at the 1000-level.
The other must either be at the 1000-level or be an intermediate
course not already used to satisfy concentration requirements.
ECON 1130 Intermediate Microeconomics (Mathematical) 1
ECON 1210 Intermediate Macroeconomics
ECON 1630 Econometrics I
Three courses from the "mathematical-economics" group:
ECON 1170 Welfare Economics
ECON 1225 Advanced Macroeconomics: Monetary, Fiscal, and
Stabilization Policies
ECON 1465 Market Design: Theory and Applications
ECON 1470 Bargaining Theory and Applications
ECON 1640 Econometrics II
ECON 1650 Financial Econometrics
ECON 1750 Investments II
ECON 1759 Data, Statistics, Finance
ECON 1810 Economics and Psychology
ECON 1820 Behavioral Economics
ECON 1850 The Theory of Economic Growth
ECON 1860 The Theory of General Equilibrium
ECON 1870 Game Theory and Applications to Economics
or any graduate Economics course
Total Credits 13

1 Or ECON 1110, with permission.

• In retrospect, which courses should you have taken before embarking
on your summer experience? What are the topics from these courses
that would have helped you over the summer if you had been more familiar with them?
• Are there topics you should have been familiar with in preparation for
your summer experience, but are not taught at Brown? What are these
topics?
• What did you learn from the experience that probably could not have
been picked up from course work?
• Is the sort of work you did over the summer something you would like to
continue doing once you graduate? Explain.
• Would you recommend your summer experience to other Brown
students? Explain.

Development Studies
Development Studies examines the interaction of social, economic
and political development in contemporary societies and is therefore,
necessarily an interdisciplinary enterprise. Development Studies
concentrators develop the skills and knowledge best suited to their
chosen geographical area of interest, emphasizing what is historically and
culturally distinctive about the region and how its development reflects
general processes of socio-economic change. While the concentration
produces graduates with expertise in the study of development, most
concentrators combine their coursework with first-hand experience in
the developing world. Course selection should balance analytic training
with local and historical knowledge. Therefore, courses must be taken
in at least three social science disciplines to achieve an interdisciplinary
approach to these processes of change.

Requirements
Concentrators in Development Studies must complete a total of 11
courses based on the following general guidelines. Any course may be
substituted by a similar course approved by the Deputy Director.

CORE 4
DEVL 1000/ Seminar in Development Studies
SOC 1871
DEVL 1500 Methods in Development Research
DEVL 1980 Thesis Writing in Development Studies
ECON 0510 Development and the International Economy

Disciplinary Courses 2
The courses must focus on different regions. Substitutions approved
by the Deputy Director.

ANTH 1229 Democracy and Difference: Political Anthropology,
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ANTH 1310 International Health: Anthropological Perspectives
ANTH 1320 Anthropology and International Development:
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ECON 1210 Intermediate Macroeconomics
ECON 1500 Current Global Macroeconomic Challenges
ECON 1540 International Trade
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ECON 1850 Theory of Economic Growth
POLS 1240 Politics, Markets and States in Developing
Countries
POLS 1450 Development in Theory and Practice
POLS 1460 International Political Economy
SOC 0150 Economic Development and Social Change
SOC 1600 Comparative Development
SOC 1620 Globalization and Social Conflict

Advanced Seminar 1

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
### East Asian Studies

East Asian Studies is a multidisciplinary concentration designed for students wishing to attain reasonable fluency in Chinese, Japanese, or Korean with specialized exposure to selected East Asian subjects. It serves students with two types of interests: those who aim to pursue active professional careers related to the East Asian region; and those who want to pursue graduate study in the humanities or social sciences with particular emphasis on China, Japan or Korea. Students in East Asian Studies will gain language proficiency and familiarity with East Asia through advanced courses in a variety of disciplines. Concentrators are strongly encouraged, but not required, to study in East Asia for one or two semesters. The concentration requires students to demonstrate a basic proficiency in Chinese, Japanese, or Korean.

#### The Language Requirement

The concentration requires students to demonstrate a basic proficiency in Chinese, Japanese, or Korean. For the purposes of the concentration, proficiency is determined to be consistent with successful completion of the Department’s third-year course sequence in Chinese, Japanese, or Korean (0500-0600), or its equivalent. Native speakers of these languages may, for example, demonstrate competency such that language courses may be unnecessary. Department language instructors may also determine that course work completed at one of the language-intensive study abroad programs attended by our undergraduates is comparable to courses offered at Brown.

Note that we do not equate completion of third-year Chinese, Japanese, or Korean with fluency in these languages. Rather, we believe that students who have demonstrated the skills associated with third-year Chinese, Japanese, or Korean have acquired a foundational understanding of the languages’ grammar, vocabularies, and conversational patterns, such that they are able to make themselves understood in everyday situations, and to understand both spoken and written communication.

For the purposes of the concentration, language courses through the third-year are treated as an accompanying requirement.

#### Language Prerequisites (demonstrating proficiency through the third-year or 0600 level in one of the three languages below)

**Chinese**
Courses with the following requirements in mind. Students should choose their electives tied to their course of study, which may be defined in linguistic, chronological, thematic, or cultural terms. The concentration requires that students complete a total of eight concentration credit courses at the 1000-level and above may also count toward this requirement.

- At least one of the eight electives must focus on an East Asian country or culture other than those associated with the language the student is using to satisfy the concentration's language requirement. A concentrator studying Korean, for example, would choose at least one course that focuses on China, Taiwan, or Japan.
- At least one of the eight elective courses must be an advanced research seminar, taken in the senior year.

As is common for interdisciplinary concentrations, a wide range of courses, including many taught by faculty in other departments, may be counted toward the concentration. These include courses offered by East Asian Studies faculty, faculty with courtesy appointments in the Department, and courses with a significant focus on East Asia offered in such disciplines as Archeology, Anthropology, Economics, International Relations, and others.

**Sample Electives offered by East Asian Studies**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHIN 0700</td>
<td>Advanced Modern Chinese II</td>
</tr>
<tr>
<td>CHIN 0800</td>
<td>Advanced Modern Chinese II</td>
</tr>
<tr>
<td>CHIN 0910B</td>
<td>Introduction to Classical Chinese</td>
</tr>
<tr>
<td>CHIN 0910C</td>
<td>Introduction to Modern Chinese Prose</td>
</tr>
<tr>
<td>CHIN 0920A</td>
<td>Advanced Reading and Writing in Chinese</td>
</tr>
<tr>
<td>CHIN 0920B</td>
<td>Classical Chinese</td>
</tr>
<tr>
<td>CHIN 0920C</td>
<td>The Changing Face of China: Advanced Reading in Chinese Media</td>
</tr>
<tr>
<td>CHIN 0920D</td>
<td>Business Chinese</td>
</tr>
<tr>
<td>CHIN 1040</td>
<td>Modern Chinese Literature</td>
</tr>
<tr>
<td>EAST 0180</td>
<td>Japan: Nature, Ritual, and the Arts</td>
</tr>
<tr>
<td>EAST 0950A</td>
<td>Turning Japanese: Constructing Nation, Race and Culture in Modern Japan (First Year Seminar)</td>
</tr>
<tr>
<td>EAST 0950C</td>
<td>Reading China: Texts and Contexts</td>
</tr>
<tr>
<td>EAST 1010</td>
<td>From Basho to Banana: Four Centuries of Japanese Literature</td>
</tr>
<tr>
<td>EAST 1012</td>
<td>Expanding the Canon: A Survey of 20th Century Japanese Literature</td>
</tr>
<tr>
<td>EAST 1070</td>
<td>China Modern: An Introduction to the Literature of Twentieth-Century China</td>
</tr>
<tr>
<td>EAST 1100</td>
<td>Korean Culture and Film</td>
</tr>
<tr>
<td>EAST 1170</td>
<td>Women's Literature in Japan and Korea</td>
</tr>
<tr>
<td>EAST 1200</td>
<td>Pop, Political and Patrician: Culture in Japan and the Koreas</td>
</tr>
<tr>
<td>EAST 1270</td>
<td>China Through the Lens: History, Cinema, and Critical Discourse</td>
</tr>
<tr>
<td>EAST 1400</td>
<td>The Floating World: Early Modern Japanese Culture</td>
</tr>
<tr>
<td>EAST 1420</td>
<td>The Confucian Mind</td>
</tr>
<tr>
<td>EAST 1950B</td>
<td>Chinese Women, Gender and Feminism from Historical and Transnational Perspectives</td>
</tr>
<tr>
<td>EAST 1950D</td>
<td>Crime, Justice and Punishment in Modern Japan</td>
</tr>
<tr>
<td>EAST 1950F</td>
<td>The Karma of Words</td>
</tr>
<tr>
<td>EAST 1950G</td>
<td>Market Economy, Popular Culture, and Mass Media in Contemporary China</td>
</tr>
<tr>
<td>EAST 1950H</td>
<td>Japanese Short Fiction, Film and Anime: Reading and Translation</td>
</tr>
<tr>
<td>EAST 1950I</td>
<td>Revolution and Culture, East Asia and Beyond</td>
</tr>
<tr>
<td>EAST 1950Q</td>
<td>Early Chinese Poetry</td>
</tr>
</tbody>
</table>

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Advanced Research Seminars

At least one of the eight elective courses must be an advanced research seminar, taken in the senior year. The research seminar will normally provide students with the opportunity to develop a project or paper focusing on one or more of their areas of inquiry within the concentration. Students are strongly encouraged to find ways to incorporate the use of Chinese, Japanese or Korean language materials in their research and learning in these courses. Courses falling into this category include the East Asian Studies 1950 series as well as designated seminars offered by faculty in such departments as History, Religious Studies, and Comparative Literature among others. The Department will provide a list of pre-approved advanced seminars every semester. Students wishing to add courses to that list must submit their requests in writing to the Director of Undergraduate Studies at the start of the semester.

Sample advanced seminars offered by East Asian Studies

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EAST 1950B</td>
<td>Chinese Women, Gender and Feminism from Historical and Transnational Perspectives</td>
<td>1</td>
</tr>
<tr>
<td>EAST 1950D</td>
<td>Crime, Justice and Punishment in Modern Japan</td>
<td>1</td>
</tr>
<tr>
<td>EAST 1950F</td>
<td>The Karma of Words</td>
<td>1</td>
</tr>
<tr>
<td>EAST 1950G</td>
<td>Market Economy, Popular Culture, and Mass Media in Contemporary China</td>
<td>1</td>
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<td>Japanese Short Fiction, Film and Anime: Reading and Translation</td>
<td>1</td>
</tr>
<tr>
<td>EAST 1950I</td>
<td>Revolution and Culture, East Asia and Beyond</td>
<td>1</td>
</tr>
<tr>
<td>EAST 1950O</td>
<td>The Art of Dissent</td>
<td>1</td>
</tr>
<tr>
<td>EAST 1950Q</td>
<td>Early Chinese Poetry</td>
<td>1</td>
</tr>
<tr>
<td>EAST 1950U</td>
<td>South Korean Cinema: From Golden Age to Korean Wave</td>
<td>1</td>
</tr>
<tr>
<td>EAST 1950X</td>
<td>Queer Japan: Culture, History and Sexuality</td>
<td>1</td>
</tr>
</tbody>
</table>

Double Concentrations

Students who are interested in developing a double concentration, including East Asian Studies as one of the two concentrations, should bear in mind that normally no more than two courses may be double-counted toward satisfying the course requirements of either of the two concentration programs involved.

Study Abroad

Concentrators are strongly encouraged, but not required, to study in East Asia for one or two semesters during their undergraduate years. Course credits earned abroad are generally transferable to Brown. However, a maximum of three courses taken abroad, of genuine intellectual substance and significantly related to East Asian Studies, may be considered for concentration credit.

Summary of requirements:

- Language study through the level of 0600 or the equivalent of Chinese, Japanese, or Korean
- Eight elective courses
  - At least three of the eight must be East Asian Studies (EAST) courses; Chinese (CHIN), Japanese (JAPN), or Korean (KREA) courses at the 1000-level and above may also count toward this requirement
  - At least one of the eight electives must focus on an East Asian country or culture other than those associated with the language the student is using to satisfy the concentration’s language requirement. A concentrator studying Korean, for example, would choose at least one course that focuses on China, Taiwan, or Japan.
  - At least one of the eight must be an advanced research seminar, taken in the senior year.
- EAST 1930 - EAST 1940 (Senior Thesis seminar) for Honors candidates only

Economics

Economics is the study of how individuals, businesses, and governments allocate resources to satisfy their objectives. The study of economics helps students understand markets, firms, financial organizations, and public debate about economic policy, including taxation, government expenditure, trade, globalization, health, and welfare. The concentration in Economics prepares students for graduate study in fields such as business and law, for graduate study leading to teaching and research in economics, and can be a steppingstone to employment in business, finance, non-profit, and government organizations. Students may choose either the standard or the professional track.

Students are required to begin with ECON 0110, an introductory course that stresses the economic problems of our society, and the vocabulary and principles of economic analysis. Intermediate level courses in microeconomics (ECON 1130), macroeconomics (ECON 1210), and econometrics (ECON 1620) round out the list of foundation courses for the concentration. Economics students must also fulfill a calculus requirement. The economics department sponsors a number of alternative concentration options. The most popular is the standard economics concentration, described below. Three additional concentration options are administered jointly with other departments and are described separately under their respective titles. They are the concentrations in applied mathematics–economics, in mathematical economics, and in computer science–economics. The first two are especially recommended for students interested in graduate study in economics.

The department offers many of the required courses in an interdepartmental concentration called Business, Entrepreneurship and Organizations (BEO). BEO is jointly run by the departments of economics and sociology, and the school of engineering. BEO has three possible "tracks," of which the business economics track is most closely related to economics. Please contact the BEO administrator for more details, including information about advising in that concentration.

Standard Economics Concentration (through the Class of 2015)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0060</td>
<td>Analytic Geometry and Calculus</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0070</td>
<td>Calculus with Applications to Social Science</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0090</td>
<td>Introductory Calculus, Part I</td>
<td>1</td>
</tr>
</tbody>
</table>
On completion of each professional experience, the student must write a reflective essay about the experience addressing the following prompts, to be approved by the student's concentration advisor:

- Which courses were put to use in your summer’s work? Which topics, in particular, were important?
- In retrospect, which courses should you have taken before embarking on your summer experience? What are the topics from these courses that would have helped you over the summer if you had been more familiar with them?
- Are there topics you should have been familiar with in preparation for your summer experience, but are not taught at Brown? What are these topics?
- What did you learn from the experience that probably could not have been picked up from course work?
- Is the sort of work you did over the summer something you would like to continue doing once you graduate? Explain.
- Would you recommend your summer experience to other Brown students? Explain.

**Education Studies**

Education Studies offers a broad liberal arts background coupled with a focus on the study of human learning and development, the history of education, teaching, school reform, and education policy. Concentrators choose a focus in either History/Policy (advised by Luther Spoehr) or Human Development (advised by Jin Li). History/Policy provides the historical underpinnings and intellectual skills for students to think critically about education issues in a number of settings. Concentrators in Human Development learn about psychological, social, and cultural processes in a variety of contexts, including schools, families, peer groups, and neighborhoods, particularly in urban settings. Additionally, the department offers teacher certification programs in elementary and secondary education.

Education Studies concentrators design a program that includes ten courses, of which at least eight are taken in the Education Department at Brown University. Within Education Studies, concentrators choose one of the two tracks, each designed to enable students to develop critical and creative skills for addressing issues surrounding children, schools, and education.

**Course Requirements:**

EDUC 1100 Introduction to Qualitative Research Methods 1

or EDUC 1110 Introductory Statistics for Education Research and Policy Analysis

At least five Education courses in the chosen area of emphasis. 5

At least two Education courses outside the chosen area of emphasis. 2

Two additional, related courses. 2

Total Credits 10

**Honors**

Concentrators seeking to graduate with honors must meet all requirements for the concentration, including a grade-point average established by the Department, and state their plans in writing by the end of their sixth semester. Finally, they must successfully complete EDUC 1990 -EDUC 1991 (Research and Writing in Education) in which they write a 60–70 page thesis under the guidance of a thesis advisor.

**Undergraduate Teacher Education Program**

Note: The Undergraduate Teacher Education Program is not a concentration. It consists of a series of courses which will prepare students for secondary teacher certification.

The Department of Education, in cooperation with other departments, offers a program of study in teacher education leading to certification in secondary school teaching: the Undergraduate Teacher Education Program (UTEP). This program is offered in English, History/Social Studies, Science (Biology, Chemistry, or Engineering/Physics), and leads to state certification for public school teaching in these fields. The Undergraduate Teacher Education Program consists of three components: courses in educational theory, courses in the teaching field, and student teaching. These are designed to complement and enhance the liberal education derived from concentration courses and electives.
Students who are interested in completing the Undergraduate Teacher Education Program must confer with the Education Department as early as possible in order to plan a coherent program. The program includes a methods course, offered during the summer in conjunction with teaching at Brown Summer High School, between Semesters VI and VII.

Courses in the teaching field

Because the program emphasizes the importance of knowledge in the teaching field, students are required to complete an academic concentration in the subject which they are preparing to teach or a closely related field. This does not mean that a student must elect a standard concentration in the field. However, such a student must, as part of or in addition to his/her chosen concentration, elect a substantive number of courses in his/her teaching field. Students considering the program should consult with advisors both in the academic department and in the Education Department to design an appropriate program of study that meets Rhode Island state certification requirements and those of many other states.

All of the required courses in education must be taken at Brown. None can be transferred for credit from other institutions. Requirements of the program include:

EDUC 0900 Fieldwork and Seminar in Secondary Education
EDUC 1450 The Psychology of Teaching and Learning
EDUC 1070A Student Teaching: English (or ARCH 1070B) Student Teaching: History and Social Studies (or EDUC 1070G) Student Teaching: Science
EDUC 1080A Analysis of Teaching: English (or EDUC 1080E) Analysis of Teaching: History and Social Studies (or EDUC 1080C) Analysis of Teaching: Science
EDUC 2060A Methods of Teaching: English (or EDUC 2060B) Methods of Teaching: History and Social Studies (or EDUC 2060C) Methods of Teaching: Science
EDUC 2090 Literacy Across the Curriculum

An Education elective.

Egyptology and Ancient Western Asian Studies

The concentration in Egyptology and Ancient Western Asian Studies offers students a choice of two tracks: Ancient Western Asian Studies or Egyptology. The department promotes collaborations with other academic units at Brown devoted to the study of antiquity including Archaeology, Classics, Judaic Studies, and Religious Studies. Egyptology and Ancient Western Asian Studies also collaborates with Brown's Joukowsky Institute for Archaeology and the Ancient World.

Ancient Western Asian Studies Track

Also known as the Near East or Middle East, Western Asia includes present-day Iraq, Syria, Turkey, and other neighboring states, a broad geographic area that was connected in antiquity with the wider world—the Mediterranean, North Africa, the Arabian Peninsula, Central Asia, and the Asian subcontinent. Students will be exposed to the critical study of the ancient cultures of this region (ca. 3400 B.C.E.–100 C.E.) using the tools of archaeology, epigraphy, and historical inquiry. A variety of interdisciplinary, comparative, and theoretical approaches will be introduced to give students the tools and methods to explore this region’s ancient languages and literatures, political and socio-economic modes of organization, art and architecture, religious traditions and other systems of knowledge, such as early science.

The Ancient Western Asian Studies (AWAS) track requires a total of at least ten (10) courses that are determined in the following way:

Introductory courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AWAS 0800</td>
<td>Introduction to the Ancient Near East</td>
</tr>
<tr>
<td>or ARCH 0370</td>
<td>Archaeology of Mesopotamia</td>
</tr>
<tr>
<td>or ARCH 1600</td>
<td>Archaeologies of the Near East</td>
</tr>
</tbody>
</table>

Foundational Courses (at least one course from each of the following three areas):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AWAS 1100</td>
<td>Imagining the Gods: Myths and Myth-making in Ancient Mesopotamia (WRIT)</td>
</tr>
<tr>
<td>AWAS 2310B</td>
<td>Assyriology I (WRIT)</td>
</tr>
<tr>
<td>AWAS 2310C</td>
<td>Assyriology II (WRIT)</td>
</tr>
<tr>
<td>AWAS 1500</td>
<td>Ancient Babylonian Magic and Medicine</td>
</tr>
<tr>
<td>AWAS 2600</td>
<td>Topics in Cuneiform Studies</td>
</tr>
</tbody>
</table>

Ancient Scholarship in Western Asia: 1

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AWAS 1600</td>
<td>Astronomy Before the Telescope</td>
</tr>
<tr>
<td>AWAS 1650</td>
<td>Time in the Ancient World (WRIT)</td>
</tr>
<tr>
<td>AWAS 1700</td>
<td>Astronomy, Divination and Politics in the Ancient World (WRIT)</td>
</tr>
<tr>
<td>AWAS 1750</td>
<td>Divination in Ancient Mesopotamia (WRIT)</td>
</tr>
<tr>
<td>AWAS 2310A</td>
<td>Ancient Scientific Texts: Akkadian</td>
</tr>
</tbody>
</table>

Archaeology of Ancient Western Asia: 1

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 1200F</td>
<td>City and the Festival: Cult Practices and Architectural Production in the Ancient Near East (WRIT)</td>
</tr>
<tr>
<td>ARCH 1200I</td>
<td>Material Worlds: Art and Agency in the Near East and Africa</td>
</tr>
<tr>
<td>ARCH 1810</td>
<td>Under the Tower of Babel: Archaeology, Politics, and Identity in the Modern Middle East (WRIT)</td>
</tr>
<tr>
<td>ARCH 2010C</td>
<td>Architecture, Body and Performance in the Ancient Near Eastern World (WRIT)</td>
</tr>
<tr>
<td>ARCH 2300</td>
<td>The Rise of the State in the Near East</td>
</tr>
</tbody>
</table>

Depth Requirement: At least two additional courses offered in AWAS or ARCH dealing with ancient Western Asia. These courses must be approved by the undergraduate concentration advisor.

Breadth Requirement: At least one course offered in EGYT or ARCH on the archaeology, art, history, culture, or language of ancient Egypt.

Elective: At least one elective course on the ancient world broadly defined. Usually this course will be offered in Ancient Western Asian Studies, Anthropology, Archaeology, Classics, Comparative Literature, East Asian Studies, Egyptology, History, History of Art and Architecture, Judaic Studies, Philosophy, or Religious Studies. The elective course must be approved by the undergraduate concentration advisor.

Total Credits: 10

1 This list contains possible offerings but should not be considered exhaustive.

Egyptology Track

The Egyptology track requires a total of at least ten courses. Six of these must be taken by all concentrators, but the remaining four can be chosen from a fairly broad range of courses, to suit individual interests.

Introductory Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGYT 1310 &amp; EGYT 1320</td>
<td>Introduction to Classical Hieroglyphic Egyptian Writing and Language (Middle Egyptian I) and Introduction to Classical Hieroglyphic Egyptian Writing and Language (Middle Egyptian II)</td>
</tr>
<tr>
<td>EGYT 1430 &amp; EGYT 1440</td>
<td>History of Egypt I and History of Egypt II</td>
</tr>
<tr>
<td>ARCH 0150</td>
<td>Introduction to Egyptian Archaeology and Art</td>
</tr>
<tr>
<td>EGY 1420</td>
<td>Ancient Egyptian Religion and Magic</td>
</tr>
<tr>
<td>or ARCH 1625</td>
<td>Temples and Tombs: Egyptian Religion and Culture</td>
</tr>
</tbody>
</table>

Depth Courses:

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
EGYT 1330  Selections from Middle Egyptian Hieroglyphic Texts  1

EGYT 1410  Ancient Egyptian Literature  2

| Breadth Course - Any course covering the ancient Near East or Mediterranean world outside Egypt, such as: |
|--------------------------------------------------|---------------------------------------------|
| AWAS 0800  Introduction to the Ancient Near East |
| or ARCH 1600  Archaeologies of the Near East |

Elective Course: Any course germane to ancient Egypt or the ancient Near East or Mediterranean world. Alternative and elective courses must be approved by the undergraduate concentration advisor.

Such courses will normally be offered by Egyptology and Ancient Western Asian Studies, Departmental Honors, and the Ancient World, Religious Studies, Classics, Judaic Studies, Anthropology, History of Art and Architecture, History, or Philosophy. Concentrators are welcome to take most courses offered by Egyptology and Ancient Western Asian Studies (EGYT and AWAS), Archaeology (ARCH), or related departments, though some may require the instructor’s approval.

Concentrators should consult with the concentration advisor to discuss the courses most suitable to their interests.

Total Credits 10

1  Required for all students pursuing the Egyptology track.
2  Or an EGYT or ARCH course in material culture.

### Capstone

All students pursuing either the Ancient Western Asian Studies or Egyptology tracks are required to complete a capstone project. The project can take many forms, but the common feature shared among all possible projects will be a public presentation. Typically in the final semester before graduating, the concentrator will give this capstone presentation before faculty, fellow students, and other interested audiences. If the concentrator is writing an undergraduate honors thesis, the procedure for which is detailed below, this work should provide the content for the capstone presentation. Students not writing an honors thesis will base their presentation on a research project more in depth than a class project, though the topic may stem from a course project or paper. The format of the presentation may vary; suggestions range from an illustrated lecture to a video or an installation presented with discussion. Both the content and the format of the capstone project should be discussed with and agreed upon by the concentration advisor no later than the end of the first semester of the senior year.

### Honors

It is possible for students to receive the A.B. in Ancient Western Asian Studies or Egyptology with departmental honors. To do so students will need to write a senior honors thesis according to the criteria and procedure outlined below.

#### Eligibility and Approval

At the beginning of the second semester of the junior year, the student should begin thinking about potential topics and consult with the department’s concentration advisor. Students seeking to graduate with honors will have received strong grades in concentration courses. In practice this means a preponderance of grades of ‘A’ in concentration courses. Students who are considering graduating with honors are strongly encouraged to take concentration courses for a letter grade. If the concentration advisor agrees that a senior honors thesis may be undertaken, the student must obtain (1) the agreement of two faculty members (at least one from the department) to serve as readers as well as (2) the approval of the department chair. If all parties agree that an honors thesis may be undertaken, the student must submit a working bibliography to the potential readers by the end of the semester (due 5/15).

#### Procedure

1. In the first semester of the senior year, the student will register for Individual Study Project. Note that this course is in addition to the ten courses required for the concentration. The student will submit a working title and outline, as well as a one-page abstract of the intended project by the end of the first month of the semester (due 9/30). The student will then work with the readers to prepare a detailed outline of the thesis with accompanying bibliography. Both readers must approve the thesis plan, and the student must then submit a partial draft (at least one major section) before the end of the Fall semester (due 12/15).

2. In the second semester of the senior year, the student will register for Individual Study Project. Note that this course is in addition to the ten courses required for the concentration. This stage will normally involve meetings with the first reader twice a month, and with the second reader monthly, to discuss the on-going research and writing of the thesis.

3. A complete draft of the thesis must be submitted to the honors committee by 3/15. As a rule of thumb, the thesis should be not more than 100 pages in length, including bibliography.

4. Three bound copies of the final version of the honors thesis must be deposited by 4/15.

5. During a half-hour session during the final exam period, the student will give a capstone presentation defending the thesis in front of the thesis committee as well as any other faculty and students who wish to attend.

### Engineering

The concentration in Engineering equips students with a solid foundation for productive careers in engineering, to advance the knowledge base for future technologies, and to merge teaching, scholarship, and practice in the pursuit of solutions to human needs. The concentration offers one standard A.B. program and seven ABET-accredited Sc.B. degree programs: biomedical, chemical and biochemical, civil through May 2016, computer, electrical, materials, and mechanical engineering. (Note: Students interested in structural engineering entering in the class of 2017 and beyond may pursue a Structures track within the ABET-accredited Mechanical Engineering program. The Civil track has been discontinued for all new students entering after Fall 2012.)

#### Standard program for the A.B. degree

Candidates for the Bachelor of Arts (A.B.) degree with a concentration in Engineering must complete at least eight approved Engineering courses. The eight courses must include, and at least two 1000-level Engineering courses. Of these 1000-level courses, one must be a design or independent study course and the other an in-classroom experience. The set of Engineering courses must be chosen with careful attention to the pre-requisites of the 1000-level courses. Please note that not all engineering courses can be used to satisfy the engineering course requirement for the A.B. degree. For example, the following courses cannot be used to satisfy the engineering course requirement for the A.B. degree: ENGN 0020, ENGN 0090, ENGN 0900, ENGN 0930A, ENGN 0930C, ENGN 1010. For this reason, it is essential that the set of courses must be developed through consultation with the concentration advisor.

The A.B. program also requires preparation in Mathematics equivalent to MATH 0200 and APMA 0330, as well as at least one college-level course from the general areas of chemistry, life sciences, physics, or geological sciences. Remedial courses, such as CHEM 0100, cannot be used to satisfy this requirement. A programming course is also recommended, but not required. The entire program is subject to approval by the Engineering AB Concentration Advisor and the Engineering Concentration Chair.

#### Standard programs for the Sc.B. degree

Standard programs for the Sc.B. degree include seven ABET-accredited degree programs: biomedical engineering, a stand-alone interdisciplinary concentration; and six different tracks in Engineering: chemical and biochemical, civil (through 2016), computer, electrical, environmental, materials, and mechanical engineering. In addition, one interdisciplinary degree program, engineering and physics, is offered. These programs are described in detail in the booklet, Engineering Undergraduate Programs (available online at http://brown.edu/academics/engineering/undergraduate-study/program-guide).

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Students without one year of secondary school level preparation in calculus should take MATH 0090, MATH 0100 in their first year. These students need to be familiar with multivariable calculus for ENGN 0510, which is often taken during the first semester of the sophomore year. Such students are urged to acquire the necessary math background through self-study, by taking a summer course, or by deferring until additional mathematics has been taken. In addition, all students must successfully complete a minimum of four courses in the humanities and/or social sciences. See the entry under Biomedical Engineering and Computer Engineering for course requirements for these degree programs.

The program of each student must be approved by the Engineering Concentration Committee, which issues more detailed guidelines and program suggestions.

### Chemical and Biochemical Track:

1. **Core Courses:**

   - ENGN 0030 Introduction to Engineering
   - ENGN 0040 Dynamics and Vibrations
   - ENGN 0410 Materials Science
   - ENGN 0510 Electricity and Magnetism
   - ENGN 0520 Electrical Circuits and Signals
   - ENGN 0720 Thermodynamics
   - ENGN 0810 Fluid Mechanics
   - CHEM 0330 Equilibrium, Rate, and Structure
   - MATH 0190 Advanced Placement Calculus (Physics/Engineering)
   - MATH 0200 Intermediate Calculus (Physics/Engineering)
   - APMA 0330 Methods of Applied Mathematics I, II
   - APMA 0340 Methods of Applied Mathematics I, II
   - BIOL 0200 The Foundation of Living Systems

2. **An Upper-level Sequence:**

   - ENGN 1110 Transport and Biotransport Processes
   - ENGN 1120 Chemical and Biochemical Reactor Design
   - ENGN 1130 Phase and Chemical Equilibria
   - ENGN 1140 Chemical Process Design
   - ENGN 1710 Heat and Mass Transfer
   - CHEM 0350 Organic Chemistry
   - One additional elective Chemistry course with a significant laboratory component
   - One approved, upper-level elective course in the natural sciences, to be selected from the four specific areas of chemistry, physics, life sciences, and materials science.

   **Total Credits:** 21

   1. Note: ENGN 1120 and 1130 are only offered in alternate years.

   2. For example: CHEM 0360, CHEM 0400, CHEM 0500, CHEM 1170, etc.

   3. For suggestions of acceptable courses, see the Concentration Advisor.

### Civil Engineering Track (Available to students entering Brown on or before the Fall of 2012):

**Important Announcement:** Civil Engineering as a standalone ABET accredited program will continue through May, 2016, and will be available to all students currently enrolled at Brown, including those who arrived as Freshmen in the Fall of 2012 (the class of 2016).

Students entering in the class of 2017 with interest in Structural Engineering will be able to concentrate in this discipline through a Structures track within the ABET-accredited Mechanical Engineering program.

### Chemical and Biochemical Track:

1. **Core courses:**

   - ENGN 0030 Introduction to Engineering
   - ENGN 0040 Dynamics and Vibrations
   - ENGN 0310 Mechanics of Solids and Structures
   - ENGN 0410 Materials Science
   - ENGN 0510 Electricity and Magnetism
   - ENGN 0520 Electrical Circuits and Signals
   - ENGN 0720 Thermodynamics
   - ENGN 0810 Fluid Mechanics
   - CHEM 0330 Equilibrium, Rate, and Structure
   - MATH 0190 Advanced Placement Calculus (Physics/Engineering)
   - MATH 0200 Intermediate Calculus (Physics/Engineering)
   - APMA 0330 Methods of Applied Mathematics I, II
   - APMA 0340 Methods of Applied Mathematics I, II
   - CSCI 0040 Introduction to Scientific Computing and Problem Solving

2. **An advanced sciences course GEOL 1580 Quantitative Elements of Physical Hydrology

3. **Seven additional courses (six credits), depending on the area of interest:**

   3a. For students interested in Structures, the following courses are required:

      - ENGN 1300 Structural Analysis
      - ENGN 1340 Water Supply and Wastewater Treatment
      - ENGN 1360 Soil Mechanics and Principles of Foundation Engineering
      - ENGN 1380 Design of Civil Engineering Structures
      - ENGN 1930C Civil Engineering Project
      - & ENGN 1930D and Large Scale Engineering Design Project

   3b. For students interested in Environmental Problems and Planning, the following courses are required:

      - ENGN 1370 Advanced Engineering Mechanics
      - ENGN 1740 Computer Aided Visualization and Design
      - ENGN 1750 Advanced Mechanics of Solids
      - ENGN 1860 Advanced Fluid Mechanics

### Computer Engineering Track:

The concentration shares much of the core with the other engineering programs, but is structured to include more courses in computer science, and a somewhat different emphasis in mathematics.
1. Core Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 0030</td>
<td>Introduction to Engineering</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 0040</td>
<td>Dynamics and Vibrations</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 0510</td>
<td>Electricity and Magnetism</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 0520</td>
<td>Electrical Circuits and Signals</td>
<td>1</td>
</tr>
</tbody>
</table>

Select one of the following Series:

- MATH 0190 Advanced Placement Calculus (Physics/ & MATH 0200 Engineering)
- Intermediate Calculus (Physics/Engineering)
- MATH 0170 Advanced Placement Calculus & MATH 0180
- Intermediate Calculus

APMA 0330 Methods of Applied Mathematics I, II
or APMA 0350 Methods of Applied Mathematics I, II

APMA 1650 Statistical Inference I

CHEM 0330 Equilibrium, Rate, and Structure
or BIOL 0200 The Foundation of Living Systems
or ENGN 0720 Thermodynamics
or ENGN 0410 Materials Science

Select one of the following series:

- CSCI 0150 & CSCI 0160 Introduction to Object-Oriented Programming and Computer Science: An Integrated Introduction and Introduction to Algorithms and Data Structures
- CSCI 0170 & CSCI 0180 Introduction to Algorithms and Computer Science: An Integrated Introduction

CSCI 0400 & CSCI 0190 Introduction to Scientific Computing and Problem Solving and Accelerated Introduction to Computer Science

2. Advanced Core:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0520</td>
<td>Linear Algebra</td>
<td>1</td>
</tr>
<tr>
<td>or CSCI 1570</td>
<td>Design and Analysis of Algorithms</td>
<td>1</td>
</tr>
<tr>
<td>CSCI 0310</td>
<td>Introduction to Computer Systems</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 1570</td>
<td>Linear System Analysis</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 1630</td>
<td>Digital Electronics Systems Design</td>
<td>1</td>
</tr>
</tbody>
</table>

3. Specialty Courses:

3 a. For the Computer Specialty:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 1620</td>
<td>Analysis and Design of Electronic Circuits</td>
<td></td>
</tr>
<tr>
<td>ENGN 1640</td>
<td>Design of Computing Systems</td>
<td></td>
</tr>
</tbody>
</table>

Select one of the following:

- ENGN 1580 Communication Systems
- ENGN 1600 Design and Implementation of Very Large-Scale Integrated Systems
- ENGN 1650 Embedded Microprocessor Design
- ENGN 1680 Design and Fabrication of Semiconductor Devices
- ENGN 2530 Digital Signal Processing
- ENGN 2910A Advanced Computer Architecture
- ENGN 2910P Nano-system Design
- ENGN 2910W Synthesis of VLSI Systems
- ENGN 2911C Digital Integrated Circuit Testing and Hardware Security
- ENGN 2911G Physical Design of Digital Integrated Circuits
- ENGN 2911X Reconfigurable Computing: Accelerate Your Algorithms
- ENGN 2911Y Verification, Test, Synthesis

Other ENGN courses subject to approval

Select two of the following:

- CSCI 0320 Introduction to Software Engineering
- CSCI 1230 Introduction to Computer Graphics
- CSCI 1270 Database Management Systems

3 b. For the Multimedia Signal Processing Specialty:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>APMA 1170</td>
<td>Introduction to Computational Linear Algebra</td>
<td></td>
</tr>
</tbody>
</table>

Select two of the following:

- ENGN 1580 Communication Systems
- ENGN 1610 Image Understanding
- ENGN 2500 Medical Image Analysis
- ENGN 2520 Pattern Recognition and Machine Learning
- ENGN 2530 Digital Signal Processing
- ENGN 2540 Speech Processing
- ENGN 2560 Computer Vision
- ENGN 2570 Applied Stochastic Processes
- ENGN 2910X Video Processing

Select one of the following:

- CSCI 0320 Introduction to Software Engineering
- CSCI 1230 Introduction to Computer Graphics
- CSCI 1410 Introduction to Artificial Intelligence
- CSCI 1460 Introduction to Computational Linguistics
- CSCI 1570 Design and Analysis of Algorithms
- CSCI 1900 Software System Design

other CSCI courses subject to the approval of the Engineering Concentration Committee.

One additional course from the APMA, ENGN, and CSCI courses listed above.


<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 1970/ENGN 1971</td>
<td>Capstone Course/Independent Study</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Credits 21

1 Capstone Course/Independent Study: ENGN 1970/ENGN 1971, an independent study relevant to the specialty selected by the student. For the Computer Systems Specialty, may be used as the Capstone, but then cannot be counted for the ENGN choice above in 3a. The independent study project should provide students with exposure to current research topics. In order to assure satisfactory progress in their independent study, students enrolled will meet at least bi-weekly with their advisors and give two oral reports to the group during the semester. A final written report will also be required. In addition, students will meet as a group with faculty to share ideas and help nurture an environment of collaborative research.

Electrical Engineering Track:

1. Core Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 0030</td>
<td>Introduction to Engineering</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 0040</td>
<td>Dynamics and Vibrations</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 0410</td>
<td>Materials Science</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 0510</td>
<td>Electricity and Magnetism</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 0520</td>
<td>Electrical Circuits and Signals</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 0720</td>
<td>Thermodynamics</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 0810</td>
<td>Fluid Mechanics</td>
<td>1</td>
</tr>
<tr>
<td>CSCI 0310</td>
<td>Mechanics of Solids and Structures</td>
<td>1</td>
</tr>
<tr>
<td>or ENGN 0810</td>
<td>Fluid Mechanics</td>
<td></td>
</tr>
<tr>
<td>CHEM 0330</td>
<td>Equilibrium, Rate, and Structure</td>
<td>1</td>
</tr>
</tbody>
</table>

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Environmental Engineering Track:
1. Core Courses:
- ENGN 0030 Introduction to Engineering 1
- ENGN 0040 Dynamics and Vibrations 1
- ENGN 0410 Materials Science 1
- ENGN 0510 Electricity and Magnetism 1
- ENGN 0520 Electrical Circuits and Signals 1
- ENGN 0720 Thermodynamics 1
- ENGN 0310 Mechanics of Solids and Structures 1
- or ENGN 0810 Fluid Mechanics 1
- CHEM 0330 Equilibrium, Rate, and Structure 1
- MATH 0190 Introduction to Scientific Computing and Problem Solving 1
- PHYS 0790 Physics of Matter 1

2. Four courses from the following:
- ENGN 1570 Linear System Analysis 1
- ENGN 1620 Analysis and Design of Electronic Circuits 1
- ENGN 1630 Digital Electronics Systems Design 1
- ENGN 1000 Projects in Engineering Design 1
- or ENGN 1650 Embedded Microprocessor Design 1
- or ENGN 1970 Independent Studies in Engineering 1
- or ENGN 1971 Independent Study in Engineering 1

3. The student shall select the other three courses to satisfy requirements of a selected specialty area: Bioelectrical Engineering, Communications Systems, Computer Engineering, Multimedia Signal Processing, Microelectronic Systems, or Solid State Electronics and Photonics. 2

Total Credits 21

1 Or any other 1000-level Physics course
2 Students should consult the Engineering Undergraduate Programs booklet regarding specific details for each specialty area (available online at http://www.brown.edu/academics/engineering/content/program-guide).

Materials Engineering Track:
1. Core Courses:
- ENGN 0030 Introduction to Engineering 1
- ENGN 0040 Dynamics and Vibrations 1
- ENGN 0410 Materials Science 1
- ENGN 0510 Electricity and Magnetism 1
- ENGN 0520 Electrical Circuits and Signals 1
- ENGN 0720 Thermodynamics 1
- ENGN 0310 Mechanics of Solids and Structures 1
- or ENGN 0810 Fluid Mechanics 1
- CHEM 0330 Equilibrium, Rate, and Structure 1
- MATH 0190 Introduction to Scientific Computing and Problem Solving 1
- PHYS 0790 Physics of Matter 1

2. The student must take the following:
- ENGN 1410 Physical Chemistry of Solids 1
- ENGN 1420 Kinetics Processes in Materials Science and Engineering 1
- ENGN 1440 Mechanical Properties of Materials 1
- ENGN 1000 Projects in Engineering Design 1

3. Three of the following upper level materials courses: 2
- ENGN 1450 Properties and Processing of Electronic Materials 1
- ENGN 1470 Structure and Properties of Nonmetallic Materials 1
- ENGN 1480 Metallic Materials 1
- ENGN 1490 Biomaterials 1

4. Upper level courses recommended to satisfy requirements of a selected specialty area, Mechanical Properties and Mechanical Processing, Electrical Properties and Applications of Materials to Solid State Electronics, Chemistry and Materials Processing and Synthesis, or Biomaterials, may be found in the Engineering Undergraduate Programs booklet available online at http://www.engin.brown.edu/undergrad/guide/index.html.

Total Credits 21

1 Or, with permission, ENGN 1970 or ENGN 1971, containing an equivalent design experience relevant to Materials Engineering.
2 These courses are taken in either the junior or senior year.

Mechanical Engineering Track:
Core Courses:
- ENGN 0030 Introduction to Engineering 1
- ENGN 0040 Dynamics and Vibrations 1
- ENGN 0410 Materials Science 1
- ENGN 0510 Electricity and Magnetism 1
- ENGN 0520 Electrical Circuits and Signals 1
- ENGN 0720 Thermodynamics 1
- ENGN 0310 Mechanics of Solids and Structures 1
- ENGN 0810 Fluid Mechanics 1
- CHEM 0330 Equilibrium, Rate, and Structure 1
- MATH 0190 Introduction to Scientific Computing and Problem Solving 1
- APMA 0330 Methods of Applied Mathematics I, II 1
- APMA 0340 Methods of Applied Mathematics III, II 1

An approved computer science course 1

Total Credits 21

1 At least five courses from numbers 2-6 must be at the 1000 level or above.
2 Consult the School of Engineering Undergraduate Program booklet regarding specific details of specific focuses in the Environmental Engineering track: http://www.brown.edu/academics/engineering/sites/brown.edu.academics.engineering/files/uploads/EUP%20Year12_13FINAL.pdf

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
The courses are as follows:

MATH 0200 or equivalent are encouraged but not required to take an
at Brown with MATH 0170 or its equivalent. Students who begin in
is 19. (We assume that a student begins his or her mathematics courses
during their first two years and then switch to this combined program.

The total number of physical science courses required for the program
students to take either the standard physics or engineering programs
upper-level courses focusing on applied physics. The program allows
programs, obtain substantial laboratory experience, and take several
Students take a significant part of the usual engineering and physics
and mathematics beyond that given in the standard engineering program.
interested in applied technical problems a strong background in physics
underlying modern technology. Specifically, it gives those who are
by the Division of Engineering and the Department of Physics, provides
students with an in-depth understanding of the fundamental principles
in physics and mathematics beyond that given in the standard engineering program. Students take a significant part of the usual engineering and physics programs, obtain substantial laboratory experience, and take several upper-level courses focusing on applied physics. The program allows students to take either the standard physics or engineering programs during their first two years and then switch to this combined program.

The total number of physical science courses required for the program
is 19. (We assume that a student begins his or her mathematics courses
at Brown with MATH 0170 or its equivalent. Students who begin in
MATH 0200 or equivalent are encouraged but not required to take an
additional upper-level mathematics course.)

The courses are as follows:

Select one of the following Series:

<table>
<thead>
<tr>
<th>PHYS 0050</th>
<th>Foundations of Mechanics</th>
</tr>
</thead>
<tbody>
<tr>
<td>&amp; PHYS 0060</td>
<td>and Foundations of Electromagnetism and Modern Physics</td>
</tr>
<tr>
<td>PHYS 0070</td>
<td>Analytical Mechanics</td>
</tr>
<tr>
<td>&amp; PHYS 0160</td>
<td>and Introduction to Relativity and Quantum Physics</td>
</tr>
<tr>
<td>ENGN 0030</td>
<td>Introduction to Engineering</td>
</tr>
<tr>
<td>&amp; ENGN 0040</td>
<td>and Dynamics and Vibrations</td>
</tr>
</tbody>
</table>

Select one of the following Series:

<table>
<thead>
<tr>
<th>MATH 0170</th>
<th>Advanced Placement Calculus</th>
</tr>
</thead>
<tbody>
<tr>
<td>&amp; MATH 0180</td>
<td>and Intermediate Calculus</td>
</tr>
<tr>
<td>MATH 0190</td>
<td>Advanced Placement Calculus (Physics/ &amp; MATH 0200 Engineering)</td>
</tr>
<tr>
<td></td>
<td>and Intermediate Calculus (Physics/Engineering)</td>
</tr>
</tbody>
</table>

Select three additional higher-level math, applied math, or
mathematical physics (PHYS 0720) courses.

| CSCI 0040          | Introduction to Scientific Computing and Problem Solving (or higher-level programming course such as CSCI 0150.) |

Select one of the following Series:

<table>
<thead>
<tr>
<th>PHYS 0470</th>
<th>Electricity and Magnetism</th>
</tr>
</thead>
<tbody>
<tr>
<td>&amp; PHYS 1510</td>
<td>and Advanced Electromagnetic Theory</td>
</tr>
<tr>
<td>ENGN 0510</td>
<td>Electricity and Magnetism</td>
</tr>
<tr>
<td>&amp; ENGN 1560</td>
<td>and Applied Electromagnetics</td>
</tr>
<tr>
<td>PHYS 0500</td>
<td>Advanced Classical Mechanics</td>
</tr>
<tr>
<td>or ENGN 1370</td>
<td>Advanced Engineering Mechanics</td>
</tr>
<tr>
<td>PHYS 1410</td>
<td>Quantum Mechanics A</td>
</tr>
<tr>
<td>PHYS 1420</td>
<td>Quantum Mechanics B</td>
</tr>
<tr>
<td>PHYS 1530</td>
<td>Thermodynamics and Statistical Mechanics</td>
</tr>
<tr>
<td>or ENGN 0720</td>
<td>Thermodynamics</td>
</tr>
<tr>
<td>ENGN 1620</td>
<td>Analysis and Design of Electronic Circuits</td>
</tr>
</tbody>
</table>

Select one of the following:

| ENGN 0310          | Mechanics of Solids and Structures |
| ENGN 0810          | Fluid Mechanics |
| CHEM 0330          | Equilibrium, Rate, and Structure |

A physics course on continuum mechanics.

Select one of the following:

| ENGN 1690          | Photonics and Applications |
| ENGN 0410          | Materials Science |
| PHYS 0560          | Experiments in Modern Physics |

Select one of the following:

| PHYS 1560          | Modern Physics Laboratory |
| ENGN 1590          | Introduction to Semiconductors and Semiconductor Electronics |

An approved 2000-level engineering or physics course.

A thesis under the supervision of a physics or engineering faculty member:

| PHYS 1990          | Senior Conference Course |
| or ENGN 1970       | Independent Studies in Engineering |
| or ENGN 1971       | Independent Study in Engineering |

In addition, students must take four courses in the humanities and social sciences. They are encouraged to consider taking courses dealing with the philosophical, ethical, or political aspects of science and technology.

To accommodate the diverse preparation of individual students, variations of the above sequences and their prerequisites are possible by permission of the appropriate concentration advisor and the instructors involved.

It is required that each student's degree program be submitted for prior approval (typically in semester four) and scrutinized for compliance (in semester seven) by one faculty member from the Department of Physics and one faculty member from the Division of Engineering.

### Engineering and Physics

The Sc.B. degree program in Engineering-Physics, sponsored jointly by the Division of Engineering and the Department of Physics, provides students with an in-depth understanding of the fundamental principles underlying modern technology. Specifically, it gives those who are interested in applied technical problems a strong background in physics and mathematics beyond that given in the standard engineering program. Students take a significant part of the usual engineering and physics programs, obtain substantial laboratory experience, and take several upper-level courses focusing on applied physics. The program allows students to take either the standard physics or engineering programs during their first two years and then switch to this combined program.

The total number of physical science courses required for the program is 19. (We assume that a student begins his or her mathematics courses at Brown with MATH 0170 or its equivalent. Students who begin in MATH 0200 or equivalent are encouraged but not required to take an additional upper-level mathematics course.)

The courses are as follows:

Select one of the following Series:

<table>
<thead>
<tr>
<th>PHYS 0050</th>
<th>Foundations of Mechanics</th>
</tr>
</thead>
<tbody>
<tr>
<td>&amp; PHYS 0060</td>
<td>and Foundations of Electromagnetism and Modern Physics</td>
</tr>
<tr>
<td>PHYS 0070</td>
<td>Analytical Mechanics</td>
</tr>
<tr>
<td>&amp; PHYS 0160</td>
<td>and Introduction to Relativity and Quantum Physics</td>
</tr>
<tr>
<td>ENGN 0030</td>
<td>Introduction to Engineering</td>
</tr>
<tr>
<td>&amp; ENGN 0040</td>
<td>and Dynamics and Vibrations</td>
</tr>
</tbody>
</table>

Select one of the following Series:

<table>
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<tr>
<th>MATH 0170</th>
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</tr>
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<tbody>
<tr>
<td>&amp; MATH 0180</td>
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<td>MATH 0190</td>
<td>Advanced Placement Calculus (Physics/ &amp; MATH 0200 Engineering)</td>
</tr>
<tr>
<td></td>
<td>and Intermediate Calculus (Physics/Engineering)</td>
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</table>

Select three additional higher-level math, applied math, or
mathematical physics (PHYS 0720) courses.

| CSCI 0040          | Introduction to Scientific Computing and Problem Solving (or higher-level programming course such as CSCI 0150.) |

Select one of the following Series:

<table>
<thead>
<tr>
<th>PHYS 0470</th>
<th>Electricity and Magnetism</th>
</tr>
</thead>
<tbody>
<tr>
<td>&amp; PHYS 1510</td>
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<td>ENGN 0510</td>
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</tr>
<tr>
<td>&amp; ENGN 1560</td>
<td>and Applied Electromagnetics</td>
</tr>
<tr>
<td>PHYS 0500</td>
<td>Advanced Classical Mechanics</td>
</tr>
<tr>
<td>or ENGN 1370</td>
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</tr>
<tr>
<td>PHYS 1410</td>
<td>Quantum Mechanics A</td>
</tr>
<tr>
<td>PHYS 1420</td>
<td>Quantum Mechanics B</td>
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<tr>
<td>PHYS 1530</td>
<td>Thermodynamics and Statistical Mechanics</td>
</tr>
<tr>
<td>or ENGN 0720</td>
<td>Thermodynamics</td>
</tr>
<tr>
<td>ENGN 1620</td>
<td>Analysis and Design of Electronic Circuits</td>
</tr>
</tbody>
</table>

Select one of the following:

| ENGN 0310          | Mechanics of Solids and Structures |
| ENGN 0810          | Fluid Mechanics |
| CHEM 0330          | Equilibrium, Rate, and Structure |

A physics course on continuum mechanics.

Select one of the following:

| ENGN 1690          | Photonics and Applications |
| ENGN 0410          | Materials Science |
| PHYS 0560          | Experiments in Modern Physics |

Select one of the following:

| PHYS 1560          | Modern Physics Laboratory |
| ENGN 1590          | Introduction to Semiconductors and Semiconductor Electronics |

An approved 2000-level engineering or physics course.

A thesis under the supervision of a physics or engineering faculty member:

| PHYS 1990          | Senior Conference Course |
| or ENGN 1970       | Independent Studies in Engineering |
| or ENGN 1971       | Independent Study in Engineering |

In addition, students must take four courses in the humanities and social sciences. They are encouraged to consider taking courses dealing with the philosophical, ethical, or political aspects of science and technology.

To accommodate the diverse preparation of individual students, variations of the above sequences and their prerequisites are possible by permission of the appropriate concentration advisor and the instructors involved.

It is required that each student's degree program be submitted for prior approval (typically in semester four) and scrutinized for compliance (in semester seven) by one faculty member from the Department of Physics and one faculty member from the Division of Engineering.

### English

English concentrators analyze language and form in the ongoing history of literatures in English, learning how literature shapes and is shaped by the world. We promote original work on new questions of history, criticism, and theory. And we invite practices of reading and writing that challenge the creation of knowledge in our fields. The curriculum includes courses from the range of literatures in English and in addition to the regular concentration offers a "track" in Nonfiction Writing, which attends to critical writing, the research paper, journalism, creative writing, and nonfiction writing. One of the largest humanities concentrations at Brown, English provides a strong foundation for a liberal education and for careers in many sectors of the changing spectrum of employment: the media, teaching, finance, government, corporate research and administration. English concentrators routinely go on to law, medical, and professional schools as well as to graduate education in literature and the arts.

### About the Concentration

Through the study of literature in English, concentrators develop skills in critical reading, thinking, and writing in preparation for a wide range of professions and careers including teaching, writing, publishing, media, medicine, law, and business. The concentration requirements aim to provide students with a coherent sense of the history of English literature from Anglo-Saxon times to the present. English concentrators have considerable latitude to choose the specific courses that will meet the requirements and we expect these choices to be informed by consistent consultation with a faculty advisor. Writing skills are an especially important focus of the English concentration. Through a variety of exercises from the short analytical essay to the longer research paper English concentrators are given a range of opportunities to sharpen their writing. We encourage students interested in concentrating in English to come into the department offices at 70 Brown Street and speak with a concentration advisor. Students in English courses who are considering an English concentration are welcome to make an appointment to speak with their instructor.

Concentration programs must be approved by a concentration advisor. To declare a concentration, students who have not previously filed a paper

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
concentration form must fill out an online Concentration form via ASK and enter their plan of study indicating the requirements that each course fulfills. Students who declared their English Concentration in 2010-2011 or earlier may choose to fulfill the requirements for the previous version of the concentration (for details please see the English Department website).

### Concentration Requirements (10 courses at the level of 0300 or above):

1. Two courses in Area I: Medieval and Early Modern Literatures: 2
2. Two courses in Area II: Enlightenment and the Rise of National Literatures: 2
3. Two courses in Area III: Modern and Contemporary Literatures 2
4. One theory course 1
5. Three electives 2

Total Credits 10

---

1 Five courses must be 1000-level courses. With advisor approval, two of the ten required courses may be taking in departments other than English.

2 As many as two 1000-level courses dealing primarily with the practice of writing, rather than the interpretation of literature, may be counted as electives.

### English Concentration -- Nonfiction Writing Track (11 courses at the level of 0300 or above)

The English concentration also includes a Nonfiction Writing Track. The requirements are the same as 1 through 4 above plus one English literature course emphasizing the genre of nonfiction writing and three 1000-level Nonfiction Writing courses for a total of eleven courses.

### Honors in English

Requirements are the same as those for the regular concentration, with the following additions:

Honors candidates must complete at least three upper-level seminars or comparable small courses and complete ENGL 1991 and ENGL 1992. Honors candidates must also earn more A's than B's in courses taken as part of the English concentration (or receive the equivalent faculty evaluation on a Course Performance Report for courses taken S/NC).

Applicants for Honors must have two letters of recommendation submitted to the Honors Advisor, a writing sample, and a one-page description of their proposed topic signed by the faculty member who has agreed to serve as the director of their thesis.

### Honors in Nonfiction Writing

Requirements are the same as those for the Nonfiction Writing Track. Eligible Honors applicants must have completed three upper-level seminars, two of which must be nonfiction writing seminars. Honors candidates must successfully complete ENGL 1993 and ENGL 1994. Honors candidates must also earn more A's than B's in courses taken as part of the English concentration (or receive equivalent faculty evaluation in a Course Performance for courses taken S/NC).

Applicants for Honors in Nonfiction Writing must have two letters of recommendation submitted to the Nonfiction Honors Advisor, a writing sample, and a one-page description of their proposed topic signed by the faculty member who has agreed to serve as the director of the thesis.

### Environmental Studies

The Center for Environmental Studies offers an A.B. and an Sc.B. in Environmental Studies. Both degrees are directed toward students who intend to work toward improving the quality of the environment. The A.B. degree is appropriate for students interested in social science or policy approaches to environmental problem-solving and who want to pursue post-graduate or professional experience in various fields of environmental management or education. Fluency in some basic sciences is essential to this degree. The ScB degree is appropriate for students who are interested in post-graduate or professional experience in the natural sciences as a way of understanding environmental processes. All concentrators are strongly encouraged to perform some environmentally-related public service during their time at Brown. Service may include work as a teaching assistant in a relevant course, volunteer work with an environmental non-profit group or an environmental agency, or significant work with a student environmental group. Students interested in the AB should consult with the primary concentration advisor, Prof. Kurt Teichert, while students with an interest in the ScB should consult with Prof. Dov Sax.

### Standard program for the A.B. degree in Environmental Studies:

#### Basic Prerequisites

- Competence in mathematics sufficient to take courses approved for the concentration.

#### Core Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVS 0490</td>
<td>Environmental Science in a Changing World</td>
</tr>
<tr>
<td>ENVS 1350</td>
<td>Environmental Economics and Policy</td>
</tr>
<tr>
<td>ENVS 1410</td>
<td>Environmental Law and Policy</td>
</tr>
<tr>
<td>ENVS 1555</td>
<td>Urban Agriculture: The Importance of Localized Food Systems</td>
</tr>
<tr>
<td>ENVS 1720</td>
<td>Environmental Justice: The Science and Political Economy of Environmental Health and Social Justice</td>
</tr>
<tr>
<td>PHP 1070</td>
<td>The Burden of Disease in Developing Countries</td>
</tr>
<tr>
<td>RELS 0260</td>
<td>Religion Gone Wild: Spirituality and the Environment</td>
</tr>
</tbody>
</table>

Select three intermediate level science or humanities courses appropriate to the student’s focus, for example:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 0420</td>
<td>Principles of Ecology</td>
</tr>
<tr>
<td>BIOL 0440</td>
<td>Plant Organism</td>
</tr>
<tr>
<td>BIOL 1470</td>
<td>Conservation Biology</td>
</tr>
<tr>
<td>ENVS 0455</td>
<td>Coastal Ecology and Conservation</td>
</tr>
<tr>
<td>GEOG 0030</td>
<td>Climate and Climate Change</td>
</tr>
<tr>
<td>GEOG 0240</td>
<td>Earth: Evolution of a Habitable Planet</td>
</tr>
<tr>
<td>GEOG 1350</td>
<td>Weather and Climate</td>
</tr>
</tbody>
</table>

A course in statistics and/or qualitative methods based on your focus

#### Focus

Select (5) focal courses

#### Capstone Options

1. One (1) or two (2) semester thesis research, register for ENVS 1970 (fall semester) and/or ENVS 1971 (spring semester) Independent Study
2. One (1) or two (2) semester environmental practicum. Register for ENVS 1970 (fall semester) and/or ENVS 1971 (spring semester) Environmentally related senior seminar or course

See footnotes 4 & 5 below for details

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVS 1970/1971</td>
<td>Independent Study</td>
</tr>
</tbody>
</table>

### Total # Courses

8 Core + 5 Focus + 1 or 2 Capstone = 14-15 courses

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Environmental Science

Standard program for the Sc.B. degree in Environmental Science

Basic Requirements

Competence in mathematics and chemistry

- MATH 0090 Introductory Calculus, Part I
- MATH 0100 Introductory Calculus, Part II
- CHEM 0330 Equilibrium, Rate, and Structure

Core Requirements

- ENVS 0490 Environmental Science in a Changing World
- ENVS 0410 Environmental Stewardship
- ENVS 1350 Environmental Economics and Policy
- ENVS 1410 Environmental Law and Policy
- ENVS 1555 Urban Agriculture: The Importance of Localized Food Systems
- ENVS 1720 Environmental Justice: The Science and Political Economy of Environmental Health and Social Justice
- PHP 1070 The Burden of Disease in Developing Countries
- RELS 0280 Religion Gone Wild: Spirituality and the Environment

Select three intermediate level environmental science courses appropriate to the student's focus, for example:  

- BIOL 0420 Principles of Ecology
- BIOL 0440 Plant Organism
- BIOL 0800 Principles of Physiology
- ENVS 0455 Coastal Ecology and Conservation
- GEOL 0220 Physical Processes in Geology
- GEOL 0240 Earth: Evolution of a Habitable Planet

A course in statistics, for example:

Focus

Six focus courses beyond the introductory level

1. of the 6 (or 7) must be science courses

3. of the 6 (or 7) must be at the 1000-level

At least one (1) course must have laboratory or field-based component

Capstone Options

1. One (1) or two (2) semester thesis research. Register for ENVS 1970 and/or ENVS 1971 Independent Study

2. One (1) or two (2) semester environmental practicum. Register for ENVS 1970 (fall semester) and/or ENVS 1971 (spring semester) Environmentally related senior seminar or course

See footnotes 5 & 6 below for details

ENVS Independent Study 1970/1971

Total # Courses

3 Rqts + 8 Core + 7 Focus + 1 or 2 Capstone = 19-20 courses

1. Advanced placement credit for MATH 0090 and MATH 0100 can be used to meet the math competency requirement and reduce the number of required courses.

2. Substitution of ENVS 0110 or ENVS 0490 requires approval of the concentration advisor. A score of 5 on AP exam may be used to satisfy ENVS 0110 or ENVS 0490 with permission of the concentration advisor.

3. Students are strongly encouraged to take Environmental Economics and an environmental policy course.

4. Other intermediate level science and non-science courses may be substituted with the approval of the concentration advisor.

5. Thesis Research: This may be a one or two semester project, done under the supervision of a faculty member. All students choosing this option must register for ENVS 1970 (fall) and/or ENVS 1971 (spring).

6. The research may be done individually, or in teams - prior approval needed. Students who undertake a one-year project may be eligible to graduate with honors. Those who apply for honors in ENVS, in addition to handing in a written thesis, must also present an oral defense.

Environmental Practicum: The practicum is a supervised, unpaid project undertaken (at least 150 hours) during the academic year in pursuit of practical experience. The project necessitates pre-approval and supervision by a faculty member and a sponsoring environmental agency, organization or firm. The practicum must include substantial research and writing components. It must be related to the student's focus and result in a final project that is accepted by the supervising organization, the faculty advisor, and concentration advisor. The practicum may be done individually, or, with prior approval, in teams. A final report must be produced. All students choosing this option must register for ENVS 1970 (fall) and/or ENVS 1971 (spring).

Capstone Course: A list of approved capstone courses will be provided on the CES website. Click on The Undergraduate Capstone Requirement (http://environstudies.brown.edu/theses/undergrad.html) under CAPSTONES/THESIS (http://envstudies.brown.edu/theses). Students choosing this option must take the capstone course during their senior year. This provides the opportunity to assimilate knowledge from previous coursework. Instructors may assign special assignments for students taking a course for capstone credit.

See the CES website for guidelines and deadlines for honors and non-honors independent thesis research - http://environstudies.brown.edu/theses/undergrad.html

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Students seeking information about the Ethnic Studies Program or in need of advising should contact the Center for the Study of Race and Ethnicity in America (401-863-3080).

French Studies

Building upon a foundation of proficiency in the French language, concentrators in French Studies explore the culture, history, and literature of Francophone civilizations. Students select from a variety of courses in language, historical periods, genres, themes, major writers, film, and civilization. Students interested in living in a French environment often reserve rooms in the coed dormitory (Machado House) at 87 Prospect Street. A Resident Coordinator in French maintains a planned program of activities centered around French conversation, movies, lectures, and cooking. Study abroad opportunities are available in Paris, Lyon and other francophone countries. Most students are required to take a placement exam. See departmental website (http://www.brown.edu/Departments/French/undergraduate/placement_exam.php) for details.

The Department of French Studies offers three standard concentration tracks. Please note that the following apply to the French Civilization, French Literature and French Language tracks:

1. FREN 0600 or equivalent is a prerequisite.
2. The overall requirement is for a minimum of nine courses (ten for Honors).
3. Up to four courses taken abroad may count for concentration credit.
4. The senior seminar (FREN 1900) must be taken during the senior year. (Requirement for Civilization and Literature concentrations only).

French Civilization Track

The concentration in civilization enables students to develop a multifaceted understanding of French and Francophone cultures, histories and contemporary issues. While based in French Studies, the program is interdisciplinary, calling for the integration of elective courses in departments such as History, Africana Studies, History of Art, International Relations, Political Science, etc. A minimum of seven courses are to be taken in French Studies.

Required courses

An upper-level language course from the FREN 1510 or FREN 1610 series
A course from the FREN 0750 series
A course from the FREN 1900 series

Electives

Six courses: Four must be in French Studies. A maximum of two may be in other departments, at the 1000-level or higher.

Total Credits

9

French Literature Track

The literature concentration provides a comprehensive view of French and Francophone literature and various types of literary analysis. Introductory courses acquaint students with methods of intellectual inquiry and basic critical approaches. Upper-level courses explore a particular author, literary genre, period, or special topic. Students learn how to use diverse analytical approaches, including semiotic, philosophical, psychological, feminist, and reader-oriented methods of criticism.

Required courses

An upper-level language course from the FREN 1510 or FREN 1610 series
A course from the FREN 0760 series
A course from the FREN 1000 series
A course from the FREN 1900 series

Electives

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
literary interpretation, and sociological analysis. Undergraduate Studies. Programs is available on the department's web site or from the Director of Undergraduate Studies.

Gender and Sexuality Studies

Gender and Sexuality Studies is an interdisciplinary concentration that examines the construction of gender and sexuality in social, cultural, political, economic, or scientific contexts. Each concentrator focuses on a well-defined topic or question and works closely with a concentration advisor to develop a program that investigates this focus area rigorously.

**Required courses**
- A course from the FREN 1510 series
- A course from the FREN 1610 series
- A course from the FREN 1020 series
- Two courses in French Studies, from the FREN 0750 series or higher.
- One final independent study course to provide a synthesis of the knowledge acquired in various areas of study.

**Electives**
- Select three 1000- or 2000- level courses in other departments.

**Total Credits** 9

- A non-exhaustive list of extra-departmental electives is posted on the department's web site.

**The Honors Program**

Candidacy for honors in French Studies presupposes an outstanding academic record, particularly in the major field. Any of the programs may be expanded into an Honors Concentration with these differences: the student will take a minimum of ten courses and write an Honors Thesis. While normally taken only in the seventh semester, students may opt to re-enroll in FREN 1900 (Senior Thesis) during the last semester, in which case eleven courses are required.

Further information on French Concentration Tracks and the Honors Programs is available on the department’s web site or from the Director of Undergraduate Studies.

**Geological Sciences**

Geological science involves the study of the Earth (and other planetary bodies), including their compositions and histories and the physical, chemical and biological processes that shape them. The geosciences are highly interdisciplinary, thus students must take some supporting math and science courses. Geoscience courses emphasize a process-oriented approach, with hands-on experiences in labs and on field trips. There is a strong emphasis on active and collaborative learning, and on practice in communication. Students may choose an AB (total of 13 courses) or an ScB (19 total courses, including one semester of research). There are many opportunities for students to do research work (typically in paid positions) during the academic year or in the summer, in areas such as deformation and properties of geological materials, deciphering the geologic history of some local rocks, or analysis of planetary images.

**Standard program for the A.B. degree**

This program provides a broad introduction to the geological sciences. Recommended for students seeking a liberal education and a general understanding of Earth processes and Earth history. Especially attractive for double concentrations, such as geology and economics as a career path to law or business, or geology and English as a career path to journalism or technical writing.

**Basic supporting science courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 0330</td>
<td>Equilibrium, Rate, and Structure (or advanced placement)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Select three of the following:</td>
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</tr>
<tr>
<td>MATH 0090</td>
<td>Introductory Calculus, Part I</td>
<td></td>
</tr>
<tr>
<td>MATH 0100</td>
<td>Introductory Calculus, Part II (or more advanced)</td>
<td></td>
</tr>
<tr>
<td>PHYS 0050</td>
<td>Foundations of Mechanics</td>
<td></td>
</tr>
<tr>
<td>PHYS 0060</td>
<td>Foundations of Electromagnetism and Modern Physics (or more advanced)</td>
<td></td>
</tr>
<tr>
<td>ENGN 0030</td>
<td>Introduction to Engineering</td>
<td></td>
</tr>
<tr>
<td>ENGN 0040</td>
<td>Dynamics and Vibrations (or more advanced)</td>
<td></td>
</tr>
<tr>
<td>BIOL 0200</td>
<td>The Foundation of Living Systems (or more advanced)</td>
<td></td>
</tr>
</tbody>
</table>

**Concentration courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 0220</td>
<td>Physical Processes in Geology</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 0230</td>
<td>Geochemistry: Earth and Planetary Materials and Processes</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 0240</td>
<td>Earth: Evolution of a Habitable Planet</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Select two of the following:</td>
<td>2</td>
</tr>
<tr>
<td>GEOL 1410</td>
<td>Mineralogy</td>
<td></td>
</tr>
<tr>
<td>GEOL 1420</td>
<td>Petrology</td>
<td></td>
</tr>
<tr>
<td>GEOL 1450</td>
<td>Structural Geology</td>
<td></td>
</tr>
</tbody>
</table>

**For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).**
A field course
Select two additional courses from upper level geological sciences, 2
mathematics, or supporting sciences with approval from the
departmental concentration advisor.

Total Credits 13

**Standard program for the Sc.B. degree**

This program is recommended for students interested in graduate study and careers in the geosciences and related fields.

**Basic supporting science courses**

Select two courses in mathematics at the level of: 2
MATH 0090 Introductory Calculus, Part I
MATH 0100 Introductory Calculus, Part II
or another more advanced math or statistics course

CHEM 0330 Equilibrium, Rate, and Structure (or advanced placement)

Select one of the following Series: 2
PHYS 0050 Foundations of Mechanics & PHYS 0060 Foundations of Electromagnetism and Modern Physics (or more advanced)
ENGN 0030 Introduction to Engineering & ENGN 0040 and Dynamics and Vibrations (or more advanced)

**Concentration courses**

GEOL 0220 Physical Processes in Geology
GEOL 0230 Geochemistry: Earth and Planetary Materials and Processes
GEOL 0240 Earth: Evolution of a Habitable Planet
GEOL 0310 Fossil Record
GEOL 1240 Stratigraphy and Sedimentation
GEOL 1410 Mineralogy
GEOL 1420 Petrology
GEOL 1450 Structural Geology

A field course

Select four courses from upper level geological sciences, 4
mathematics, or supporting sciences with approval from the
departmental concentration advisor.

GEOL 1970 Individual Study of Geologic Problems (Senior Research Thesis)

Total Credits 19

1 Advanced placement may be substituted for the first semester of physics.

**Geology-Biology**

Geology-Biology involves study of the interactions of the Earth and its hydrosphere and atmosphere with the great diversity of life forms, and how they have evolved and influenced one another over the entire history of the Earth. Many courses emphasize climate and biogeochemistry; this concentration is a good one for students interested in quantitative approaches to environmental science. Students take a basic suite of geoscience courses and at least 4 bio courses of their choosing, plus some supporting math and science courses; the AB degree requires a total of 14 courses and the ScB degree requires a total of 19, including one semester of research. There is a strong emphasis on active and collaborative learning, and on practice in communication. There are many opportunities for students to do research work (typically in paid positions) during the academic year or in the summer, in areas such as determining the history of climate change during the recent ice age, investigating the causes of major extinctions, and using paleoenvironmental records to determine the vulnerability of different regions of the globe to droughts and other processes that strongly affect society.

**Standard program for the A.B. degree**

This program provides a broad introduction to the geologic and biologic processes that shape the Earth and our environment. It is recommended for students seeking a liberal education and a general understanding of Earth processes, including the evolution of climate and the environment, global environmental change and Earth history. The program prepares students for careers in environmental science, geology, ecology, oceanography, and global change.

**Basic supporting science courses**

BIOL 0200 The Foundation of Living Systems (or more advanced)
CHEM 0330 Equilibrium, Rate, and Structure (or advanced placement)

Select two courses in mathematics and/or physics at the level of: 2
MATH 0090 Introductory Calculus, Part I (or more advanced)
PHYS 0050 Foundations of Mechanics (or more advanced)
ENGN 0030 Introduction to Engineering (or more advanced, or courses in data analysis and statistics)

**Concentration courses**

GEOL 0220 Physical Processes in Geology
GEOL 0230 Geochemistry: Earth and Planetary Materials and Processes
GEOL 0240 Earth: Evolution of a Habitable Planet
GEOL 1240 Stratigraphy and Sedimentation

Select three Biology courses from the following: 3
BIOL 0390 Vertebrate Evolution and Diversity
BIOL 0410 Invertebrate Zoology
BIOL 0415 Microbes in the Environment
BIOL 0420 Principles of Ecology
BIOL 0430 The Evolution of Plant Diversity
BIOL 0440 Plant Organism
BIOL 0480 Evolutionary Biology
BIOL 1470 Conservation Biology
BIOL 1480 Terrestrial Biogeochemistry and the Functioning of Ecosystems
BIOL 1500 Plant Physiological Ecology
BIOL 1880 Comparative Biology of the Vertebrates

Three geological sciences courses from the following: 3
GEOL 0580 Foundations of Physical Hydrology
GEOL 1100 Global Physical/Descriptive Oceanography
GEOL 1110 Estuarine Oceanography
GEOL 1120 Paleoclimatology
GEOL 1130 Ocean Biogeochemical Cycles
GEOL 1150 Limnology: The Study of Lakes
GEOL 1330 Global Environmental Remote Sensing
GEOL 1350 Weather and Climate
GEOL 1370 Environmental Geochemistry
GEOL 1380 Environmental Stable Isotopes
GEOL 1510 Introduction to Atmospheric Dynamics

Total Credits 14

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
or ENGN 0030 Introduction to Engineering
Select two courses in mathematics at the level of: 2
MATH 0090 Introductory Calculus, Part I
MATH 0100 Introductory Calculus, Part II (or more advanced, or advanced courses in data analysis)

Fourteen (14) concentration courses
GEOL 0220 Physical Processes in Geology 1
GEOL 0230 Geochemistry: Earth and Planetary Materials and Processes 1
GEOL 0240 Earth: Evolution of a Habitable Planet 1
GEOL 1240 Stratigraphy and Sedimentation 1
Three biology courses from the following: 3
BIOL 0390 Vertebrate Evolution and Diversity
BIOL 0410 Invertebrate Zoology
BIOL 0415 Microbes in the Environment
BIOL 0420 Principles of Ecology
BIOL 0430 The Evolution of Plant Diversity
BIOL 0440 Plant Organism
BIOL 0480 Evolutionary Biology
BIOL 1470 Conservation Biology
BIOL 1480 Terrestrial Biogeochemistry and the Functioning of Ecosystems
BIOL 1500 Plant Physiological Ecology
BIOL 1880 Comparative Biology of the Vertebrates
Three geological sciences courses from the following: 3
GEOL 0580 Foundations of Physical Hydrology
GEOL 1100 Global/Physical/Descriptive Oceanography
GEOL 1110 Estuarine Oceanography
GEOL 1120 Paleoceanography
GEOL 1130 Ocean Biogeochemical Cycles
GEOL 1150 Limnology: The Study of Lakes
GEOL 1330 Global Environmental Remote Sensing
GEOL 1350 Weather and Climate
GEOL 1370 Environmental Geochemistry
GEOL 1380 Environmental Stable Isotopes
GEOL 1510 Introduction to Atmospheric Dynamics
Three additional courses from upper level geological sciences, mathematics, or supporting sciences with approval from the concentration advisor: 3
GEOL 1970 Individual Study of Geologic Problems (Senior Research Thesis)

Total Credits 19

Geology-Chemistry

Geochemistry involves two different emphases. Low-temperature geochemistry involves study of chemical and biochemical processes on and near Earth’s surface, including land, oceans and freshwater bodies, and how the geochemical record reflects climate conditions. High-temperature geochemistry includes study of formation and evolution of the Earth and other planets, magma formation and properties, volcanic activity, and metamorphism. The AB degree requires a total of 14 courses, including 5 geoscience courses and 4 chemistry courses, and a few supporting math and physics courses. The ScB degree requires a total of 20 courses, including 7 geoscience courses and 4 chemistry courses, either with an organic or an inorganic focus, plus some supporting math and physics courses and one research course. Geoscience courses emphasize a process-oriented approach, with hands-on experiences in labs and on field trips. There is a strong emphasis on active and collaborative learning, and on practice in communication. There are many opportunities for students to do research work for pay during the academic year or in the summer, in areas such as experimental studies of magma formation, and analyzing lunar rock samples for water content.

Standard program for the A.B. degree
Recommended for students seeking a liberal education and interested in applying physical and chemical principles toward an understanding of Earth history, Earth processes, and environmental and resource issues.

Basic supporting science courses
Select two courses in mathematics at the level of: 2
MATH 0090 Introductory Calculus, Part I (or more advanced)
MATH 0100 Introductory Calculus, Part II (or more advanced)
CHEM 0330 Equilibrium, Rate, and Structure
PHYS 0050 Foundations of Mechanics (or a more advanced course, or advanced placement.)
or ENGN 0030 Introduction to Engineering

Concentration courses
GEOL 0220 Physical Processes in Geology
GEOL 0230 Geochemistry: Earth and Planetary Materials and Processes
GEOL 0240 Earth: Evolution of a Habitable Planet
Three additional chemistry courses 3
Select one of the following Series: 2
GEOL 1410 Mineralogy
& GEOL 1420 Petrology
GEOL 1130 Ocean Biogeochemical Cycles
& GEOL 1370 Environmental Geochemistry
Two additional courses from upper level geological sciences, math, or supporting sciences with approval from the department concentration advisor: 2

Total Credits 14

Standard program for the Sc.B. degree
This program is recommended for students interested in graduate study and careers in geochmistry and related fields.

Basic Supporting Science Courses:
Select two courses in mathematics at the level of: 2
MATH 0090 Introductory Calculus, Part I (or more advanced)
MATH 0100 Introductory Calculus, Part II (or more advanced)
CHEM 0330 Equilibrium, Rate, and Structure
Select one of the following Series: 2
PHYS 0050 Foundations of Mechanics
& PHYS 0060 Foundations of Electromagnetism and Modern Physics
or ENGN 0030 Introduction to Engineering
or a more advanced course

Concentration Courses:
Either the geochemistry/inorganic option or the geochemistry/organic option: 10

Geochemistry/Inorganic Option:
GEOL 0220 Physical Processes in Geology
GEOL 0230 Geochemistry: Earth and Planetary Materials and Processes
GEOL 0240 Earth: Evolution of a Habitable Planet
GEOL 1130 Ocean Biogeochemical Cycles
or GEOL 1370 Environmental Geochemistry
GEOL 1410 Mineralogy
GEOL 1420 Petrology
Plus one from:
GEOL 1240 Stratigraphy and Sedimentation
GEOL 1330 Global Environmental Remote Sensing
GEOL 1450 Structural Geology
Three from:
CHEM 0350 Organic Chemistry

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
CHEM 0500 Inorganic Chemistry
CHEM 1060 Advanced Inorganic Chemistry
CHEM 1140 Physical Chemistry: Quantum Chemistry
CHEM 1150 Physical Chemistry: Thermodynamics and Statistical Mechanics

Geology-Physics/Mathematics

Geophysics involves the application of physics and mathematics to the study of processes that operate on and within the Earth and other planets, over short and long timescales. The AB degree requires a total of 14 courses, including 6 geoscience courses, 3 physics or engineering courses, and 3 math and applied math courses. The ScB degree requires a total of 20 courses, including 8 geoscience courses, 4 physics or engineering courses, and 4 math and applied courses; students can choose courses from both solid Earth geophysics and environmental geophysics. Geoscience courses emphasize an analytical and process-oriented approach, with hands-on experiences in labs and on field trips. Active and collaborative learning is encouraged, as is practice in written and oral communication. There are many opportunities for students to engage in research (typically in paid positions) during the academic year or in the summer, in areas such as analysis of seismic waves in subduction zones, theoretical modeling of convection in the Earth’s mantle, interpreting the cause of gravity anomalies in southern California, and remote sensing of warming in Narragansett Bay.

Standard program for the A.B. degree

Recommended for students seeking a liberal education and interested in applying physical and mathematical principles toward an understanding of the planets, Earth and the environment.

Basic supporting science courses

Select one of the following Series:

<table>
<thead>
<tr>
<th>Series</th>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0050 &amp; PHYS 0060</td>
<td>Foundations of Mechanics and Foundations of Electromagnetism and Modern Physics</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 0070 &amp; PHYS 0160</td>
<td>Analytical Mechanics and Introduction to Relativity and Quantum Physics</td>
<td>2</td>
</tr>
<tr>
<td>ENGN 0030 &amp; ENGN 0040</td>
<td>Introduction to Engineering and Dynamics and Vibrations</td>
<td>2</td>
</tr>
</tbody>
</table>

CHEM 0330 Equilibrium, Rate, and Structure (or advanced placement)

Concentration courses

Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 0220</td>
<td>Physical Processes in Geology</td>
</tr>
<tr>
<td>GEOL 0230</td>
<td>Geochemistry: Earth and Planetary Materials and Processes</td>
</tr>
<tr>
<td>GEOL 0250</td>
<td>Computational Approaches to Modelling and Quantitative Analysis in Natural Sciences: An Introduction</td>
</tr>
<tr>
<td>GEOL 1610</td>
<td>Solid Earth Geophysics</td>
</tr>
</tbody>
</table>

Four additional courses from upper level geological sciences, mathematics, or supporting sciences with approval of the departmental concentration advisor.

Total Credits 20

1 Advanced placement may be substituted for the first semester of physics.

Standard program for the Sc.B. degree

This program is recommended for students interested in graduate study and careers in geophysics and related fields.

Basic supporting science courses

Select one of the following Series:

<table>
<thead>
<tr>
<th>Series</th>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0050 &amp; PHYS 0060</td>
<td>Foundations of Mechanics and Foundations of Electromagnetism and Modern Physics</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 0070 &amp; PHYS 0160</td>
<td>Analytical Mechanics and Introduction to Relativity and Quantum Physics</td>
<td>2</td>
</tr>
<tr>
<td>ENGN 0030 &amp; ENGN 0040</td>
<td>Introduction to Engineering and Dynamics and Vibrations</td>
<td>2</td>
</tr>
<tr>
<td>CHEM 0330</td>
<td>Equilibrium, Rate, and Structure (or advanced placement)</td>
<td>1</td>
</tr>
</tbody>
</table>

Concentration courses

Select two of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 0220</td>
<td>Physical Processes in Geology</td>
</tr>
<tr>
<td>GEOL 0230</td>
<td>Geochemistry: Earth and Planetary Materials and Processes</td>
</tr>
<tr>
<td>GEOL 0250</td>
<td>Computational Approaches to Modelling and Quantitative Analysis in Natural Sciences: An Introduction</td>
</tr>
<tr>
<td>GEOL 1450</td>
<td>Structural Geology</td>
</tr>
<tr>
<td>GEOL 1610</td>
<td>Solid Earth Geophysics</td>
</tr>
<tr>
<td>GEOL 1620</td>
<td>Continuum Physics of the Solid Earth (related to solid Earth dynamics)</td>
</tr>
</tbody>
</table>

Total Credits 14

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Health & Human Biology

Health and Human Biology is an interdisciplinary concentration whose goals are to provide a rigorous foundation in the biological sciences with substantive course work in humanities and social sciences within a subfield of Human Health and Disease. The program includes: background courses, a biology core courses, a set of theme courses, and a Senior Capstone activity. Background courses provide the essential foundations in chemistry, mathematics, methods, and basic biology. These support the Biology core comprised of a flexible menu of intermediate and advanced courses. A required portion of the Biology core is Genetics, which is considered a cornerstone of human biology and its interface with other fields. The Biology core underscores the related coursework within the Health and Disease Theme. This course grouping is comprised of social science and humanities courses and must form a cohesive, thoughtful cohort. Suggested theme subfoci must be discussed and approved by an advisor. It is expected that these course selections will evolve over the course of the student’s college career, as each semester’s experience builds on the previous one. A senior year capstone course or experience should build on the program’s theme.

Program Requirements

REQUIRED BACKGROUND:

Four (4) courses including:

- MATH 0090 & CHEM 0330 & BIOL 0200
- and The Foundation of Living Systems
- and Equilibrium, Rate, and Structure
- and the 100-level (or higher);
- Two of the 1000-level courses must contain writing assignments in
- German, and students must obtain at least a grade of B in these
courses;
- At least five of the nine courses must be taken in the Department of
- German Studies (or four if a student spends a whole year in Germany
- on Study Abroad);
- Completion of a Senior Seminar during the senior year (i.e. a course
- from the German Studies 1900 series) as part of the five courses within
- the Department of German Studies; and
- If a student studies abroad for one semester, as many as four courses,
in the case of two semesters, as many as five courses, from study
abroad may count toward the concentration.

Honors

Candidates for honors will be expected to have a superior record in
departmental courses and will have to be approved by the Department
of German Studies. Honors candidates must take one additional course
at the 100-level from the German studies offerings and present an
acceptable Senior Honors Thesis. The additional course may be used for
preparation of the honors thesis. Students are encouraged to discuss their
thesis topics with the concentration advisor no later than the third week of
classes in Fall of their Senior year.
or BIOL 0410 Invertebrate Zoology
or BIOL 0415 Microbes in the Environment
or BIOL 0420 Principles of Ecology
or BIOL 0475 Conservation Medicine
or BIOL 0480 Evolutionary Biology
or BIOL 1410 Evolutionary Genetics
or BIOL 1430 The Computational Theory of Molecular Evolution
or BIOL 1475 Biogeography
or BIOL 1480 Terrestrial Biogeochemistry and the Functioning of Ecosystems
or BIOL 1880 Comparative Biology of the Vertebrates
or ENVS 0490 Environmental Science in a Changing World
or ENVS 0455 Coastal Ecology and Conservation
or ENVS 1455 Marine Conservation Science and Policy
c) Two (2) Biology or Neuroscience courses that relate to and support the chosen theme course grouping (see below). 3

THEME: (see examples below) Four (4) appropriate and cohesively grouped courses from non-biology and non-neuroscience offerings

The unifying theme in this program is Human Health and Disease. With advisor’s assistance, a subfocus is chosen from departments such as: CLPS, PHP, EDUC, GNSS, SOC, ANTH, HIST, SCSO, ETHN, ENVs, AFRI, PPAI, and sections of BIOL 1920; others by approval or suggestion of the advisor. Approved courses must be suitable for concentrators, and at least one must be advanced (>1000 level in the discipline). EXCLUSIONS: BIOL 1920 and BIOL 2840, which carry theme or capstone credit (BIOL 1920C) only. *Courses numbered below BIOL 0100 do not carry concentration credit.

SENIOR CAPSTONE ACTIVITY 4

1) The Capstone activity must be approved by the concentration advisor and must be carried out DURING the Senior year.

2) Honors in Human Biology is based on approved Capstone Research that yields a thesis and oral presentation, plus quality grades (see more information about Honors below).

Total Credits 14


THEME: Examples of thematic subfoci that may describe a course grouping include (but are not necessarily limited to):

1. Health Behavior (Brain & Behavior)
2. Health Systems Structure and Policy
3. Culture and Health
4. Environmental Health
5. Global/International Health
6. Women’s/Children’s Health
7. Disability/Ethics
8. Social context
9. Race and ethnic disparities in disease

Examples of possible THEME COURSES are listed in this pdf.

HONORS: See more information about Honors at http://biology.brown.edu/bug/honors.

1 Note: These latter two options involve TWO courses, both of which would therefore count as part of the five biology course portion of the program.

2 BIOL 0480 serves as the organismal/population biology course that is required

3 At least one of these at the advanced (>1000) level.

4 May be fulfilled by an independent activity such as an approved relevant advanced course, or seminar or, Directed Research (eg, BIOL 1950/1960, or an independent study in another Department if approved by the concentration advisor), or an appropriate internship accompanied by a scholarly paper written under the direction of a Brown faculty mentor. The Capstone activity must be approved by the concentration advisor and must be carried out DURING the senior year.

Hispanic Studies

Spanish is the second most widely spoken language in the world and the second language of the United States. In our society, knowing Spanish is not just an asset; it is increasingly a necessity. The Hispanic Studies concentration enables students to develop advanced Spanish skills while acquiring a solid background in the complex history, literature, cultures, and intellectual traditions of Spain, Latin America, and the Latino-U.S.

The department offers a variety of courses on topics related to literary history and theory; multicultural context; linguistics and the history of the language; visual culture, film, and performance studies. Interdisciplinarity is a hallmark of the department, and students in this concentration are encouraged to broaden their perspectives by taking relevant courses in other departments. Most choose to strengthen their academic preparation by participating in a study abroad program in Spain or Latin America and by engaging with Hispanic communities in the United States.

The Department of Hispanic Studies offers a standard concentration program in Hispanic Studies with a track in Hispanic Language, Literature and Culture. This program provides students with a comprehensive view of Hispanic (Spain and Latin America) language, literature and culture. Both introductory and upper-level courses offer opportunities to explore a particular author, genre, period, or special topic, and to learn and use diverse analytical approaches. The overall requirement is a minimum of ten courses.

Prerequisite

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>HISP 0600</td>
<td>Advanced Spanish II</td>
</tr>
</tbody>
</table>

Required courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HISP 0730</td>
<td>Early and Contemporary Writers of Spanish America 1</td>
</tr>
<tr>
<td>HISP 0740</td>
<td>Intensive Survey of Spanish Literature 1</td>
</tr>
</tbody>
</table>

Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
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<tbody>
<tr>
<td>HISP 1990</td>
<td>Senior Conference (for students writing an honors thesis)</td>
</tr>
</tbody>
</table>

Elective courses

Select at least eight 1000-level courses which provide more specific preparation in major areas of Hispanic Studies. Students should consider taking one upper-level language course. 2

Total Credits 10

1 Introduces students to standards and methods of interpretation in the field, as well as to major works, genres, and movement in the literatures and cultures of both sides of the Atlantic.

2 Four of the 1000-level courses cover the principal areas of Hispanic Studies - from medieval and early modern works all the way to works in the twenty-first century. In consultation with the concentration advisor, students also choose from four 1000-level elective courses that best suit their specific needs and interests. Concentrators are reminded that courses from Comparative Literature, History and other disciplines may be applied toward the concentration in Hispanic Studies as long as they deal with Spanish or Latin American themes, or with questions or topics that are pertinent for the study of Peninsular or Latin American culture. Individual courses may be discussed with the Concentration Advisor on a case by case basis. Up to two courses from outside of Hispanic Studies may be counted toward the concentration.

As many as four courses take abroad may be applied towards the concentration in Hispanic Studies. These courses must meet the
requirements of the concentration and be approved by the Concentration Advisor (note that they must first be approved for Brown University credit). If you are planning to fulfill concentration requirements with courses taken abroad, please keep the syllabi and work (exams, papers) for evaluation.

Honors

Students are normally required to have an A average in their concentration courses before being considered for the Honors Program. Those interested in writing a Senior Thesis should discuss this possibility with the instructor they want as their thesis advisor during the spring semester of their junior year. Applications are due by the third week of a student’s seventh semester at Brown.

History

History is the study of how societies and cultures across the world change over time. History concentrators learn to write and think critically, and to understand issues from a variety of perspectives. The department offers a wide variety of courses concerned with changes in human experience through time, ranging from classical Greek and Roman civilizations to the histories of Europe, the Americas, and Asia. While some courses explore special topics, others concentrate on the history of a particular country (e.g. Russia or France) or period of time (e.g. the Middle Ages or the Renaissance). By taking advantage of our diverse course offerings, students can engage in and develop broad perspectives on the past and the present.

1. Basic Requirement: A concentration in History consists of a minimum of ten semester-long courses; of these, at least eight (seven in the case of students who spend more than one semester at another institution; see “Transferring Courses” below) must be offered by the Brown University History Department, including cross-listed courses.

2. Introductory Courses: Students may count no more than two lecture surveys numbered 0520 or lower and only one HIST 0970 or HIST 0980 seminar toward the concentration requirements. It is recommended that concentrators in their first or second years take a HIST 0970 series seminar or a HIST 0980 series seminar for a seminar-based introduction to historical reasoning, discussion, and writing.

3. Field of Focus: Upon declaring a concentration in History, students must define the area that will be the primary focus of their program. The primary field of focus must include minimum of four courses. The field may be defined by geographical regions (see #4), by geographical regions with thematic or chronological emphases, or by topical

4. Geographical Distribution: Concentrators must distribute nine of the ten required courses as follows: four courses in the primary geographic area. Thereafter, five courses in two or more secondary areas, with a maximum of three in any of these areas. Comparative and transnational courses may count for the geographical requirement with the approval of the concentration advisor. The geographical areas are:
   - Africa
   - East Asia
   - Europe
   - Latin America and the Caribbean
   - Middle East and South Asia
   - North America

5. Chronological Distribution: All History Department courses are designated “P” for pre-modern, “M” for modern, and “E” for either pre-modern or modern. Concentrators must complete at least three courses in the pre-modern period and three courses in the modern periods. Two of the courses must be designated “P” and two must be designated “M”. Courses designated “E” may fulfill the requirements for a third course in each category.

6. Capstone Seminar: All concentrators must complete at least one capstone seminar (HIST 1960 or HIST 1970 series seminar). These seminars are designed to serve as an intellectual culmination of the concentration. They provide students with an opportunity to delve deeper into a historical problem and to write a major research and/or analytical paper which serves as a capstone experience. Ideally, they will be taken in the field of focus and during the student’s junior or senior year. Students considering writing a senior honors thesis are advised to take an advanced seminar in their junior year.

7. Honors: To be admitted to the honors program, students must have achieved two-thirds “quality grades” in History department courses. A “quality grade” is defined as a grade of “A” or a grade of “S” accompanied by a course performance report indicating a performance at the “A” standard. Honors is normally a three-semester process, with students taking HIST 1992, “History Honors Workshop for Prospective Thesis Writers,” one semester and HIST 1993, “History Honors Workshop for Thesis Writers,” for two semesters. Both classes will be offered every semester, so students may begin the process in either their 5th or 6th semester. HIST 1992 is strongly recommended but not required. The class may count as one of the 10 courses required for graduation in history. Students may be admitted into HIST 1993 in one of two ways.
   2. By submitting a thesis prospectus of equivalent quality (A- or above) no later than the first day of their 7th semester. This method of entry into HIST 1993 is geared especially, but not limited to students who have spent their junior year away from Brown. Students who take HIST 1992 in the 5th semester can finish the thesis in the 7th semester. Students who take HIST 1992 in the 6th semester will finish it in the 8th semester.

   Students who contemplate enrolling in the honors program in History should consult the department website. They are also encouraged to meet with the Director of Undergraduate Studies, who serves as the honors advisor.

8. Transferring Courses: The History Department encourages students to take history courses at other institutions, either in the United States or abroad, as well as history-oriented courses in other departments and programs at Brown. Students may apply two courses taken in other departments/programs at Brown to the ten-course minimum for the History concentration. Students who spend one semester at another institution may apply to have their concentration a maximum of two courses from other departments or institutions, and those who spend more than one semester at another institution may apply to their concentration a third course transferred from another institution. The total number of courses from other departments or institutions may not exceed three.

   Students wishing to apply such courses must present to their concentration advisor justification that those courses complement some aspect of their concentration. Courses from other Brown departments may not be applied toward the chronological distribution requirement; courses transferred from other institutions may be applied toward the chronological distribution requirement so long as they clearly are history courses.

   It is normally expected that students will have declared their intention to concentrate in History and have their concentration programs approved before undertaking study elsewhere. Students taking courses in Brown-run programs abroad automatically receive University transfer credit, but concentration credit is granted only with the approval of a concentration advisor. Students taking courses in other foreign-study programs or at other universities in the United States must apply to the Transfer Credit Advisor.

   Final transfer credit will be not be granted until the student successfully completes the course(s) and returns to Brown. Approval by the department advisor for transfer credit will be
contingent on satisfactory course content and performance (to be demonstrated by documents such as a transcript showing the grade, syllabi, notes, papers, exams, etc).

9. **Regular Consultation:** Students are strongly urged to consult regularly with their concentration advisor or a department advisor about their program. During the seventh semester, all students must meet with their concentration advisor for review and approval of their program.

### History of Art and Architecture

The concentration in History of Art and Architecture introduces students to the history of art, architecture, and visual culture. Students in HIAA explore Western and non-Western areas ranging over a wide period of time. (Ancient, Medieval, Islamic, East Asian, Latin American, Early Modern, Modern/Contemporary). Concentrators often focus on a particular period (e.g. ancient, modern architecture), a particular branch of the field (e.g. urbanism), or a methodology (e.g. semiotics, critical interpretation, archaeology), but students may choose to create their own program of study. Concentrators will receive essential training in perceptual, historical, and critical analysis. Concentrators often study abroad for first-hand knowledge of works of art and monuments as well as for exposure to foreign languages and cultures. Because foreign language skills are essential for pursuing art historical studies in a professional environment or in graduate school, HIAA requires two years of foreign language study.

The concentration total ten courses (eleven for honors). There are no prerequisites, but our general survey in history of art and architecture is an excellent foundation for the concentration. Students may receive concentration credit for this course. Please remember that these figures are only the minimum requirements and that we expect concentrators to take more than just the minimum number of classes in the subject of their choice.

Students must demonstrate reading proficiency in another language, since foreign language skills are essential for pursuing art historical studies in a professional environment or graduate school. Students with previous language experience will be asked to take a placement test and/or demonstrate a 400 level reading ability.

Since the history of art and architecture addresses issues of practice within specific historical contexts, concentrators are asked to take at least one studio art course, and courses in history that pertain to their area of emphasis. Study abroad can be a valuable enrichment of the academic work available on campus, in that it offers opportunities for first-hand knowledge of works of art and monuments as well as providing exposure to foreign languages and cultures. Study abroad should be planned in consultation with the concentration advisor in order to make sure that foreign course work will relate meaningfully to the concentration's program of study. Only two courses taken outside the department may count for concentration credit (including courses taken abroad and at other institutions in the United States). These credits will be counted as lecture courses, not seminars and cannot replace any of the six core classes. There is a maximum of two outside credits for courses taken at other universities (transfer credits or from study abroad programs), or courses that also count towards a second concentration. No concentration credit for High School AP, Subsidiary AP, A level etc. courses. No concentration credit for language classes.

Courses are taught on three levels. HIAA 0010 - HIAA 0940 are lecture courses meeting for three to four hours a week of lectures and discussion. HIAA 0020 - HIAA 1890 are seminars dealing with specific problems or issues in, art, architecture and theory and are designed for concentrators or otherwise well-prepared students. Courses with numbers above 2000 are graduate courses, which can, in exceptional cases, be opened up to particularly qualified seniors.

The core courses of four lecture classes and two seminars have to be taken in the department without exception. Those classes cannot be replaced with classes taken in other departments or universities.

Enrollment in seminar courses requires permission of the instructor.

### Requirements

The concentration consists of ten courses (eleven for honors):

- 4 general lecture core courses, (HIAA 0020 - HIAA 0940) distributed between 3 of the 7 available areas of the discipline. (Ancient / Medieval/ Islamic / East Asian / Latin American / Early Modern (ca. 1400-1800 / Modern, Contemporary)
- 2 seminar core courses (numbered between HIAA 1040 and HIAA 1890)
- 4 courses that can include other courses taught in the department and cross-listed courses elsewhere. will count as 1 of these courses, but will not count as 1 of the 4 core lecture classes. Students are encouraged to take 1 studio class as part of these 4 courses.
- The 6 core lecture courses and seminars have to be taken in the department and can NOT be replaced with an independent study/ honors thesis/classes taken in other departments, universities, or high schools.
- Language requirement: (A recent placement test for a 400 level reading capacity, or passing of a 400 level language class has to be provided and will become part of the record.)
- Maximum 2 outside credits for courses taken at other universities (transfer credits or from study abroad programs), or courses that also count towards a second concentration. No concentration credit for High School AP, Subsidiary AP, A level etc. courses. No concentration credit for language classes.

### Architectural Studies Track

The Architectural Studies concentration track within the Department of History of Art and Architecture blends a variety of disciplines toward the study of buildings and the built environment. The concentration prepares students for the continued study of architecture and the history of architecture in graduate school as well as careers in related areas such as urban studies. The concentration requires four lecture courses and two seminars in the history of architecture and urbanism that are offered by the Department of History of Art and Architecture. One of the seminars is a project seminar, taken in junior or senior year, and is designed as a capstone experience for the Architectural Studies concentrator. Courses that may be counted toward the concentration are listed with an "A" at the end of their descriptions in the Course Announcement Bulletin.

Because the architectural studies program was especially designed for students wishing to gain greater experience in the practical skills necessary for a career in architecture or related field, concentrators are required to take a course in design from the Visual Arts Department, the Rhode Island School of Design or an introduction to architectural design, theatre set design at Brown University or the Harvard GSD’s summer school or similar six week+ courses in drafting or design instruction.

- Students will be able and are encouraged to take cross listed pertinent courses from such departments or programs as American Civilization, Center for Old World Archaeology and Art, Engineering, Mathematics, History, Modern Culture and Media, Urban Studies, and Visual Art, and Engineering, in addition to those offered by the Department.
- They can receive concentration credit for a maximum of two of these courses. Study abroad can be a valuable enrichment of the academic work available on campus, in that it offers opportunities for first-hand knowledge of architecture and the built environment as well as providing exposure to foreign languages and cultures. Study abroad should be planned in consultation with the concentration advisor in order to make sure that foreign course work will relate meaningfully to the concentrator’s program of study. Only two courses taken outside the department may count for concentration credit (including courses taken abroad and at other institutions in the United States). These credits will be counted as lecture courses, not seminars.
- The equivalent of two years of foreign language study are required for concentrators, in order to read scholarship in at least one other language and to sensibly interact with an architectural culture other than your own. Students with previous language experience will be asked to take a placement test and demonstrate a 400 level reading ability.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Requirements:

- Four lecture courses distributed over three areas in architectural history (numbered between HIAA 0020 and HIAA 0940 and marked with an A) from the following areas: Ancient / Medieval / Islamic / East Asian / Latin American / Early Modern (ca. 1400-1800) Modern / Contemporary
- One seminar or independent study in architectural history (numbered between HIAA 1100 and HIAA 1890 and marked with an A).
- The project seminar (HIAA 1910-A - 1910F or acceptable substitute to be chosen in discussion with the concentration advisor) is required of all concentrators and is taken in junior or senior year. Priority is given to architectural studies concentrators. In years when no project seminar is offered, any seminar that qualifies for architectural studies can become the starting point for a senior project.
- The two above seminars can NOT be replaced with an independent study/honors thesis/classes taken in other departments or universities.
- One studio art course in design (at Brown, RISD, Harvard Career Discovery and similar 6 week + summer courses)
- Three additional courses. These can include other courses taught in the department (including ,) and cross-listed courses in another department that are pertinent to architectural studies. They also include a select number of non-cross listed courses that are approved by the concentration advisor. These include (but are not limited to HIAA 1910-1910F) and , , , urban studies and engineering courses, and scenic design and technical production (Department of Theatre Arts and Performance Studies)
- Language requirement (A recent placement test for a 400 level reading capacity, or passing of a 400 level language class.)
- Maximum two outside credits for courses taken at other universities (transfer credits or from study abroad programs), or courses that also count towards a second concentration. No concentration credit for High School AP, Subsidiary AP, A level etc. courses. No concentration credit for language classes.

It is expected that concentrators will wish to focus on a particular period (e.g. ancient, modern architecture), a particular branch of the field (e.g. urbanism), or a methodology (e.g. semiotics, critical interpretation, archaeology). Students are encouraged to formulate their own coherent program of study.

Honors

The Honors program in History of Art & Architecture and Architectural Studies will be administered as follows: accepted students will sign up for in the Fall and in the Spring. In the Fall, students will meet regularly with the whole Honors group and HAA faculty to discuss methodology and general research and writing questions. In the Spring, students will continue to meet to present their research in progress to each other for comment and feedback. They will also be meeting regularly with their advisors and second readers throughout the year. Finished drafts of the thesis (which will generally be no more than 30-35 pages in length (exceptions to be determined in consultation with the instructor), not counting bibliography and visual materials) will be due to the advisor and second reader on April 1 of the Spring semester. Comments will be returned to the students for final corrections at that point. There will be a public presentation of the Honors work at the end of the Spring semester.

Students wishing to write an honors thesis should have an A average for language classes.

Honors Application Process

Towards the end of the Spring semester all concentrators will be notified via the DUG Listserv that the application process is open. In order to apply to the Honors program each student should write up a proposal of no more than two double-spaced pages stating the topic (subject and argument) of the research to be undertaken as clearly as possible, along with a one-page bibliography of the most relevant books and major articles to be consulted for the project. This three page application should be submitted, along with a résumé and a printout of the student’s most recent available transcript and submitted to the department with a short cover letter stating who you feel the most appropriate advisor and second reader are for the thesis and why, and what your preparation is for this project. Clarity and brevity are considered persuasive virtues in this process. Applicants will be notified about the success of their applications at the end of the Spring semester.

Capstone Project

Those students who are not enrolled in the honors program are encouraged to develop one of their seminar papers into a capstone project, in consultation with the instructor. This paper can contain additional research, the application of the research to a catalog or website project etc.

While capstone projects will not be mandatory, they will be highly recommended. Capstones can include honors theses, UTRA’s, undergraduate TAships, internships, perfecting a seminar paper, GISP, GILP, etc. The capstone and any related course of study, including internships, must be approved and overseen by a faculty sponsor.

Self-Assessment

All concentrators are required to write an essay when they file for the concentration that lays out what they expect to gain from the course of study they propose. All second semester seniors will be required to write a final essay that takes measure of what they have learned from the concentration, including their capstone and other experiences relating to their study of the history of art and architecture. For students doing a capstone, their capstone director will read this essay. A department subcommittee will read essays written by students not electing to do a capstone. The self-assessment should be turned in with a revised list of courses actually taken and the final paperwork for concentration approval.

Attendance at lecture events and conferences in the HIAA department is strongly encouraged.

Independent Concentration

Although Brown offers nearly 80 concentrations, a small number of students have academic interests that fall beyond the scope of these offerings. Brown allows these students to design their own concentrations through the Independent Concentration (IC) program. The IC program is for exceptionally dedicated students who are willing to spend extra time and effort creating a “new” concentration, representing a coherent field of study that Brown does not offer. Such fields may include emerging topics, such as “sustainable technology,” or broader interdisciplinary areas, such as “Southern Studies.” As of 2010, the Independent Concentration also includes some already approved (though rarely selected) concentration offerings. Students wishing to declare one of these established “tracks” need to work with the relevant concentration advisors. Students interested in pursuing an Independent Concentration are strongly encouraged to review the IC website (http://brown.edu/academics/college/advising/curricular-resource-center/independent-concentrations/independent-concentrations) and speak with the Curricular Resource Center (http://brown.edu/Administration/Dean_of_the_College/crc)’s IC Coordinator and with the IC Dean (Dean Rodriguez) and to review previous proposals in the CRC’s library.

Independent concentration proposals are reviewed and approved by the College Curriculum Council.

Pre-Approved Tracks: If the track is jointly offered it requires sign off from both departments. Prospective concentrators should complete the declaration process in ASK by selecting Independent Concentration, followed by the appropriate track and track advisor.

Modern Culture and Media-French Track

This track is offered jointly by the Department of French Studies and the Department of Modern Culture and Media. It is intended for students who

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
wish to receive special preparation in French language and literature, with
emphasis on contemporary semiotic theory, and those students whose
primary interest is in theory and who wish to strengthen their knowledge
of French language, literature, and culture. In addition to a Senior Thesis,
students will take five courses in French and five in Modern Culture and
Media. Students wishing to declare this concentration must select an
advisor from each of the two sponsoring departments.

Required courses:

Select two of the following:

FREN 0500 Writing and Speaking French I
FREN 0520 Introduction to the Literary Experience
FREN 0600 Writing and Speaking French II
A course from the FREN 1510 series

Three upper level courses in French literature, language and
civilization.

MCM 0110 Introduction to the Theory and Analysis of Modern
Culture and Media

Two or three additional courses in semiotic theory

One or two courses in semiotic production

Total Credits 9-11

Honors: Students who qualify for Honors in the Independent
Concentration, Modern Culture and Media-French track are eligible to
apply to do an Honors project or thesis. Applications will be screened by
both MCM and French Studies. (Application forms should be submitted by
prospective honors students in the beginning of the 7th semester. They
are available in the MCM office.) If approved, a student must then register
for or FREN 1990, a one-credit thesis course in which they complete the
Honors project.

Modern Culture and Media-German Track

This track is offered jointly by the Department of German Studies and the
Department of Modern Culture and Media. It offers interested students
an opportunity to explore the phenomenon of “Germany” using the
approaches of cultural theory. Students will take a number of required
courses through which they learn the basic theories and approaches to
issues of language and meaning, subjectivity and identity, ideology and
consciousness, gender and sexuality, and theories of narrativity. Other
courses offer the student an overview of the German textual traditions
in literature, philosophy, music, film, and the fine arts. German language
proficiency is expected of all participants in the program and may be
covered by a variety of approaches available within the German Studies
Department. Overseas study at Berlin’s Humboldt University or in special
cases at an equivalent institution is considered a normal part of this joint
concentration. All students will be required to complete a final project.

Requirements in addition to Senior Thesis:

Twelve courses are required.

Prerequisites

Select two of the following:

MCM 0110 Introduction to the Theory and Analysis of Modern
Culture and Media
MCM 0230 Digital Media
MCM 0240 Television Studies
MCM 0250 Visuality and Visual Theories
MCM 0260 Cinematic Coding and Narrativity
MCM 1110 The Theory of the Sign
A course from the GRMN 0900 series

Requirements

Two courses in German Studies at the 1000-level with topics relevant
to the focus area.

GRMN 1990 Senior Conference
or MCM 1990 Honors Thesis/Project in Modern Culture and Media
Select six of the following:

HIST 1370 Germany, 1914 to the Present (strongly recommended)
HIAA 0850 Modern Architecture
A course from the GRMN 1440 series: Studies in Literary Genre
A course from the GRMN 1450 series: Seminars in German
Literature
A course from the MCM 1200 series: Special Topics in Modern
Culture and Media
A course from the MCM 1500 Series: Senior Seminars in Modern
Culture and Media
PHIL 1660 Metaphysics

Total Credits 12

Students are encouraged to examine the course offerings carefully in
consultation with their advisors to select courses that augment their
concentration and, in particular, inform their final projects. In addition,
students will normally complete two to four of those electives while
studying in Berlin or at another location approved by the concentration
advisor.

Students who are unable to study in Germany will be required to
demonstrate reading knowledge of German.

Students are encouraged to consult with the concentration advisors for
German Studies and Modern Culture and Media as early as possible in
order to begin planning their course work sequences and their final project.

Modern Culture and Media-Italian Track

This track is offered jointly by the Italian Studies Department and the
Department of Modern Culture and Media. The program includes 11
courses.

Requirements in addition to Senior Thesis:

Six courses from the Italian Studies Department

ITAL 0950 Introduction to Italian Cinema: Italian Film and
History
A course from the ITAL 1000 series: Studies in Contemporary Italian
Culture
A course from the ITAL 1060 series: Realism and Utopia in Italian Film
Select three of the following:

ITAL 1340 Garibaldi Panorama: the Invention of a Hero (from
pre-cinema to digital)
A course from the ITAL 1350 series: Contemporary Italian
Literature
ITAL 1390 Modern Italy
A course from the ITAL 1400 series: Special Topics in Italian
Studies

Five courses from the Modern Culture and Media Department

Any three of the following:

MCM 0110 Introduction to the Theory and Analysis of Modern
Culture and Media
MCM 0230 Digital Media
MCM 0240 Television Studies
MCM 0250 Visuality and Visual Theories
MCM 0260 Cinematic Coding and Narrativity
MCM 1110 The Theory of the Sign
At least one course from the MCM 1200 series
At least one course from the MCM 1500 series

Total Credits 11

Students are encouraged to consider study at the University of Bologna
through the Brown Program in Bologna, though this is by no means a
requirement for fulfillment of the program. Courses taken at the University
of Bologna may substitute for Italian Studies and MCM courses (no more
than 2 from either department) at the discretion of the student’s advisors.

Honors: Honors will require a thesis and will normally be undertaken by
signaling intent during the junior year.
Statistics Track

Statistics has a theoretical core surrounded by a large number of domains of application in diverse fields, including economics, psychology, biology and medicine, sociology, population sciences, government, anthropology, astronomy, physics, chemistry, geology, engineering, and computer science. At Brown, graduate training in Biostatistics is available in the Department of Biostatistics and in Mathematical Statistics in the Division of Applied Mathematics. In addition, several other departments are offering introductory and even advanced courses in statistical methodology, including the Departments of Economics, Sociology, Cognitive, Linguistic and Psychological Sciences, Political Science and Computer Science.

The Undergraduate program in Statistics, established in 1997, is an interdepartmental program, administered by the Department of Biostatistics and leading to the Sc.B. degree. The program is constructed on several premises: that statistics is a scientific discipline in its own right, with its characteristic methodology and body of knowledge; that it is essentially concerned with the art and science of the analysis of data; and that it is best taught in conjunction with specific, substantive applications. To this end, the concentration is designed to provide a foundation of basic concepts and methodology, requiring students to take core courses in the discipline itself, and to expose students to a cross-section of statistical applications, through courses (of their own selection and subject to approval) in the social, biological, and natural sciences.

In a senior honors thesis, each student will be required to carry out a major project of statistical data analysis in one of these disciplines. The program prepares students for careers in industry and government, for graduate study in statistics or biostatistics and other sciences, as well as for professional study in law, medicine, business, or public administration.

Requirements in addition to Senior Thesis:

The program begins with a foundation in mathematics and computing, combined with an elementary introduction to statistical thinking and practice. A set of three core courses builds on this foundation by providing a comprehensive account of the fundamentals of statistical theory and data analysis. At this point, the students in the concentration are ready to delve into more advanced material covering important areas of statistical methodology. In addition to formal coursework, students will have opportunities to acquire practical experience in study design, data management, and statistical analysis by working as undergraduate research assistants in projects in one of the participating academic departments or research centers at Brown.

The program requires twelve one-semester courses and participation in the senior seminar. The required courses are as follows:

**Foundations courses:**

**Mathematics**
Three courses, including courses in multivariate calculus and linear algebra 3

**Computing**
APMA 0160 Introduction to Scientific Computing 1

**Introduction to statistical thinking and practice**
Select one of the following: 1
- SOC 1100 Introductory Statistics for Social Research
- ECON 1620 Introduction to Econometrics
- APMA 0650 Essential Statistics

**Core Courses in Theory and Data Analysis**

PHP 2510 Principles of Biostatistics and Data Analysis 1

Choose one of the following series: 2
- APMA 1650 Statistical Inference I
  & APMA 1660 Statistical Inference II
- MATH 1610 Probability
  & MATH 1620 Mathematical Statistics

**Advanced Courses in Statistical Methods**

APMA 1690 Computational Probability and Statistics 1

PHP 2511 Applied Regression Analysis 1

Two electives from the following courses: 2
- Social Sciences:

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).

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**International Relations**

The IR concentration is one of the largest concentrations at Brown. The objective of the International Relations concentration is to foster creative thinking about pressing global problems and to equip students with the analytic tools, language expertise, and cross-cultural understanding to guide them in that process. To this end, the concentration draws on numerous departments including political science, history, economics, anthropology, sociology, psychology, religious studies, and area studies. The IR concentration is organized around a multidisciplinary core and two sub-themes: security and society, and political economy and society. It has a three-year language requirement that must be linked to the student's selected region of the world. All concentrators are required to undertake a capstone project using research in a second language.

**Requirements**

The IR concentration requires 14 courses and the equivalent of 3 years study of a second language.

**Core Courses**

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For additional information please contact: Roee Gutman, Box G-S-121-7; Telephone: 401-863-2682; Fax: 401-863-9182; e-mail: Roee Gutman

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**Total Credits** 12

Prospective students will be able to obtain Advanced Placement credit for the requirements in mathematics, computing, and introductory statistics. Students who have already completed an introductory course in statistics will be granted permission to proceed to Level II core courses if they meet the prerequisites in mathematics and computing.

**Honors:** Honors work in the Independent Concentration, Statistics track requires the completion of a senior thesis and a superior record in the program.

The program is administered by the Department of Biostatistics, located at 121 South Main Street, 7th floor.

For additional information please contact: Roee Gutman, Box G-S-121-7; Telephone: 401-863-2682; Fax: 401-863-9182; e-mail: Roee Gutman

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For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Track Requirements (five courses from ONE track distributed between the sub-themes: 2)

Security and Society:
Conflict (two or three courses):
- ANTH 1232 War and Society
- ANTH 1411 Nations within States

HIST 1350 Modern Genocide and Other Crimes against Humanity
INTL 1280 Global Security After the Cold War
POLS 1560 American Foreign Policy

Society (two or three courses):
- ANTH 1233 Ethnographies of Global Connection: Politics, Culture and International Relations
- INTL 1400 Religion and Global Politics
- INTL 1800N Global Media: History, Theory, Production

POLS 1380 Ethnic Politics and Conflict
POLS 1500 The International Law and Politics of Human Rights
POLS 1821M War in Film and Literature
SOC 1270 Race, Class, and Ethnicity in the Modern World

Political Economy and Society:
Economics (two or three courses):
- ECON 1110 Intermediate Microeconomics
- ECON 1210 Intermediate Macroeconomics
- ECON 1500 Current Global Macroeconomic Challenges
- or ECON 1540 International Trade
- or ECON 1550 International Finance

POLS 1420 Professional Politics
POLS 1020 Politics of the Illicit Global Economy

Regional Focus 3

Research Methods 4

Capstone Course, from the following options: 5
- Honors thesis (two courses: INTL 1910, INTL 1920)
- Senior seminar paper (see website for approved senior seminars)
- Directed research project (Independent Study)

Total Credits 14

1 Required for all students, preferably to be taken during their freshman or sophomore years. Advanced Placement credit does not count toward the concentration.
2 This is only a subset of the more comprehensive list of applicable courses.
3 Both courses must be on the same area. Content must build on track of study. Students are required to link these with language study.
4 Prior to 7th semester. Quantitative or qualitative course from approved list.
5 Must be taken senior year. Must incorporate language skills.

Detailed lists of courses that satisfy these requirements may be obtained from the IR program website: www.watsoninstitute.org/IR (http://www.watsoninstitute.org/IR).

The program has a director, an associate director/concentration advisor, and a faculty advisor for each track to assist students in planning their academic programs.

Italian Studies

Inherently interdisciplinary, the Italian Studies concentration allows students to strengthen their language skills in Italian and deepen their knowledge of Italian literature, history, art, and culture. Most concentrators have some background in Italian language. However, it is possible to concentrate in Italian studies without having studied the language before coming to Brown, although doing so requires an early start. After fulfilling the language requirement by completing up to Italian 0600 (or the equivalent), students enroll in a variety of advanced courses, reflecting the interdisciplinary nature of the concentration. Junior concentrators often study abroad in the Brown Program in Bologna. All senior concentrators participate in the “senior conference” by delivering brief presentations on academic topics of their choice in Italian Studies. Concentrators might also pursue capstone research, writing, or multimedia projects.

The concentration requires that students demonstrate proficiency in the Italian language by completing up to ITAL 0600 (or the equivalent in Bologna). ITAL 0600 is the first language course that counts toward the eight required courses for the concentration. At least four of the eight courses should be taken in Italian.

Italian Studies Concentration and the Brown Program in Bologna

Concentrators who enroll in the Brown in Bologna program should fulfill the requirements according to the following sequence: prior to departure, the student should complete the level of Italian language study required (ITAL 0300) and enroll in one of the courses in the four distribution areas -- Italian literature; Italian History; history of Italian art and architecture; film or performance. Upon return from Bologna, the student should enroll in at least one advanced course offered by the department, preferably a course taught in Italian. Any student returning from the Bologna program must enroll in a course above the language level of ITAL 0600. Credits toward the Italian Studies concentration may also be transferred from the Brown in Bologna Program. Concentrators may count three courses per semester toward the concentration (or six courses total for the year), although the course content must focus on Italy if the student wishes to count the course toward the concentration requirements.

Concentrators should consult the concentration advisor to know which courses may or may not transfer as credits toward the concentration.

Honors in Italian Studies

Concentrators are encouraged to expand their understanding of Italian language, history, or culture through independent research that will result in a thesis, a translation, or a multimedia project, developed in consultation with the undergraduate concentration advisor and the individual faculty member who will advise the student’s project. The Honors thesis in Italian Studies is a two-semester thesis. Students who intend to complete an honors project should enroll for the first semester in ITAL 1920 (Independent Study), and have their project approved by their advisor by October 15. During the second semester, honors students enroll in ITAL 1910 and continue to work with their advisor to complete the project. ITAL 1900 does not count as one of the eight courses required for the concentration.

Capstone Experiences in Italian Studies

A Capstone experiences in Italian Studies would consist of a course or project that a student, in consultation with the undergraduate advisor, feels would integrate the various intellectual engagements of this interdisciplinary concentration, and constitute a culminating experience in Italian Studies at Brown. Such experiences are strongly encouraged, and should be arrived at through conversations with the concentration advisor or a professor in the department. This could include the Brown Program in Bologna, typically taken in the Junior year, and/or the honors thesis in the senior year. However, students may also apply early in the Fall or Spring semester of their senior year for permission to designate one of their courses (1000-level or above) a Capstone course. In consultation with the professor, students in Capstone courses complete an independent research, writing, or multimedia project that is well beyond the required
assignment for the course. ITAL 1920 (Independent Study) may also be designated a Capstone course with the permission of the instructor.

**Judaic Studies**

Jews have lived and flourished over thousands of years in a variety of social contexts, stretching from the Land of Israel and the eastern Mediterranean to Asia, Africa, Europe, and the Americas. Concentrators will have the opportunity to study Jews in these contexts, getting to know their social structures, and what they have created. The subjects of study cover an astonishing range, including history and society, Jewish law and philosophy, and Jewish literature and ritual. Students will learn to unlock this wealth in both the ancient and the modern worlds through a number of academic disciplines - History, Religious Studies, and Literature. These also provide tools for studying and analyzing human societies and cultures in general, for which Jewish experiences provide an important perspective.

**PROGRAM IN JUDAIC STUDIES**

**Required Coursework for concentrators declaring in Spring 2013 and beyond**

The Program in Judaic Studies offers two paths (detailed below). Please note that the following apply to each concentrator:

1) All students are required to take a total of ten courses.
2) All students must take one full year of Hebrew (two of the ten required courses). Generally, this requirement will consist of two courses in Elementary Hebrew (JUDS 0100/JUDS 0200) or the equivalent as determined by a proficiency examination. Fulfillment of the Hebrew requirement through examination does not reduce the requirement to take ten courses for the concentration.
3) Upon declaring a concentration in Judaic Studies, each student must define his or her primary disciplinary track (History, Religious Studies, or Language/Literature). Concentrators will then be assigned a faculty mentor in that discipline (within the Judaic Studies faculty) to help students select courses and construct a coherent concentration plan.

**Program in History or Religious Studies:**

For this track, students are expected to complete a minimum of four courses in their area of disciplinary focus (History or Religious Studies), at least one of which must and no more than two of which may be outside the Program in Judaic Studies in the department of disciplinary focus (preferably methods courses, such as in the History department or RELS 1000). Students in this track, in consultation with the concentration adviser and faculty mentor, may apply up to two additional Hebrew language courses (JUDS 0300, JUDS 0400, or JUDS 0500) to the additional four required courses for the concentration.

**Program in Language/Literature:**

For this track, students are expected to complete five courses in Hebrew language (JUDS 0100 /JUDS 0200; JUDS 0300/JUDS 0400; JUDS 0500). In addition, students must take one Israeli Language (JUDS 1810) and one further course in Judaic Studies (within the disciplinary focus). Two additional courses in the disciplinary focus, at least one of which must be outside the Program in Judaic Studies in a department of shared disciplinary focus (e.g. English or Comparative Literature), are also required. Fulfillment of the Hebrew requirement through proficiency examination does not reduce the requirement to take ten courses for the concentration.

4) Of the courses required in the Program in Judaic Studies, at least one should focus on the ancient period and one should focus on the modern period.

5) Each student, in discussion with his/her mentor, is required to designate an advanced course (1000 level) in his/her senior year either within the Judaic Studies program or in the corresponding disciplinary department as the capstone for his/her concentration. Within the frame of this capstone course, the concentrator will write a final paper on a topic in Judaic Studies that displays in an appropriate way the theoretical and interpretive issues of the concentration focus. If students opt to fulfill this requirement in a course outside the Program in Judaic Studies, the student must get permission in advance both from his/her mentor and from the professor of the course in question since the student’s final project will address a Judaic Studies topic or theme.

6) Students who study at other institutions, either in the United States or abroad, may apply a maximum of four courses (two topical and two language courses) to the concentration.

7) Double concentrators may count up to two courses that they have used to complete their concentration requirements in another department towards their concentration in Judaic Studies.

**Honors Thesis**

A candidate for honors in Judaic Studies will write a thesis in the senior year. In order to be considered a candidate for honors, students will be expected to maintain an outstanding record (at least an A-) in Judaic Studies courses. The honors thesis, which fulfills the capstone requirement, will normally be written as a two-semester individual study project (numbered Judaic Studies 1975/1976). At the end of the senior year, the thesis adviser (a faculty member of the Program in Judaic Studies), and a second reader, chosen by the thesis adviser in consultation with the student, will evaluate the thesis, and the Judaic Studies faculty will determine if it is worthy of honors in Judaic Studies. Students interested in honors should approach a potential adviser by the spring registration period of their junior year. When taken as preparation of the honors thesis, 1975/1976 count towards the ten required courses in the concentration.

**Further Information**

Students who are interested in further information about the concentration should contact the Judaic Studies Office at 163 George Street to make an appointment with the undergraduate concentration adviser. [Tel: 401.863.3912] or Judaic@brown.edu.

**Required Coursework for concentrators declaring prior to Spring 2013:**

- Six Topical Courses in Judaic Studies
- JUDS 0110 and JUDS 0120 Introduction to Modern Hebrew
- Two additional JUDS courses either topical or language

**Topical courses (non-language courses)**

- Upon declaring a concentration in Judaic studies, students must define the area of study that will be the primary focus of their program. The field may be defined as an historical period (ancient/modern), as a discipline (humanities/social science), or as a topic (religion, culture, history, language/literature, etc.). Students are expected to complete a minimum of four courses in their area of focus, but the final number will be finalized in discussion with the concentration advisor.
- Of the six required topical courses, four must be taken in the Judaic Studies Program at Brown.
- Of the six required topical courses, at least one should focus on the ancient period and one should focus on the modern period.
- Of the six required topical courses, at least one should be a 1000-level seminar or another advanced course (including independent study) approved by the concentration advisor in the student’s area of focus.
- All students are required to designate an advanced departmental course as the capstone for his or her concentration. Within the frame of this capstone course, the concentrator will write a final course paper, which displays the student’s concentration focus, addressing in an appropriate way the theoretical and interpretive issues of the concentration focus.
- In consultation with the concentration advisor, students may petition for the right to apply up to two courses taken in other departments/programs at Brown to the ten required for the Judaic Studies concentration. These courses must relate directly to the student’s focus and provide a comparison of a Judaic topic with some other relevant topic.
- Students who study at other institutions, either in the United States or abroad, may apply a maximum of two topical courses to their concentration in Judaic Studies. Hebrew language courses may also be transferred.
- In consultation with the concentration advisor, students may apply up to two advanced language courses (or) to the six required topical courses for the concentration.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Language Courses

- One full year of Elementary Hebrew. Generally, this requirement will consist of two courses in Modern Hebrew (and ) or the equivalent as determined by a proficiency examination. Students who pass the proficiency exam are encouraged, but are not required, to continue the study of Hebrew (for example, Intermediate Hebrew, and ; Writing and Speaking Hebrew.). Fulfillment of the Hebrew requirement through examination does not reduce the requirement to take ten courses for the concentration.

Honors Thesis

A candidate for honors in Judaic Studies will write a thesis in the senior year. In order to be considered a candidate for honors, students will be expected to maintain an outstanding record (at least A-) in Judaic Studies courses. The honors thesis, which fulfills the capstone requirement, will normally be written as a two-semester individual study project (JUDS 1970). At the end of the senior year, the thesis advisor (a faculty member of the Judaic Studies Program), and a second reader, chosen by the thesis advisor in consultation with the student, will evaluate the thesis, and the Judaic Studies faculty will determine if it is worthy of honors in Judaic Studies. Students interested in honors should approach a potential advisor by the spring registration period of their junior year. When taken as preparation of the honors thesis, JUDS 1970 count towards the ten required courses in the concentration.

Latin American and Caribbean Studies

Latin American and Caribbean Studies is an interdisciplinary concentration designed to help students develop an understanding of culture, history, and contemporary issues in the region. Concentrators study the social, political, economic, literary, and cultural features that comprise contemporary Latin American and Caribbean societies. Concentration requirements cover four general areas: language, area studies, research, and professional experience. Concentrators develop competency in Spanish or Portuguese and many concentrators also study in Latin America for one or both semesters during the junior year. An internship or volunteer work (required of all students) in Latin America or with a local organization that primarily serves Spanish or Portuguese speakers, puts students in direct contact with Latin Americans, and builds professional skills and experience.

Requirements are intentionally broad and flexible to accommodate the interests of students in understanding the diverse reality of Latin America and the Caribbean, yet the concentration also encourages focus. Concentration requirements cover four general areas: language and literature, area studies, independent research, and out of classroom experience.

Language

Basic competence in either Spanish or Portuguese is required. Each student must take either HISP 0100, HISP 0200, POBS 0110 or any more advanced Spanish or Portuguese language course. This requirement may be satisfied by examination, but the examination will not count as a course. No more than one advanced language course (not including literature courses) may be counted among the ten courses required for the concentration.

Literature

Some familiarity with the literature of the region is required. Each concentrator must take at least one of the following: HISP 0730, POBS 0610, or a 1000-level Spanish or Portuguese literature course dealing with Latin America.

Area Studies

6 courses: Two types of area-focused courses are required: (1) courses specifically designated "Latin American Studies" (LAST, not including LAST 1990- LAST 1991), and (2) courses in several departmental programs that demonstrate the ways in which various disciplines have contributed to our understanding of Latin America. Approved area studies courses for the concentration are listed in Appendix B of the Concentration Guide.

At least 2 disciplines (not including Latin American Studies) must be represented among the six area studies courses. Other 1000-level courses dealing with related subjects that are especially pertinent to the study of Latin America may be substituted with approval.

Senior Thesis or Project

2 courses: A Senior Thesis or Project is optional for concentrators. It includes course credit for a reading and research course (LAST 1990-LAST 1991). In order to integrate the diverse perspectives gained in courses and readings, seniors may elect to complete a Senior Thesis or Project under the direction of one faculty member. Seniors will also choose one additional faculty member to serve as a reader. The reader will receive a draft and a finished copy of the student’s thesis or project, which the reader will be responsible to grade. The reader may be involved in the earlier development of the thesis or project depending upon the arrangement made by the student with the reader. The Senior Thesis or Project will normally consist of a major research paper. A student may, with prior permission of the Latin American and Caribbean Studies Concentration Advisor, present a film, videotape, museum exhibition, or other appropriate project, together with a paper that clearly demonstrates the academic relevance of the project. Only the Senior Thesis qualifies the student (along with a minimum B+ average) for Honors. The Senior Project is quite often of a more personal nature, such as observations on practice teaching or a survey of social resources on Latin America. Near the beginning of the seventh semester, students should submit to the concentration advisor a 5 to 8 page prospectus accompanied by the signature of one faculty member indicating that he or she is willing to serve as primary advisor on the project.

If a concentrator chooses to do neither a senior thesis nor a senior project, then a research paper must be written in an advanced undergraduate seminar (1000-level). The seminar must be among the approved area studies courses listed in Appendix B of the Latin American Studies Concentration Guide, and will count as one of the ten courses required for the concentration. Research papers will typically be 20-30 pages in length and must be approved by the Concentration Advisor. Students who choose this option do not take LAST 1990 or LAST 1991. The Senior Project is quite often of a more personal nature, such as observations on practice teaching or a survey of social resources on Latin America. Near the beginning of the seventh semester, students should submit to the concentration advisor a 5 to 8 page prospectus accompanied by the signature of one faculty member indicating that he or she is willing to serve as primary advisor on the project. If a concentrator chooses to do neither a senior thesis nor a senior project, then a research paper must be written in an advanced undergraduate seminar (1000-level). The seminar must be among the approved area studies courses listed in Appendix B of the Latin American Studies Concentration Guide, and will count as one of the ten courses required for the concentration. Research papers will typically be 20-30 pages in length and must be approved by the Concentration Advisor. Students who choose this option do not take LAST 1990 or LAST 1991. The seminar counts as the research component of the program. The distribution requirements for this option are: 2 language courses, 7 area studies courses and 1 research course (i.e. the seminar for which the paper is written).

Internships/Community Service

The Concentration in Latin American and Caribbean Studies requires students to complete an internship or volunteer service work in Latin America or with a local organization that works primarily with Spanish or Portuguese speaking peoples. The Center maintains a database of local and international internship opportunities. Students are also strongly encouraged to consult with the Swearer Center for Public Service. Internships and community service work are available to Brown students who study abroad at the Brown programs in Mexico (Universidad de las Americas) and in Brazil (Catholic University of Rio de Janeiro). Examples of local service work performed by concentrators in previous years include: helping compile a Spanish language guide to welfare service agencies, developing a culturally appropriate adaptation of a health testing and education program, and ESL instruction to Latin American immigrants. Such extracurricular work can be rewarding in itself; in consultation with a faculty member, it can often be used to earn academic credit and furnish material for either a Senior Thesis or Project.

A minimum of one semester or a summer of internship or volunteer service work is required. Students need to submit an internship/service work proposal form to the Latin American and Caribbean Studies Concentration Advisor for approval prior to starting the internship or service work. Upon completion of the internship or service work, students are required to submit to the Concentration Advisor a brief summary report of their experience, which must be signed by the supervisor of the student’s internship or service work.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Honors
Qualified undergraduates may pursue work towards the B.A. with Honors. The requirements for graduation with Honors are the following:
1. Maintenance of at least a B+ average in the ten courses counting for the concentration.
2. Maintenance of at least a B+ average in all course work done for the B.A. at Brown.
3. Completion of a Senior Thesis approved by the primary advisor and reader as acceptable for Honors. The senior thesis should be a "A" level work, although an "A" thesis does not automatically qualify for honors.
Prizes and Awards: Graduating seniors in Latin American Studies are eligible for an award administered by the concentration for outstanding Senior Thesis.

Foreign Study
Study abroad (normally in the junior year) is encouraged as an important part of the concentration. Interested students should begin early to prepare for such a venture. Popular programs with Latin American concentrators include Universidad de las Americas-Puebla, Mexico, and the Catholic University (PUC-Rio) of Rio de Janeiro, Brazil. Up to three courses taken abroad may be counted toward the ten courses required for the concentration. A list of Brown programs and approved non-Brown programs is available from the Office of International Programs (OIP) located in Rhode Island Hall. Feel free to consult the Latin American and Caribbean Studies concentration advisor about study abroad.

Linguistics
The concentration in linguistics is designed both for students interested in the discipline itself and for those wishing to use their understanding of linguistic structure to pursue other disciplines. Linguists are concerned with such issues as the commonalities of human languages, why languages change, how our linguistic abilities interact with our cognitive abilities, how language is learnable, and developing formal models of linguistic structure. Fields as diverse as anthropology, legal reasoning, language pathology, technical writing and editing, and Artificial Intelligence (AI) all rely heavily upon methods and models developed in linguistics. Required courses examine linguistic theory, phonology, syntax, and semantics, while electives may focus on computational, mathematical, or socio-linguistics, the philosophy of language, and biology and the evolution of language.

Requirements (10 courses)
Prerequisite Course
CLPS 0030 Introduction to Linguistic Theory (formerly COGS 0410) (may be waived in special instances)

Required Courses
CLPS 1310 Introduction to Phonological Theory (formerly COGS 1210)
CLPS 1330 Introduction to Syntax (formerly COGS 1310)
Select one of the following courses in phonetics, phonology, syntax, or semantics:
CLPS 1340 Introduction to Semantics (formerly COGS 1110)
CLPS 1341 Lexical Semantics (formerly COGS 1120)
CLPS 1342 Formal Semantics (formerly COGS 1130)
CLPS 1320 The Production, Perception, and Analysis of Speech (formerly COGS 1230)
CLPS 1381 Topics in Phonetics and Phonology: Intonational Phonology
Select one of the following courses in psycholinguistics:
CLPS 1800 Language Processing (formerly COGS 1410)
CLPS 1810 Syntactic Theory and Syntactic Processing (formerly COGS 1420)
CLPS 1850 Child Language Acquisition (formerly COGS 1430)

Electives (select five):
CLPS 1890 Laboratory in Psycholinguistics (formerly COGS 1450)
CLPS 1820 Language and the Brain (formerly COGS 1480)
CLPS 1385 Topics in Language Acquisition: Language Acquisition and Cognitive Development
CLPS 1389 Topics in Language Processing (formerly COGS 1840)

Total Credits 10

Comments:
Foreign language courses will generally not count towards the concentration requirements, except those which focus on the structure or history of the language. Students are, however, advised to gain familiarity...
with a foreign language, and are encouraged to take at least one course which deals with the structure of a language other than English.

It is strongly recommended that students take CLPS 1310 and CLPS 1330 before Semester 7.

Literary Arts

Brown’s Program in Literary Arts provides a home for innovative writers of fiction, poetry, playwriting, screenwriting, literary translation, electronic writing and mixed media. The concentration allows student writers to develop their skills in one or more genres while deepening their understanding of the craft of writing. Many courses in this concentration require a writing sample; students should consult a concentration advisor or the concentration website for strategies on getting into the appropriate course(s).

Candidates for the Bachelor of Arts degree with concentration in Literary Arts will be expected to complete the following course work:

1. At least four creative writing workshops from among the following series: LITR 0100, LITR 0210, LITR 0310, LITR 0610, LITR 1010, LITR 1110, and LITR 1150. At least two genres must be covered within the four courses taken. An independent study in literary arts (LITR 1310) may count toward the workshop requirement. Other writing-intensive courses may also count, at the discretion of the advisor.

2. Six elective reading and research in literary arts courses, which must include:
   • a course in literary theory or the history of literary criticism
   • a course that primarily covers readings and research in literary arts created before 1800
   • a course that primarily covers readings and research in literary arts created between 1800 and 1900
   • a course that primarily covers readings and research in literary arts created after 1900

   These courses, selected in consultation with a concentration advisor, may come from (but are not limited to) the following departments: Africana Studies, American Civilization, Classics, Comparative Literature, East Asian Studies, Egyptology, French Studies, German Studies, Hispanic Studies, Italian Studies, Judaic Studies, Linguistics, Literatures and Cultures in English, Middle East Studies, Modern Culture and Media, Music, Portuguese and Brazilian Studies, Slavic Studies, South Asian Studies, Theatre, Speech and Dance, Visual Arts. With approval from the concentration advisor, courses covering pre-20th century time periods may be distributed in a variant manner, so long as they cover two distinct literary time periods that precede the 20th century.

3. Among the ten required courses, at least four must be at the 1000-level or above. No more than a total of four classes (workshops or reading/research courses) may be taken outside of the Literary Arts Department at Brown (whether at another institution or within another department’s curriculum). No more than two of the ten required courses for the concentration may also count toward fulfilling a second concentration.

4. During the senior year, all students must take at least one course within the Literary Arts course offerings (courses with LITR designation by the Registrar, or courses approved by the concentration advisor).

Honors in Creative Writing: Course requirements are the same as those for the regular concentration (four workshops, six elective literature-reading courses), with the following changes and additions: honors candidates must include two 1000-level workshops or independent studies among their courses; and complete a thesis. Students who are enrolled in or have completed at least one 1000-level workshop (or independent study) may submit honors applications to the Literary Arts Department from the first day of the fall semester to 20 September. Interested students should obtain information from the office of the Literary Arts Department.

Marine Biology

Marine biology encompasses the study of living organisms in the ocean or other marine or brackish bodies of water. Because marine organisms play an important role in sustaining life on earth, and because of the diverse habitats studied by marine biologists, concentrators must study broadly in the basic sciences and become familiar with the varied research techniques in the field. Consequently, students begin their learning with foundational courses in biology, mathematics, chemistry, and physics. Subsequent coursework in the concentration exposes students to a range of topics in biology (e.g., Invertebrate Zoology, Ecology, Physiology, Conservation) and courses in other sciences, including geological sciences, computer science, and engineering. Students are encouraged to spend a summer or semester conducting research at a field station. The field experience is a key feature of this program and provides scholarly interaction with leaders in the field so that students are mentored at the cutting edge.

Standard program for the Sc.B. degree

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 0330</td>
<td>Equilibrium, Rate, and Structure (or equivalent)</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 0030</td>
<td>Basic Physics (or equivalent)</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 0040</td>
<td>Basic Physics (or equivalent)</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0090</td>
<td>Introductory Calculus, Part I (or equivalent)</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0100</td>
<td>Introductory Calculus, Part II (or equivalent)</td>
<td>1</td>
</tr>
<tr>
<td>Two additional courses in physics, chemistry, mathematics, applied mathematics, computer science, engineering, or geological sciences, as approved by advisor.</td>
<td>2</td>
<td></td>
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<tr>
<td>Select four of the following biology courses:</td>
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<td></td>
</tr>
<tr>
<td>BIOL 0410</td>
<td>Invertebrate Zoology</td>
<td></td>
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<tr>
<td>BIOL 0420</td>
<td>Principles of Ecology</td>
<td></td>
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<tr>
<td>BIOL 0510</td>
<td>Introductory Microbiology</td>
<td></td>
</tr>
<tr>
<td>BIOL 0800</td>
<td>Principles of Physiology</td>
<td></td>
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<tr>
<td>BIOL 1180</td>
<td>Comparative Animal Physiology</td>
<td></td>
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<tr>
<td>BIOL 1440</td>
<td>Marine Biology</td>
<td></td>
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<tr>
<td>BIOL 1880</td>
<td>Comparative Biology of the Vertebrates</td>
<td></td>
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<tr>
<td>Select three additional biology courses, highly recommended are:</td>
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<tr>
<td>BIOL 0200</td>
<td>The Foundation of Living Systems</td>
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<tr>
<td>BIOL 0470</td>
<td>Genetics</td>
<td></td>
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<tr>
<td>BIOL 0480</td>
<td>Evolutionary Biology</td>
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<tr>
<td>BIOL 0500</td>
<td>Cell and Molecular Biology</td>
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<tr>
<td>BIOL 1180</td>
<td>Comparative Animal Physiology</td>
<td></td>
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<tr>
<td>BIOL 1310</td>
<td>Developmental Biology</td>
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<tr>
<td>BIOL 1410</td>
<td>Evolutionary Genetics</td>
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<tr>
<td>BIOL 1420</td>
<td>Experimental Design in Ecology</td>
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<tr>
<td>BIOL 1470</td>
<td>Conservation Biology</td>
<td></td>
</tr>
<tr>
<td>ENVS 0490</td>
<td>Environmental Science in a Changing World</td>
<td></td>
</tr>
<tr>
<td>Select two of the following group of related science courses:</td>
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</tr>
<tr>
<td>CSCI 0040</td>
<td>Introduction to Scientific Computing and Problem Solving</td>
<td></td>
</tr>
<tr>
<td>GEOL 0070</td>
<td>Introduction to Oceanography</td>
<td></td>
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<tr>
<td>GEOL 0310</td>
<td>Fossil Record</td>
<td></td>
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<tr>
<td>GEOL 1100</td>
<td>Global Physical/Descriptive Oceanography</td>
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<tr>
<td>GEOL 1110</td>
<td>Estuarine Oceanography</td>
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<tr>
<td>GEOL 1120</td>
<td>Paleoceanography</td>
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<tr>
<td>GEOL 1130</td>
<td>Ocean Biogeochemical Cycles</td>
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<tr>
<td>GEOL 1240</td>
<td>Stratigraphy and Sedimentation</td>
<td></td>
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<tr>
<td>GEOL 1330</td>
<td>Global Environmental Remote Sensing</td>
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<tr>
<td>GEOL 1580</td>
<td>Quantitative Elements of Physical Hydrology</td>
<td></td>
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<tr>
<td>CHEM 0350</td>
<td>Organic Chemistry</td>
<td></td>
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<tr>
<td>CHEM 0360</td>
<td>Organic Chemistry</td>
<td></td>
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<tr>
<td>An approved course in statistics</td>
<td></td>
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<tr>
<td>BIOL 1950/1960</td>
<td>Directed Research/Independent Study (conducted at Brown or an approved marine lab or field station.)</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Credits 17

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Mathematics

Mathematics is a grouping of sciences, including geometry, algebra, and calculus, that study quantity, structure, space, and change. Mathematics concentrators at Brown can explore these concepts through the department’s broad course offerings and flexible concentration requirements. The concentration leads to either the Bachelor of Arts or Bachelor of Science degree (the latter is strongly recommended for students interested in pursuing graduate study in mathematics or related fields). Concentrators begin their learning with multivariable calculus, linear algebra, and abstract algebra. Beyond these prerequisites, students take a variety of advanced topics on the 1000 and 2000 level based on their interests. Students also have the option of completing a thesis project.

Concentrators in mathematics should complete the prerequisites by the end of their sophomore year. It is strongly recommended that students take MATH 1010 before taking MATH 1130.

Standard program for the A.B. degree

**Prerequisites:**

Multivariable calculus and linear algebra (choose one of the following sequences):
- MATH 0180 Intermediate Calculus
  & MATH 0520 and Linear Algebra
- MATH 0180 Intermediate Calculus
  & MATH 0540 and Honors Linear Algebra
- MATH 0200 Intermediate Calculus (Physics/Engineering)
  & MATH 0520 and Linear Algebra
- MATH 0350 Honors Calculus
  & MATH 0540 and Honors Linear Algebra
  Or the equivalent

**Program:**
- MATH 1530 Abstract Algebra 1
- Five other 1000- or 2000-level Mathematics courses 1 5

**Total Credits** 8

1 One of which may be replaced, with the approval of the concentration advisor, by a mathematically-oriented course in science, economics, or applied mathematics.

Standard program for the Sc.B. degree

**Prerequisites:**

Multivariate calculus and linear algebra (choose one of the following sequences):
- MATH 0180 Intermediate Calculus
  & MATH 0520 and Linear Algebra
- MATH 0180 Intermediate Calculus
  & MATH 0540 and Honors Linear Algebra
- MATH 0200 Intermediate Calculus (Physics/Engineering)
  & MATH 0520 and Linear Algebra
- MATH 0350 Honors Calculus
  & MATH 0540 and Honors Linear Algebra
  Or the equivalent

**Program:**
- MATH 1130 Functions of Several Variables
  & MATH 1140 Functions Of Several Variables 2
- MATH 1530 Abstract Algebra 1
- MATH 1540 Topics in Abstract Algebra 1
- or MATH 1560 Number Theory
- Four other 1000- or 2000-level Mathematics courses. 4

Four additional courses in mathematics, science, economics, or applied mathematics approved by the concentration advisor. 4

**Total Credits** 14

Honors

Honors degrees may be recommended for students who have exhibited high achievement in mathematics. Candidates must complete at least eight mathematics courses at the 1000 or 2000 level with sufficiently good grades and must write an honors thesis under the guidance of a faculty member. The honors thesis is usually written while the candidate is enrolled in MATH 1970. The candidate should consult with the concentration advisor for the precise grade requirements.

Those interested in graduate study in mathematics are encouraged to take:

- MATH 1130 Functions of Several Variables
- MATH 1140 Functions Of Several Variables
- MATH 1260 Complex Analysis
- MATH 1410 Combinatorial Topology
- MATH 1540 Topics in Abstract Algebra

Mathematics-Computer Science

Students may opt to pursue an interdisciplinary Bachelor of Science degree in Math-Computer Science, a concentration administered cooperatively between the mathematics and computer science departments. Course requirements include math- and systems-oriented computer science courses, as well as computational courses in applied math. Students must identify a series of electives that cohere around a common theme. As with other concentrations offered by the Computer Science department, students have the option to pursue the professional track (http://www.cs.brown.edu/ugrad/concentrations/professional.track.html) of the ScB program in Mathematics-Computer Science.

Requirements for the Standard Track of the Sc.B. degree.

**Prerequisites**

Three semesters of Calculus to the level of MATH 0180, MATH 0200, or MATH 0350

- MATH 0520 Linear Algebra 1
- or MATH 0540 Honors Linear Algebra

**Core Courses**

- MATH 1530 Abstract Algebra 1
- Select one of the following series: 2

  **Series A**
  - CSCI 0150 Introduction to Object-Oriented Programming and Computer Science
  - CSCI 0160 and Introduction to Algorithms and Data Structures

  **Series B**
  - CSCI 0170 Computer Science: An Integrated Introduction
  - CSCI 0180 and Computer Science: An Integrated Introduction

  **Series C**
  - CSCI 0190 Accelerated Introduction to Computer Science
  - and an additional CS course not otherwise used to satisfy a concentration requirement: this course may be CSCI 0180, an intermediate-level CS course, or a 1000-level CS course

  - CSCI 0320 Introduction to Software Engineering
  - or CSCI 0330 Introduction to Computer Systems
  - CSCI 0220 Introduction to Discrete Structures and Probability
  - or CSCI 0450 Introduction to Probability and Computing
  - or CSCI 0510 Models of Computation

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
### Mathematics-Economics

The Mathematical Economics concentration is designed to give a background in economic theory plus the mathematical tools needed to analyze and develop additional theoretical constructions. The emphasis is on the abstract theory itself.

**Standard Mathematics-Economics Concentration (through the class of 2015):**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1130</td>
<td>Intermediate Microeconomics (Mathematical) Or ECON 1110 with permission</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1210</td>
<td>Intermediate Macroeconomics</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1630</td>
<td>Econometrics I</td>
<td>1</td>
</tr>
</tbody>
</table>

At least three other 1000-level courses, at least two must be chosen from the following "mathematical-economics" group:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1640</td>
<td>Econometrics II</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1650</td>
<td>Financial Econometrics</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1750</td>
<td>Investments II</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1759</td>
<td>Data, Statistics, Finance</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1810</td>
<td>Economics and Psychology</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1820</td>
<td>Behavioral Economics</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1850</td>
<td>Theory of Economic Growth</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1860</td>
<td>The Theory of General Equilibrium</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1870</td>
<td>Game Theory and Applications to Economics</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Credits: 19

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1. These courses must be at the 1000-level or higher. The three courses must include a pair of courses with a coherent theme. A list of pre-approved pairs may be found at the approved-pairs web page (http://cs.brown.edu/ugrad/concentrations/approvedpairs.html). You are not restricted to the pairs on this list, but any pair not on the list must be approved by the director of undergraduate studies.

2. These must be approved by a concentration advisor.

3. A one-semester course, normally taken in the student’s last undergraduate year, in which the student (or group of students) use a significant portion of their undergraduate education, broadly interpreted, in studying some current topic in depth, to produce a culminating artifact such as a paper or software project.

### Requirements for the Professional Track of the Sc.B. degree.

The requirements for the professional track include all those of the standard track, as well as the following:

- Students must complete two two-to-four-month full-time professional experiences, doing work that is related to their concentration programs. Such work is normally done within an industrial organization, but may also be at a university under the supervision of a faculty member.
- On completion of each professional experience, the student must write and upload to ASK a reflective essay about the experience addressing the following prompts, to be approved by the student’s concentration advisor:
  - Which courses were put to use in your summer’s work? Which topics, in particular, were important?
  - In retrospect, which courses should you have taken before embarking on your summer experience? What are the topics from these courses that would have helped you over the summer if you had been more familiar with them?
  - Are there topics you should have been familiar with in preparation for your summer experience, but are not taught at Brown? What are these topics?
  - What did you learn from the experience that probably could not have been picked up from course work?
  - Is the sort of work you did over the summer something you would like to continue doing once you graduate? Explain.
  - Would you recommend your summer experience to other Brown students? Explain.

**Mathematics-Economics Concentration (class of 2016 and beyond):**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1170</td>
<td>Welfare Economics</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1225</td>
<td>Advanced Macroeconomics: Monetary, Fiscal, and Stabilization Policies</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1465</td>
<td>Market Design: Theory and Applications</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1470</td>
<td>Bargaining Theory and Applications</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1640</td>
<td>Econometrics II</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1650</td>
<td>Financial Econometrics</td>
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<td>ECON 1750</td>
<td>Investments II</td>
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<td>Economics and Psychology</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1820</td>
<td>Behavioral Economics</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1850</td>
<td>Theory of Economic Growth</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Credits: 12

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For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
On completion of each professional experience, the student must write an honors thesis. This is awarded to students who present a meritorious honors thesis in addition to completing the required courses of the concentration. The thesis permits the student to synthesize various disciplines or interests, or to pursue a new interest in greater depth. To be eligible for Honors, candidates must complete a minimum of six approved courses in Medieval Studies by the end of their third year with more grades of A than B. Students should apply for admission to Honors and should meet with their faculty advisor(s) no later than spring of the junior year to plan the thesis project. Accepted candidates write the thesis in a two-semester course sequence under the supervision of a director and second reader drawn from the Medieval Studies faculty. Interested students should contact the concentration advisor for further details or consultation (863-1994).

Medieval Cultures

Medieval Cultures offers two distinct areas of historical focus: the Medieval and the Late Antique. The former focuses on the sixth through the fifteenth centuries, combining interdisciplinary perspectives with in-depth study of one or two related disciplines. Late Antique Cultures deals with the third through the ninth centuries, when ancient cultural forms were still in place but medieval cultures were beginning to take shape simultaneously. The first undergraduate degree of its kind in this country, Late Antique Cultures facilitates the study of human activity in all of its variety. A traditional area of study in Medieval Cultures is Western Europe, but students are encouraged to work in other cultural areas such as Byzantine, Islamic, Judaic and Slavic. The concentration serves students interested in the changing relation of cultural practices, social patterns, political and economic forms, and artistic and literary traditions in this important transitional period.

Medieval Cultures Track

It is recommended that prospective concentrators take the introductory course, Medieval Perspectives, during their freshman or sophomore year.

Requirements

Ten courses approved by the Program in Medieval Studies, including two courses in medieval history and one 1000- or 2000-level course that uses primary texts in a medieval language other than Middle English. Interested students are invited to discuss their plans with an appropriate faculty member of the Program. A concentration proposal should be prepared in consultation with the faculty advisor and submitted to the Program Chair for approval.

Honors

This is awarded to students who present a meritorious honors thesis in addition to completing the required courses of the concentration. The thesis permits the student to synthesize various disciplines or interests, or to pursue a new interest in greater depth. To be eligible for Honors, candidates must complete a minimum of six approved courses in Medieval Studies by the end of their third year with more grades of A than B. Students should apply for admission to Honors and should meet with their faculty advisor(s) no later than spring of the junior year to plan the thesis project. Accepted candidates write the thesis in a two-semester course sequence under the supervision of a director and second reader drawn from the Medieval Studies faculty. Interested students should contact the concentration advisor for further details or consultation (863-1994).

Late Antique Cultures Track

Requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLAS 1310</td>
<td>Roman History I: The Rise and Fall of an Imperial Republic</td>
<td>1</td>
</tr>
<tr>
<td>CLAS 1320</td>
<td>Roman History II: The Roman Empire and Its Impact (recommended)</td>
<td>1</td>
</tr>
<tr>
<td>HIST 1030</td>
<td>The Long Fall of the Roman Empire</td>
<td>1</td>
</tr>
</tbody>
</table>

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
under scholarly scrutiny. The Middle East encompasses a diversity of cultures. It includes the lands where the first cities were built and the earliest writing system was developed, the same lands where the three monotheistic religious traditions – Islam, Judaism and Christianity – flourished. The region has always been a crossroads for states and empires, networks of trade and intellectual discourse. Therefore we define it beyond traditional geographic parameters, which tend to focus on the Arab world, North Africa, Iran and Turkey. The concentration approaches the study of the Middle East of the 21st century as a global phenomenon, one that has generated diasporic communities throughout the world as well as transnational Islamic and community networks. The Middle East is integral to the making of global socio-economic networks, political discourses and the histories of colonialism and empire. While the contemporary popular media focus on the Middle East of late modernity, the concentration promotes the study of the region through a long-term perspective from antiquity to the present day. As an interdisciplinary concentration, Middle East Studies integrates diverse methodological approaches drawn from a variety of disciplines.

The concentration is designed to provide a broad knowledge of the region as well as a comparative understanding of Middle Eastern cultures, societies, states and economies. Within the concentration, students may choose from the following three focus areas:

I. Religions and Cultures: This focus area largely – although not exclusively – prioritizes pre-modern and early modern cultures and religions in the lands of the Middle East. Grounded primarily in the humanities, courses engage in an ongoing genealogy of the major cultural formations and religious traditions through the work of ethnographers, archaeologists, historians, sociologists, theologians, historians of science, literary critics and numerous other realms of scholarship. Topics covered in relevant coursework vary widely, ranging from Arabic literature to the history of Syriac Christianity to the medieval pilgrims of the Holy Land.

II. Modern Politics and Society: This focus area centers on issues that have been particularly salient in the colonial and post-colonial periods of the countries and peoples from the region and practicing its major faiths. Relevant coursework examines the formation of political regimes, the development of nationalist and supra-nationalist ideologies such as Arab nationalism or Islamism, ethnic and sectarian movements and identity formation, as well as regional conflict and accommodation in the modern and contemporary period.

III. Economies and Resources: Water, oil, cultural patrimony: From the Petra artifacts adorning RI Hall to the diesel that powers emergency generators which keep experiments running during winter storms, this university is intimately linked to the resources and economic logics that help to make the lands of the Middle East an object of academic study. Coursework in this focus area centers on two possible trajectories, including the economics of heritage practices (i.e., tourism to archaeological sites) or economic development and underdevelopment in the region (i.e., the political economy of oil, labor, water and other resource flows).

All concentrators are required to fulfill seven courses in addition to the language competency requirements for a total of eleven courses:

1. One course in a major religious tradition (i.e., Christianity, Islam, Judaism);
2. One course on the history of the Middle East. (Note: Students whose coursework deals primarily with the ancient or pre-modern periods, are strongly encouraged to take a modern history course while students whose coursework deals primarily with the modern period are strongly encouraged to take an ancient or pre-modern history course);
3. Three focus area courses (the list of eligible courses for each focus area is available at the Middle East Studies website: http://www.watsoninstitute.org/middleeast/); and
4. Two electives, including any two courses from any focus area in the concentration or independent studies approved by the MES director.
5. Language competency: Intermediate competency in a Middle Eastern language (i.e., Arabic, Aramaic, Egyptian, Farsi, Hebrew, Hindi-Urdu, Turkish), or four semesters of language coursework in the same language, is required. The requirement may be met by successfully passing courses in the given language at the intermediate level at Brown or another institution. Students wishing to fulfill this requirement on the basis of study outside of Brown are required to pass a competency test administered by an authorized Brown faculty member as listed on the MES website. Students who complete the language requirement in fewer than four courses – whether at Brown or elsewhere – are required to take courses equivalent to the number of language courses they do not need to fulfill. These may include more advanced language courses, courses in a second language, or courses from any of the three focus areas.

Capstone Project
All concentrators are required to complete a capstone project. Students undertake the project in conjunction with one or more faculty members with interests in the Middle East. The project may take the form of an undergraduate honors thesis, an independent study project, or with permission, an enhanced final project for a regularly scheduled course.

Concentration Colloquium
All concentrators are required to attend the annual concentration colloquium at which students who have completed a capstone project make a presentation related to that project. The colloquium is held during spring semester.

Honors
Students may graduate with Honors in Middle East Studies by completing an undergraduate Honors thesis under the supervision of a primary reader drawn from the Middle East Studies faculty and one additional reader from the Brown or Brown-affiliated faculty. Honors students must increase the number of courses in the concentration to twelve, of which two courses...
Modern Culture and Media

Modern Culture and Media (MCM) is an interdisciplinary concentration that explores the ties between media and broader cultural and social formations. We stress creative thinking and critical production: comparative analysis and theoretical reflection, as well as work that integrates practice and theory. We thus bring together aspects of modern culture that are normally separated by departmental structures such as film and media studies, fine art, literature, literary arts and philosophy. This concentration offers the student a range of possible specializations. A student might decide to focus the critical study and production of a certain type or combination of media (print, photography, sound recording, cinema, video, television, and digital media); or they might focus on certain cultural, theoretical and/or social formations (for example, gender / sexuality in post-Cold War television, postcolonial theory and film, the changing form of the novel, theories of subjectivity and ideology, video games and theories of representation). These paths are united by a commitment to critical thinking/practice: rather than reproducing conventions, MCM concentrators learn how conventions emerge, what work they do, and explore ways to change them.

Track I

Track I concentrators may choose to study a particular historical moment, a medium, or a mode of textual production, in combination with theoretical studies that examine the categories of cultural analysis: for example, the distinction between high and low culture. Examples of areas of interest include but are not limited to film, gender/sexuality, digital media, television, post-coloniality, the novel, modern thought, the modern arts, sound, and theories of ideology and subjectivity. Productive work in some modern medium or textual mode is encouraged for all concentrators. MCM’s approach to production recognizes the inextricable link between theory and practice, and the possibility of a fruitful complicity between them. Production, in the sense defined here, is a theoretically informed sphere or practice, one within which acknowledged forms of cultural creation are tested and extended in close complementarity with the analyses conducted elsewhere in MCM.

Track I consists of 11 courses.

Core courses

MCM 0110 Introduction to the Theory and Analysis of Modern Culture and Media 1

Select two of the following: 1

MCM 0230 Digital Media
MCM 0240 Television Studies
MCM 0250 Visuality and Visual Theories
MCM 0260 Cinematic Coding and Narrativity
MCM 1110 The Theory of the Sign

Additional courses

One must be an upper level course from the MCM 1200 series

Track II

Track II concentration combines production courses with the critical study of the cultural role of practice. It aims to engage students in the analysis of theories of production elaborated within philosophical, artistic, and technological traditions, while encouraging them to produce works that interrogate these traditions.

Track II consists of 11 courses:

Two core courses:

MCM 0110 Introduction to the Theory and Analysis of Modern Culture and Media 1

Select one of the following Introductory Practice or History of a Medium course:

MCM 0710 Introduction to Filmmaking: Time and Form
MCM 0730 Introduction to Video Production: Critical Strategies and Histories
MCM 0750 Art in Digital Culture
VISA 0100 Studio Foundation
VISA 0110 Advanced Studio Foundation
VISA 0120 Foundation Media: Sound and Image
MUSC 0200 Computers and Music
CSCI 0150 Introduction to Object-Oriented Programming and Computer Science

A course from the LITR 0110 series

A course from the LITR 0210 series

HIAA 0010 Introduction to the History of Art and Architecture

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
TAPS 0030  Introduction to Acting and Directing
MUSC 0010  Introduction to Western Music
MUSC 0040  World Music Cultures (Africa, America, Europe, Oceania)

One additional course from the following:  
MCM 0230  Digital Media
MCM 0240  Television Studies
MCM 0250  Visuality and Visual Theories
MCM 0260  Cinematic Coding and Narrativity
MCM 1110  The Theory of the Sign

Three additional courses from the MCM 1200 or MCM 1500 series  
Four practice courses selected in consultation with an advisor.  
One Senior Seminar from the MCM 1700 series or other equivalent in production

Total Credits 11

1 At least one must be from the MCM 1500 series.
2 Courses can be in any medium or combinatorial sequence of media from the following departments: Modern Culture and Media, Visual Art, Music, Literary Arts, Theatre Arts and Performance Studies, Computer Science, Engineering, supplemented by approved courses at Rhode Island School of Design and study abroad. This list is not exhaustive.

Honors: Students who qualify for Honors in Track II are eligible to apply to do an Honors project or thesis. Prospective honors students submit the honors application in the beginning of the 7th semester. (Forms are available in the MCM office.) Applications are screened by the MCM Honors Committee. If approved, a student must then register in the 8th semester for MCM1990, a one-credit thesis course, to complete the Honors project. An Honors degree reflects not only the completion of the thesis course and project, but generally distinguished performance in the concentration.

Music
The concentration in Music integrates theory, history, ethnomusicology, technology, composition, and performance. Students may select from among three tracks within the concentration: the first track emphasizes theory, history, and composition; a second track emphasizes ethnomusicology; and a third track focuses on computer music and multimedia. The Music curriculum is supported by the Orwig Music Library, a state-of-the-art facility with holdings of over 40,000 books and scores and an equal number of sound and video recordings. Concentrators are encouraged to participate in one or more of the departmentally sponsored performing organizations: Chorus, Orchestra, Jazz Band, Wind Symphony, Chamber Music Performance, Electroacoustic Ensemble, Sacred Harp/Shape-Note Singing, Old-time String Band, Javanese Gamelan, Brazilian Choro Ensemble, or Ghanaian drumming. All music courses—including performance courses—are open to all Brown students, provided that they have satisfied the prerequisites.

Concentration Requirements:
History/Theory/Composition Track:
Music Theory
MUSC 0550  Theory of Tonal Music (offered every fall)  
MUSC 0560  Theory of Tonal Music (offered every spring)

History
Select two of the following (the third is optional):  
MUSC 0910  Medieval and Renaissance Music  
MUSC 0920  Baroque and Classic Music  
MUSC 0930  Romantic and Modern Music

Advanced Theory
Select two of the following:  
MUSC 1020  Modal Counterpoint (usually offered every other fall)  
MUSC 1030  Tonal Counterpoint (usually offered every other fall)  
MUSC 1040  Advanced Music Theory I (usually offered every other fall)  
MUSC 1050  Advanced Music Theory II (usually offered every other fall)

Advanced Musicianship
MUSC 1010  Advanced Musicianship I (offered every fall)  
MUSC 1011  Advanced Musicianship II (offered every spring)

Ethnomusicology
MUSC 1900  Introduction to Ethnomusicology (usually offered annually)

Electives:
Three upper-level courses are required (i.e., no course below MUSC 0570);  

Total Credits 11

1 Prerequisite: MUSC 0560
2 Should be taken before the senior year.
3 1600-level seminars are preferred. Up to two full Applied Music or ensemble credits (i.e., four semesters) may be applied to the concentration requirements.

Ethnomusicology Track:
Music Theory
MUSC 0550  Theory of Tonal Music (offered every fall)  
MUSC 0560  Theory of Tonal Music (offered every spring)

Other Foundational Courses
ANTH 0100  Introduction to Cultural Anthropology
MUSC 1900  Introduction to Ethnomusicology (usually offered annually)

History
Select two of the following (the third is optional):  
MUSC 0910  Medieval and Renaissance Music  
MUSC 0920  Baroque and Classic Music  
MUSC 0930  Romantic and Modern Music

Electives in Ethnomusicology
Four additional courses in ethnomusicology numbered 1000 or higher are required.  

Total Credits 10

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Neuroscience

Neuroscience is an interdisciplinary field that seeks to understand the functions and diseases of the nervous system. It draws on knowledge from neurobiology as well as elements of psychology and cognitive science, and mathematical and physical principles involved in modeling neural systems. Through the Neuroscience concentration, students develop foundational knowledge through courses in biology, chemistry, and mathematics as well as three core courses in neuroscience. They are also required to develop facility with research methodologies (through courses in statistics and laboratory methods) before moving into specific topics in the field (e.g., visual physiology, neurochemistry and behavior, and synaptic transmission and plasticity). Members of the Neuroscience faculty are affiliated with the Brown Institute for Brain Science, a multidisciplinary program that promotes collaborative research about the brain. Prospective concentrators should contact Heather_Shalvey@brown.edu in order to have a faculty advisor assigned to them.

Standard Concentration (for declarations made January 2013 to present)

10 courses total, of which no more than one may be below PHIL 0200, and at least three must be at or above PHIL 0990.

One course in Ancient Philosophy, e.g.

- PHIL 0350 Ancient Philosophy
- PHIL 1250 Aristotle
- PHIL 1260 Plato
- PHIL 1310 Myth and the Origins of Science

One course in Early Modern Philosophy, e.g.

- PHIL 0360 Early Modern Philosophy
- PHIL 1700 British Empiricists
- PHIL 1710 17th Century Continental Rationalism
- PHIL 1720 Kant: The Critique of Pure Reason

One course in Epistemology or Metaphysics, e.g.

- PHIL 1660 Metaphysics
- PHIL 1750 Epistemology
- PHIL 1760 Philosophy of Language
- PHIL 1770 Philosophy of Mind

One course in Ethics or Political Philosophy, e.g.

- PHIL 0500 Moral Philosophy
- PHIL 0560 Political Philosophy
- PHIL 1640 The Nature of Morality
- PHIL 1650 Moral Theories

One course in Logic, e.g.

- PHIL 0540 Logic
- PHIL 1630 Mathematical Logic
- PHIL 1880 Advanced Deductive Logic

One seminar

A course from the PHIL 0990 series

Or any seminar at the 2000-level, which may be counted for one of the other requirements

Specialization: Three related courses from one single area of philosophy; e.g., logic and language; philosophy of science; epistemology; philosophy of mind; moral philosophy; political philosophy; ancient philosophy, etc.

Independent study and honors research projects are encouraged.

Philosophy

The Philosophy concentration offers courses covering subjects from the philosophy of religion to the philosophies of science and literature. It also provides survey courses on various periods in the history of philosophy. Concentrators can expect to strengthen their knowledge of and skills in ancient philosophy, early modern philosophy, logic, epistemology and metaphysics. Students are asked to identify an area of specialization. There is also a related, but separate concentration in physics and philosophy.

Musicology Ethnomusicology Elective

One scholarly course numbered above MUSC 0900

Electives:

Four elective courses selected in any combination from the following groups:

- Computer Music and Multimedia courses, MUSC 1220–1290 or MUSC 2200–2290
- Theory and composition courses, MUSC 1020–1190
- No more than one lower–level Computer Music and Multimedia course, MUSC 0210–0230
- No more than one electronic art production course (VISA or MCM) from approved list

Total Credits: 10

1 For a list of qualifying courses, see the concentration advisor.

Neuroscience

Neuroscience is an interdisciplinary field that seeks to understand the functions and diseases of the nervous system. It draws on knowledge from neurobiology as well as elements of psychology and cognitive science, and mathematical and physical principles involved in modeling neural systems. Through the Neuroscience concentration, students develop foundational knowledge through courses in biology, chemistry, and mathematics as well as three core courses in neuroscience. They are also required to develop facility with research methodologies (through courses in statistics and laboratory methods) before moving into specific topics in the field (e.g., visual physiology, neurochemistry and behavior, and synaptic transmission and plasticity). Members of the Neuroscience faculty are affiliated with the Brown Institute for Brain Science, a multidisciplinary program that promotes collaborative research about the brain. Prospective concentrators should contact Heather_Shalvey@brown.edu in order to have a faculty advisor assigned to them.

Standard Concentration (for declarations made January 2013 to present)

10 courses total, of which no more than one may be below PHIL 0200, and at least three must be at or above PHIL 0990.

One course in Ancient Philosophy, e.g.

- PHIL 0350 Ancient Philosophy
- PHIL 1250 Aristotle
- PHIL 1260 Plato
- PHIL 1310 Myth and the Origins of Science

One course in Early Modern Philosophy, e.g.

- PHIL 0360 Early Modern Philosophy
- PHIL 1700 British Empiricists
- PHIL 1710 17th Century Continental Rationalism
- PHIL 1720 Kant: The Critique of Pure Reason

One course in Epistemology or Metaphysics, e.g.

- PHIL 1660 Metaphysics
- PHIL 1750 Epistemology
- PHIL 1760 Philosophy of Language
- PHIL 1770 Philosophy of Mind

One course in Ethics or Political Philosophy, e.g.

- PHIL 0500 Moral Philosophy
- PHIL 0560 Political Philosophy
- PHIL 1640 The Nature of Morality
- PHIL 1650 Moral Theories

One course in Logic, e.g.

- PHIL 0540 Logic
- PHIL 1630 Mathematical Logic
- PHIL 1880 Advanced Deductive Logic

One seminar

A course from the PHIL 0990 series

Or any seminar at the 2000-level, which may be counted for one of the other requirements

Specialization: Three related courses from one single area of philosophy; e.g., logic and language; philosophy of science; epistemology; philosophy of mind; moral philosophy; political philosophy; ancient philosophy, etc.

Independent study and honors research projects are encouraged.

Philosophy

The Philosophy concentration offers courses covering subjects from the philosophy of religion to the philosophies of science and literature. It also provides survey courses on various periods in the history of philosophy. Concentrators can expect to strengthen their knowledge of and skills in ancient philosophy, early modern philosophy, logic, epistemology and metaphysics. Students are asked to identify an area of specialization. There is also a related, but separate concentration in physics and philosophy.
Reading Course (PHIL 90): a reading course for one semester involving one professor and one student, leading to the preparation of a substantial research paper on a particular topic. The Reading Course may accompany a 1000-level course being taken concurrently. In this case, the 1000-level course would provide a general overview of the topic and the reading course would consist of a deeper foray into the topic. A one-semester Reading Course may also be a first step towards writing an Honors Thesis.

Senior Seminar (PHIL 0990): Seminars aimed primarily at advanced undergraduates, on varying topics each year, requiring the completion of a substantial research paper.

Graduate Seminar (PHIL 2000-level): seminars mainly aimed at graduate students, but also open to advanced undergraduates, requiring the completion of a substantial research paper.

Honors Thesis: a piece of work expected to be more substantial than the above-mentioned research papers, typically researched and written over the course of the entire senior year (possibly starting with a relevant Reading Course in the first semester) under the supervision of a thesis advisor (possibly, though not necessarily, the specialization advisor). For honors, see below.

<table>
<thead>
<tr>
<th>Total Credits</th>
<th>10</th>
</tr>
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</table>

1. No more than one course may fulfill both a general distribution requirement and a specialization requirement.
2. No more than two courses from departments other than the philosophy department may be counted among the ten courses required for the concentration; no more than one of these two outside courses may count toward the three specialization requirements.
3. The specialization and the courses that will fulfill it are standardly declared at some point in the course of the Junior year. Those making a Concentration Declaration at an earlier time (e.g. at the end of their Sophomore year) may make a provisional choice of courses which can be revised at a later date with the approval of the department’s
4. Concentrators who aim at a general acquaintance with the discipline of philosophy may forgo a specialization and devise an appropriately balanced program of courses beyond the requirements with the approval of the DUS.

Honors Requirements:

- Philosophy GPA must be greater than 3.5. (This refers to the GPA at the beginning of the senior year in all philosophy courses, and including at least six courses).
- Thesis (see Capstone Options)

Prior Concentration Requirements

For Declarations made prior to January 2013, there was one concentration program in Philosophy with two optional tracks:

Standard Concentration (Prior to January 2013)

Eight courses in philosophy, which may not include more than one course numbered below 0350. In addition, at least one of the courses must be an undergraduate or graduate seminar.

| One course in Ancient Philosophy | PHIL 0350 Ancient Philosophy | 1 |
| One course in Epistemology or Metaphysics | PHIL 1660 Metaphysics | 1 |
| One course in Epistemology or Metaphysics | PHIL 1750 Epistemology | 1 |
| One course in Epistemology or Metaphysics | PHIL 1770 Philosophy of Mind | 1 |
| One course in Epistemology or Metaphysics | Three additional courses is philosophy | 3 |
| Total Credits | 8 |

Optional tracks:

Ethics and Political Philosophy

Eight courses in philosophy, which may not include more than one course numbered below 0350.

| One course in Ancient Philosophy | PHIL 0350 Ancient Philosophy | 1 |
| One course in Ancient Philosophy | PHIL 1250 Aristotle | 1 |
| One course in Ancient Philosophy | PHIL 1260 Plato | 1 |
| One course in Ancient Philosophy | PHIL 1310 Myth and the Origins of Science | 1 |
| One course in Early Modern Philosophy | PHIL 0360 Early Modern Philosophy | 1 |
| One course in Early Modern Philosophy | PHIL 1700 British Empiricists | 1 |
| One course in Early Modern Philosophy | PHIL 1710 17th Century Continental Rationalism | 1 |
| One course in Early Modern Philosophy | PHIL 1720 Kant: The Critique of Pure Reason | 1 |
| Logic | PHIL 0540 Logic (or higher) | 1 |
| Logic | Three courses in ethics or political philosophy at the level of 0400 or higher | 3 |
| Logic | Two additional philosophy courses | 2 |
| Logic | Total Credits | 8 |

Total Credits

| Logic | Total Credits | 8 |
| Logic | Total Credits | 8 |

Honors (Prior to January 2013)

Seniors wishing to earn honors by presenting a senior honors thesis should consult their concentration advisor during their sixth semester concerning procedures and requirements. In addition to completing the usual non-honors requirements, a student must write a thesis judged to be of honors quality by two readers and have a strong record in philosophy.
Physics

Physics is the scientific study of the fundamental principles governing the behavior of matter and the interaction of matter and energy. Mathematics is used to describe fundamental physical principles, the behavior of matter, and the interactions of matter and energy. As the most fundamental of sciences, physics provides a foundation for other scientific fields as well as the underpinnings of modern technology. The Physics department is unique because of the breadth of its faculty expertise and research, and the relatively intimate size of its classes above the introductory level. Physics concentrators may choose to pursue either the A.B. or the more intensive Sc.B. degree. Course work on either path covers a broad base of topics (for example, electricity and magnetism, classical and quantum mechanics, thermodynamics, and statistical mechanics). The Sc.B. degree requires additional advanced topics as well as a senior thesis project.

Astrophysics Track for the Sc.B. degree

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0070</td>
<td>2</td>
</tr>
<tr>
<td>&amp; PHYS 0160</td>
<td></td>
</tr>
<tr>
<td>Analytical Mechanics &amp; Introduction to Relativity and Quantum Physics</td>
<td></td>
</tr>
<tr>
<td>PHYS 0030</td>
<td>2</td>
</tr>
<tr>
<td>&amp; PHYS 0040</td>
<td></td>
</tr>
<tr>
<td>Basic Physics &amp; Basic Physics</td>
<td></td>
</tr>
<tr>
<td>PHYS 0050</td>
<td>1</td>
</tr>
<tr>
<td>&amp; PHYS 0060</td>
<td></td>
</tr>
<tr>
<td>Foundations of Mechanics &amp; Foundations of Electromagnetism and Modern Physics</td>
<td></td>
</tr>
<tr>
<td>PHYS 0470</td>
<td>1</td>
</tr>
<tr>
<td>Electricity and Magnetism</td>
<td></td>
</tr>
<tr>
<td>PHYS 0500</td>
<td>1</td>
</tr>
<tr>
<td>Advanced Classical Mechanics</td>
<td></td>
</tr>
<tr>
<td>PHYS 0560</td>
<td>1</td>
</tr>
<tr>
<td>Experiments in Modern Physics</td>
<td></td>
</tr>
<tr>
<td>PHYS 1410</td>
<td>1</td>
</tr>
<tr>
<td>Quantum Mechanics A</td>
<td></td>
</tr>
<tr>
<td>PHYS 1530</td>
<td>1</td>
</tr>
<tr>
<td>Thermodynamics and Statistical Mechanics</td>
<td></td>
</tr>
<tr>
<td>One additional 1000-level course or a mathematics course beyond the introductory level.</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>8</strong></td>
</tr>
</tbody>
</table>

Program:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1100</td>
<td>1</td>
</tr>
<tr>
<td>Undergraduate Research in Physics</td>
<td></td>
</tr>
</tbody>
</table>

One additional 1000 or 2000 level Physics course or upper level course in related fields of science chosen by the student with agreement of his or her advisor.

Four Mathematics courses beyond MATH 0190 or 0090, 0100 including choices from Applied Mathematics

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1990</td>
<td>1</td>
</tr>
<tr>
<td>Senior Conference Course</td>
<td></td>
</tr>
</tbody>
</table>

**Honors**

Candidates for honors in physics will be expected to pursue a more rigorous and extensive program than those merely concentrating in the subject. In addition they will be required to begin an honors thesis during the seventh semester and to complete it (as part of PHYS 1990) during the eighth semester. Honors candidates are also expected to take a special oral examination on the thesis at the end of the eighth semester. Further details about the program may be obtained from the chair of the department or the departmental honors advisor.

Astrophysics Track for the Sc.B. degree

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0350</td>
<td>1</td>
</tr>
<tr>
<td>Honors Calculus (or equivalent)</td>
<td></td>
</tr>
<tr>
<td>PHYS 0470</td>
<td>2</td>
</tr>
<tr>
<td>Electricity and Magnetism</td>
<td></td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

Prerequisites:

Select one of the following Series:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PHYS 0070</td>
<td>2</td>
</tr>
<tr>
<td>&amp; PHYS 0160</td>
<td></td>
</tr>
<tr>
<td>Analytical Mechanics &amp; Introduction to Relativity and Quantum Physics</td>
<td></td>
</tr>
<tr>
<td>PHYS 0050</td>
<td>1</td>
</tr>
<tr>
<td>&amp; PHYS 0060</td>
<td></td>
</tr>
<tr>
<td>Foundations of Mechanics &amp; Foundations of Electromagnetism and Modern Physics</td>
<td></td>
</tr>
<tr>
<td>PHYS 0470</td>
<td>1</td>
</tr>
<tr>
<td>Electricity and Magnetism</td>
<td></td>
</tr>
<tr>
<td>PHYS 0500</td>
<td>1</td>
</tr>
<tr>
<td>Advanced Classical Mechanics</td>
<td></td>
</tr>
<tr>
<td>PHYS 0560</td>
<td>1</td>
</tr>
<tr>
<td>Experiments in Modern Physics</td>
<td></td>
</tr>
<tr>
<td>PHYS 1410</td>
<td>1</td>
</tr>
<tr>
<td>Quantum Mechanics A</td>
<td></td>
</tr>
<tr>
<td>PHYS 1530</td>
<td>1</td>
</tr>
<tr>
<td>Thermodynamics and Statistical Mechanics</td>
<td></td>
</tr>
<tr>
<td>One additional 1000-level course or a mathematics course beyond the introductory level.</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>8</strong></td>
</tr>
</tbody>
</table>

Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0170</td>
<td>2</td>
</tr>
<tr>
<td>Advanced Placement Calculus &amp; MATH 0180</td>
<td></td>
</tr>
<tr>
<td>&amp; MATH 0200</td>
<td></td>
</tr>
<tr>
<td>Advanced Placement Calculus (Physics/Engineering) &amp; Intermediate Calculus</td>
<td></td>
</tr>
<tr>
<td>MATH 1110</td>
<td>1</td>
</tr>
<tr>
<td>Ordinary Differential Equations</td>
<td></td>
</tr>
<tr>
<td>MATH 1120</td>
<td>1</td>
</tr>
<tr>
<td>Partial Differential Equations</td>
<td></td>
</tr>
<tr>
<td>PHYS 0500</td>
<td>1</td>
</tr>
<tr>
<td>Advanced Classical Mechanics</td>
<td></td>
</tr>
<tr>
<td>PHYS 0560</td>
<td>1</td>
</tr>
<tr>
<td>Experiments in Modern Physics</td>
<td></td>
</tr>
<tr>
<td>PHYS 1410</td>
<td>1</td>
</tr>
<tr>
<td>Quantum Mechanics A</td>
<td></td>
</tr>
<tr>
<td>PHYS 1530</td>
<td>1</td>
</tr>
<tr>
<td>Thermodynamics and Statistical Mechanics</td>
<td></td>
</tr>
<tr>
<td>Three of the following:</td>
<td></td>
</tr>
<tr>
<td>PHYS 1100</td>
<td>1</td>
</tr>
<tr>
<td>Introduction to General Relativity</td>
<td></td>
</tr>
<tr>
<td>PHYS 1250</td>
<td>1</td>
</tr>
<tr>
<td>Stellar Structure and the Interstellar Medium</td>
<td></td>
</tr>
<tr>
<td>PHYS 1270</td>
<td>1</td>
</tr>
<tr>
<td>Extragalactic Astronomy and High-Energy Astrophysics</td>
<td></td>
</tr>
<tr>
<td>PHYS 1280</td>
<td>1</td>
</tr>
<tr>
<td>Introduction to Cosmology</td>
<td></td>
</tr>
</tbody>
</table>
Two additional 1000- or 2000-level courses in physics or a related field which are not listed as requirements.

**Total Credits** 2

**PHYS 1990** Senior Conference Course

---

### Biological Physics Track for the Sc.B. degree

<table>
<thead>
<tr>
<th>Foundations of Physics</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0070 Analytical Mechanics</td>
<td>1</td>
</tr>
<tr>
<td>or PHYS 0505 Foundations of Mechanics</td>
<td>1</td>
</tr>
<tr>
<td>or ENGN 0040 Dynamics and Vibrations</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 0160 Introduction to Relativity and Quantum Physics</td>
<td>1</td>
</tr>
<tr>
<td>or PHYS 0060 Foundations of Electromagnetism and Modern Physics</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 0470 Electricity and Magnetism</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 0500 Advanced Classical Mechanics</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 1410 Quantum Mechanics A</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 1530 Thermodynamics and Statistical Mechanics</td>
<td>1</td>
</tr>
</tbody>
</table>

Select one of the following Series: 1

- **Series A**
  - PHYS 0720 Methods of Mathematical Physics

- **Series B**
  - Select one of the following:
    - APMA 0330 Methods of Applied Mathematics I, II
    - APMA 0350 Methods of Applied Mathematics I, II
    - MATH 1110 Ordinary Differential Equations
  - And select one of the following:
    - MATH 0180 Intermediate Calculus
    - MATH 0200 Intermediate Calculus (Physics/Engineering)
    - MATH 0350 Honors Calculus
    - MATH 0520 Linear Algebra
    - MATH 0540 Honors Linear Algebra

### Basic Biology and Chemistry

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIOL 0200 The Foundation of Living Systems (or placement out of BIOL 0200)</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 0500 Cell and Molecular Biology</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 0330 Equilibrium, Rate, and Structure</td>
<td>1</td>
</tr>
</tbody>
</table>

### Advanced Biophysical Topics and Techniques

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1610 Biological Physics</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 1990 Senior Conference Course</td>
<td>1</td>
</tr>
</tbody>
</table>

### Elective Courses (four chosen from the following list, with at least two 1000-level courses, or additional courses approved by the concentration advisor)

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>APMA 0360 Methods of Applied Mathematics I, II</td>
<td>1</td>
</tr>
<tr>
<td>APMA 0410 Mathematical Methods in the Brain Sciences</td>
<td>1</td>
</tr>
<tr>
<td>APMA 0650 Essential Statistics</td>
<td>1</td>
</tr>
<tr>
<td>APMA 1070 Quantitative Models of Biological Systems</td>
<td>1</td>
</tr>
<tr>
<td>APMA 1080 Inference in Genomics and Molecular Biology</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 0280 Introductory Biochemistry</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 0470 Genetics</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 1050 Biology of the Eukaryotic Cell</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 1200 Protein Biophysics and Structure</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 1270 Advanced Biochemistry</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 1870 Techniques in Pathobiology</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 0350 Organic Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 0360 Organic Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0090 Introductory Calculus, Part I</td>
<td>1</td>
</tr>
</tbody>
</table>

---

**Total Credits** 17-18

1 A senior thesis is required. This is to be prepared in connection with the direction of a faculty supervisor. The topic may be in a related department or of interdisciplinary nature. In any event, a dissertation must be submitted.

### Mathematical Physics Track for the A.B. degree

**Prerequisites:**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0090 Introductory Calculus, Part I</td>
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</tr>
<tr>
<td>or MATH 0100 Introductory Calculus, Part II</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 0190 Advanced Placement Calculus (Physics/Engineering)</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 0050 Foundations of Mechanics</td>
<td>1</td>
</tr>
<tr>
<td>or PHYS 0070 Analytical Mechanics</td>
<td>1</td>
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</tbody>
</table>

**Mathematics Courses**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0180 Intermediate Calculus</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 0200 Intermediate Calculus (Physics/Engineering)</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 0350 Honors Calculus</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0520 Linear Algebra</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 0540 Honors Linear Algebra</td>
<td>1</td>
</tr>
<tr>
<td>MATH 1110 Ordinary Differential Equations</td>
<td>1</td>
</tr>
</tbody>
</table>

Select at least one of the following:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1060 Differential Geometry</td>
<td>1</td>
</tr>
<tr>
<td>MATH 1120 Partial Differential Equations</td>
<td>1</td>
</tr>
<tr>
<td>MATH 1610 Probability</td>
<td>1</td>
</tr>
</tbody>
</table>

**Physics Courses**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0060 Foundations of Electromagnetism and Modern Physics</td>
<td>1</td>
</tr>
<tr>
<td>or PHYS 0160 Introduction to Relativity and Quantum Physics</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 0470 Electricity and Magnetism</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 0500 Advanced Classical Mechanics</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 0560 Experiments in Modern Physics</td>
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</table>

Select at least two of the following:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PHYS 1410 Quantum Mechanics A</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 1420 Quantum Mechanics B</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 1510 Advanced Electromagnetic Theory</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 1530 Thermodynamics and Statistical Mechanics</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 1560 Modern Physics Laboratory</td>
<td>1</td>
</tr>
</tbody>
</table>

**Total Credits** 12

1 Concentrators are required to take at least one course in mathematics and one in physics in each of their last two semesters.
Mathematical Physics Track for the Sc.B. degree

Prerequisites:
Select one of the following series:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0070 &amp;</td>
<td>Analytical Mechanics and Introduction to Relativity and Quantum Physics</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 0050 &amp;</td>
<td>Foundations of Mechanics and Foundations of Electromagnetism and Modern Physics</td>
<td>2</td>
</tr>
</tbody>
</table>

Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0190</td>
<td>Introductory Calculus, Part I</td>
<td>1-2</td>
</tr>
<tr>
<td>&amp; MATH 0100</td>
<td>and Introductory Calculus, Part II</td>
<td></td>
</tr>
</tbody>
</table>

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0470</td>
<td>Electricity and Magnetism</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 0500</td>
<td>Advanced Classical Mechanics</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 0560</td>
<td>Experiments in Modern Physics</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 1410</td>
<td>Quantum Mechanics A</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 1530</td>
<td>Thermodynamics and Statistical Mechanics</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0180 &amp;</td>
<td>Intermediate Calculus</td>
<td>1-2</td>
</tr>
<tr>
<td>&amp; MATH 0200</td>
<td>and Intermediate Calculus (Physics/Engineering)</td>
<td></td>
</tr>
<tr>
<td>or MATH 0350</td>
<td>Honors Calculus</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0520</td>
<td>Linear Algebra</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 0540</td>
<td>Honors Linear Algebra</td>
<td></td>
</tr>
<tr>
<td>MATH 1530</td>
<td>Abstract Algebra</td>
<td>1</td>
</tr>
<tr>
<td>Four additional 1000 or 2000 level Physics courses</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Two additional 1000 or 2000 level Math courses</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>PHYS 1990</td>
<td>Senior Conference Course</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Credits: 18-20

A senior thesis is required. This is to be prepared in connection with under the direction of a faculty supervisor.

Physics and Philosophy

The Physics and Philosophy concentration is for students with a deep interest in physics who do not need to acquire the laboratory and computational skills of a professional physicist. The concentration allows students to grapple with computational problems and delve into the investigation of conceptual and epistemological issues. By the end of the program, concentrators possess an excellent conceptual understanding of the most philosophically interesting physics, relativity and quantum mechanics.

This concentration should prepare a student either for graduate study, especially in a history and philosophy of science (HPS) program, or for employment in science education or journalism. Other professions such as law and medicine will look favorably on such concentrators for having versatile interests and being able to master difficult material. The concentration may serve as an excellent preparation for a law school since physics and philosophy both exercise a rigorous approach to problems of immediate relevance to life but at the same time assume two complimentary and sometimes competing viewpoints.

Advising

Concentration advisors from the Departments of Physics and Philosophy will guide students working towards the A.B. degree.

Curriculum

The curriculum builds around the fields of physics that have had the biggest impact on philosophy, especially Quantum Physics, and the fields of philosophy most relevant for physics, such as Epistemology, Metaphysics and Philosophy of Physics. It is strongly recommended that students complete at least one relevant history course.

There are 11 required courses (5 in Physics, 5 in Philosophy or History, one course in mathematics) and a final project. The choice of the courses is dictated by the following considerations. The field of physics with both deepest philosophical implications and deepest influence on the rest of physics is Quantum Mechanics. Thus, a 1000-level course in Quantum Mechanics or a closely related field such as Statistical Mechanics is indispensable. The second field of physics most relevant for the concentration is Relativity. This field touches upon and serves as a foundation for a broad list of subjects with major philosophical implications of their own, for example: PHYS 1170, PHYS 1280, PHYS 1510, PHYS 1100. This requires another 1000-level physics course in the concentration. 1000-level Physics courses cannot be taken without certain preliminary work, most importantly, PHYS 0470, which serves as a prerequisite for most higher-level physics courses and which relies in turn on PHYS 0160 or PHYS 0060. Another lower-level physics course is necessary for a student to develop familiarity with the tools which have been employed in producing the physics knowledge.

A natural introduction into philosophy of physics comes from a course in Early Modern Philosophy. To a large extent, Early Modern Philosophy was shaped by scholars who combined interest in philosophy and physics (e.g., Rene Descartes, Blaise Pascal, Gottfried Wilhelm Leibniz). The influence of the seventeenth-century physics on other central figures such as Kant is unquestionable. Early Modern Philosophy sets an intellectual stage for many subsequent developments in the Philosophy of Physics and directly addresses some of the most perplexing issues like the connection (or lack thereof) between physics and religion. The core of the Philosophy requirement involves two courses in Epistemology, Metaphysics and Philosophy of Science. One course in this field would not be sufficient due to its very broad nature. Students are strongly advised to take a relevant history course. This requirement can be substituted by an additional philosophy course to reflect interests of those students who want a deeper background in Epistemology, Metaphysics and Philosophy of Science or have other related interests such as Ancient Natural Philosophy.

In addition to the above philosophy courses, PHIL 0210 (Science, Perception, and Reality) serves as a gateway into the concentration. It may be substituted by other relevant courses such as PHYS 0100 (Flat Earth to Quantum Uncertainty: On the Nature and Meaning of Scientific Explanation). A course in calculus is a prerequisite for most physics and some philosophy classes.

Required courses for the A.B. degree are listed below:

**Physics Courses**

Select one of the following introductory courses in Modern Physics:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0060</td>
<td>Foundations of Electromagnetism and Modern Physics</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 0160</td>
<td>Introduction to Relativity and Quantum Physics</td>
<td>1</td>
</tr>
</tbody>
</table>

One course in Special Relativity and Classical Field Theory:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0470</td>
<td>Electricity and Magnetism</td>
<td>1</td>
</tr>
</tbody>
</table>

Select one of the following in Methods of Experimental and Theoretical physics:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0500</td>
<td>Advanced Classical Mechanics</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 0560</td>
<td>Experiments in Modern Physics</td>
<td>1</td>
</tr>
</tbody>
</table>

Select one of the following in Quantum Mechanics and its applications:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1410</td>
<td>Quantum Mechanics A</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 1530</td>
<td>Thermodynamics and Statistical Mechanics</td>
<td>1</td>
</tr>
</tbody>
</table>

One more 1000-level Physics course

**Philosophy Courses**

Select one of the following gateway courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 0210</td>
<td>Science, Perception and Reality</td>
<td>1</td>
</tr>
<tr>
<td>PHIL 0100</td>
<td>Critical Reasoning</td>
<td>1</td>
</tr>
</tbody>
</table>

Select one of the following courses in Early Modern Philosophy:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 0360</td>
<td>Early Modern Philosophy</td>
<td>1</td>
</tr>
</tbody>
</table>
Political Science

Political science applies theories, concepts, and methods to the study of political phenomena. It uses historical, philosophical, and empirical perspectives to understand political problems and policy issues. Traditionally, political science splits into four sub-fields: (1) the study of politics in the United States; (2) the comparative study of political systems and individual nations around the globe; (3) the study of relations among states and peoples; and (4) the philosophical study of political ideas. What distinguishes Political Science at Brown is our exploration among states and peoples; and (4) the philosophical study of political systems and individual nations around the globe; (3) the study of relations of politics in the United States; (2) the comparative study of political politics, and political theory. Twelve courses are required overall: ten within the Department of Political Science and two from areas outside the department related to your chosen track. Thirteen courses are required if the methods requirement is fulfilled with a course outside the department.

Requirements:

Two introductory courses:

For the American politics and political theory tracks, select two courses from the following list. One of which must be the introductory course associated with the chosen track:

- POLS 0010 Introduction to the American Political Process
- POLS 0110 Introduction to Political Thought
- POLS 0200 Introduction to Comparative Politics
- POLS 0400 Introduction to International Politics

For the international and comparative politics track, the following two introductory courses are required:

- POLS 0200 Introduction to Comparative Politics
- POLS 0400 Introduction to International Politics

One course in the American politics subfield

One course in the political theory subfield

Two courses in the international and comparative politics subfield

Three upper-level courses in the chosen subfield

One methods course from Political Science:

- POLS 0500 Foundations of Political Analysis
- POLS 1600 Political Research Methods

One research seminar from the POLS 1820, 1821, 1822 or 1823 offerings that is track related

Two upper-level courses from outside the department related to the specialized track, chosen with the approval of the concentration advisor.

Total Credits: 13

Honors

Students wishing to undertake the honors program need to complete the same requirements as shown for the concentration. Completion of the methods requirement is required prior to applying to the Honors program. Students must also complete an honors research project and take POLS 1910 and POLS 1920 during the senior year. POLS 1910 and POLS 1920 will count as one credit towards the 10 required Political Science courses for the concentration.

Portuguese and Brazilian Studies

Portuguese and Brazilian Studies examines the Portuguese-speaking world, a large and diverse geographical and cultural area spread over five continents. Inhabited by two hundred fifty million people, this area includes Brazil, Continental and Insular Portugal, Lusophone Africa and Luso-America. Although concentrators are encouraged to examine the global nature of the Portuguese-speaking world, typically they focus on...
neuroscience, and social psychology. The concentration in Psychology

programs: Africana Studies, Anthropology and Sociology. At least four courses must be conducted in Portuguese. Students may choose between two basic programs:

Program A (Language and literature focus):

POBS 0610 Mapping Portuguese-Speaking Cultures: Brazil 1
POBS 0620 Mapping Portuguese-Speaking Cultures: Portugal and Africa 1
At least two literature courses at the POBS 1500 level or higher. 2
POBS 1030 Portuguese Stylistics: Advanced Language Study and Creative Writing 1
A course from the POBS 1800 (Concentration Seminar) series 1
Electives 1 2
Total Credits 8

1 At least one elective should be a course outside the field of language and literature.

Program B (Interdisciplinary focus):

POBS 0610 Mapping Portuguese-Speaking Cultures: Brazil 1
POBS 0620 Mapping Portuguese-Speaking Cultures: Portugal and Africa 1
A course from the POBS 1800 (Concentration Seminar) series 1
Five courses to be selected from the offerings in Portuguese and Brazilian Studies and/or related departments, such as Africana Studies, Anthropology, History, Political Science, and Sociology. 5
Total Credits 8

Honors
Candidacy for honors in Portuguese and Brazilian Studies assumes a better than average record, particularly in the concentration. Candidates for honors are required to complete an honors thesis or other approved project. Normally honors candidates will register for POBS 1990 ("Research and Preparation of Honors Projects") in Semesters VII and VIII. These independent study units may not be used to satisfy the minimum course requirement for the concentration. Honors projects are evaluated by two faculty members. Detailed information on honors is available from the concentration advisor.

Foreign Study: Study either in Brazil or in Portugal (usually in the junior year or during the summer) is encouraged as an important part of the concentration. One advanced laboratory course from the following: Concentrators must take at least one laboratory course outside the field of language and literature, which can be applied towards the concentration.

Concentration Requirements

Introductory Psychology: Planning a concentration and choosing elective courses requires general knowledge about the topics psychologists study. Introductory Psychology (CLPS 0010) is required for the concentration. Students may satisfy the Introductory Psychology requirement by submitting AP (score of 4 or 5) or IB (score of 5 or above) test credit or by transferring Introductory Psychology course credits from other 4-year institutions.

Quantitative: Careers in Psychology and related fields require familiarity with statistics. Therefore, the Psychology concentration requires Quantitative Methods in Psychology (CLPS 0900). CLPS 0900 is a prerequisite for most of the laboratory courses, so concentrators should plan to take this course by their fourth semester. The department does not grant concentration credit for AP Statistics, regardless of score. Students who feel that CLPS 0900 is too elementary can complete for concentration credit.

Laboratory Course: Concentrators must take at least one laboratory course, which provides students with hands-on experience with research methods in a substantive area of psychology. Because the laboratory serves as the basis for independent research and is a prerequisite for the Honors program, concentrators should plan to take their lab before their senior year. This course must be taken in CLPS. Independent study or laboratory courses in other departments will not fulfill this requirement.

Advanced Seminar: Both A.B. and Sc.B. concentrators are required to take one advanced limited-enrollment seminar/critical readings course. The list of approved seminars varies yearly. Contact one of the concentration advisors for details.

AP and Transfer Credits: Students receiving AP credit for Introductory Psychology can place out of CLPS 0010, and can enroll directly in higher-level psychology courses. AP credits are not accepted for other concentration requirements. Students transferring from another college or university, or students studying abroad or at another US institution, may receive transfer credits for other concentration requirements. Please refer to our departmental policy on applying AP and transfer credits.

The A.B. degree requires 12 courses. The Sc.B. degree requires 17 courses. (Concentrators should complete either the A.B. or Sc.B. Concentration Worksheet before meeting with their Concentration Advisor.)

Requirements for the A.B. degree

CLPS 0010 Elementary Psychology: An Introduction to Mind and Behavior (formerly PSYC 0010) 1
CLPS 0900 Quantitative Methods in Psychology (formerly COGS/PSYC 0900) 1
Two courses in Perception and Cognition 2 2
Two courses in Comparative/Physiological 2 2
Two courses in Social/Personality/Developmental 2 2
One advanced laboratory course from the following: 3 1
CLPS 1090 Research Methods in Psychology (formerly PSYC 1090)
CLPS 1092 Psychological Theory (formerly PSYC 1070)
CLPS 1190 Techniques in Physiological Psychology (formerly PSYC 1030)
CLPS 1191 Animal Behavior Laboratory (formerly PSYC 1450)
CLPS 1192 Experimental Analysis of Animal Behavior and Cognition (formerly PSYC 1200)
CLPS 1193 Laboratory in Genes and Behavior (formerly PSYC 1040)
CLPS 1194 Sleep and Chronobiology Research (formerly PSYC 1060)
CLPS 1290 Laboratory in Cognitive Processes (formerly COGS 1530)
Functional Magnetic Resonance Imaging: Theory and Practice (formerly PSYC 1840)

Neural Modeling Laboratory (formerly COGS 1020)

Computational Cognitive Neuroscience (formerly COGS 1480)

Psychology of Hearing (formerly PSYC 1190)

Laboratory in Developmental Psychology (formerly COGS 1610)

Personality and Clinical Assessment (formerly PSYC 1110)

Personality in Social Cognition (formerly PSYC 1540)

An advanced seminar/critical readings course in CLPS, numbered above 1000.  

Two elective courses, with approval of the concentration advisor.

Total Credits

1 1
2 2

1 Or advanced placement with a score of 4 or 5, or transfer credit. If placement for CLPS0010 is granted on the basis of AP or IB test scores, then another CLPS course (at any level) must be substituted.  
2 The pre-approved courses in each area are listed on the concentration worksheets. A laboratory course or seminar (indicated on the worksheet) may be used to meet the area requirement only if it is the student's second lab course or second seminar. Independent study courses cannot be used for this requirement. First year seminars outside of CLPS cannot be counted for the area requirement.  
3 The worksheets (http://www.brown.edu/Departments/CLPS/undergrad/psychology) include up-to-date lists of labs. Independent study courses and laboratory courses outside of CLPS cannot be used to satisfy this requirement.  
4 Consult one of the concentration advisors for lists of approved courses.  
5 The electives should complement the student's main area of interest in Psychology. These courses can be taken outside of CLPS. Only courses that carry concentration credit in the home department can be used for this requirement. In addition, independent study and GISP courses will not fulfill this requirement.

Requirements for the Sc.B. degree

Elementary Psychology: An Introduction to Mind and Behavior (formerly PSYC 0010)

Quantitative Methods in Psychology (formerly COGS/PSYC 0090)

Two courses in Perception and Cognition

Two courses in Comparative/Physiological

Two courses in Social/Personality/Developmental

An advanced laboratory course from the following:

Research Methods in Psychology (formerly PSYC 1090)

Psychological Theory (formerly PSYC 1070)

Techniques in Physiological Psychology (formerly PSYC 1030)

Animal Behavior Laboratory (formerly PSYC 1450)

Experimental Analysis of Animal Behavior and Cognition (formerly PSYC 1200)

Laboratory in Genes and Behavior (formerly PSYC 1040)

Sleep and Chronobiology Research (formerly PSYC 1060)

Laboratory in Cognitive Processes (formerly COGS 1530)

Functional Magnetic Resonance Imaging: Theory and Practice (formerly PSYC 1840)

Neural Modeling Laboratory (formerly COGS 1020)

Computational Cognitive Neuroscience (formerly COGS 1480)

Psychology of Hearing (formerly PSYC 1190)

Laboratory in Developmental Psychology (formerly COGS 1610)

Personality and Clinical Assessment (formerly PSYC 1110)

Laboratory in Social Cognition (formerly PSYC 1540)

An advanced seminar/critical readings course in CLPS, numbered above 1000.  

Six supporting science courses should be selected from the following areas: Applied Mathematics, Biology, Chemistry, Computer Sciences, Engineering, Mathematics, Neuroscience, or Physics.  

Directed Research in Cognitive, Linguistic and Psychological Sciences (formerly PSYC 1990)

Total Credits

1 1
2 2
3 2

1 Or advanced placement with a score of 4 or 5, or transfer credit. If placement for CLPS0010 is granted on the basis of AP or IB test scores, then another CLPS course (at any level) must be substituted.  
2 The pre-approved courses in each area are listed on the concentration worksheets. A laboratory course or seminar (indicated on the worksheet) may be used to meet the area requirement only if it is the student's second lab course or second seminar. Independent study courses cannot be used for this requirement. First year seminars outside of CLPS cannot be counted for the area requirement.  
3 The worksheets (http://www.brown.edu/Departments/CLPS/undergrad/psychology) include up-to-date lists of labs. Independent study courses and laboratory courses outside of CLPS cannot be used to satisfy this requirement.  
4 Consult one of the concentration advisors for lists of approved courses.  
5 The following courses cannot be used to meet the requirement for outside science courses: independent study or GISP courses in science studies, or ENGN 0020, 0090, 0900, 1010. AP credit can substitute for only one of these courses.  
6 CLPS1980 typically involves one semester of independent research under the direct supervision of a faculty advisor in CLPS. This includes data collection and/or analysis, and a final written report. Upon department approval, the faculty advisor may be from another department or unit if the research program is within the field of psychology and approved by the concentration advisor as such. The proposal form for CLPS1980 (http://www.brown.edu/Departments/CLPS/undergrad/psychology) must be submitted to the concentration advisor before the student can register for CLPS1980. Contact the Sc.B. Concentration Advisor for further details. CLPS1980 cannot be counted for the lab requirement. The CLPS Undergraduate Concentration Committee oversees the concentration and receives petitions regarding concentration requirements.

Honors

Detailed information about the Psychology Honors program is available on a dedicated page.

Public Health

The requirements listed below are for AB Public Health concentrators in the class of 2016 and beyond. AB Community Health concentrators, in the classes of 2014 and 2015 should refer to http://bulletin.brown.edu/the-college/concentrations/comh/ for degree requirements.

Required Courses:

Health Care in the United States

This course should be taken as a freshman or sophomore

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
PHP 0320  Introduction to Public Health  1
This course should be taken as a freshman or sophomore
PHP 1910  Community Health Senior Seminar  1
Two additional courses, Introduction to Epidemiology and Introduction to Biostatistics (currently being developed)
Both of these courses will be required during the student’s junior year.

Environmental Health and Policy Electives (Students must select one of the following):
  PHP 1700  Current Topics in Environmental Health  1
  BIOL 1820  Environmental Health and Disease
  ENVS 1410  Environmental Law and Policy
  ENVS 1710  Environmental Health and Policy
  ENVS 1720  Environmental Justice: The Science and Political Economy of Environmental Health and Social Justice

Health, Health Care Systems and Policy Electives (Students must select one of the following):
  PHP 1520  Emergency Medical Systems: An Anatomy of Critical Performance
  PHP 1530  Case Studies in Public Health: The Role of Governments, Communities and Professions
  PHP 1070  The Burden of Disease in Developing Countries
  PHP 1100  Comparative Health Care Systems
  PHP 1500  Global Health Nutrition
  ECON 1360  Health Economics

Social and Behavioral Science for Prevention Electives (Students must select one of the following):
  PHP 1010  Doctors and Patients: Clinical Communication in Medicine
  PHP 1400  HIV/AIDS in Africa: A Multidisciplinary Approach to Support HIV/AIDS Care and Treatment Programs
  PHP 1540  Alcohol Use and Misuse
  PHP 1600  Obesity in the 21st Century: Causes, Consequences and Countermeasures
  PHP 1680N  Tobacco, Smoking, and the Evil Empire
  PHP 1680T  Translation, Diffusion and Cultural Relevance of Health Promotion Interventions
  PHP 1740  Principles of Health Behavior and Health Promotion Interventions
  PHP 1920  Social Determinants of Health
  PHP 2310  Physical Activity and Public Health
  PHP 2320  Environmental and Policy Influences on the Obesity Epidemic
  PHP 2330  Behavioral and Social Approaches to HIV Prevention
  PHP 2340  Behavioral and Social Science Theory for Health Promotion
  PHP 2360  Designing and Evaluating Public Health Interventions
  PHP 2380  Health Communication

Approved Electives (Students must select four electives. The four electives may be selected from the approved courses from the areas listed above or the approved general electives listed below):
  PHP 0030  Health of Hispanics
  PHP 0040  Addiction: The Causes, Cures and Consequences of Substance Abuse in Modern Society
  PHP 1680  Pathology to Power: Disability, Health and Community
  PHP 1680J  The Race To Inner Space: Conflating Science, Politics, and Economics To Promote Brain Health
  PHP 1680K  Introduction to Conducting Clinical Research
  PHP 1680M  The Epidemiology of Violence and its Consequences
  ANTH 0300  Culture and Health
  ANTH 1020  AIDS in Global Perspective
  ANTH 1242  Bioethics and Culture
  ANTH 1310  International Health: Anthropological Perspectives
  BIOL 0030  Principles of Nutrition
  BIOL 0040  Nutrition for Fitness and Physical Activity
  BIOL 0180  The Biology of AIDS
  BIOL 0190E  Botanical Roots of Modern Medicine
  BIOL 0200  The Foundation of Living Systems
  BIOL 0470  Genetics
  BIOL 0475  Conservation Medicine
  BIOL 0530  Principles of Immunology
  BIOL 0800  Principles of Physiology
  BIOL 0860  Diet and Chronic Disease
  BIOL 1920B  Health Inequality in Historical Perspective
  BIOL 1920C  Social Contexts of Disease
  BIOL 1920D  Race, Difference and Biomedical Research: Historical Considerations
  ENVS 0410  Environmental Stewardship
  ENVS 0490  Environmental Science in a Changing World
  ENVS 1700A  Working with Communities: Cultural Competence and Ethics
  ETHN 1890J  Native American Environmental Health Movements
  CNS 1900B  Health and Healing in American History
  HMAN 1970G  International Perspectives on NGOs, Public Health, and Health Care Inequalities
  NEUR 0010  The Brain: An Introduction to Neuroscience
  PPAI 1700J  GIS and Public Policy
  PPAI 1700K  Health Policy Challenges
  PPAI 1700V  Nonprofit Organizations
  SOC 0300B  Environment and Society
  SOC 0300E  HIV/AIDS: Politics, Culture and Society
  SOC 0300F  Unequal From Birth: Child Health From a Social Perspective
  SOC 0300K  Inequalities and Health
  SOC 1250  Perceptions of Mental Illness
  SOC 1315  Macro-Organizational Theory: Organizations in Social Context
  SOC 1410  Aging and the Quality of Life
  SOC 1540  Human Needs and Social Services
  SOC 1550  Sociology of Medicine
  SOC 1870D  Aging and Social Policy
  SOC 1871F  Principles and Methods of Geographic Information Systems
  SOC 1871H  Social Perspectives on HIV/AIDS
  SOC 1871N  Military Health: The Quest for Healthy Violence

Total Credits: 12

Honors: An Honors track is available for students who qualify. Honors track students are also required to enroll in PHP 1880 in both semesters of their senior year to conduct research and write the honors thesis. Please visit http://brown.edu/academics/public-health/honors-track for details. Inquiries: Sarah Hemond (Sarah_Hemond@brown.edu)
Public Policy and American Institutions

Public Policy and American Institutions is housed in the A. Alfred Taubman Center, which is dedicated to teaching, research, and service in the areas of health care and social welfare policy, education policy, urban policy, law and criminal justice, and media and technology. Public policy refers to societal initiatives to remedy social problems. Because social problems typically emerge from complex, multi-faceted social conditions, the study of public policy requires students to become familiar with the insights of diverse academic disciplines into how institutions facilitate or inhibit societal problem-solving. The study of public policy is an excellent framework for integrating ideas drawn from several disciplines around issues of real world significance. Concentrators emerge with a sound understanding of institutional change and are well-equipped to contribute to processes of social change.

Required Courses:

<table>
<thead>
<tr>
<th>Core courses:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PPAI 0100</td>
<td>Introduction to Public Policy</td>
</tr>
<tr>
<td>Ethics and Public Policy</td>
<td></td>
</tr>
<tr>
<td>POLS 1050 or PPAI 1700</td>
<td>Ethics and Public Policy</td>
</tr>
<tr>
<td>Good Government</td>
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<tr>
<td>Microeconomics</td>
<td></td>
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<tr>
<td>ECON 1110</td>
<td>Intermediate Microeconomics</td>
</tr>
<tr>
<td>ECON 1130</td>
<td>Intermediate Microeconomics (Mathematical)</td>
</tr>
<tr>
<td>EDUC 1130</td>
<td>Economics of Education I</td>
</tr>
<tr>
<td>Research Methods</td>
<td></td>
</tr>
<tr>
<td>POLS 1600</td>
<td>Political Research Methods</td>
</tr>
<tr>
<td>EDUC 1110</td>
<td>Policy Analysis</td>
</tr>
<tr>
<td>ECON 1620</td>
<td>Introduction to Econometrics</td>
</tr>
<tr>
<td>ECON 1630</td>
<td>Econometrics I</td>
</tr>
<tr>
<td>SOC 1100</td>
<td>Introductory Statistics for Social Research</td>
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<tr>
<td>Policy Analysis and Program Evaluation</td>
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<tr>
<td>PPAI 1200 or EDUC 1160</td>
<td>Policy Analysis and Program Evaluation</td>
</tr>
<tr>
<td>Evaluating the Impact of Social Programs</td>
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</tr>
</tbody>
</table>

Elective Courses: 1

- Two courses in American Institutions 2
- One course in global policy 1
- Two courses in policy problems 2

Total Credits 11

1 Two of the five elective courses must have a primary listing in Public Policy. One of the five elective courses must be designated as a writing course.

Honors

Candidates for honors should apply in the Spring term of their third year. Successful candidates will enroll in the Public Policy Colloquium and prepare a senior honors paper.

Religious Studies

Religious Studies seeks to understand and interpret religions in various historical, cultural, and social contexts. It fosters scholarly skills such as close reading (of texts and other social and material data), excellence in writing and verbal expression, interpretation of the past from written and physical evidence, and interpretation of contemporary society. By exploring the public and private concerns that religions engage—for example, the nature of community and solitude, suffering and death, good and evil—students discover new ways of interpreting the complex world in which they live. As students venture into the religions of Asia, the Middle East, Africa, the Americas, and Europe, they learn about the formation and transmission of beliefs, behaviors, values, rituals, texts, institutions, and forms of community. Students also learn about conflict and accord within and between religions, as well as between religious and non-religious perspectives.

Concentration in religious studies includes course work in RELS 1000 (junior seminar in methods in the study of religion) and eight other courses conforming to the following requirements.

Each student in consultation with appropriate faculty members devises a concentration program. The student presents (for approval by the concentration advisor) a written statement of the objectives of his or her concentration program and a list of the component courses. The program is expected to encompass the study of at least one religious tradition from each of the following groups. Ordinarily, this requirement is satisfied by two or more courses in each of these areas:

1. Traditions that emerge from West Asia and the Mediterranean world
2. Traditions that emerge from South and East Asia

The plan of study must take account of more than one approach to the study of religion, e.g., philosophical and historical; contain at least two Intermediate-level courses (0200-0999), RELS 1000, and two additional advanced-level courses (above 1000). This means that no more than four courses (out of nine) can be at the introductory level. Courses listed in other departments but taught by religious studies faculty count toward the program. Up to three courses that are outside the department and not taught by religious studies faculty can count toward the program.

No later than the end of spring registration in the junior year, the concentrator will determine whether he or she will write an honors thesis or complete a capstone project for the concentration. A capstone course will be selected in consultation with the concentration advisor and other faculty as appropriate. Within the frame of this capstone course, the concentrator will address the theoretical and interpretive issues of his or her particular focus in the religious studies concentration.

Honors

A religious studies concentration with honors requires, in addition to RELS 1000 and eight other courses, an honors thesis (RELS 1999, during both semesters of the senior year). To receive honors, a student must have at least a high B in the concentration and an A on the thesis.

Thomas A. Lewis, Director of Undergraduate Studies
Stephen Bush, Undergraduate Advisor for Seniors

Renaissance and Early Modern Studies

The Program in Renaissance and Early Modern Studies (REMS) encourages students to pursue interdisciplinary and multidisciplinary approaches to the study of Europe and its relation with the Americas and Asia in the early modern period. Students focus on the late fourteenth through the late eighteenth centuries—a time marked by scientific and agricultural revolutions, the Reformation, the development of capitalism, and the rise of cultural forms such as the novel, opera, Grub Street journalism and the art market. Concentrators examine the development of new cultural and political forms through the imitation and reworking of those of classical antiquity, the restructuring of patriarchal society, and the emergence of the sovereign nation state. Students take courses in more than a dozen departments affiliated with REMS.

Sponsoring departments include: Africana Studies, Archaeology and the Ancient World, Classics, Comparative Literature, English, French Studies, Hispanic Studies, History, History of Art and Architecture, History of Mathematics, Italian Studies, Judaic Studies, Music, Philosophy, Portuguese and Brazilian Studies, Slavic Languages, and Theatre and Performance Studies. Students are invited to take advantage of this breadth of offerings in order to enhance their understanding of the period, as well as to gain a sense of the uses, limitations, and interrelationships of particular disciplinary approaches.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Requirements
Concentrators are required to take a minimum of 8 courses. These include the following:

1. Three courses on Renaissance and/or early modern topics in one field in which the student has primary interest or training, (for example, literature, history of art and architecture, or history).
2. Three courses related to the Renaissance and/or early modern period chosen from two other fields.
3. A senior project. (Credit will be granted through registration for Independent Study in the department in which the topic of research lies.)
4. Another relevant course of the student’s choosing.

In addition, the student must be able to demonstrate a reading knowledge of a relevant modern or ancient language other than English. This language requirement does not count as one of the 8 courses.

Honors
Interested and eligible students will petition to write a thesis and the faculty will choose the Honors group for that year from the applications, making every effort to accommodate all eligible proposals. Selection is based upon the quality of the application, the preparedness of the student to undertake the project, and the availability of appropriate advisors for the subject. Applications will be due to the Director of REMS in mid-April of the student’s junior year.

For those accepted, the Honors program will be administered as follows:
Students will sign up for REMS 1980 in the Fall and again in the Spring, with the section number of their advisor. Students must meet regularly with their advisors and second readers throughout the year according to a schedule determined by each student and advisor. Finished drafts of the thesis (which will be about 35 pages in length, not counting bibliography and visual or other supporting materials) will be due to the advisor and second reader on April 1 of the Spring semester. Comments will be returned to the students for final polishing and corrections at that point. Students will receive Honors when both their primary advisor and their second reader have provided written statements in support of the finished thesis. The finished paper, which should be a polished and revised, edited, professional work of original research, will be made available to the entire REMS faculty at the Annmary Brown Memorial, with a folder for leaving constructive comments on the finished thesis for the concentrator. This is an optional engagement that we hope will become part of the culture of the program. There will be a public presentation of the Honors work at the end of the Spring semester.

Students planning a December graduation will not be eligible for the Honors Thesis program, although as always they are welcome to work out other ways to pursue projects of independent interest in consultation with an academic advisor.

Students wishing to write an honors thesis must have an A average in the concentration, which means that they will not have received more than one “B” or “S” in any course used for the concentration. Classes taken S/NC may be considered as qualifying the student for Honors if they are marked “S with distinction,” meaning that had the student taken the course for a grade, the grade would have been an “A.” It is advisable for them to have taken at least one class with the person who will advise the thesis, and have already written a research paper before choosing to undertake this year-long writing project. Honors students are strongly encouraged not to take more than 4 classes either semester of their senior year—the Honors class being considered one of the four classes.

Application process:
Each application shall consist of:
1. A very brief (one or two paragraph) cover letter identifying the most appropriate advisor and second readers, and stating also the student’s preparation is for the project. Second readers may be professors who work in areas related to the topic, or in some very special cases (and with advisor’s approval) may be practitioners with whom the student already worked closely, for example.
2. A 2 page double-spaced abstract stating and explaining the topic (subject and argument) of the research to be undertaken, written as clearly as possible.
3. A one-page working bibliography of the most relevant books and major articles to be consulted for the project.
4. A current résumé.
5. A printout of the most recent transcript

The senior project constitutes the capstone for all concentrators. Examples of possible senior projects are: a senior thesis (roughly equivalent to a senior seminar paper), the staging of an early modern play, the performance of early modern music, or an exhibition. The final project will be developed in consultation with two REMS faculty advisors who work closely with the student. Credit is granted through registration for Independent Study in the department for which the topic of research lies.

Liberal Learning
This concentration will help develop your aesthetic awareness, close reading skills, collaborative skills, cultural understanding, facility with symbolic languages, historical awareness, and your speaking and writing.

Science and Society
Science and Society is an interdisciplinary concentration that examines the processes of scientific discovery and the establishment of scientific policies and systems of belief from historical, philosophical, anthropological, and sociological perspectives. Concentrators analyze the practices, norms, and values that reflect and shape our deepest convictions about what is considered "science." Students select courses in the physical sciences, life sciences, or mathematics and choose a thematic track that may include the history and philosophy of science, gender and science, race, science and ethnicity, health and medicine, environment and society, or they may create their own independent focus. Science and Society prepares students to follow, guide, and shape scientific knowledge as it travels from the laboratory into the public arena.

Requirements
Consisting of 12 courses, the program of study outlined below will be developed by each student in consultation with the concentration advisor. Where appropriate, independent reading, lab courses or GISPS may count for up to three of the twelve total courses. Students will take a minimum of 7 intermediate to advanced courses.

Required Courses (2)
The concentration has two required courses.
- SCSO 1000: Gender, Science and Society, or equivalent introductory course: usually taken in the second or third year.
- SCSO 1900: Senior Seminar, also open to non-majors with the proper background, usually taken senior year.

Thematic Track (3)
Students will organize their course of study around the choice of a thematic track. The theme may be thought of as the applied content portion of the concentration. Students will take a minimum of three courses, at least one of which must be at an advanced level, in one of the thematic areas listed below:
- History & Philosophy of Science
- Gender & Science
- Race, Science & Ethnicity
- Health & Medicine
- Representing Science in Literature & Culture
- Policy, Persuasion & the Rhetoric of Science
- Environment & Society
- Independent Focus

Science Track (4)
Students will take a minimum of four courses in one of the following scientific areas: physical sciences, life sciences, mathematics/computer science. The chosen area should provide appropriate background and support for the chosen concentration theme. The science courses will be sequenced such that a concentrator will move enough beyond

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
the introductory level to gain some understanding of the world view of scientists within a chosen field. The particular sequence of courses which best meets the science requirement will be chosen in consultation with the concentration advisor. When necessary, the concentration advisor will seek guidance from faculty within the chosen scientific field.

Science and Technology Studies Theory (3)

Students will take three Science and Technology Studies-related courses in the social sciences and humanities. These courses, which will provide critical theoretical background for the study of Science and Society, should address questions of historiography, epistemology and methodology in the field of science and technology studies. A full list of such courses and sample concentrations may be found at http://www.brown.edu/Faculty/COSTS.

Honors

To qualify for Honors a student must:

1. Apply for candidacy for Honors by the end of the student’s seventh semester.
2. Maintain a high level of excellence in courses within the concentration and above average performance in non-concentration courses. In the event that a student has taken a number of courses S/NC he or she will submit CPR’s for consideration by the concentration advisory committee, which will evaluate the student’s candidacy.
3. Complete an Honors Thesis judged by the advisor and an additional reader to be of superior quality.
4. Deliver an oral presentation based on thesis work that is favorably reviewed by the concentration faculty and the advisory committee.

Slavic Studies

Slavic Studies is concerned with the languages, literatures, and civilizations of the Slavic world. Built on sound knowledge of one or two Slavic languages (normally Russian or Czech) the program allows students to develop an in-depth appreciation and understanding of East European cultures and civilizations through a broad spectrum of interdisciplinary fields. Students take courses in literature, history, culture, theater, political science, economics, and international relations. Concentrators focusing on Russia learn one of the world’s most commonly spoken languages and study some of the world’s best-regarded authors and composers: Tolstoy and Dostoevsky, Gogol and Bulgakov, Tchaikovsky and Mussorgsky, and Rachmaninoff and Stravinsky. Focusing on Czech allows students to explore, for example, how Czechs distinguished themselves by peacefully transitioning from communism to capitalism (the “Velvet Revolution”) and separating peacefully with the Slovak Republic (the “Velvet Divorce”). Most concentrators study abroad in a Slavic country, either during the academic year or the summer.

Requirements for the AB degree:

1. Six semesters of one Slavic language or the equivalent (normally Czech or Russian), or a combined total of eight semesters of two Slavic languages or the equivalent.
2. Seven 1000-level courses devoted to the study of the East European civilizations: literature, history, culture, theater, political science, economics, international relations. Typically, at least four of these courses will be from within the Department of Slavic Languages. Students’ choice of courses is subject to the approval of the concentration advisor.

Honors

Honors candidacy in Slavic studies assumes an excellent academic record, particularly in the concentration. Additional requirements are the same as those for a standard concentration, plus the writing of a senior thesis (SLAV 1990). For procedures and schedule for writing a senior thesis, please refer to the department guidelines.

Social Analysis and Research

The Sc.B. concentration in Social Analysis and Research provides both a conceptual and a working knowledge of the techniques for data collection and analysis used for social research in academic and non-academic environments. The centerpiece of the concentration is a rigorous and comprehensive collection of courses; (1) that develop an understanding of the principles underlying the processes of data collection and analysis; and (2) that train students in the application of advanced statistical techniques for data description and analysis. The concepts and skills learned in these courses are reinforced through engagement in applied research with Sociology faculty and/or internships with local organizations in the for profit and not-for-profit sectors.

Concentrators also take courses that provide grounding in the theoretical approaches to social phenomena that are foundational to social research. Graduates develop an understanding of the concepts and processes that underlie the issues studied by sociologists and the analytic techniques that allow sociologists to understand social relations and individual behavior.

Standard program for the Sc.B. degree

Required Core

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>MATH 0090</td>
<td>Introductory Calculus, Part I</td>
<td>1</td>
</tr>
<tr>
<td>SOC 1100</td>
<td>Introductory Statistics for Social Research</td>
<td>1</td>
</tr>
<tr>
<td>or APMA 0650</td>
<td>Essential Statistics</td>
<td></td>
</tr>
<tr>
<td>or ECON 1620</td>
<td>Introduction to Econometrics</td>
<td></td>
</tr>
<tr>
<td>SOC 1020</td>
<td>Methods of Social Research</td>
<td>1</td>
</tr>
<tr>
<td>SOC 2010</td>
<td>Multivariate Statistical Methods I</td>
<td>1</td>
</tr>
<tr>
<td>SOC 2010</td>
<td>Classical Sociological Theory</td>
<td>1</td>
</tr>
<tr>
<td>SOC 2240</td>
<td>Event History Analysis</td>
<td>1</td>
</tr>
<tr>
<td>SOC 2240</td>
<td>Event History Analysis</td>
<td>1</td>
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</tbody>
</table>

Three (3) substantive or theory courses (non-methodological courses) in Sociology, two (2) of which must be at the 1000-level or above

Three (3) of the following advanced analysis courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 1120</td>
<td>Market and Social Surveys</td>
<td>3</td>
</tr>
<tr>
<td>SOC 1117</td>
<td>Focus Groups for Market and Social Research</td>
<td>3</td>
</tr>
<tr>
<td>SOC 1260</td>
<td>Market Research in Public and Private Sectors</td>
<td>3</td>
</tr>
<tr>
<td>SOC 1340</td>
<td>Principles and Methods of Geographic Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2610</td>
<td>Spatial Thinking in Social Science</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2960G</td>
<td>Spatial Data Analysis Techniques in the Social Sciences</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2230</td>
<td>Techniques of Demographic Analysis</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2210</td>
<td>Qualitative Methods</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2020</td>
<td>Multivariate Statistical Methods II</td>
<td>3</td>
</tr>
</tbody>
</table>

Capstone Experience (1-2 courses)

A one-semester research internship (not for credit or for credit as SOC 1970 - Independent Study), or a summer research internship (not for credit)

Sociology Senior Seminar (SOC 1950)

Total Number of Courses (12-13)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Credits</td>
<td></td>
<td>12-13</td>
</tr>
</tbody>
</table>

Course Substitutions: Students may petition the Undergraduate Concentration Advisor to use one advanced analysis course taken in another department to count toward the three required advanced analysis courses.

Research Internship

A one semester or a summer research internship is required. The research internship is designed to provide students with hands-on experience in social research. Students will typically complete the research internship in their junior year or during the summer between their junior and senior years. Students need to submit an Internship Proposal Form to the Undergraduate Concentration Advisor for approval prior to starting the internship. Upon completion of the internship, students are required to submit to the Undergraduate Concentration Advisor a brief summary report of their experience, which must be signed by the supervisor of the student’s internship.

Academic research internships involve work on a faculty member’s research project. Activities may range from data collection, data entry, data file management, descriptive analyses, and more advanced model estimation. Students are encouraged to approach faculty about

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
opportunities for working on their research projects. Off-campus research internships are arranged through the Sociology Department Students Affairs Coordinator or the Undergraduate Concentration Advisor. Academic and off-campus research internships will typically entail 5-10 hours of work per week and may or may not involve compensation.

Students may receive academic credit for academic research internships and off-campus internships completed during the academic year if they combine the internship experience with an academic component under the direction of a faculty advisor. Students taking an internship for credit should register for an Individual Research Project (SOC 1970).

The Senior Seminar

The concentration in Social Analysis and Research requires all concentrators to complete a thesis or project in their senior year as a capstone experience. The purpose of the thesis or project is to allow students an opportunity to apply the knowledge they acquired on a topic of their own interests. This capstone experience provides a hands on experience through which students learn what can be done with sociological research methods. To fulfill the capstone requirement students enroll in SOC 1950- Senior Seminar during the senior year. SOC 1950 is a one credit course that students take across two successive semesters. Students receive 0.5 credit in each semester. The senior seminar is focused on finalizing a senior project or thesis and giving a presentation of the completed work. Participation in this seminar allows each cohort of concentrators to discuss diverse interests and exposes them to a wider range of applications of sociological knowledge.

The senior thesis is supervised by a faculty member who serves as the primary advisor, and one additional faculty member who serves as a reader. The primary advisor and the reader are chosen by the student and approved by the Concentration Advisor. The reader will receive a draft and a finished copy of the students thesis, which the reader will be responsible to grade. The reader may be involved in the earlier development of the thesis depending upon the arrangement made by the student with the reader. The Senior thesis will normally consist of a major research project. By the end of the sixth semester, students must submit a prospectus of the senior thesis to the Concentration Advisor. At the start of the seventh semester students should submit to the Concentration Advisor a proposal (not more than four pages) accompanied by the signature of one faculty member indicating that he or she is willing to serve as primary advisor on the thesis. Only a senior thesis qualifies the student for Honors. A thesis typically includes one or two semesters of course credit through SOC 1980 - Senior Thesis/Project (fall semester) and/or SOC 1990 - Senior Thesis/Project (spring semester). SOC 1980 and SOC 1990 do not count toward the 12-13 course requirement for the concentration.

A senior project differs from a thesis in its scholarly content and form, and it depends only on the evaluation of the senior seminar instructor (although students may elect to have a faculty advisor for the project, in addition to the senior seminar instructor). Whereas the senior thesis follows the form of a conventional research paper, the project allows a wider array of research and creative outputs, including, but not limited to video documentaries, photographic exhibitions, and applied or policy related reports with an off-campus organization. projects should be complemented by an analytical paper that situates the central subject matter of the project within the context of sociological scholarship.

You should decide your senior project in consultation with the Concentration Advisor and the instructor of the Senior Seminar. You may also need to approach a specific faculty member within the department to advise you on your project. At the beginning of your senior year you should file a written statement with the Concentration Advisor describing your senior project and listing your advisor for the project (if you opt to have one outside of the SOC 1950 instructor). Students who have a faculty advisor on their senior project may register for SOC 1980 Senior Thesis/Project (fall semester) and SOC 1990 Senior Thesis/Project (spring semester). SOC 1980 and SOC 1990 do not count toward the 12-13 course requirement for the concentration.

Due Dates

During the second week of March, a complete draft of the senior thesis must be given to the faculty advisor and the reader for comments, and the final version of the senior thesis is due during the second week of April (exact dates vary from year to year and are announced at the start of the academic year). During the second week of March, a complete draft of the senior project must be given to the instructor of the senior seminar and the faculty advisor (if the student has one) for comments, and the final version of the senior project is due during the second week of April (the exact dates vary from year to year and are announced at the start of the academic year).

These deadlines are essential to allow the faculty time to evaluate theses for awards, and to notify the Registrar with recommendations for honors. NO EXTENSIONS WILL BE GRANTED.

Honors

In order to be considered for honors, students must receive a grade point average of at least 3.5 (A=4, B=3, C=2) on all concentration courses taken, and no more than one (1) of the concentration courses with the "S/NC" option. Honors also requires a senior thesis, with a recommendation of Honors by the advisor and reader, that demonstrates an understanding of empirical research.

Independent Study

Students can use no more than one (1) Independent Study course (SOC 1970 to meet the concentration course requirements. This course counts towards a 1000 level substantive requirement and will not serve as a substitute for any of the core concentration requirement.

Sociology

Sociology seeks to understand human behavior by studying how individuals connect to the groups and institutions in which they live. Sociologists analyze the interrelationship of social structures with political, economic, and cultural forces, from the micro to the macro level. As a discipline, sociology provides students with the conceptual and analytic tools to make sense of complex social structures in a rapidly changing global environment. Brown's Sociology department brings together a dynamic group of scholars with international reputations for outstanding achievement in a range of important research areas -- social demography, health and medicine, environmental justice and environmental change, development, politics and democracy, urban and spatial analysis, and organizations and occupations.

Standard program for the A.B. degree

Ten courses are required:

Requirements: (10 course)

One introductory level course to be selected from:

SOC 0010 Perspectives on Society
SOC 0020 Perspectives on Social Interaction: An Introduction to Social Psychology
SOC 0130 American Heritage: Democracy, Inequality, and Public Policy
SOC 1010 Classical Sociological Theory
SOC 1020 Methods of Social Research
SOC 1100 Introductory Statistics for Social Research

(or APMA 0650 or ECON 1620)

SOC 1950 Senior Seminar

Five additional courses

a. At least three of the optional courses have to be 1000 level and one of them must be a substantive seminar (1870/1871).
b. Students can choose to take up to two (showcase) lower level (0100 level) courses.
c. Students can petition to take one course outside of the concentration (this will be allowed only when the proposed course makes sense given the interests of the student, and there is no equivalent sociology course).

Total Credits

10

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
The Senior Seminar

Sociology requires all concentrators to complete a thesis or project in their senior year as a capstone experience. The purpose of the thesis or project is to allow students an opportunity to apply the knowledge they acquired on a topic of their own interests. This capstone experience provides a hands-on experience through which students learn what can be done with Sociology. To fulfill the capstone requirement students enroll in – Senior Seminar during the senior year. is a one credit course that students take across two successive semesters. Students receive 0.5 credit in each semester. The senior seminar is focused on finalizing a senior project or thesis and giving a presentation of the completed work. Participation in this seminar allows each cohort of concentrators to discuss their diverse interests and expose them to the wide range of applications of Sociological knowledge.

The **senior thesis** is supervised by a faculty member who serves as the primary advisor, and one additional faculty member who serves as a reader. The primary advisor and the reader are chosen by the student and approved by the Concentration Advisor. The reader will receive a draft and a finished copy of the student’s thesis, which the reader will be responsible to grade. The reader may be involved in the earlier development of the thesis depending upon the arrangement made by the student with the reader. The senior thesis will normally consist of a major research paper. By the end of the sixth semester, students must submit a prospectus of the senior thesis to the Concentration Advisor. At the start of the seventh semester students should submit to the Concentration Advisor a proposal (not more than four pages) accompanied by the signature of one faculty member indicating that he or she is willing to serve as primary advisor on the thesis. Only a senior thesis qualifies the student for Honors. A thesis typically includes one or two semesters of course credit through - Senior Thesis/Project (fall semester) and/or - Senior Thesis/Project (spring semester), and do not count toward the 10 course requirement for the concentration.

A **senior project** differs from a thesis in its scholarly content and form, and it depends only on the evaluation of the senior seminar instructor (although students may elect to have a faculty advisor for the project, in addition to the senior seminar instructor). Whereas the senior thesis follows the form of a conventional research paper, the project allows a wider array of research and creative outputs, including but not limited to video documentaries, photographic exhibitions, and applied or policy related reports with an off-campus organization. Projects should be complemented by an analytical paper that situates the central subject matter of the project within the context of sociological scholarship. You should decide your senior project in consultation with the Concentration Advisor and the instructor of the Senior Seminar. You may also need to approach a specific faculty member within the department to advise you on your project. At the beginning of your senior year you should file a written statement the Concentration Advisor describing your senior project (if you opt to have one outside of the instructor). Students who have a faculty advisor on their senior project may register for - Senior Thesis/Project (fall semester) and/or - Senior Thesis/Project (spring semester). Soc 1980 and 1990 do not count towards the 10 course requirement for the concentration.

**Due Dates**

During the second week of March, a complete draft of the senior thesis must be given to the faculty advisor and the reader for comments, and the final version of the senior thesis is due during the second week of April (the exact dates vary from year to year and are announced at the start of the academic year).

During the second week of March, a complete draft of the senior project must be given to the instructor of the senior seminar and the faculty advisor (if the student has one) for comments, and the final version of the senior project is due during the second week of April (the exact dates vary from year to year and are announced at the beginning of the academic year).

These deadlines are essential to allow faculty time to evaluate theses for awards, and to notify the Register with recommendations for honors. NO EXCEPTIONS WILL BE GRANTED

**Honors**

In order to be considered for honors, students must receive a grade point average of at least 3.5 (A=4, B=3, C=2) on all concentration courses taken, and can take no more than one (1) of the concentration courses with the “SINC” option. Honors also requires a senior thesis, with a recommendation of Honors by the advisor and reader, that demonstrates an understanding of empirical research.

**Independent Study**

Students can use no more than one (1) Independent Study course to meet the concentration course requirements. This course counts only towards a 1000 level substantive requirement and will not serve as a substitute for any of the core concentration requirements.

**South Asian Studies**

The diversity and shared histories of South Asia’s cultures, religions, languages, and nations are an important area of engagement in the world today. While India, Pakistan, Bangladesh, Sri Lanka, Nepal and neighboring nation-states constitute a recognizable geographic region, the equally vital diasporic communities from South Asia and their globally dispersed networks extend our understanding of an old and yet changing South Asia. South Asian Studies is an interdisciplinary concentration in which students work in a specified chronological period (e.g. ancient, medieval, early modern, or contemporary), in a geographical area (e.g. Bangladesh, Bengal, Maharashtra, North India, Pakistan, South India), or in a particular discipline (e.g. anthropology, Hindi/Urdu, history, religion, or Sanskrit) but also take courses outside of their chosen area of emphasis in disciplines such as economics, literature, philosophy, political science, or theatre arts.

**Course Requirements**

All South Asian Studies concentrators must take and pass 10 courses as approved by their concentration advisor.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 1580</td>
<td>Gandhi’s India: South Asia Before 1947</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Select at least one of the following courses in pre-modern history, philosophy, religious studies and literature:</td>
<td>1</td>
</tr>
<tr>
<td>CLAS 0180</td>
<td>Indian Civilization through Its Literature</td>
<td></td>
</tr>
<tr>
<td>CLAS 0800</td>
<td>Religious and Philosophical Thought in Ancient India</td>
<td></td>
</tr>
<tr>
<td>CLAS 0820</td>
<td>Epics of India</td>
<td></td>
</tr>
<tr>
<td>CLAS 0990</td>
<td>Concepts of the Self in Classical Indian Literature</td>
<td></td>
</tr>
<tr>
<td>CLAS 1140</td>
<td>Classical Philosophy of India</td>
<td></td>
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<tr>
<td>HIST 1590</td>
<td>Beyond Hindu, Muslim: Recovering Early South Asia</td>
<td></td>
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<tr>
<td>RELS 0140</td>
<td>Religions of South Asia</td>
<td></td>
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<tr>
<td>RELS 0130</td>
<td>The Hindu Tradition</td>
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<tr>
<td>RELS 0120</td>
<td>Select at least one of the following social science course:</td>
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</tr>
<tr>
<td>ANTH 1250</td>
<td>Film and Anthropology: Identity and Images of Indian Societies</td>
<td></td>
</tr>
<tr>
<td>ANTH 1321</td>
<td>Impact on Colonialism: Gender and Nationalism in India</td>
<td></td>
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<tr>
<td>ANTH 1131</td>
<td>Indian Issues in Anthropological Perspective</td>
<td></td>
</tr>
<tr>
<td>ANTH 2321</td>
<td>Coming to Terms with India: Anthropology of Colonialism and Nationalism</td>
<td></td>
</tr>
<tr>
<td>POLS 1280</td>
<td>Politics, Economy and Society in India</td>
<td></td>
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<tr>
<td>POLS 1280</td>
<td>At least one course in the visual arts, modern literature, music, cinema, or theatre of South Asia such as:</td>
<td></td>
</tr>
<tr>
<td>HIAA 0080</td>
<td>Introduction to Indian Art</td>
<td></td>
</tr>
<tr>
<td>HIAA 1410A</td>
<td>Topics in Islamic Art: Islamic Art and Architecture on the Indian Subcontinent</td>
<td></td>
</tr>
<tr>
<td>HINDI 1080</td>
<td>Advanced Hindi-Urdu</td>
<td></td>
</tr>
<tr>
<td>MUSC 1933</td>
<td>Music of India</td>
<td></td>
</tr>
<tr>
<td>PRSN 1200</td>
<td>Iranian Cinema: Before and After the Islamic Revolution</td>
<td></td>
</tr>
<tr>
<td>RELS 0910</td>
<td>Music, Drama and Religion in India</td>
<td></td>
</tr>
<tr>
<td>TAPS 1270</td>
<td>Performance in the Asias</td>
<td></td>
</tr>
</tbody>
</table>

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
An Honors Thesis or a Capstone Course taken in an appropriate Department.

Five electives 1

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ANTH 0066K</td>
<td>International Perspectives of Women’s Agency and Society</td>
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<tr>
<td>ANTH 1131</td>
<td>Indian Issues in Anthropological Perspective</td>
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<td>ANTH 1220</td>
<td>Comparative Sex Roles</td>
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<tr>
<td>ANTH 1250</td>
<td>Film and Anthropology: Identity and Images of Indian Societies</td>
</tr>
<tr>
<td>ANTH 2320</td>
<td>Ideology of Development</td>
</tr>
<tr>
<td>ANTH 2321</td>
<td>Coming to Terms with India: Anthropology of Colonialism and Nationalism</td>
</tr>
<tr>
<td>CLAS 0180</td>
<td>Indian Civilization through Its Literature</td>
</tr>
<tr>
<td>CLAS 0800</td>
<td>Religious and Philosophical Thought in Ancient India</td>
</tr>
<tr>
<td>CLAS 0820</td>
<td>Epics of India</td>
</tr>
<tr>
<td>CLAS 0990</td>
<td>Concepts of the Self in Classical Indian Literature</td>
</tr>
<tr>
<td>CLAS 1140</td>
<td>Classical Philosophy of India</td>
</tr>
</tbody>
</table>

Several courses in Development Studies are potentially appropriate; check to see if the course allows for a South Asian focus.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1520</td>
<td>The Economic Analysis of Institutions</td>
</tr>
<tr>
<td>HIAA 0060</td>
<td>Introduction to Indian Art</td>
</tr>
<tr>
<td>HIAA 1410A</td>
<td>Topics in Islamic Art: Islamic Art and Architecture on the Indian Subcontinent</td>
</tr>
<tr>
<td>HIST 0970V</td>
<td>The American South in History and Memory</td>
</tr>
<tr>
<td>HIST 1971L</td>
<td>History of Islamic Law: Theory and Practice</td>
</tr>
<tr>
<td>HIST 1440</td>
<td>Islamic History, 1400-1800</td>
</tr>
<tr>
<td>HIST 1580</td>
<td>Gandhi’s India: South Asia Before 1947</td>
</tr>
<tr>
<td>HIST 1590</td>
<td>Beyond Hindu, Muslim: Recovering Early South Asia</td>
</tr>
<tr>
<td>HIST 1950B</td>
<td>European Empires in the East (1500-1800): A Comparative Analysis</td>
</tr>
<tr>
<td>HIST 1950E</td>
<td>Europe and the Indian Ocean, 1500 - 1800</td>
</tr>
<tr>
<td>HIST 1970O</td>
<td>Moving Boundaries: Inequalities, Histories and the Making of Postcolonial South Asia</td>
</tr>
<tr>
<td>HIST 2971A</td>
<td>Science in a Colonial Context</td>
</tr>
</tbody>
</table>

Several courses in International Relations are potentially appropriate; check to see if the course allows for a South Asian focus.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNDI 0100</td>
<td>Beginning Hindi or Urdu</td>
</tr>
<tr>
<td>HNDI 0200</td>
<td>Beginning Hindi or Urdu</td>
</tr>
<tr>
<td>HNDI 0300</td>
<td>Intermediate Hindi-Urdu</td>
</tr>
<tr>
<td>HNDI 0400</td>
<td>Intermediate Hindi-Urdu</td>
</tr>
<tr>
<td>HNDI 1080</td>
<td>Advanced Hindi-Urdu</td>
</tr>
<tr>
<td>MUSC 0041</td>
<td>World Music Cultures (Middle East and Asia)</td>
</tr>
<tr>
<td>MUSC 1933</td>
<td>Music of India</td>
</tr>
<tr>
<td>PHIL 0090</td>
<td>Philosophy East and West</td>
</tr>
<tr>
<td>POLS 1280</td>
<td>Politics, Economy and Society in India</td>
</tr>
<tr>
<td>POLS 1821O</td>
<td>Politics of Economic Development in Asia</td>
</tr>
<tr>
<td>POLS 1380</td>
<td>Ethnic Politics and Conflict</td>
</tr>
<tr>
<td>POLS 1430</td>
<td>Roots of Radical Islam</td>
</tr>
<tr>
<td>PRSN 0100</td>
<td>Basic Persian</td>
</tr>
<tr>
<td>PRSN 0200</td>
<td>Basic Persian</td>
</tr>
<tr>
<td>PRSN 0300</td>
<td>Intermediate Persian Language and Culture</td>
</tr>
<tr>
<td>PRSN 0400</td>
<td>Intermediate Persian Language and Culture</td>
</tr>
<tr>
<td>PRSN 1200</td>
<td>Iranian Cinema: Before and After the Islamic Revolution</td>
</tr>
<tr>
<td>RELS 0040</td>
<td>Great Contemplative Traditions of Asia</td>
</tr>
<tr>
<td>RELS 0090B</td>
<td>Hindu and Christian Modes of Loving Devotion</td>
</tr>
<tr>
<td>RELS 0100</td>
<td>Introduction to Buddhism</td>
</tr>
</tbody>
</table>

Total Credits: 10

1 Two of which may be language courses in Hindi/Urdu or Sanskrit taken in conjunction with the language requirement. This list is not exhaustive, as any class which allows the concentrator to complete a substantial final project on South Asia may be counted towards the concentration requirements. If course rotations or the introduction of new courses warrant, substitutions within these categories may be made with approval of the faculty advisor.

**Language Requirements**

Proficiency in a South Asian language is required for the concentration. Students who are not native speakers of a South Asian language may prove proficiency by taking two years of Hindi/Urdu or Sanskrit at Brown, by successfully passing a course at the intermediate (4th semester) level at Brown or the approved equivalent at another institution, or by successfully passing a special examination administered by an approved faculty member. Two courses taken to fulfill the language requirement may be counted among the elective courses required for concentration.

**Study Abroad**

All South Asian Studies concentrators are encouraged to take Hindi/Urdu and to participate in Brown in India, a junior-year study abroad program at St. Stephen's College and Lady Sri Ram College in Delhi. Students can also opt to enroll in any other Brown approved study-abroad program in South Asia.

**Capstone Project**

All concentrators other than honors concentrators will designate an upper-level course in the area of their primary focus as their capstone course. The student will take this course during the senior year and will produce as part of the written work for the course a substantial paper or annotated translation displaying the unique focus of his or her concentration.

**Honors**

A South Asian Studies Concentration with Honors requires a high B or A average in courses taken for the concentration as well as an honors thesis in the department of the student’s main focus. Candidates for the
honors program should apply to the South Asia Faculty Group through their advisor by the middle of their sixth semester.

Theatre Arts and Performance Studies

The Department of Theatre Arts and Performance Studies (TAPS) is the intellectual and artistic center for the aesthetic, historical, literary, practical, and theoretical explorations of performance in global perspective — theatre, dance, speech, time-based art, and even performative “roles” in everyday life. The TAPS concentration offers three tracks with many points of overlap among them: Performance Studies, Theatre Arts, and Writing for Performance. Concentrators gain exposure to a broad spectrum of performance modes and methods — acting, directing, dance, and writing, and chose an avenue of focus among them. Everyone graduates having studied craft, gained familiarity with history, and investigated the role of performance arts in culture.

Theatre Arts Track

This concentration combines the study of dramatic literature, theatre history, performance theory, and studio work in the various theatre arts. All concentrators in Theatre Arts will gain practical experience through the study of acting and directing as well as in the technical production of plays, preparing students in the practical study of a cross-section of the vital aspects of theatre craft, including one class in either dance or speech. An essential aim of the concentration track is the engagement of students in performance procedures (acting, dancing, directing, choreography, design, playwriting, dramaturgy, etc.) in order to experience the inter-relationships among social contexts, dramatic texts and theatrical enactments. Along with practical study in craft, concentrators will graduate having studied theatre history and performance theory in global perspective. The study of theatre history provides a Theatre Arts concentrator with the necessary background to understand a variety of dramatic and theatrical forms. The study of performance theory enhances a student’s ability to ask fundamental questions about the role of theatre in social, political, cultural and cross-cultural arenas.

Of the ten courses required, at least four must be in theatre history, dramatic and theatrical theory that forms a backbone for further study in these areas. Students should take at least one course that exhibits geographic or cultural breadth beyond what might loosely be called "mainstream" Euro-American tradition. Basic courses in technical theatre and design are required of all students, as is a senior seminar, taken by most students in their seventh semester. The remaining three courses for the concentration may be taken in areas of applied theatre arts (though this is not a requirement); there are sequences of courses available in acting/directing, playwriting, design/technical theatre, and dance. Students wishing to enroll as concentrators in Theatre Arts and Performance Studies and take the Theatre Arts track should see the undergraduate Theatre Arts track advisor, in order to discuss options that will best serve their interests.

Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAPS 0230</td>
<td>Acting</td>
<td>1</td>
</tr>
<tr>
<td>TAPS 0250</td>
<td>Introduction to Technical Theatre and Production</td>
<td>1</td>
</tr>
<tr>
<td>TAPS 1230</td>
<td>Performance Theory: Ritual, Play and Drama in Context</td>
<td>1</td>
</tr>
<tr>
<td>TAPS 1240</td>
<td>Performance Historiography and Theatre History</td>
<td>1</td>
</tr>
<tr>
<td>TAPS 1250</td>
<td>Twentieth-Century Western Theatre and Performance</td>
<td>1</td>
</tr>
</tbody>
</table>

One course in Dramatic or Performance Literature, Theory, History and/or Criticism offered or cross-listed in the department: 1

Select one of the following (At least one course in the mix of a concentrator’s elective requirements should demonstrate enhanced geographical breadth):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAPS 0220</td>
<td>Persuasive Communication</td>
</tr>
<tr>
<td>TAPS 0255</td>
<td>Any dance history or practice course.</td>
</tr>
</tbody>
</table>

Two electives to be selected from applied areas and/or from relevant theoretical and text-based studies through the university. At least one course in the mix of a concentrator’s elective requirements should demonstrate enhanced geographical breadth:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAPS 1520</td>
<td>Seminar in Theatre Arts</td>
</tr>
</tbody>
</table>

Total Credits 10

Performance Studies Track

The Performance Studies track in the Theatre Arts and Performance Studies concentration offers a base for students interested in a variety of performance forms, performance media, or in intermedial art. A concentrator in this track will study the multiple modes in which live performance articulates culture, negotiates difference, constructs identity, and transmits collective historical traditions and memories. Because Performance Studies is not primarily invested in one performance mode over another (such as theatre or dance), a concentrator will gain exposure to a broad spectrum of performance modes. Studying ritual, play, game, festival, spectacle and a broad spectrum of "performance behaviors" under the umbrella of Performance Studies, a concentrator will graduate having investigated the role of performance in culture, including performative acts in everyday life, political enactment, ritual behavior, aesthetic or representational practices, and social role or the performance of subjectivity. The history of aesthetic performance practices (such as the histories of theatre and/or dance) will be an important part of this track, serving to ground inquiry into the broader spectrum of performance study. Students will craft their electives on this track from a wide selection of courses both within the Department of Theatre, Speech and Dance and across the university. The study of performance behavior across mediums such as dance, theatre, ritual, and orature allows for geographic and historical flexibility as not all cultures parse theatre from dance, nor, historically, genres of religious or political ritual from genres of entertainment, play, or game.

At least two of the ten required classes must show geographic or cultural breadth, and be approved as such by the undergraduate concentration advisor. Participation in practical classes in modes of performance is also required.

Students wishing to enroll as concentrators in Theatre Arts and Performance Studies and take the Performance Studies track should see the undergraduate Performance Studies track advisor, in order to discuss options that will best serve their interests.

Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAPS 1230</td>
<td>Performance Theory: Ritual, Play and Drama in Context</td>
<td>1</td>
</tr>
<tr>
<td>TAPS 1240</td>
<td>Performance Historiography and Theatre History</td>
<td>1</td>
</tr>
</tbody>
</table>

Select three of the following (one of which must show geographical breadth): 3

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAPS 1250</td>
<td>Twentieth-Century Western Theatre and Performance</td>
</tr>
<tr>
<td>TAPS 1270</td>
<td>Performance in the Asias</td>
</tr>
<tr>
<td>TAPS 1330</td>
<td>Dance History: The 20th Century</td>
</tr>
<tr>
<td>TAPS 1280N</td>
<td>New Theories for a Baroque Stage</td>
</tr>
<tr>
<td>TAPS 1380</td>
<td>Mise en Scene</td>
</tr>
<tr>
<td>TAPS 1390</td>
<td>Contemporary Mande Performance</td>
</tr>
<tr>
<td>TAPS 1430</td>
<td>Russian Theatre and Drama</td>
</tr>
<tr>
<td>TAPS 1610</td>
<td>Political Theatre of the Americas</td>
</tr>
<tr>
<td>TAPS 1630</td>
<td>Performativity and the Body: Staging Gender, Staging Race</td>
</tr>
<tr>
<td>TAPS 1640</td>
<td>Theatre and Conquest in Greater Mexico: From Cortes to NAFTA</td>
</tr>
<tr>
<td>TAPS 1650</td>
<td>21st Century American Drama</td>
</tr>
<tr>
<td>TAPS 1670</td>
<td>Latino/a Theatre and Performance</td>
</tr>
<tr>
<td>TAPS 1690</td>
<td>Performance, Art, and Everyday Life</td>
</tr>
<tr>
<td>TAPS 2120</td>
<td>Revolution as a Work of Art</td>
</tr>
<tr>
<td>AFRI 0990</td>
<td>Black Lavender: Black Gay/Lesbian Plays/Dramatic Constructions in the American Theatre</td>
</tr>
</tbody>
</table>
Writing for Performance Track

Concentrators explore the craft and sensibility of writing for live performance in the broad context of art in a changing society. Moving through a graduated series of skill-based writing classes, students additionally encounter theater history in core courses and focused seminars, engage with the practical aspects of production, and relate theatre to other disciplines. Writing is viewed neither as an alienated cause nor a terminal outpost, but as a co-equal aspect of a creative ecology, sharing space with orature, acting, scenography, ethics, and all fields that focus attention, invoke fascination, and alert the will to the possibilities of transformation.

Ten courses are required: A minimum of two writing-skills classes relevant to live performance; a writing or composition class outside of live performance (literature, screenplay, computer programming, video editing); a technical production class; a performance-based class; and; one elective drawn from inside or outside the department that broadens the cultural and disciplinary reach of the track, for example concerning the study of social phenomena from a scientific, philosophical, or political perspective (chosen in consultation with an advisor); senior seminar.

Students wishing to enroll as concentrators in Theatre Arts and Performance Studies can be made available to interested students.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
For a concentration, the program requires ten courses selected from four course groups:

**Introduction (choose one):**
- POLS 0220 City Politics
- URBN 0210 The City: An Introduction to Urban Studies

**Research Skills (choose one):**
- ECON 1620 Introduction to Econometrics
- EDUC 1110 Introductory Statistics for Education Research and Policy Analysis
- POLS 1600 Political Research Methods
- SOC 1020 Methods of Social Research
- SOC 1100 Introductory Statistics for Social Research

**Core Courses (choose three courses covering three of the seven core areas -American Civilization, Economics, History, History of Art and Architecture, Literature, Political Science, and Sociology, from the following:**
- AMST 1520 Technology and Material Culture in America: The Urban Built Environment
- AMST 1530 Technology and Material Culture in America: The Automobile in American Life
- AMST 1612D Cities of Sound: Place and History in American Pop Music
- ANTH 1236 Urban Life: Anthropology in and of the City
- COLT 1810C City (B)Lights
- ECON 1410 Urban Economics
- ECON 1590 The Economy of China since 1949
- ENGL 0710A City Novels
- ENV 1400 Sustainable Design in the Built Environment
- HIAA 0700 Nineteenth-Century Architecture
- HIAA 0840 History of Rhode Island Architecture
- HIAA 0850 Modern Architecture
- HIAA 0860 Contemporary Architecture
- HIAA 0900 City and Cinema
- HIAA 1850D Film Architecture
- HIST 1820 American Urban History to 1870
- HIST 1830 American Urban History, 1870-1950
- POLS 0220 City Politics
- POLS 1320 Urban Politics and Urban Public Policy
- SOC 1330 Remaking the City
- SOC 1640 Social Exclusion
- URBN 1200 The United States Metropolis, 1945-2000
- URBN 1210 Regional Planning
- URBN 1220 Sustainable Urbanism
- URBN 1230 Crime and the City
- URBN 1570 Guts of the City: Interdisciplinary Perspectives on Urban Infrastructure and Environmental Planning

**Seminar courses (choose three):**
- AMST 1903E City of the American Century: The Culture and Politics of Urbanism in Postwar New York City
- ECON 1420 Urbanization in China
- EDUC 1650 Policy Implementation in Education
- ENGL 1760F City, Culture, and Literature in the Early Twentieth Century
- ENGL 1760K Reading New York
- ETHN 1870A Ethnic Los Angeles
- GEOG 1320 Introduction to Geographic Information Systems for Environmental Applications
- HIAA 1910A Architecture of Downtown Providence from Late Nineteenth Century to the Present
- HIST 1974F The Urban Crisis and American Political Culture, 1932-1984
- HIST 1974T Ethnic Los Angeles
- POLS 2220 Urban Politics
- PPAI 1700J GIS and Public Policy
- SOC 1871F Principles and Methods of Geographic Information Systems
- SOC 1871W Geographical Analysis of Society
- SOC 2960C Urban Sociology
- URBN 1000 Fieldwork in the Urban Community
- URBN 1010 Fieldwork in Urban Archaeology and Historical Preservation
- URBN 1420 Urbanization in China
- URBN 1870A American Culture and the City
- URBN 1870C The Environment Built: Urban Environmental History and Urban Environmentalism for the 21st Century
- URBN 1870D Downtown Development
- URBN 1870E Green Cities: Parks and Designed Landscapes in Urban America
- URBN 1870F Housing and Homelessness
- URBN 1870H Rivers and Cities
- URBN 1870I The Changing American City
- URBN 1870J The Politics of Community Organizing
- URBN 1870M Urban Regimes in the American Republic
- URBN 1870N The Cultural and Social Life of the Built Environment
- URBN 1870P Representing the Twentieth-Century City
- URBN 1870Q Cities in Mind: Modern Urban Thought and Theory
- URBN 1900 Land Use Planning: The Future of the I-195 Parcels

**Complementary Curriculum (choose two from the following options):**
1. Any course from the Introductory or Basic Curriculum options above not used to fulfill another requirement
2. Any of the following:
   - AFRI 0600 Race, Gender, and Urban Politics
   - AFRI 0620 African-American Life in the City
   - AMST 0150B Boston: A City Through Time
   - AMST 0190D Popular Music and the City
   - AMST 1611A Making America: Twentieth-Century U.S. Immigrant/Ethnic Literature
   - AMST 1903G Oral History and Community Memory
   - AMST 1904M Charles Chaplin and the Urban Public Health Movement
   - ANTH 0450 Two Billion Cars: Humans, Markets, Cultures, and the Automobile
   - ARCH 0400 City and Sanctuary in the Ancient World
   - ARCH 1150 Cities and Urban Space in the Ancient World
   - ARCH 1200F City and the Festival: Cult Practices and Architectural Production in the Ancient Near East
   - ARCH 1200F City of the American Century: The Culture and Politics of Urbanism in Postwar New York City
   - ARCH 1200F Urbanization in China
   - ARCH 1600 Archaeologies of the Near East
   - ARCH 1720 How Houses Build People
   - ARCH 1900 The Archaeology of College Hill

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Concentration Requirements:

**VISA 0100** Studio Foundation 1  
**VISA 0110** Advanced Studio Foundation  
**VISA 1110** Drawing I 2  
**VISA 1120** Drawing II  
**VISA 0120** Foundation Media: Sound and Image 2  
**HIAA 0010** Introduction to the History of Art and Architecture 1  
**HIAA 0880 - Contemporary Art I** 3  
**or HIAA 0890 - Contemporary Art II**  

Five additional studio courses (in addition to VISA 0120 and VISA 1120) 4  
One upper-level History of Art and Architecture course.  
One elective course in History of Art and Architecture, Visual Art, Modern Culture and Media 5  
Senior Thesis Exhibition: which does not carry academic credit, is required for graduation (usually presented during the seventh or eighth semester).  

Total Credits 12  

1 VISA 0100 and VISA 0110 do not count as one of the 7 studio concentration requirements; VISA 0100 or VISA 0110 are prerequisites for all studio courses.  
2 Qualifies as one of the 5 studio concentration requirements.  
3 Should be taken by the first semester of junior year.

**Visual Art**

The Visual Arts concentration engages in artistic practice across a wide range of media: painting, sculpture, printmaking, drawing, photography, and digital imaging. Courses in art history combine with these to frame the direction of the concentrator’s work and to develop his or her critical thinking skills. Students are encouraged to cultivate an informed and thoughtful individual perspective. Students in the Visual Arts department enjoy cutting-edge facilities and a knowledgeable faculty. These two resources inspire creativity and pleasure in our concentrators while they explore the discipline. Students acquire the intellectual and practical tools to make art as well as to interpret and critique the world of images. Students also have the opportunity to take courses at the neighboring Rhode Island School of Design.
A minimum of four studio courses must be taken at Brown University. One must be drawing.

Certain related courses or acceptable RISD courses may also be approved.

**Honors**

The project is a two-semester enterprise and counts as two courses taken for graduation credit VISA 1800C (Sem I) and VISA 1990 (Sem II) but will not count as two of the twelve courses needed for the visual art concentration. Students that are planning to complete their degree requirements in December must apply for honors by December 5 of the previous year.