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.
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# Academic Calendar

## Summer 2019

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<th>Day(s)</th>
<th>Event Description</th>
</tr>
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<tbody>
<tr>
<td>Apr 1 - Apr 11, 2019</td>
<td>Mon. - Thurs.</td>
<td>Registration for Summer courses for continuing Brown undergraduates opens at 9:00 a.m. on Monday April 1 and continues through Thursday April 11 at 5:00 p.m.</td>
</tr>
<tr>
<td>Apr 24 - June 26, 2019</td>
<td>Wed. - Wed.</td>
<td>Registration period for Summer courses for Brown undergraduates re-opens at 9:00 a.m. and remains open until Wednesday June 26 at 5:00 p.m.</td>
</tr>
<tr>
<td>June 24, 2019</td>
<td>Mon.</td>
<td>Summer Session begins.</td>
</tr>
<tr>
<td>June 26, 2019</td>
<td>Wed.</td>
<td>Last day to change courses. (All students MUST be in their registered courses by Thursday, June 27.)</td>
</tr>
<tr>
<td>July 9, 2019</td>
<td>Tues.</td>
<td>Last day to change grade options.</td>
</tr>
<tr>
<td>Aug 3 - 6, 2019</td>
<td>Sat. - Tues.</td>
<td>Reading period.</td>
</tr>
<tr>
<td>Aug 6, 2019</td>
<td>Tues.</td>
<td>Last day to drop a course. Last day to initiate a Course Performance Report via ASK.</td>
</tr>
<tr>
<td>Aug 9, 2019</td>
<td>Fri.</td>
<td>Summer Session ends.</td>
</tr>
<tr>
<td>Aug 10, 2019</td>
<td>Sat.</td>
<td>Residence halls close.</td>
</tr>
</tbody>
</table>

## Fall 2019

<table>
<thead>
<tr>
<th>Date</th>
<th>Day(s)</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug. 1, 2019</td>
<td>Thurs.</td>
<td>Last day for payment of charges.</td>
</tr>
<tr>
<td>Sept. 3, 2019</td>
<td>Tues.</td>
<td>Opening Convocation at 4:00 p.m. Registration of new students for the first semester (7:00 pm to midnight).</td>
</tr>
<tr>
<td>Sept. 4, 2019</td>
<td>Wed.</td>
<td>Classes of the first semester begin. Web registration begins at 8:00 a.m.</td>
</tr>
<tr>
<td>Sept. 5, 2019</td>
<td>Thurs.</td>
<td>First day of RISD Fall Session.</td>
</tr>
<tr>
<td>Sept. 12, 2019</td>
<td>Thurs.</td>
<td>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).</td>
</tr>
<tr>
<td>Sept. 17, 2019</td>
<td>Tues.</td>
<td>Last day to add a course without a fee. (5:00 p.m. deadline.) The web will be taken down for approximately one hour. Once relaunched, all course adds require Instructor override and will be charged late fee of $15 per course.</td>
</tr>
<tr>
<td>Oct. 1, 2019</td>
<td>Tues.</td>
<td>Last day to add a course (includes late fee), change from audit to credit, or change a grade option declaration (5:00 p.m. deadline).</td>
</tr>
<tr>
<td>Oct. 1, 2019</td>
<td>Tues.</td>
<td>Deadline for students currently on non-medical leave to apply for readmission for Semester II.</td>
</tr>
<tr>
<td>Oct. 8, 2019</td>
<td>Tues.</td>
<td>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).</td>
</tr>
</tbody>
</table>

## Important Dates

- **Oct. 18, 2019** Fri. Mid-semester deadline. Last day to change from credit to audit in a course (5:00 p.m. deadline).
- **Oct. 21 - Nov. 1, 2019** Mon. - Fri. 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.
- **Oct. 31, 2019** Thurs. Date by which advisors must approve sophomore submitted concentration in ASK to avoid having a No Concentration hold placed against the student's Banner registration. (5:00 pm deadline).
- **Nov. 5, 2019** Tues. Registration opens for Semester II, 2019-20 for undergraduate students at semester level 07 and above and all continuing graduate students at 8:00 a.m. Registration remains open until Tuesday, November 12.
- **Nov. 6, 2019** Wed. Registration opens for Semester II, 2019-20 for undergraduate students at semester level 05-06 at 8:00 a.m. (Students are unable to register for 5th semester unless approved concentration is filed). Registration remains open until Tuesday, November 12.
- **Nov. 7, 2019** Thurs. Registration opens for Semester II, 2019-20 for continuing undergraduate students at semester level 03-04 at 8:00 a.m. Registration remains open until Tuesday, November 12.
- **Nov. 8, 2019** Fri. Registration opens for Semester II, 2019-20 for continuing undergraduate students at semester level 01-02 at 8:00 a.m. Registration remains open until Tuesday, November 12.
- **Nov. 8, 2019** Fri. Deadline for submission of proposals for College Curriculum Council-approved undergraduate group study projects (GISPs), independent study projects, and internships for credit for Semester II.
- **Nov. 9 - Nov. 12, 2019** Sat. - Tues. Registration for Semester II, 2019-20 continues until Tuesday, November 12.
- **Nov. 14, 2019** Thurs. Students on serious warning who wish to drop a course after this date must meet with an academic dean for advising and to obtain ‘drop-code.’
- **Nov. 27 - Dec. 1, 2019** Wed. - Sun. Thanksgiving recess beginning Wednesday at noon.
- **Dec. 1, 2019** Sun. Deadline for undergraduates to declare a leave for Semester II.
- **Dec. 2, 2019** Mon. Classes resume.
- **Dec. 4, 2019** Wed. Last day of Fall RISD classes.
- **Dec. 7, 2019** Sat. Midyear Completion Celebration at 4:00 p.m. in Salomon De Ciccio Family Auditorium. Reception to follow in Sayles Hall.
- **Dec. 8 - 12, 2019** Sun. - Thurs. Reading Period (optional and at the discretion of the instructor.)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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</thead>
<tbody>
<tr>
<td>Dec. 12, 2019</td>
<td>Thurs.</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. Last day for advisors to approve second or third concentrations in ASK for students in their penultimate semester (for most students this is 7th semester) who are declaring a second/third 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. Last day to initiate a Course Performance Report via ASK.</td>
</tr>
<tr>
<td>Dec. 13, 2019</td>
<td>Fri.</td>
<td>Last day for approved 7th (or penultimate) semester undergraduates in eligible concentrations to submit writing completed in the concentration in ASK to complete part II of the writing requirement. Concentration advisors must approved submitted writing in ASK by the last day of the semester.</td>
</tr>
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**Winter 2020**

<table>
<thead>
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<tbody>
<tr>
<td>Nov. 13 - Dec. 3, 2019</td>
<td>Wed. - Tues.</td>
<td>Registration for Wintersession courses (begins at 9:00 A.M.).</td>
</tr>
<tr>
<td>Dec. 3, 2019</td>
<td>Tues.</td>
<td>Last day to register for a Wintersession course (5:00 p.m. deadline).</td>
</tr>
<tr>
<td>Jan. 1, 2020</td>
<td>Wed.</td>
<td>Residence halls open (for students registered for Wintersession classes only).</td>
</tr>
<tr>
<td>Jan. 2, 2020</td>
<td>Thurs.</td>
<td>Wintersession begins (On-Campus and Destination courses).</td>
</tr>
<tr>
<td>Jan. 7, 2020</td>
<td>Tues.</td>
<td>Last day to change a grade option declaration.</td>
</tr>
<tr>
<td>Jan. 14, 2020</td>
<td>Tues.</td>
<td>Last day to drop a course or request an incomplete from an instructor. Last day to initiate a Course Performance Report via ASK.</td>
</tr>
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</table>

**Spring 2020**

<table>
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<tbody>
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<td>Wed.</td>
<td>Last day for payment of charges.</td>
</tr>
<tr>
<td>Jan. 10, 2020</td>
<td>Fri.</td>
<td>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).</td>
</tr>
<tr>
<td>Jan. 20, 2020</td>
<td>Mon.</td>
<td>Martin Luther King, Jr. holiday. No University exercises.</td>
</tr>
<tr>
<td>Jan. 21, 2020</td>
<td>Tues.</td>
<td>Registration of new students for the second semester (4:00 pm to midnight).</td>
</tr>
<tr>
<td>Jan. 22, 2020</td>
<td>Wed.</td>
<td>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) are due.</td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
<table>
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<tr>
<th>Date</th>
<th>Day</th>
<th>Event Description</th>
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</thead>
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<tr>
<td>April 15, 2020</td>
<td>Wed.</td>
<td>Registration opens for Semester I, 2020-21 for undergraduate students semester levels 05-06 at 8:00 a.m. (Students are unable to register for 5th semester unless approved concentration is filed). Registration remains open until Tuesday, April 21.</td>
</tr>
<tr>
<td>April 16, 2020</td>
<td>Thurs.</td>
<td>Registration opens for Semester I, 2020-21 for continuing undergraduate students semester levels 04 and below at 8:00 a.m. Registration remains open until Tuesday, April 21.</td>
</tr>
<tr>
<td>Apr. 17 - Apr. 21, 2020</td>
<td>Fri. - Tues.</td>
<td>Registration for Semester I, 2020-21 continues until Tuesday, April 21.</td>
</tr>
<tr>
<td>April 24, 2020</td>
<td>Fri.</td>
<td>Reading Period begins and will end on May 5 (optional and at the discretion of the instructor).</td>
</tr>
<tr>
<td>May 1, 2020</td>
<td>Fri.</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 5, 2020</td>
<td>Tues.</td>
<td>Reading Period ends.</td>
</tr>
<tr>
<td>May 5, 2020</td>
<td>Tues.</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. Last day for advisors to approve second or third concentrations in ASK for students in their penultimate semester (for most students this is 7th semester) who are declaring a second/third 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. Last day to initiate a Course Performance Report via ASK.</td>
</tr>
<tr>
<td>May 6, 2020</td>
<td>Wed.</td>
<td>Last day for approved 7th (or penultimate) semester undergraduates in eligible concentrations to submit writing completed in the concentration in ASK to complete part II of the writing requirement. Concentration advisors must approved submitted writing in ASK by the last day of the semester.</td>
</tr>
<tr>
<td>May 6 - 15, 2020</td>
<td>Wed. - Fri.</td>
<td>Final Examination Period. (No exams on Sunday May 10).</td>
</tr>
<tr>
<td>May 13, 2020</td>
<td>Wed.</td>
<td>Last day of Spring RISD classes.</td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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://www.brown.edu/about/administration/registrar/degree-guidelines-0/college) 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/about/administration/registrar/degree-guidelines-0/graduate-school) 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/about/administration/registrar/course-enrollment/registration

For a tutorial on registration, see:

https://ithelp.brown.edu/kb/articles/746-students-search-and-register-for-courses-on-courses-brown

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 February 2016'), see:

http://selfservice.brown.edu/menu and select 'Courses@Brown (https://cab.brown.edu)'

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.

Brown follows the Federal standard that defines a credit hour as an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutional established equivalence that reasonably approximates not less than: (1) One hour of classroom or direct faculty instruction and a minimum of two hours of out of class student work each week for approximately fifteen weeks for each semester, or the equivalent amount of work over a different amount of time (i.e. Summer/Winter Sessions); or (2) At least an equivalent amount of work as required in paragraph (1) of this definition for other academic activities as established by the institution including laboratory work, internships, practica, studio work, and other academic work leading to the award of credit hours. Additionally, transfer credit must equate to the four semester hour standard except for three credit courses taken at the Rhode Island School of Design.

Course Numbering

Courses numbered 0001-0999 are strictly for Undergraduate credit (Graduate students may enroll in such courses with the permission of the instructor and the Graduate School.)

Courses numbered between 1000-1999 are for both Undergraduate and Graduate credit depending on the level of the student's degree program.

Courses numbered between 2000-2999 are for Graduate credit (Undergraduate students may in enroll in such courses and may be applied towards their Undergraduate degree requirements by permission of the instructor.)

Courses numbered above 3000 are strictly for credit in the Alpert Medical School. Certain MD level courses may be taken for credit for Undergraduate students enrolled in the PLME program, but such courses do not count towards quantity, concentration, or Latin honors requirements for the Baccalaureate degree.

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 forms to all students who request them. An asterisk shall accompany the listing on the transcript of any course that has been designated by the instructor to be graded on the basis of S/NC only, with an appropriate explanation of the symbol provided.

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 Performance Report forms to all students who request them. An asterisk shall accompany the listing on the transcript of any course that has been designated by the instructor to be graded on the basis of S/NC only, with an appropriate explanation of the symbol provided.

2. In exceptional circumstances, a course may be left incomplete (except for a regularly scheduled final examination—see paragraph 3 below), with the instructor’s consent. In such cases, a grade of INC will be assigned provided that the student has filed a request for extension of time to complete the work of the course and the instructor has consented to such a request. Unless an earlier date is specified by the instructor, grades of INC must be made up as follows: for Semester I, by midsemester of Semester II; for Semester II or the for-credit 7 week Summer Session II, by the first day of Fall semester. Extensions beyond semester in which the course left incomplete was taken may be granted by the instructor who will indicate this in writing to the registrar. A course not completed by the designated time will be assigned a grade of NC unless the instructor indicates that sufficient work has been completed to justify course credit by submitting, as appropriate, a grade change from INC to A, B, C, or S. A grade of NC assigned in accordance with these procedures if changed subsequently, but no later than one calendar year after the end of the semester in which the course was taken.

3. If a student is absent from a regularly scheduled final examination for a course, the instructor should submit either an INC or an NC . If the absence from the examination is excused by the dean, the student will be permitted to take a Special Examination and the original grade will be made into an A&S temporarily. The Special Examination will be administered by the Office of the Registrar 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 absence from the final examination is not excused by the dean, the student will receive no credit for the course.

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 a year course 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 Gradate 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: Any undergraduate 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 the student’s work by way of a Course Performance Report (Note: This form is available online for currently enrolled undergraduates via Advising SideKick (ASK)). Course performance reports provide valuable information to students about their success in meeting course learning objectives, especially for courses graded S/NC. The instructor may decline to submit such a form if they fell they have inadequate information to do so. The deadline for requesting a Course Performance Report is the day before the final exam period begins in the semester of enrollment (in the course (Refer to Academic Calendar for relevant deadlines). Late Course Performance Reports may be requested after the deadline and before a student graduates, but the instructor is not obligated to complete a late report. Students may not request a Course Performance Report after completing their degree requirements (although they may contact an instructor directly for a letter of recommendation or a reference at any time). Copies of Course Performance Reports are 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 from the University at the student’s request as part of an official transcript request as long as the student provides such copies to the Office of the Registrar when making the initial transcript request.

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/about/administration/registrar/academic-transcript-requests). 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 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 Semester I, 2019-2020 is as follows:

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<th>Date</th>
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Semester II, 2019-2020

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Exam Excuses: The Office of the Dean of the College is solely responsible for determining whether a student’s absence from a final examination is excused. To ensure equitable treatment of all students, students are excused from exams only for family or medical emergencies. Please note that students’ travel plans are never an excuse for missing a final exam. Faculty wishing to grant a student an exam excuse may contact the appropriate academic dean or authorized to grant exam excuses. In emergency situations, students who are unable to contact their professors must contact the Office of the Dean of the College, which will determine whether or not an exam excuse is warranted. Course instructors are notified of exam excuses granted by the Dean of the College Office.

Consistent with Brown’s policy on nondiscrimination, students who are unable to take a final examination due to religious observance may arrange to take their final at an alternate time. Students who cannot take a final exam on the scheduled date due to a religious observance must inform the instructors of any conflicts within the first four weeks of the term. In such cases, instructors are expected to offer a final exam on an alternate date within the same semester, noting the policy in the Faculty Rules that final examinations may be given only during the final examinations period. For further information on exams and religious observance please visit https://www.brown.edu/academics/college/support/faculty/religiousobservance.

Make-up exams for approved exam excuses for medical or family emergencies are administered by the Registrar in the second week of the subsequent fall or spring term. The Registrar’s Office informs students by email of the date, time, and location of make-up exams.

Placement and Achievement Tests in Foreign Languages. Placement tests in the foreign languages are given during Orientation Program in the fall and during the first week of classes in each semester.

All students, before taking college courses in a foreign language in which they have presented entrance credit, must take either a placement test at Brown University or, preferably, a College Board Language Achievement Test in secondary school. Students with outstanding performance on these tests, or on the Advanced Placement Tests of the College Entrance Examination Board, may be admitted to advanced courses without the usual course prerequisites.

Student Code of Conduct

Academic Code Violations

All cases of academic dishonesty among undergraduates, graduate, or medical students, as defined in the Academic Code at Brown University, shall be referred to the dean of the College, Graduate School, or Medical School, or his or her designated representative. A student accused of such an offense shall be notified in writing as soon as possible of the specific charge or charges against him or her before his or her case is considered. The student shall be given the opportunity of a hearing before the designated representative of the dean of the College, Graduate School, or Medical School, and two members of the faculty, at which all relevant facts may be presented. A student shall have the right to appeal any decision to the dean of the College, Graduate School, or Medical School within five business days after receipt of the official letter outlining the case and the decision reached.

Code of Student Conduct

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 Code of Student Conduct. These procedures are designed to address behaviors that impede the educational activity of the University or that infringe upon the rights of others.

Student Conduct cases are administered by the Office of Student Conduct & Community Standards.

Specific hearing procedures can be found online at www.brown.edu/randr.

Curricular Programs

Community-Based Learning and Research

Community-Based Learning and Research (CBLR) courses connect academic inquiry with real-world learning experiences, enabling students to integrate and transfer their learning to contexts beyond the classroom. CBLR-designated courses: (i) Involve collaboration with one or more community partners to investigate an important social challenge or problem; (ii) Incorporate in-depth community-based experiences (typically undertaken outside of the classroom) into the learning and/or research objectives of the course; (iii) Provide structured opportunities for reflecting on the relationship between classroom learning and real-world experience, with the goals of deepening the understanding of course content and exploring questions of identity, agency, and social responsibility; and (iv) Create products or outcomes that are shared with the community partner and/or broader public.

DIAP Courses: Race, Gender, and Inequality

In support of the University’s broader Diversity and Inclusion Action Plan, DIAP Courses on Race, Gender, and Inequality examine issues of structural inequality, racial formations and/or disparities, and systems of power.

They may investigate:

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
(i) the ways different forms of power and privilege construct racial and identity formations in the U.S. and/or globally; the cultural, political, and intellectual responses to this racialization;
(ii) the production of categories of ethnicity, race, gender, sexual orientation, class, religion, ability, citizenship status, and geography (and their intersections);
(iii) the structures, institutions, practices, and attitudes that enable, maintain, or mitigate domestic and/or global disparities in health, income, education outcomes, media representations, etc.; and/or
(iv) the production of knowledge and difference in the context of discourses on race, power, and privilege
A complete list of each semester’s DIAP courses may be viewed in Courses@Brown by choosing “DIAP Courses: Race, Gender, Inequality” 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.
A complete list of each semester’s seminars may be viewed in Courses@Brown by choosing “First-Year Seminar” 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.

Sophomore Seminars
Sophomore seminars bring together ideas, perspectives, and approaches that are not normally seen side by side in a given course or program. Embracing a range of intellectual perspectives, many of the seminars focus specifically on issues of social justice, identity, and difference. Limited to twenty students each, the seminars help students develop the skills, knowledge, and values they need to progress toward more advanced learning in a discipline or field.
A complete list of each semester’s SOPH seminars may be viewed in Courses@Brown by choosing “Sophomore Seminar” 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 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 Courses@Brown by choosing “Writing-Designated Courses” in the Curricular Programs field.

Community-Based Learning and Research
Fall 2019
Archaeology and Ancient World
ARCH 1900 S01 17129 Archaeology of College Hill TBD
English
ENGL 1050P S01 17115 Reframing Race in Art Writing TBD
Environmental Studies
ENVS 0110 S01 16516 Humans, Nature and the Environ Dawn King
ENVS 1557 S01 15357 Birding Communities Nancy J. Jacobs

French Studies
FREN 1410T S01 15541 L’expérience des réfugiés Virginia A. Krause

Spring 2020
Biology
BIOL 0940E S01 24476 Precision or Privileged Med Robert K. Campbell
English
ENGL 1140E S01 25729 Writing for Activists Kate J. Schapira
Environmental Studies
ENVS 1555 S01 24964 Urban Agriculture Dawn King
Literary Arts
LITR 1152C S01 25668 Writers-in-the-Community Train Eleni A Sikelianos

DIAP Courses: Race, Gender and Inequality
Fall 2019
Africana Studies
AFRI 0090 S01 17157 An Intro to Africana Studies Francoise N. Hamlin
AFRI 0210 S01 17137 Afro Latin Americans Anani Dzidzienyo
AFRI 0670 S01 17141 Global Black Radicalism Brian W E Meeks
AFRI 0980 S01 17144 Fela Kuti African Freedom Oladotun B Ayobade
AFRI 1030 S01 17145 Contesting the Carceral State Lisa L Biggs
AFRI 1110 S01 17140 Voices Beneath the Veil Elmo Terry-Morgan
AFRI 1210 S01 17138 Afro-Brazilians Brazil Polity Anani Dzidzienyo
AFRI 1920 S01 17142 Health Inequality in Historica Lundy Braun

American Studies
AMST 1611A S01 15488 20thC US Immigrant Ethnic Lit Richard Alan Meckel
AMST 1905S S01 15708 Readings Histories of Violence Monica M. Martinez

Anthropology
ANTH 0066D S02 16812 Who Owns the Past? Patricia E. Rubertone
ANTH 0300 S01 16815 Culture and Health Katherine A. Mason
ANTH 1030 S01 16836 Pre-Columbian Art and Architec Stephen D. Houston
ANTH 1125 S01 16817 Indigenous Archaeologies Robert W. Preucel

Archaeology and Ancient World
ARCH 1900 S01 17129 Archaeology of College Hill TBD

Classics
CLAS 0765 S01 16949 Witches and Vixens Sasha-Mae Eccleston

East Asian Studies
EAST 0500 S01 15612 Childhood and Culture in Japan Samuel E. Perry
EAST 1090 S01 15611 Translating Korea Samuel E. Perry
EAST 1100 S01 16765 Lit and Sci Early Modern China Kajun Chen
EAST 1951B S01 16045 From Desktop to Stage Kajun Chen

Economics
ECON 1480 S01 17132 Public Economics TBD
ECON 1530 S01 16764 Health, Hunger + the Household Andrew D. Foster

Education
EDUC 0610 S01 15805 Brown v. Board of Education Tracy L. Steffes

English
ENGL 0100F S01 17172 Devils, Demons, Do-Gooders James F. Egan
ENGL 0100V S01 17105 Inventing Asian Am Lit Daniel Kim
ENGL 0150X S01 16044 The Claims of Fiction Olakunle George
ENGL 0150Y S01 17106 Brontës and Brontësism Benjamin W. Parker
ENGL 0700E S01 17103 Postcolonial Literature Olakunle George
ENGL 0710B S01 16048 African Amer Lit and Slavery Rolland D. Murray

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
SAST 0700 S01 17150 Intro to Modern South Asia TBD

South Asian Studies

ENGL 1050P S01 17115 Reframing Race in Art Writing TBD
ENGL 1511A S01 17107 Am. Lit and the Civil War Drayton Nabers
ENGL 1711H S01 16025 Lyric Concepts Ada Smalebegovic
ENGL 1711N S01 17114 PlantationandWoodsinLit Dixa Ramirez
ENGL 1760Y S01 16053 Toni Morrison Kevin E Quashie
ENGL 1900K S01 17102 Reading Sex Jacques Khalip

Ethnic Studies

ETHN 1000 S01 15487 Intro to AmeroEthnic Studies Kevin A. Escudero
ETHN 1200B S01 15702 Cont Indigenous Education Adrienne J. Keene
ETHN 1200D S01 15499 Latina/o Literature Ralph E. Rodriguez
ETHN 1200L S01 15503 Representations of Native ppls Adrienne J. Keene
ETHN 1200J S01 16763 Asian Americans/SocialJustice Robert George Lee
ETHN 1200K S01 16770 Intro to Amer Indian Studies Elizabeth M. Hoover

Gender and Sexuality Studies

GNSS 1520 S01 17044 Latin Amer Horror Jeremy Lehen

Hispanic Studies

HISP 0730 S01 16353 Latin Am in Its Lit + Culture Iris Montero

History of Art and Architecture

HIAA 1305 S01 16768 Pre-Columbian Art + Architectu Stephen D. Houston

History

HIST 0202 S01 16001 African Experiences of Empire Nancy J. Jacobs
HIST 0244 S01 16257 Middle East:1800s to Present Sreemati Mitter
HIST 0556A S01 15986 Sport in American History Howard P. Chudacoff
HIST 0557C S01 15994 Race, Religion, + the Secular Paul E. Nahme

History of Art and Architecture

MCM 1204J S01 17166 A New Black Gaze Tina Campt

Music

MUSC 0021B S01 16701 Reading Jazz Matthew Richards McGarrell
MUSC 0642 S01 17109 World Music Ensemble Martin K. Obeng

Political Science

POLS 1820E S01 15707 Pragmatism in Black and White Kevin E Quashie
POL2101 S01 15732 Indigenous Politics in Hawai'i Mary L Baker
POL2102 S01 15725 Democracy and Inequality in Am Richard O. Snyder

Portuguese and Brazilian Studies

POBS 0280 S01 17149 Food&Community-Lusophone world Patricia I. Sobral

Public Health

PHP 1070 S01 16101 Brdn of Disease in Devel Cnty Stephen T. McGarvey
PHP 1880I S01 16110 Disability/Health and Community Sarah E. Skeels

Russian

RUSS 1660 S01 16751 Sexuality and Revolution Fabrizio Fenghi

Sociology

SOC 0010 S01 16871 Introductory to Sociology Andrew M. Schrank

South Asian Studies

SAST 0700 S01 17150 Intro to Modern South Asia TBD

Theatre Arts and Performance Studies

TAPS 0350 S01 16241 Black Performance Theory Jasmine E Johnson

Urban Studies

URBN 0210 S01 15661 The City: Intro to Urban Study Samuel Zipp
URBN 1870J S01 15689 Poltics of Community Organizing Marion E. Orr

Spring 2020

African Studies

AFRI 0990 S01 25745 Black Lavendr-Gay+Lesbn Plays Elmo Terry-Morgan
AFRI 1020C S01 25742 Afro-Luso-Brazilian Triangle Anani Dzidzienyo
AFRI 1050A S01 25776 Advanced RPM Playwriting Elmo Terry-Morgan
AFRI 1050D S01 25778 Intermediate RPM Playwriting Elmo Terry-Morgan
AFRI 1050E S01 25779 RPM Playwriting Elmo Terry-Morgan
AFRI 1060E S01 25743 W African Wtrts/Potcl Kingdm Anani Dzidzienyo
AFRI 1100X S01 25748 Black Speculative Fiction Matthew Gutler
AFRI 1150 S01 25744 Afro-Caribbean Philosophy Paget Henry
AFRI 1360 S01 25747 Knowledge, Texts + Methodology Brian W E Meeks
AFRI 1390 S01 25749 Race Difference Biomedical Res Lundy Braun

American Studies

AMST 1700N S01 25372 Public Memory Beverly Haviland
AMST 1700X S01 25346 Global Macho: Action Movies Matthew Gutler

Anthropology

ANTH 0066N S01 25444 Peoples, Cultures Greater Mex Matthew C. Gutmann
ANTH 0100 S01 25445 Intro to Cultural Anthropology TBD
ANTH 0800 S01 25447 Intro to Linguistic Anthro TBD
ANTH 1240 S01 25448 Religion and Culture Bhrigupati Singh
ANTH 1242 S01 25449 Bioethics and Culture Katherine A. Mason
ANTH 1623 S01 25451 Archaeology of Death Patricia E. Rubertone

Arabic

ARAB 0800 S01 24855 Adv Arabic Language + Culture TBD

Biology

BIOL 0940E S01 24476 Precision or Privileged Med Robert K. Campbell

Classics

CLAS 0660 S01 25558 The World of Byzantium Byron D MacDougall

Comparative Literature

COLT 0810I S01 25416 Talmakers of Non-Western Wld Dore J. Levy

East Asian Studies

EAST 0531 S01 24682 Complicating Korean History Ellie Choi
EAST 0800 S01 24702 Off the Beaten Path Samuel E. Perry
EAST 1030 S01 24577 Words on Things: Lit/Mat China Kaijun Chen

Economics

ECON 1310 S01 25421 Labor Economics Kenneth Chay
ECON 1370 S01 25669 Race and Inequality in the US Glenn C. Loury
ECON 1510 S01 25725 Economic Development TBD
ECON 1590 S01 25468 The Economy of China snr 1949 Louis Puttermann

Education

EDUC 0600 S01 24510 Youth Civic Engagement Andrea Flores
EDUC 0620 S01 24484 Cradle of Inequality David E Rangel

English

ENGL 0710V S01 24582 Death and Dying in Black Lit Kevin E Quashie
ENGL 0710Y S01 25735 Lit of US Inequality Drayton Nabers
ENGL 1140E S01 25729 Writing for Activists Kate J. Schapira
ENGL 1180V S01 25497 Asian American Narrative TBD
ENGL 1710P S01 24601 Lit and Culture of Black Power Rolland D. Murray
ENGL 1761V S01 24602 The Korean War in Color Daniel Kim
ENGL 1901J S01 25726 Fanon and Spillers Kevin E Quashie
ENGL 1950H S01 28730 Recent Novel and its Rivals Drayton Nabers

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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Brown University

Literary Arts
LITR 0100A S01 15662 Introduction to Fiction TBD
LITR 0100B S01 15663 Introduction to Poetry TBD
LITR 0510C S01 16688 The Pleasures of the Text Carole Maso
LITR 0710 S01 15675 Writers on Writing Seminar TBD

Music
MUSC 0021B S01 16701 Reading Jazz Matthew Richards McGarrell
MUSC 0021J S01 16698 Stephen Sondheim and the Ameri Dana A. Gooley

Philosophy
PHIL 200F S01 16729 Language, Race, and Gender Anna S. Bjurman Pautz

Physics
PHYS 0114 S01 25119 Science + Technology of Energy TBD

Political Science
POLS 0820T S01 24341 Women's Welfare in Global Pers Linda J. Cook

Public Health
PHP 0030 S01 24914 Health of Hispaniola Timothy M. Empkie

Russian
RUSS 0320A S01 24289 Brothers Karamazov/Art of Novel Svetlana Evdokimova

Sophomore Seminars
Fall 2019
Africana Studies
AFRI 0670 S01 17141 Global Black Radicalism Brian W E Meeks

Spring 2020
Biology
BIOL 0940E S01 24476 Precision or Privileged Med Robert K. Campbell

Education
EDUC 0620 S01 24484 Cradle of Inequality David E Rangel

Political Science
POLS 0920B S01 24381 Intro. to Indigenous Pol. Mary L Baker

Portuguese and Brazilian Studies
POBS 0990 S01 25070 Mapping Cross-Cult. Identities Patricia I. Sobral

Writing-Designated Courses
Fall 2019
Africana Studies
AFRI 0090 S01 17157 An Intro to Africana Studies Francoise N. Hamlin
AFRI 0110C S01 17178 Autobiography Civil Rights Mvmt Francoise N. Hamlin
AFRI 1110 S01 17140 Voices Beneath the Veil Elmo Terry-Morgan
AFRI 1920 S01 17142 Health Inequality in Historica Lundy Braun

American Studies
AMST 1611A S01 15488 20thC US Immigrant Ethnic Lit Richard Alan Meckel
AMST 1905O S01 15708 Readings Histories of Violence Monica M. Martinez

Anthropology
ANTH 0300 S01 16815 Culture and Health Katherine A. Mason
ANTH 1030 S01 16836 Pre-Columbian Art and Archite Stephen D. Houston
ANTH 1300 S01 16820 Anthropology of Addictions Irene Glasser

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ANTH 1940 S01 16826 Ethnographic Research Methods | Lina M. Fruzzetti

Archaeology and Ancient World
ARCH 0407 S01 17126 Hadrian’s Wall + Arch Skills TBD
ARCH 0420 S01 17123 Archaeologies of Greek Past Georgia M Andreou
ARCH 1900 S01 17129 Archaeology of College Hill TBD

BioMed-Neuroscience
NEUR 1930N S01 16276 Analysis of One Brain Area | Monica Linden

Biology
BIOL 0100 S01 15739 Living Bio at Brown and Beyond Katherine F. Smith
BIOL 0190U S01 15779 The Lives of Plants Peter Heywood
BIOL 0940A S01 15791 Viral Epidemics Walter J. Atwood
BIOL 1300 S01 15833 Biomolecular Interactions Nicolas Lux Fawzi
BIOL 1485 S01 16080 Human Population Genomics Emilia Huerta-Sanchez

Business, Entrepreneurship and Organizations
BEO 1930A S01 16966 BEO Capstone I Lisa DiCarlo
BEO 1930B S01 16967 BEO Capstone I Steven F. Petteruti
BEO 1930C S01 16968 BEO Capstone I Brendan C. McNally

Classics
CLAS 0210B S01 16956 Death in Ancient Greece Pura Nieto Hernandez
CLAS 1120G S01 16958 The Idea of Self Joseph Michael Pucci
CLAS 1210 S01 16957 Archaic Greek History Graham J. Oliver

Cognitive, Linguistic and Psychological Sciences
CLPS 0010 S01 16805 Mind, Brain and Behavior Elena Festa
CLPS 0700 S01 16611 Social Psychology Bertram F. Malle
CLPS 1900 S01 16628 Senior Seminar in BDS Steven A. Sloman

Comparative Literature
COLT 0710L S01 15961 New Worlds Stephanie Merrim
COLT 0710N S01 16524 Comp Intro Lit of Americas Luiz Fernando Valente
COLT 1811L S01 16777 Travel/Tourism/Traff Thru Ages Vangelis Calotychos

Computer Science
CSCI 1570 S01 16135 Design/Analysis of Algorithms TBD
CSCI 1805 S01 16715 Computers, Freedom and Privacy Timothy H. Edgar

Contemplative Studies
COST 0140 S01 16497 Food, Religion and Politics in Finnnian M. Moore-Gerety

East Asian Studies
EAST 1090 S01 15611 Translating Korean Samuel E. Perry
EAST 1951B S01 16045 From Desktop to Stage Kaijen Chen

Economics
ECON 0510 S01 15944 Development/International Econ TBD
ECON 1200 S01 16697 History of Economic Thought Emily C Skarbek
ECON 1530 S01 16764 Health, Hunger + the Household Andrew D. Foster

Education
EDUC 0610 S01 15805 Brown v. Board of Education Tracy L. Steffes

Egyptology
EGYT 1430 S01 15642 History of Egypt I Laurel D. Bestock

Engineering
ENGN 1010 S01 15412 Entrepreneurial Process Daniel E. Warshay
ENGN 1010 S02 15413 Entrepreneurial Process Jon E. Cohen
ENGN 1010 S03 15414 Entrepreneurial Process Jason D. Harry
ENGN 1230 S01 15436 Instrumentation Design David A. Barton

English
ENGL 0100F S01 16022 Love Stories James A. Kuzner
ENGL 0100V S01 17105 Inventing Asian Am Lit Daniel Kim
ENGL 0150C S01 16038 The Medieval King Arthur Elizabeth Johnson Bryan
ENGL 0200K S01 17119 "Trans" in Literature TBD
ENGL 0200L S01 17120 Narr of Revolt & Refuge TBD
ENGL 0310A S01 16046 Shakespeare Stephen Merriam Foley
ENGL 0700E S01 17103 Postcolonial Literature Olakunle George
ENGL 1190X S01 16488 Nonfiction Now Michael H. Stewart

Environmental Studies
ENVS 0070C S01 16615 Transcending Transptn Impacts Kurt Tichehrt
ENVS 0110 S01 16518 Humans, Nature and the Environ Dawn King
ENVS 1557 S01 15537 Birding Communities Nancy J. Jacobs
ENVS 1574 S01 16526 Engaged Climate Policy: USA J Timmons Roberts
ENVS 1615 S01 17094 Environmental Policy Process Amanda Lynch
ENVS 1913 S01 16529 China’s Environment Elizabeth Lord
ENVS 1920 S01 16792 Methods interdiscipnlary Rsch Kai Bosworth

Ethnic Studies
ETHN 0090A S01 15706 The Border/La Frontera Evelyn Hu-Dehart
ETHN 1200D S01 15499 Latin@o Literature Ralph E. Rodriguez
ETHN 1750H S01 15691 Water is Life/Land Indigeneity Elizabeth M. Hoover

French Studies
FREN 0600 S01 15540 Writing and Speaking French II Youenn Yves J Kervennic
FREN 0600 S02 15555 Writing and Speaking French II Youenn Yves J Kervennic
FREN 0600 S03 15656 Writing and Speaking French II Youenn J Kervennic
FREN 0600 S04 15657 Writing and Speaking French II Youenn J Kervennic
FREN 0720G S01 17049 L’art de la nouvelle Thangam Ravindranathan
FREN 1040F S01 17053 Des monstres et de l’anormal Lewis C. Seifert
FREN 1140A S01 17050 French Theory David Wills
FREN 1410T S01 15541 L’expérience des réfugiés Virginia A. Krause
FREN 1410U S01 16098 La France en guerre Gretchen Schultz
FREN 1510L S01 17048 À nous deux la mode Stephanie A Ravillon
FREN 1610C S01 15894 Atelier d’écriture Virginia A. Krause
FREN 1710I S01 17047 Polit. in Francophone Africa Justin Izzo

Gender and Sexuality Studies
GNSS 0120 S01 16651 Intro Gendr/Sexuality Studies Denise L. Davis
GNSS 1990 S01 16652 Senior Seminar Drew Walker

Geological Sciences
GEOG 1615 S01 16943 The Environmental Policy Process Amanda Lynch

German Studies
GRMN 0500F S01 16307 20th Century German Culture Kristina C. Mendicino
GRMN 0750F S01 16308 Historical Crime Fiction Thomas W. Knesiak

Hispanic Studies
HISP 0730 S01 16363 Latin Am in Its Lit + Culture Iris Montero
HISP 0740 S01 16354 Intensive Survey of Spanish Lit Sarah L. Thomas
HISP 1500L S01 16338 Theory + Practice: Translation Sarah L. Thomas

History of Art and Architecture
HIAA 0081 S01 15975 Architecture of the House Ithoban I. Osayimwese
HIAA 0580 S01 15969 Word, Image, Power-Italy Evelyn Lincoln
HIAA 0850 S01 15973 Modern Architecture Dietrich Neumann
HIAA 1305 S01 16768 Pre-Columbian Art + Architettu Stephen D. Houston

History
HIST 0150H S01 15989 Foods and Drugs in History Harold J. Cook
HIST 0202 S01 16001 African Experiences of Empire Nancy J. Jacobs
HIST 0252 S01 16035 The American Civil War Michael Voremburg
HIST 0522G S01 15988 The Dutch Golden Age Harold J. Cook
HIST 05220 S01 16017 The Enlightenment Joel W. Revill
HIST 0523P S01 16256 The First World War TBD
HIST 0537B S01 15996 Tropical Delights James N. Green
HIST 0551A S01 16034 Lincoln in History and Culture Vangelis Calotychos
HIST 0556A S01 15986 Sport in American History Howard P. Chudacoff
HIST 0557C S01 16013 Narratives of Slavery Emily A Owens
HIST 0580M S01 16006 Age of Revolutions, 1760-1824 Jeremy R. Mumford

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University Courses
UNIV 1110 S01 15528 Problem Solving and Research Christina Smith

Urban Studies
URBN 0210 S01 15661 The City: Intro to Urban Study Samuel Zipp
URBN 1870A S01 15460 American Culture and the City James A. Morone
URBN 1870D S01 15461 Downtown Development Robert E. Azar
URBN 1870J S01 15469 Poltics of Community Organizing Marion E. Orr
URBN 1870K S01 15637 Jerusalem Since 1850 Katharina M Galor

Visual Art
VISA 1800C S01 16840 Honors Seminar Paul Myoda

Spring 2020

African Studies
AFRI 0990 S01 25745 Black Lavendar-Gay+Lesbn Plays Elmo Terry-Morgan
AFRI 1100X S01 25748 Black Speculatve Fiction Matthew Guterl
AFRI 1360 S01 25747 Knowledge, Texts + Methodology Brian W E Meeks
AFRI 1930 S01 25749 Race Difference Biomedical Res Lundy Braun

American Studies
AMST 1700N S01 25372 Public Memory Beverly Haviland
AMST 1700X S01 25436 Global Macho: Action Movies Matthew Guterl
AMST 1900P S01 24621 Essaying Culture Ralph E. Rodriguez

Anthropology
ANTH 1000 S01 25445 Intro to Cultural Anthropology TBD
ANTH 1242 S01 25449 Bioethics and Culture Katherine A. Mason

BioMed-Neuroscience
NEUR 1040 S01 24729 Introduction to Neurogenetics Karla Kaun
NEUR 1540 S01 25436 Biological Design Sharon M. Swartz
NEUR 1930 S01 24749 Soc Context of Learning/Devel Jinn Li

Business, Entrepreneurship and Organizations
BEQ 1940A S01 25525 BEO Capstone II Brendan C. McNally
BEQ 1940B S01 25526 BEO Capstone II Steven F. Petteruti

Chemistry
CHEM 1450 S01 24786 Advanced Organic Chemistry TBD

English
ENGL 1311G S01 25727 Shakespeare and Love James A. Kuzner
ENGL 1311M S01 25724 Renaissance Poetry Stephen Merriam Foley
ENGL 1761V S01 24602 The Korean War in Color Daniel Kim
ENGL 1901J S01 25726 Fanon and Spillers Kevin E Quashie

Environmental Studies
ENVS 0715 S01 24950 Political Ecology Elizabeth Lord
ENVS 1925 S01 24971 Energy Policy and Politics Dawn King

Ethnic Studies
ETHN 1650F S01 25665 Mapping Violence Monica M. Martinez

French Studies
FREN 1020A S01 24256 Writing and Speaking French II Stephanie A Ravillon
FREN 1020B S01 24257 Writing and Speaking French II Stephanie A Ravillon
FREN 1060 S01 24258 Introduction to French Histoire Francaise Ouida Mostefai
FREN 1040C S01 24399 Le Grand Siècle à l’écran Lewis C. Seifert
FREN 1130E S01 24258 Le Poétique et le quotidien Thangam Ravindranathan
FREN 1410V S01 25662 French-American (Dis)Connect Lewis C. Seifert
FREN 1501J S01 24515 Photographie Youenn Lewis C. Seifert
FREN 1710H S01 25663 Villes africaines Justin Izzo
FREN 1900M S01 25664 La question animale Thangam Ravindranathan

Geological Sciences
GEOL 0160F S01 25523 Patterns: in Nature,in Society Reid F. Cooper
GEOL 0241 S01 25113 Earth:Ecol Sci of Habitability Timothy D. Herbert
GEOL 0470 S01 25100 Weather and Climate Meredith K. Hastings

German Studies
GRMN 0410 S01 24755 Intermediate German II Jonathan B Fine
GRMN 0410X S01 24756 Intermediate German II Jonathan B Fine
GRMN 0600B S01 24761 Was ist Deutsch? Thomas W. Kniesche
GRMN 0600S S01 25721 Language and Multilingualism Zachary Sng

Hispanic Studies
HISP 0760 S01 24870 Transatlantic Crossings Sarah L. Thomas
HISP 1700B S01 25169 Rhythm and Silence: A Creative TBD

History of Art and Architecture
HIAA 0022 S01 24556 The Art of Enlightenment Jeffrey Moser
HIAA 0062 S01 24557 Dutch and Flemish Art Jeffrey M. Muller
HIAA 0070 S01 24562 Art and Architecture African Diaspora Itahan I. Osayimwese

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### Italian Studies
ITAL 0600 S01 24748 Advanced Italian II Filomena Fantarella
ITAL 1020 S01 24749 Boccaccio's Decameron Ronald L. Martinez

### Japanese
JAPN 1310 S01 24713 Japanese Linguistics Kikuko Yamashita

### Literary Arts
LITR 0100A S01 25014 Introduction to Fiction TBD
LITR 0100B S01 25015 Introduction to Poetry TBD
LITR 0110A S01 25016 Fiction I TBD
LITR 0110A S02 25017 Fiction I TBD
LITR 0110A S03 25018 Fiction I TBD
LITR 0110B S01 25019 Poetry I TBD
LITR 0110B S02 25020 Poetry I TBD
LITR 0110B S03 25021 Poetry I TBD
LITR 0110E S01 25022 Screenwriting I TBD
LITR 0210A S01 25023 Fiction Writing II TBD
LITR 0210A S02 25024 Fiction Writing II TBD
LITR 0210B S01 25025 Poetry Writing II TBD
LITR 0210B S02 25026 Writers on Writing Seminar Monica M de la Torre
LITR 0999 S01 25225 Graphic Novels and Comic Maste Hiram F Moody

### Modern Culture and Media
MCM 0150 S01 24520 Text/Media/Culture Ellen Frances Rooney

### Philosophy
PHIL 0010 S01 25345 The Place of Persons David P. Christensen
PHIL 0360 S01 25353 Early Modern Philosophy Charles Larmore
PHIL 0500 S01 25347 Moral Philosophy Nomy Arpaly
PHIL 0560 S01 25348 Political Philosophy David Estlund
PHIL 0880 S01 25366 Ethel Themes Amer Short Story Felicia Nimue Ackerman
PHIL 1750 S01 25350 Epistemology Christopher S. Hill

### Religious Studies
RELS 0056 S01 24977 Spiritual But Not Religious Daniel Vaca
RELS 0525 S01 24981 The History and Practice of Yo Finnan M. Moore-Gerety
RELS 0820 S01 24982 African American Religious Str Andre C. Willis
RELS 1000 S01 24983 Methods in Religious Studies Stephen S. Bush
RELS 1325A S01 25196 Educating Bodies in Ancient Ch Jae Hee Han
RELS 1325C S01 25235 The Virgin Mary in Christian T Susan Ashbrook Harvey
RELS 1430 S01 25199 Buddhist Classics Janine T Anderson Sawada
RELS 1500 S01 25200 Prophecy of the Ancient World Jae Hee Han
RELS 1610 S01 25202 Sacred Sites: Law, Politics, Nathaniel A. Berman

### Russian
RUSS 1300 S01 24282 Russian Lit in Translation II Vladimir Golstein
RUSS 1330 S01 24291 Soviet Culture Fabrizio Fenghi
RUSS 1440 S01 24292 Imagining Moscow Fabrizio Fenghi

### Slavic
POBS 0400 S01 25066 Writing + Speaking Portuguese Naomi Parker
POBS 0620 S01 25072 Map Português-Speak Ctr:Ptugti Leonor Simas-Almeida
POBS 0990 S01 25070 Mapping Cross-Cult. Identities Patricia I. Sobral
POBS 1080 S01 25071 Brazil: Lang/Theater/Culture Patricia I. Sobral

### University Courses
UNIV 1520 S01 25074 The Shaping of World Views Onesimo T. Almeida

### Urban Studies
URBN 1000 S01 24237 Fieldwrk in the Urban Community Jan Mateusz Pacewicz
URBN 1870N S01 24240 Cult/Soc Life Built Envirmt Samuel Zipp
URBN 1870T S01 24238 Transportation: Planning Persp Robert E. Azar

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Course Descriptions

Africana Studies

AFRI 0980. 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.
Fall
AFRI0090 S01 17157 TTh 9:00-10:20(02) (F. Hamlin)

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 plots 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 19 first year students.
Fall
AFRI0110C S01 17158 M 3:00-5:30(05) (F. Hamlin)

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.
Fall
AFRI0210 S01 17137 TTh 2:30-3:50(03) (A. Dzidzienyo)

AFRI 0670. Global Black Radicalism.
The decade from the mid-Sixties until the mid-Seventies witnessed the rise of Black Radicalism as a global phenomenon. The emergence of Black Power in the US, Brazil and the Caribbean, the consolidation of liberation struggles in Portuguese Africa and the rise of a Black Consciousness trend in Apartheid South Africa all represent key moments. What led young activists to embrace “Black Power”? What led to the emergence of Marxist movements in Portuguese Africa? What events in the Caribbean gave ascendance to radical tendencies? And what forces contributed to the decline of these movements? This course seeks to answer these questions.
Fall
AFRI0670 S01 17141 Th 4:00-6:30(04) (B. Meeks)

Miles Davis famously described Fela Kuti (1938-1997) as “the future of music.” Beyoncé’s attempt “to do something that sounds like Fela” saw her compose an unpublished 20-track album. Arguably Africa’s most prolific and controversial artist of the twentieth century, Fela continues to be invoked as musical genius and as icon of popular struggle. This course invites students to explore the complexities of Fela’s art and activism. We mobilize his life/work as a springboard for examining emergent debates about African identity—from postcolonial masculinity to the creative logics of African cities, from contemporary African youth culture to the gendered politics of cultural memory.
Fall
AFRI0980 S01 17144 TTh 1:00-2:20(08) (O. Ayobade)

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.
Spr
AFRI0990 S01 25745 TTh 10:30-11:50(09) (E. Terry-Morgan)

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.
Spr
AFRI1020C S01 25742 Th 4:00-6:30(17) (A. Dzidzienyo)

AFRI 1030. Contesting the Carceral State.
This course introduces students to the study of crime and justice through Black, feminist, queer and prison abolitionist frameworks, with a particular focus on narratives by people of African descent in the U.S. since 1965.
Fall
AFRI1030 S01 17145 W 5:40-8:10PM (L. Biggs)

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.
Spr
AFRI1050A S01 25776 Th 4:00-6:30(17) (E. Terry-Morgan)

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).
Spr
AFRI1050D S01 25778 Th 4:00-6:30(17) (E. Terry-Morgan)

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).
Spr
AFRI1050E S01 25779 Th 4:00-6:30(17) (E. Terry-Morgan)

AFRI 1060E. West African Writers and Political Kingdom.
Do West African writers have a role to play in the changing political landscape of their countries? An examination of the ways and means through which a select group of West African writers have dealt with issues that relate to the role of the state in the management of individual and group relations, the politics of gender, civil and military relations, and the construction of new forms of civil society. Enrollment limited to 40.
Spr
AFRI1060E S01 25743 W 3:00-5:30(10) (A. Dzidzienyo)

AFRI 1060U. An Introduction to Africa.
Africa invokes myriad images in the global imagination. It figures in debates on the evolution of humans; in the formation of capitalism, and even as a counterpoint to discourses on human progress. This course interrogates how “Africa” gets mobilized in popular discourse in the US and beyond. How might we reconcile the idea of Africa with contemporary conditions of the African continent? We will not only examine Africa through a broad range of disciplinary perspectives; but also become familiar with social, cultural, political and economic diversity of the African continent. We will engage the disciplines of history, economics, politics, cultural studies and gender studies among others.
Fall
AFRI1060U S01 17143 T 4:00-6:30(09) (O. Ayobade)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
This class surveys the genre, including the work of George Schuyler, Nalo Hopkinson, Samuel R. Delaney, N.K. Jemisin, Octavia Butler, Cosion Whitehead, and Tananarive Duey, along with everything related, from comic books to album covers to filmic re-writings of canonical science fiction and fantasy works. The goal is to understand the history of the genre, its relationship to histories of anti-blackness and ideologies of black liberation, and its contributions to speculative fiction more broadly. For graduate students who have met the residency requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.
Spr AFRI1100X S01 25748 MWF 9:00-9:50(02) (M. Guterl)

AFRI 1110. Voices Beneath the Veil.
VBV is an interdisciplinary exploration of African-American history and cultures through the analyses of Black authored plays from 1858 to the present. The course focuses on the development of a thesis paper, which includes an incremental re-writing process.
Fall AFRI1110 S01 17140 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 historians and existentialists. The second half consists of a more intensive comparative focus on the ontologies and epistemologies of two of these schools.
Spr AFRI1150 S01 25744 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 AFRI1210 S01 17138 W 3:00-5:30(17) (A. Dzidzienyo)

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.
Spr AFRI1360 S01 25747 M 3:00-5:30(13) (B. Meeks)

AFRI 1920. Health Inequality in Historical Perspective.
Seminar takes a historical perspective to explore causes of health inequality in the US. Draws on studies from the 19th century-present. Examines socio-political and economic context of health/disease, focusing on who gets sick, who lives, and how that shapes the experience of health, disease causality, and public health responses. Includes health consequences of immigration, incarceration, race-based medicine, the Chicago heatwave, and Katrina. Enrollment restricted to 20, second and third-year students.
Fall AFRI1920 S01 17142 W 3:00-5:30(17) (L. Braun)

AFRI 1930. Race, Difference and Biomedical Research: Historical Considerations.
This advanced seminar places the current debate over race, health, and genetics in historical context. An overarching goal is to understand how the social world informs the scientific questions we ask, design of research studies, and interpretation of findings. How have the theories and practices of biomedical science and technology produced knowledge of “race” and racial difference historically? How does race relate to gender and class? What are the implications of this debate for understanding health inequality? Previous coursework in Africana Studies preferred. Enrollment limited to 20; instructor permission.
Spr AFRI1930 S01 25749 W 3:00-5:30(10) (L. Braun)

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.

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.
Fall AFRI2001 S01 17139 W 10:00-12:30 (P. Henry)

A preoccupation of Africana Studies involves the central, 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 western cultural practices and expressive forms? What role did enslavement, forced migration and segregation play in shaping Africana culture in the modern west? These cultural debates play a central role in literary, musical, philosophical, aesthetic, historical and sociological analyses of the culture of people of African descent frame this graduate course.
Spr AFRI2002 S01 25753 F 10:00-12:30 (L. Biggs)

AFRI 2102. Interdisciplinary Methods and Africana Studies.
This graduate seminar focuses on interdisciplinary methodology and Africana Studies. The seminar explores how students and scholars in Africana Studies use interdisciplinary methods developed in the social sciences and the humanities in novel and innovative ways. Students will critically examine key methodological issues in Africana Studies and how and in what ways these issues are similar to and differ from such disciplines as economics, history, sociology, and literature. Prerequisite: a prior undergraduate or graduate level methods in Humanities or Social Sciences. Enrollment limited to 20.
Spr AFRI2102 S01 25798 W 10:00-12:30 (K. Perry)

AFRI 2450. Exchange Scholar Program.
Fall AFRI2450 S01 15246 Arranged ‘To Be Arranged’

AFRI 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 AFRI2970 S01 15247 Arranged ‘To Be Arranged’
Spr AFRI2970 S01 24150 Arranged ‘To Be Arranged’

AFRI 2980. Graduate Level Independent Reading and Research.
A program of intensive reading and research. Section numbers may vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

AFRI 2990. Thesis Preparation.
For graduate students who have met the residency requirement and are continuing research on a full time basis.
Fall AFRI2990 S01 15248 Arranged ‘To Be Arranged’
Spr AFRI2990 S01 24151 Arranged ‘To Be Arranged’

AFRI XLIST. Courses of Interest to Concentrators in Africana Studies.

American Studies

American Studies

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.
Fall AMST1611AS01 15488 TTh 2:30-3:50(03) (R. Meckel)
AMST 1612Q. Women / Writing / Power.
An introduction to American women’s writing and to the development of feminist literary practice and theory. This course will cover a broad historical range from the colonial poet Anne Bradstreet and Phillis Wheatley to contemporary writers Toni Morrison, a Nobel Laureate, and Marilynne Robinson, a Pulitzer Prize winner. Attention to the effects of racial, class, and cultural differences will inform this course that will focus on gender and literature. Spr AMST1612S01 24322 MWF 12:00-12:50(04) (B. Haviland)

AMST 1700N. Public Memory: Testimony, Memorial, Ritual.
This seminar explores theories and practices of public memory by studying three related topics and media. Questions about the relation of history and memory are pursued by reading verbal testimony. Questions about commemoration are developed by looking at material objects and public spaces. Questions about embodied memory are explored by witnessing trauma, performance, and ritual. Readings will include Freud, Nora, Derrida, Halbwachs, Laub, Savage, Connerton, Taylor and Young. Rhode Island will provide our field for understanding how public memory works in verbal, material, and embodied signs of the past and present. Spr AMST1700H-S01 25372 W 3:00-5:30(10) (B. Haviland)

AMST 1700X. Global Macho: Race, Gender, and Action Movies.
Carefully siftting through an oft-overlooked but globally popular genre - the muscle-bound action - this class asks: what sort of racial work does an action movie do? What is the role of women in this genre? How should we scrutinize these supposedly empty trifles of the global popular? How should we think critically about movies that feature - often without apology - a deep, dangerous obsession with masculinity, patriarchy, war, and lawlessness, with violence outside of civil society. In short, from Hollywood to Hong Kong to Rio to Paris to Mexico City, what makes the action movie genre tick? Spr AMST1700XS01 25436 MW 11:00-11:50 (M. Gutner)

AMST 1800. Honors Seminar.
This seminar is for second-semester junior American Studies and Ethnic Studies concentrators who are interested in writing an honors thesis in their senior year. The outcome of this course will be a proposal for the honors thesis along with a bibliography and a research plan and schedule. Topics covered will be the research methods associated with different disciplines; how to make the thesis interdisciplinary; integrating public projects and new media into a thesis. Open to juniors concentrating in American Studies and Ethnic Studies. Enrollment limited to 20. S/NC Spr AMST1800 S01 24323 F 3:00-5:30(15) (L. Alvarado)

AMST 1900P. Essaying Culture.
This course is interested in the essay as form. As a verb, essay means "to make an often tentative or experimental effort to perform." We will explore through reading and our own writing the poetic, gnomic, and often desultory moves the essay makes as it seeks to understand its cultural objects. Like the novel, the essay is an omnivorous form. It consists of fragments, poetry, personal reflection, lists, rational argument, and much more as it winds its way to understanding. We will be reading a range of essays, as well as theories of the form. Spr AMST1900PS01 24621 TTh 1:00-2:20(08) (R. Rodriguez)

AMST 1901B. Form Matters: Contemporary Short Fiction.
Form Matters is an advanced seminar in reading contemporary short fiction, mainly centered on US writers. The class particularly focuses on socially-attuned and historically-minded neo-formalist analyses of literature. Fiction readings will be supplemented with relevant critical readings from both scholars and practicing writers. Students will be expected to engage in rigorous discussion of the material. Goals of the course include introducing you to a relevant critical vocabulary for discussing form, deepening your familiarity with contemporary US short fiction, and improving your oral and written communication skills. Fall AMST1901BS01 16358 Th 1:00-2:20(08) (R. Rodriguez)

AMST 1903I. Museum Histories.
Museums collect and display art and artifacts not only to preserve culture heritage, but also to educate, engage, and entertain. This course examines the history of museums—of art, history, anthropology, natural history, science and technology— to understand their changing goals and their changing place in American society. It also considers the changes within museums, in the work of curation, conservation, education, and social engagement. Students will read museum history and theory, engage with museum archives and other primary sources, and produce a research paper or a digital or public project. Fall AMST1903I S01 16476 TTh 10:30-11:50(13) (S. Lubar)

AMST 1903Z. Shrine, House or Home: Rethinking the House Museum.
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. Spr AMST1903ZS01 24630 M 3:00-5:30(13) (R. Polvin)

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 sophomores, juniors and seniors. Fall AMST1904HS01 16762 M 3:00-5:30(05) (R. Meckel)

AMST 1905O. Reading and Righting Histories of Violence.
This seminar proposes "histories of violence" as a useful framework to interrogate the varied forms of violence that constitute Western liberal modernity. These forms include systems of state power and imperial practices; subjective violence through raced, gendered, and sexualized hierarchies; and narrative violence that prevents histories and voices of emerging through the erasure of archives and narrative silencing. Course readings consider ongoing local and transnational struggles to reckon with the violent histories of slavery, empire, colonialism, nationalism, and democracy. They offer interdisciplinary models for researching and narrating these histories. Class discussions with consider avenues for reckoning with histories of violence. Fall AMST1905OS01 15708 Th 4:00-6:30(04) (M. Martinez)

AMST 1906A. History of Skill.
What speakers of skilled and unskilled work; but what is skill? In this course we will look for skill captured in embodied knowledge, in the words, images, and videos of instruction manuals, and in the material culture of work. We will consider the context of skills: changing ideas about skill throughout American history and the ways in which race, gender, and ethnicity have shaped the definition of skill and the nature of skilled work. Research based in primary sources, including students' own skills, will lead to historical or ethnographic essays. Spr AMST1906AS01 24913 TTh 10:30-11:50(09) (S. Lubar)

AMST 1906R. Law and Transformative Social Change.
What potential does the law hold to bring about transformative social change in today's society? Relatedly, what strategies and approaches have social movement activists utilized to engage lawyers and the broader legal system? We will answer these questions through an examination of models of activist and public interest lawyering from the Civil Rights, Environment Justice, Immigrant Rights and same sex marriage movements. Readings will draw from sociological, anthropological, legal and historical texts and legal cases with a focus on exploring multiple aspects of a legal decision. Spr AMST1906RS01 25373 TTh 4:00-6:30(17) (K. Escudero)

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 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.

AMST 2200O. Native American and Indigenous Studies. While Native American and Indigenous Studies is by nature interdisciplinary, since the end of the 20th century the field has coalesced around a series of methods, debates and topics centered on indigenous knowledges, settler colonialism, and cultural revitalization and decolonization. This course will explore both foundational and emergent literature around the growing field of Native American and Indigenous Studies.

AMST 2220L. Cultural Theory: Cultural Studies Rubrics in American Studies. This course will provide an introduction to significant theoretical rubrics deployed in the analysis of cultural texts in the field of American Studies. From the Marxist cultural theorists of the Frankfurt School and British school of cultural studies to scholars of New Materialism we will chart a wide theoretical terrain in order to grapple with the import of the cultural and aesthetic.

AMST 2220P. Diaspora and Indigeneity. This graduate seminar explores the interrelated concepts of diaspora and indigeneity. Drawing on theoretical frameworks from American Studies, history, anthropology, and law, students will explore the relationship between diasporic and indigenous communities in the United States, Canada, Middle East, Caribbean and Pacific Ocean. In the process, conversations will focus on how struggles for migrant justice can take place while critically engaging with the settler colonial legacies of many nation-states moving towards a politics of collective liberation.

AMST 2450. Exchange Scholar Program. Fall AMST2450 S01 15249 Arranged 'To Be Arranged'

AMST 2520. American Studies: Professional Issues in American Studies. This course explores the mechanics of a doctorate degree in American Studies. We will explore the constitution of our field through the elaboration of field exam lists and narratives, query its pedagogical application in the design of undergraduate syllabi, and begin to outline and enact our participation in the profession both within and beyond the academy. At the end of this class, students will have constructed a portfolio that will assist their progress towards a degree and provide the tools with which to chart pathways once a degree is in hand.

AMST 2540. Methods in Public Humanities. 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.

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.

AMST 2653. Public Art: History, Theory, and Practice. 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 arts 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.

AMST 2655. Against Invisibility: Asian American/a, Collective Memory and the Public Humanities. Asians have been living in North America since the 1600’s but four centuries later Asian Americans are still virtually invisible in the narratives that define the nation. What spaces are available to resist invisibility? The seminar will focus on ways in which Asian Americans have used vernacular photography to archive collective memory, resist state surveillances, assert subjectivity, and narrate alternate histories. We will learn to read photographs in their shifting contexts produced in the internment or refugee camp, collected in a family album or used to prove immigration status and think about the politics of photography in Asian American narratives.

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 2685. Critical Approaches to Architectural Preservation and Cultural Heritage.
This course examines the modern fields of preservation and cultural heritage from a historical and critical point of view to better understand their formation, evolution, current condition and the issues integral to their future. We explore such thorny topics as the “invention” of tradition and the relationship between heritage programs and nationalism, the evolution of the global cultural heritage industry, the story of preservation institutions in the United States and abroad, the rise of cultural heritage crimes in conflict zones, public history and memorials at “sites of conscience,” and the emergence of digital preservation and “experimental preservation.”

AMST 2694. Decolonizing Public Humanities: Intersectional Approaches to Curatorial Work + Community Organizing.
This course will decenter experiences and cultural expectations attendant to whiteness, cis-maleness, able-bodiedness, heterosexuality, and middle/upper-classness in the public humanities, and thereby explore the contemporary problems and possibilities of intersectional approaches in the field. What do contemporary paradigms of “diversity,” “public engagement,” and “cultural organizing” have to teach us about effective and ethical public humanities approaches? Do different, multiply marginalized communities of affinity practice entirely different public humanities? How are cultural interventions changing to accommodate the demands of an increasingly segmented public sphere?

AMST 2900. Thesis Preparation.
For graduate students who have met the residency requirement and are continuing research on a full time basis.

AMST 2901. 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 2902. 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

AMST 2950. Independent Reading and Research in Public Humanities.
For MA in Public Humanities Students who wish to do independent reading and research.

Ethnic Studies

ETHN 0090A. The Border/La Frontera.
We will examine the historical formation, contemporary reality and popular representation of the U.S.-Mexico border from a bilingual (English-Spanish), multicultural (U.S., Mexican, and Latino), and transnational perspective within the framework of globalization. We will explore the construction of border communities, lives and identities on both sides of the international divide, and pay particular attention to the movement of peoples in both directions. We will read materials, watch films, and conduct class discussions in English and Spanish. Comfort and reasonable proficiency in Spanish is required, but native command is not necessary. Enrollment limited to 19 first year students.

ETHN 1000. 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 racial and ethnic stratification in the U.S. imagination.

ETHN 1200B. Contemporary Indigenous Education in North America.
In the past, formalized schooling in Indigenous communities was a tool of colonization and cultural genocide, forcing Native peoples to assimilate to western norms, values, and knowledge. However, contemporary Indigenous communities have managed to reclaim and reshape education for Native youth, utilizing innovative methods and technologies, as well as drawing upon generations of traditional and indigenous knowledges to create environments that promote academic achievement alongside culture. In this course we will focus on the ways Native communities are asserting their educational sovereignty, through culturally-relevant/responsive curriculums, language immersion schools, indigenous charter schools, traditional ecological and scientific knowledges, and more.

ETHN 1200D. Latinx Literature.
This course will introduce students to a broad array of Latin@/o literature, fiction, poetry, drama, and graphic novels. While there is a long tradition of Latin@o literature in the United States, we will focus primarily on a period from 1985 to the present. Aimed to familiarize students with debates in the field, the readings will also include critical essays. Enrollment limited to 15.

ETHN 1200F. History and Resistance in Representations of Native Peoples.
Throughout history, Native peoples have been portrayed through a stock set of stereotypes such as savage warriors, Indian princesses, or mystical shamans. These images surround us in advertising, news media, Hollywood, sports mascots, and Halloween costumes. This course will examine the foundations of these representations and their connections to colonization, with a focus on contemporary and ongoing examples, from Johnny Depp’s Tonto, Urban Outfitters’ “Navajo” products, to JK Rowling’s “History of Magic in North America,” with a focus on the ways Native peoples are taking back and reshaping Native representations through activism, social media, art, design, film, and more.

In 1868, in the largest strike that America had ever seen, ten thousand Chinese workers struck Central Pacific Railroad. One hundred and fifty years later, Asian Americans, now stereotyped as the “model minority,” are rendered invisible in current struggles for social justice. Yet as railroad workers, laundymen, farmworkers, draft resisters, sewing women and nurses, Asian Americans have left us a rich legacy of legal, social, and political activism. Particular attention will be paid to solidarities across racial, gender, and national boundaries.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
ETHN 1200K. Introduction to American Indian Studies. Introduces students to both historical and contemporary issues in North America, examining issues of sovereignty, representation and self-representation, culture, politics, and history. Because this course is interdisciplinary, we will use texts from Indigenous studies, 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. Fall ETHN1200K S01 16770 TTh 2:30-3:50(03) (E. Hoover)

ETHN 1650F. Mapping Violence. Mapping Violence is a research project that aims to expose interconnected histories of violence, the legacies of colonization, slavery, and genocide that intersect in Texas in the early twentieth century. Although often segregated in academic studies, these histories coalesced geographically and temporally. Students in this course will learn interdisciplinary methods combining ethnic studies, history, public humanities and the digital humanities to rethink the limits of archival research, historical narrative, and methods for presenting findings to public audiences. This research intensive seminar will allow students to develop historical research skills and to contribute original research to the Mapping Violence project. Fall ANTH01650F S01 25444 W 3:00-5:30(10) (M. Gutmann)

ANTH 0066D. Who Owns the Past?. Examines the role of the past in the present. Using examples from the U.S. and other parts of the world, we will look at how archaeological evidence is implicated in contemporary cultural and political issues. Students will learn that the past is not just the focus of archaeologists’ interest and scientific inquiries, but is also a subject romanticized by antiquarians, mobilized in nation-building, marketed for profit, re-enacted as entertainment, consumed by tourists, and glorified in commemoration. Understanding these different and competing valuations, claims, and uses of the archaeological past will provide an introduction to why the past matters in the present and to the future. Enrollment limited to 19 first year students. Fall ANTH0066D S02 16812 W 3:00-5:30(17) (P. Rubertone)

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. Fall ANTH0300 S01 16815 MWF 11:00-11:50(16) (K. Mason)

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. Spr ANTH0500 S01 25446 MWF 11:00-11:50(04) (S. Houston)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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.

Survey of ancient art and building in ancient America, with a focus on Mexico, Central America, and the Andes. Underlying concepts include: meaning and method, cosmos and kingship, narrative and symbol, personality and authorship, empire and royal court. Rich collections of the Haffenreffer museum will form the focus of work in the class.

ANTH 1125. Indigenous Archaeologies.
This is an intro. to Indigenous archaeology, sometimes defined as archaeology "by, for and with Indigenous peoples." These approaches combine the study of the past with 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.

ANTH 1150. Middle East in Anthropological Perspective.
A seminar focusing on anthropological methods of analyzing and interpreting Middle Eastern cultures and societies. Emphasizes the study of kinship, tribal structure, social organization and gender relations, ethnic groups relations, and urban-rural distinctions. Draws upon insights from these topics as a basis for understanding contemporary social, economic, and political dynamics in the region.

ANTH 1240. Religion and Culture.
Global events in recent years seem to defy the commonsensical idea that religious traditions would decline or disappear in the modern epoch. We examine classic theories and methods in the study of religion to understand the continuing vitality of spiritual contemplation, asceticism, myths, rituals, magic, witchcraft, experiences of healing, and other ways of thinking and acting that are typically associated with (or against) the concept of religion.

ANTH 1242. Bioethics and Culture.
This course examines bioethics from an ethnographic point of view. Topics include pregnancy, death, suicide, disability, medical research, organ transplantation, and population control. We will distinguish between the moral experiences of people faced with difficult choices, and the ethical ideals to which they aspire. We will then ask: how can these perspectives be reconciled? When trying to reconcile these perspectives, how can we account for powerful dynamics of race, gender, class, religion, and cultural difference? Finally, how can we develop a code of ethics that takes these issues into account and also is fundamentally connected to everyday life?

ANTH 1253. The Visual in Anthropology: Documentary Films and Society.
This lecture course entails an introduction of the history of anthropology complemented with cinematic documentary films. Anthropological text is used to demonstrate continuity between the visual and the written word in select films screened for the course. Weekly topics address the anthropology of exclusive authors to critically juxtapose their work with discussion on either the convergence or discontinuity in the uses of the documentary films. Do films inform us or deviate from our understanding of the written anthropological ethnographies? How do we read culture from the visual? Is culture or the social readable or not?

ANTH 1300. Anthropology of Addictions and Recovery.
The purpose of this course is to consider the uses and misuses 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.

ANTH 1301. Anthropology of Homelessness.
Homelessness emerged as a public concern in the United States and in other industrialized countries in the late 1970s as people began encountering people living on the streets, a way of life which had formerly been confined to the skid rows of large cities. In this course, through readings, readings, discussion, and hands on experiences with homeless populations, we will uncover the causes, conditions, and responses to homelessness. Each student will spend at least two hours per week in a local homeless-serving agency in order to gain face to face experiences. The field placements will be facilitated by the professor.

This course explores how physical energy infrastructures configure social and political power across human societies. It enables students to understand contemporary energy challenges not simply as a matter of scarce or unsustainable material resources but also as a matter of socioeconomic inequality, geopolitical instability, structural racism and sexism, indigenous sovereignty, and other social issues. In introducing students to the complex operations of coal, oil, solar, wind, gas, and other energy resources, this course offers a conceptual framework for making sense of the intersecting material and social dynamics of political power, and for navigating today's greatest resource challenges.

ANTH 1621. Material Culture Practicum.
Combines theory with hands-on study of artifacts from historical archaeological contexts in North and Latin America. Students will gain skills and experience in artifact identification, dating, recording, analysis, and interpretation, and will conduct individual or team research projects on material things as products of everyday life and history. Enrollment limited to 15.

ANTH 1623. Archaeology of Death.
Examines death, burial, and memorials using comparative archaeological evidence from prehistory and historical periods. The course asks: What insight does burial 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.
ANTH 1720. The Human Skeleton.
More than simply a tissue within our bodies, the human skeleton is a 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’ll 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.
Fall ANTH1720 S01 16823 TTh 9:00-10:20(02) (A. Scherer)

ANTH 1750. Bioarchaeology and Forensic Anthropology.
Bioarchaeology and forensic anthropology have common methodological roots (human osteology) but are oriented to answer very different questions. Both are grounded in the anthropological sub-disciplines of biological anthropology and archaeology. The focus in bioarchaeology is advancing our understanding of the human experience in the past. Bioarchaeologists study a range of topics including health, violence, migration, and embodiment. Forensic anthropology is an applied form of anthropology that is employed to document and interpret human remains in medicolegal contexts. The course will survey both fields while instructing in the methodologies and approaches of each. The course complements The Human Skeleton (ANTH 1720).
Spr ANTH1750 S01 24647 TTh 9:00-10:20(01) (A. Scherer)

ANTH 1830. The Pictured Text.
Writing makes language visible, and thus concerns images. Language also delimits the legibility of imagery. Turning words into images and images into words occurs at great speed around us. This course explores the relation of text and image across world traditions—Chinese, Mayan, Egyptian, Islamic, Greco-Roman, and others, extending up to the present. Topics include: calligraphy, context, scribal practice, the form and shape of writing, including typography, hidden or pseudo-writing, graffiti, and contemporary art.
Fall ANTH1830 S01 17046 W 3:00-5:30(05) (S. Houston)

ANTH 1910B. Anthropology of Place.
The anthropology of place serves as a unifying theme for the seminar by bridging anthropology’s subdisciplines and articulating with other fields of knowledge. Through readings and discussion, students will explore how place permeates people’s everyday lives and their engagement with the world, and is implicit in the meanings they attach to specific locales, their struggles over them, and the longings they express for them in rapidly changing and reconfigured landscapes. Enrollment limited to 20.
Spr ANTH910BS01 25480 M 3:00-5:30(13) (P. Rubertone)

ANTH 1911. Gender and Sexuality in the Middle East.
The aim of this course is to offer an overview of the key issues in the study of gender and sexuality with reference to the Middle East. It will provide a gendered understanding of prevailing structures, ideologies, social practices and trends for those students interested in Middle East societies, cultures and politics, as well as those interested in women and gender studies. While the course focuses on anthropological approaches, it is interdisciplinary in scope, with readings and theoretical underpinnings ranging from anthropology to history, sociology, political science, to cultural studies.
Fall ANTH1911 S01 16869 W 3:00-5:30(17) (N. Al-Ali)

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 16826 Th 4:00-6:30(04) (L. Fruzzetti)

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

An examination of the intellectual roots and the development of theory and method in anthropology, from the discipline’s origins in the nineteenth century to 1940, with an emphasis on sociocultural anthropology.
Fall ANTH2000 S01 16827 Th 4:00-6:30(04) (B. Singh)

A seminar exploring fundamental theoretical and ethnographic currents in 20th- and 21st-century cultural anthropology.
Spr ANTH2010 S01 25454 T 9:30-12:00 (K. Mason)

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 25456 M 9:00-11:30 (S. Besky)

ANTH 2045. Proposal Writing Workshop for Anthropological Fieldwork.
This course is designed for third-year graduate students in any subfield of anthropology or closely related fields who are writing grant proposals for dissertation research. Student grant proposals will be pre-circulated and worked on. Students will gain familiarity with the format for writing successful proposals, with the strategies needed to operationalize them, and with the everyday academic labor of both offering and responding to substantive feedback.
Fall ANTH2045 S01 16831 M 1:00-2:30 (R. Carter)

ANTH 2450. Exchange Scholar Program.
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 anthropology and other fields, and will cover a broad range of topical and geographic contexts.
Spr ANTH2450 S01 25457 T 4:00-6:30(16) (M. Gutmann)

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 16834 W 3:00-5:30(17) (A. Scherer)

ANTH 2520. Mesoamerican Archaeology and Ethnohistory.
Seminar focusing on current issues in the archaeology and history of Mesoamerica, including Mexico and Northern Central America. Draws on rich resources at Brown, including the John Carter Brown Library.
Spr ANTH2520 S01 25458 Th 4:00-6:30(17) (S. Houston)

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.
Spr ANTH2800 S01 25459 M 3:00-5:30(13) "To Be Arranged"

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 15252 Arranged "To Be Arranged"
Spr ANTH2970 S01 24154 Arranged "To Be Arranged"

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
**APMA 0160. Introduction to Scientific Computing.**
For students 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:** Spr 25635 MWF 9:00-9:50(02) (G. Pang)
- **Spr:** Spr 25482 MWF 12:00-12:50(05) (Y. Guo)
- **Fall:** Spr 25481 MWF 12:00-12:50(05) (V. Dobrushkin)
- **Spr:** Spr 25480 MWF 11:00-11:50(04) (L. Bienenstock)

**APMA 0300. Methods of Applied Mathematics I, II.**
This course will cover mathematical techniques involving ordinary differential equations used in the analysis of physical, biological, and economic phenomena. The course emphasizes established methods and their applications rather than rigorous foundation. Topics include: first and second order differential equations, an introduction to numerical methods, series solutions, and Laplace transformations.

- **Fall:** APMA0330 S01 16846 MWF 12:00-12:50(15) (Y. Guo)
- **Spr:** APMA0330 S01 25481 MWF 12:00-12:50(05) (V. Dobrushkin)

**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 16847 MWF 12:00-12:50(15) (V. Dobrushkin)
- **Spr:** APMA0340 S01 25482 MWF 12:00-12:50(05) (S. Akopian)

**APMA 0350. Applied Ordinary Differential Equations.**
This course provides a comprehensive introduction to ordinary differential equations and their applications. During the course, we will see how applied mathematicians use ordinary differential equations to solve practical applications, from understanding the underlying problem, creating a differential-equations model, solving the model using analytical, numerical, or qualitative methods, and interpreting the findings in terms of the original problem. We will also learn about the underlying rigorous theoretical foundations of differential equations. Format: lectures and problem-solving workshops.

- **Fall:** APMA0350 S01 16848 MWF 2:00-2:50(07) (S. Akopian)
- **Spr:** APMA0350 S01 25483 MWF 9:00-9:50(02) (B. Sandstede)

**APMA 0360. Applied Partial Differential Equations I.**
Course builds on APMA 0350 which covers ordinary differential equations and systems involving a single independent variable. We will look at processes with two or more independent variables formulated as partial differential equations (PDE) using concepts from multivariable calculus. We will see how problems are described quantitatively as PDEs, how seemingly unrelated contexts can result in similar equations; and develop methods for solution using analytical, numerical or qualitative methods. Contexts include first order equations; the second order wave equation and problems involving diffusion processes; steady state balances for systems in two or three dimensions; together with insights from theory.

- **Fall:** APMA0360 S01 16849 MWF 1:00-1:50(06) (M. Maxey)
- **Spr:** APMA0360 S01 25484 MWF 1:00-1:50(06) (H. Dong)

**APMA 0650. Essential Statistics.**
A first course in probability and statistics emphasizing statistical reasoning and basic concepts. Topics include visual and numerical summaries of data, representative and non-representative samples, elementary discrete probability theory, the normal distribution, sampling variability, elementary statistical inference, measures of association, Examples and applications from the popular press and the life, social and physical sciences. No prerequisites.

- **Spr:** APMA0650 S01 25485 MWF 3:00-4:20(10) (C. Lawrence)

**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.

- **Spr:** APMA1070 S01 25489 MWF 11:00-11:50(04) (L. Bienenstock)

**APMA 1080. Inference in Genomics and Molecular Biology.**
Massive quantities of fundamental biological and geological sequence data have emerged. Goal of APMA1080 is to enable students to construct and apply probabilistic models to draw inferences from sequence data on problems novel to them. Statistical topics: Bayesian inferences; estimation; hypothesis testing and false discovery rates; statistical decision theory; change point algorithm; hidden Markov models; Kalman filters; and significances in high dimensions. Prerequisites: One of following APMA1650, APMA1655, MATH1610, CSC1450; and one of the following APMA0160, CSC1040, CSC10150, CSC1170, CSC1190, CLPS0950, waiver for students with substantial computing experience and their acceptance of responsibility for their own computing.

- **Fall:** APMA1080 S01 16850 MWF 3:00-4:20(17) (C. Lawrence)

**APMA 1160. An Introduction to Numerical Optimization.**
This course provides a thorough introduction to numerical methods and algorithms for solving non-linear continuous optimization problems. A particular attention will be given to the mathematical underpinnings to understand the theoretical properties of the optimization problems and the algorithms designed to solve them. Topics will include: line search methods, trust-region methods, nonlinear conjugate gradient methods, an introduction to constrained optimization (Karush-Kuhn-Tucker conditions, mini-maximization, saddle-points of Lagrangians). Some applications in signal and image processing will be explored. Basic programming skills at the level of APMA 16 or CSCI 40 are assumed.

- **Fall:** APMA1160 S01 16851 MWF 10:00-10:50(14) (J. Darbon)

**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 16852 MWF 10:00-10:50(14) (Y. Shin)
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, 1655 or MATH 1610, or equivalent.
Spr APMA1200 S01 25491 TTh 9:00-10:20(01) (A. Matzavinos)

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.
Spr APMA1210 S01 25490 TTh 10:30-11:50(09) (Y. Shin)

APMA 1330. Methods of Applied Mathematics.
Fall APMA1330 S01 16853 MWF 1:00-1:50(06) (A. Matzavinos)

APMA 1360. Applied Dynamical Systems.
This course gives an overview of the theory and applications of dynamical systems modeled by differential equations and maps. We will discuss changes of the dynamics when parameters are varied, investigate periodic and homoclinic solutions that arise in applications, and study the impact of additional structures such as time reversibility and conserved quantities on the dynamics. We will also study systems with complicated “chaotic” dynamics that possess attracting sets which do not have an integer dimension. Applications to chemical reactions, climate, epidemiology, and phase transitions will be discussed.
Spr APMA1360 S01 25492 MWF 2:00-2:50(07) (G. Menon)

APMA 1650. Statistical Inference I.
APMA 1650 is 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: One year of university-level calculus. At Brown, this corresponds to MATH 0100, MATH 0170, MATH 0180, MATH 0190, MATH 0200, or MATH 0350. A score of 4 or 5 on the AP Calculus BC exam is also sufficient.
Fall APMA1650 S01 16854 TTh 2:30-3:50(03) (C. Klivans)
Spr APMA1650 S01 25493 TTh 9:00-10:20(01) (S. Punshon-Smith)

APMA 1655. Statistical Inference I.
Students may opt to enroll in 1655 for more in depth coverage of APMA 1650. Enrollment in 1655 will include an optional recitation section and required additional individual work. Applied Math concentrators are encouraged to take 1655.
Prerequisite (for either version): MATH 0100, 0170, 0180, 0190, 0200, or 0350.
Fall APMA1655 S01 16855 TTh 2:30-3:50(03) (H. Wang)
Spr APMA1655 S01 25495 TTh 2:30-3:50(11) (H. Wang)

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, 1655 or equivalent, basic linear algebra.
Spr APMA1660 S01 25496 TTh 2:30-3:50(11) ("To Be Arranged")

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. Prerequisites: A calculus-based course in probability or statistics (e.g. APMA1650 or MATH1610) is required, and some programming experience is strongly recommended. Prerequisite: MATH 0100, 0170, 0180, 0190, 0200, or 0350, or equivalent placement.
Fall APMA1690 S01 16856 MWF 2:00-2:50(07) (M. Harrison)

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 16857 MWF 9:00-9:50(01) (G. Menon)

APMA 1740. Recent Applications of Probability and Statistics.
This course develops the mathematical foundations of modern applications of statistics to the computational, cognitive, engineering, and neural sciences. The course is rigorous, but the emphasis is on application. Topics include: Gibbs ensembles and their relation to maximum entropy, large deviations, exponential models, and information theory; statistical estimation and the generative, discriminative and algorithmic approaches to classification; graphical models, dynamic programming, MCMC computing, parameter estimation, and the EM algorithm. For 2,000-level credit enroll in 2610; for 1,000-level credit enroll in 1740. Rigorous calculus-based statistics, programming experience, and strong mathematical background are essential. For 2610, some graduate level analysis is strongly suggested.
Fall APMA1740 S01 17073 TTh 10:30-11:50(13) (S. Geman)
Spr APMA1740 S01 25502 MWF 10:00-10:50(03) (M. Harrison)

APMA 1940Z. Probability in Quantum Mechanics.
We will start from scratch. The only prerequisites are some probability, statistics, and good math skills. We will be rigorous in making a careful accounting of the (few) assumptions that lead mathematically and inescapably to consequences that are almost impossible to believe. With an eye on some of the most startling and vexing of these, we will construct a minimum mathematical foundation sufficient to explore: the abrupt transition from the weird quantum to the familiar classical world; the uncertainty principles; teleportation; Bell's theorem and the Einstein-Bohr debates; quantum erasure; the Conway-Kochen "free-will theorem"; quantum computing; and (unbreakable) quantum encryption.
Spr APMA1940Z S01 26715 MWF 2:00-2:50(07) (S. Geman)

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 16858 TTh 1:00-2:20(08) (J. Mallet-Paret)
Spr APMA2200 S01 25497 TTh 1:00-2:20(08) (J. Mallet-Paret)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
The theory of the classical partial differential equations, 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 16859 TTh 9:00-10:20(02) (H. Dong)

The theory of the classical partial differential equations, 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
will be addressed. In particular, we will discuss in depth the discontinuous
section number and CRN to use when registering for this course.

APMA 2420. 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 APMA2420 S01 25499 MWF 11:00-11:50(04) (M. Maxey)

APMA 2450. Exchange Scholar Program.
Fall APMA2450 S01 15254 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.

Fall APMA2550 S01 16860 M 3:00-5:30(05) (C. Shu)

APMA 2560. 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 end finite element methods, and solution techniques. Homework
will include both theoretical and computational problems.

Spr APMA2560 S01 25500 M 3:00-5:30(13) (C. Shu)

APMA 2570B. Numerical Solution of Partial Differential Equations III.
We will cover finite element methods for ordinary differential equations
and for elliptic, parabolic and hyperbolic partial differential equations.
Algorithm development, analysis, and computer implementation issues
will be addressed. In particular, we will discuss in depth the discontinuous
Galerkin finite element method. Prerequisite: APMA 2550 or equivalent
knowledge in numerical methods.

Spr APMA2570B S01 25501 W 3:00-5:30(10) (J. Guzman)

APMA 2580A. Computational Fluid Dynamics.
The course will focus primarily on finite difference methods for viscous
incompressible flows. Other topics will include multiscale methods, e.g.,
molecular dynamics, dissipative particle dynamics and lattice Boltzmann
methods. We will start with the mathematical nature of the Navier-
Stokes equations and their simplified models, learn about high-order
explicit and implicit methods, time stepping, and fast solvers. We will
then cover advection-diffusion equations and various forms of the Navier-
Stokes equations in primitive variables and in vorticity/streamfunction
formulations. In addition to the homeworks the students are required to
develop a Navier-Stokes solver as a final project.
Fall APMA2580A S01 16990 W 3:00-5:30(17) (G. Kamiadakis)

APMA 2610. Recent Applications of Probability and Statistics.
This course develops the mathematical foundations of modern
applications of statistics to the computational, cognitive, engineering,
and neural sciences. The course is rigorous, but the emphasis is on
application. Topics include: Gibbs ensembles and their relation to
maximum entropy, large deviations, exponential models, and information
theory; statistical estimation and the generative, discriminative and
algorithmic approaches to classification; graphical models, dynamic
programming, MCMC computing, parameter estimation, and the EM
algorithm. For 2,000-level credit enroll in 2610; for 1,000-level credit enroll
in 1740. Rigorous calculus-based statistics, programming experience, and
strong mathematical background are essential. For 2610, some graduate
level analysis is strongly suggested.
Fall APMA2610 S01 17074 TTh 10:30-11:50(13) (S. Gean)
Spr APMA2610 S01 25503 MWF 10:00-10:50(03) (M. Harrison)

Part one of a two semester course that provides an introduction to
probability theory based on measure theory. The first semester (APMA
2630) covers the following topics: countable state Markov chains, review
of real analysis and metric spaces, probability spaces, random variables
and measurable functions, Borel-Cantelli lemmas, weak and strong laws
of large numbers, conditional expectation and beginning of discrete time
martingale theory. Prerequisites—undergraduate probability and analysis,
co-requisite—graduate real analysis.
Fall APMA2630 S01 16892 TTh 1:00-2:20(08) (K. Ramanan)

APMA 2640. Theory of Probability II.
Part two of a two semester course that provides an introduction to
probability theory based on measure theory. Standard topics covered
in the second-semester (APMA 2640) include the following: discrete
time martingale theory, weak convergence (also called convergence in
distribution) and the central limit theorem, and a study of Brownian motion.
Optional topics include the ergodic theorem and large deviation theory.
Prerequisites—undergraduate probability and analysis, co-requisite—
graduate real analysis.
Spr APMA2640 S01 25504 TTh 1:00-2:20(08) (K. Ramanan)

APMA 2670. Mathematical Statistics I.
This course presents advanced statistical inference methods. Topics
include: foundations of statistical inference and comparison of classical,
Bayesian, and minimax approaches, point and set estimation, hypothesis
testing, linear regression, linear classification and principal component
analysis, MRF, consistency and asymptotic normality of Maximum
Likelihood and estimators, statistical inference from noisy or degraded
data, and computational methods (EM Algorithm, Markov Chain Monte
Carlo, Bootstrap). Prerequisite: APMA 2630 or equivalent.
Fall APMA2670 S01 16863 Th 4:00-6:30(04) (B. Gidas)

APMA 2812A. An Introduction to Stochastic Control.
This is a course on the optimal control of random processes. Much of the
course will focus on discrete time and optimal control of Markov chains
(also called Markov Decision Theory in the context of Reinforcement
Learning). Various optimality criteria are introduced and questions of
existence of optimal controls and their characterization are addressed.
Applications from finance, engineering and optimal stopping will be
developed, and well as methods for numerical solution. Depending on
interests and background, models that evolve in continuous time and/or
with partial observations will also be considered. Prerequisites: APMA
2630/2640.
Fall APMA2812S01 16963 TTh 1:00-2:20(08) (P. Dupuis)

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.

APMA 2990. Thesis Preparation.
For graduate students who have met the residency requirement and are
continuing research on a full time basis.
Fall APMA2990 S01 15255 Arranged "To Be Arranged"
Spr APMA2990 S01 24156 Arranged "To Be Arranged"

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Archeology and Ancient World

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.
Spr ARCH0100 S01 25754 MWF 11:00-11:50(04) (L. Bestock)

ARCH 0407. Hadrian's Wall: Archaeological Skills, Methods, and History on the Northern Roman Frontier.
Explore the archaeology of one of Great Britain's grandest monuments, Hadrian's Wall, from the beginning of the fortification in 122AD to the present. Students will learn the basics of archaeological excavation, survey, and illustration, through hands-on, in-class labs - to understand the real, tangible ways archaeology can teach us about religion, race, the military, politics, architecture, and the everyday lives of people in Roman Britain. Note: this course can fulfill the archaeological methodology (field archaeology) requirement for Archaeology concentrators.
Fall ARCH0407 S01 17126 TTh 9:00-10:20(02) "To Be Arranged"

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.
Fall ARCH0420 S01 17123 MWF 2:00-2:50(07) (G. Andreou)

ARCH 0440. Archaeologies of the Ancient "Middle East".
What were Neanderthals really like? Why stop hunting and start farming? This course will explore these and other questions through an examination of the earliest archaeologies of the Middle East. Topics will include the evidence for the first hominids and humans in the region, the nature of hunter-gatherer existence, the origins of cultivation and pastoralism, and the rise of social inequality.
Fall ARCH0440 S01 17131 TTh 1:00-2:20(08) "To Be Arranged"

ARCH 0446. War and Peace in the Hebrew Bible and its Environment (JUDS 0670).
Interested students must register for JUDS 0670.
Fall ARCH0446 S01 16917 Arranged "To Be Arranged"

ARCH 0520. Roman Archaeology and Art.
Anyone who has ever watched 'Gladiator', 'Spartacus', 'Life of Brian' or ' Bugs Bunny. Roman Legion Hare' has some image of Rome, the Romans and their empire. This course, while exploring and assessing these influential popular preconceptions, introduces a more balanced view of Roman archaeology and art, examining not only the 'eternal city' of Rome, but its vast and diverse imperial domain.
Spr ARCH0520 S01 25756 MWF 1:00-1:50(06) "To Be Arranged"

ARCH 0530. Hannibal ad Portas! Fact and Fiction on Carthage and the Punic World.
"Hannibal stands at the gates": Roman parents would terrify their children with these words. And many others have been haunted by Hannibal Barca: the Carthaginian general still fascinates the European imagination, not least his epic trek over the Alps with three dozen elephants. This course explores fact and fiction about Hannibal and his world, holding up historical and mythic records against hard archaeological evidence. Enrollment limited to 50.
Fall ARCH0530 S01 17122 MWF 12:00-12:50(15) (P. Van Dommelen)

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."
Fall ARCH0770 S01 17121 MWF 1:00-1:50(06) (Y. Hamilakis)

ARCH 1870. Environmental Archaeology.
From Neanderthals on the brink of extinction to the smog of the Industrial Revolution, humans have been impacted by the environment for millions of years. How has climate change affected the development of human society? How have people adapted to their environments in the past? What does "sustainability" mean over the long term? Environmental archaeology is the study of these questions through the use of scientific techniques to analyze soils, plants, artifacts, and human and animal remains from ancient archaeological contexts. These methods will be introduced with an eye toward how they allow us to interpret human-environmental interactions in the past, as well as the present and future.
Fall ARCH1870 S01 17127 TTh 1:00-2:20(08) (J. Bates)

ARCH 1900. The Archaeology of College Hill.
A hands-on training class in archaeological field and laboratory techniques. Topics include the nature of field archaeology, excavation and survey methodologies, archaeological ethics, computer technologies (such as GIS), and site and artifact analysis and conservation. Students will act as practicing archaeologists (i.e., actually dig and analyze the results!) through the investigation of local historical and archaeological sites in the College Hill area (e.g. the First Baptist Church of America and Brown University's Quiet Green).
Fall ARCH1900 S01 17129 W 3:00-5:30(17) "To Be Arranged"

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

Honors students in Archaeology and the Ancient World who are completing their theses should enroll in this course in their final semester. 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.

ARCH 2250. Island Archaeology in the Mediterranean.
The Mediterranean is a world of islands, par excellence, and the island cultures that have developed there over the millennia have great archaeological distinctiveness. This seminar will consider the concept of insularity itself, in cross-cultural archaeological, anthropological, and historical perspective. We will then turn to the rich, specifically Mediterranean literature on island archaeology (exploring issues of colonization, settlement, interaction).
Fall ARCH2250 S01 17128 W 3:00-5:30(17) (J. Chen)

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

ARCH 2981. Thesis Research.
Individual reading for the Master's degree. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

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.
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.
Fall BIOL0030 S01 15735 TTh 9:00-10:20(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 24390 T 4:00-6:30(16) (M. Flynn)

BIOL 0080. 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.
Spr BIOL0080 S01 24466 T 4:00-6:30(16) (B. Bready)

BIOL 0100. Living Biology at Brown and Beyond.
This unique first-year seminar taught by Dean Smith has 3 goals: 1) introduce students to the people, projects, and opportunities in Biology at Brown, 2) foster and cultivate student STEM identities and interests, 3) arm students with personal, professional and academic skills to help them succeed in Biology at Brown (and beyond). Students will visit faculty research labs, learn novel lab skills, engage in active research talks from Professors, read and discuss timely books like 'The Immortal Life of Henrietta Lacks', and more. LiBio is especially tailored to students from historically underrepresented groups, but open to all.
Fall BIOL0100 S01 15739 Th 4:00-6:30(04) (K. Smith)

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.
Fall BIOL0150A S01 15776 Th 5:00-6:00PM (J. Hall)

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.
Spr BIOL0150D S01 24467 M 12:00-2:00 (T. Achilli)

BIOL 0160. 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 world population of potentially 10 billion, while sustaining biodiversity and environmental quality. Course will include two papers and assistance from Writing Fellows; feedback from first paper will be available when writing second paper. Enrollment limited to 50.
Spr BIOL0160 S01 24421 TTh 10:30-11:50(09) (P. Heywood)

BIOL 0170. Biotechnology in Medicine.
Introduces undergraduates to the main technological advances currently dominating the practice of medicine. Provides an overview of the objectives, techniques, and problems related to the application of biomedical technology to the diagnosis and treatment of disease and the contemporary health care industry. Topics include: pharmaceutical development and formulation; organ replacement by prosthetics and transplantation; medical imaging; tissue engineering, therapeutic cloning, regenerative medicine; stem cells; societal, economic, and ethical issues. This course does carry Biology concentration credit.
Fall BIOL0170 S01 15822 MWF 1:00-1:50(06) (T. Achilli)

BIOL 0180. The Biology of AIDS.
AIDS represents an example of the vulnerability of humans to new infectious agents. We will review some human infectious diseases including small pox yellow fever and influenza, and then explore AIDS/ HIV. First characterized in 1981, AIDS became the leading cause of death in U.S. males aged 25-44 within a decade. We will examine what factors make HIV such a potent pathogen. The course is intended for students beginning in biology. Expected: BIOL 0200, or equivalent placement. This course does carry Biology concentration credit.
Spr BIOL0180 S01 24947 MW 8:30-9:50(02) (P. Shank)

BIOL 0190E. 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, identifying and growing these plants. Enrollment limited to 19. Students MUST register for the lecture section and the lab.
Fall BIOL0190E S01 15740 MW 3:00-4:20(17) (F. Jackson)

BIOL 0190F. 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 19 first year students.
Fall BIOL0190F S01 15742 TTh 1:00-2:20(05) (M. Tatar)

BIOL 0190P. Pride and Prejudice in the Development of Scientific Theories.
We will examine how the pace and shape of scientific progress is affected by the social/cultural context and the "personality" of the individual. We will look into how the interplay between society and the individual affects how scientific theories arise, are presented, are debated and are accepted. The course will initially focus on Charles Darwin and his theory of Natural Selection using the biography of Adrian Desmond and James Moore, "Darwin: The Life of a Tormented Evolutionist." Enrollment limited to 19 first year students.
Fall BIOL0190P S01 15778 TTh 2:30-3:50(03) (S. Heifand)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
BIOL 0190R. Phage Hunters, Part I.
A research-based lab class for freshmen; both semesters are required in the sequence. Students will isolate and characterize a bacteriophage viruses found in the soil. Lab work includes isolation and purification of your own phage, DNA isolation and restriction mapping, and EM characterization of your phage. Several phages will be selected for genome sequencing over Winter Recess, and annotated in the spring. One hour lecture, discussion, and 3 hours lab per week. Expected: AP Biology or equivalent, and HS chemistry. Instructor permission required. Admittance based on review of applications in the first class. Limited to 19 freshmen.
Fall BIOL0190R S01 15682 M 3:00-5:30(05) (S. Taylor)

BIOL 0190S. Phage Hunters, Part II.
A research-based laboratory/class for freshmen; both semesters are required. Students will isolate and characterize a bacteriophage viruses found in the soil. Lab work includes isolation and purification of your own phage, DNA isolation and restriction mapping, and EM characterization of your phage. Several phages will be selected for genome sequencing over Winter Recess, and annotated in the spring. One hour lecture/ discussion, and 3 hours lab per week. Expected: AP Biology or equivalent, HS chemistry, and permission of the instructor. Students are expected to take fall and spring courses in the sequence. Enrollment limited to 19 first-year students. Instructor permission.
Spr BIOL0190S S01 24327 W 3:00-5:30(10) (S. Taylor)
Spr BIOL0190S S01 24327 F 3:00-5:30(10) (S. Taylor)

BIOL 0190U. The Lives of Plants.
This course examines the lives of plants through their development, structure, function, reproduction, and responses to environmental conditions. Enrollment limited to 19 first year students.
Fall BIOL0190U S01 15779 TTh 10:30-11:50(13) (P. Heywood)

BIOL 0200. The Foundation of Living Systems.
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.
Spr BIOL0200 S01 24424 MWF 11:00-11:50(04) (K. Miller)

BIOL 0210. Diversity of Life.
This course will explore biological diversity – the number of taxa, and the functions, and processes that support life – from the perspectives of ecology and evolutionary biology. It will draw on examples and case studies from the geological record, functional morphology, the evolution of organ systems in vertebrates, genomics, behavior and sexual selection in birds and invertebrates. Overarching themes will emphasize that taxonomic diversity is an emergent property of complex life on Earth, and the importance of diversity of biological functions and processes in generating and maintaining taxonomic diversity. The course is open to all students.
Fall BIOL0210 S01 15743 MWF 11:00-11:50(16) (J. Kellar)

BIOL 0280. Biochemistry.
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.
Spr BIOL0280 S01 24431 TTh 1:00-2:20(08) (A. Salomon)

BIOL 0285. Inquiry in Biochemistry: From Gene to Protein Function.
In this inquiry-based research course, students work in teams to formulate and test a hypothesis about how a change in genetic sequence affects enzyme function. Students will cultivate skills in scientific visualization, experimental design, data analysis, and laboratory techniques in molecular biology and biochemistry. In discussion, students will learn scientific writing through peer editing and iterative revisions to write a full scientific paper. This course is WRIT designated and will prepare students for writing an honors thesis. Expected: Students have previously taken or be concurrently enrolled in BIOL 0280. Enrollment in one lab section and one discussion section is required.
Spr BIOL0285 S01 24443 M 1:00-5:00 (K. Cohen)
Spr BIOL0285 S02 24444 Th 2:30-6:30 (K. Cohen)

BIOL 0380. The Ecology and Evolution of Infectious Disease.
Infectious diseases remain among the leading causes of death worldwide, and this burden is disproportionately borne by children living in low- and middle-income countries. Thus management of infectious disease remains a critical intellectual challenge in the 21st century. This course will develop and apply ecological and evolutionary theory to infectious microbes (and their hosts) via the detailed examination of a number of case studies. This will be accomplished by a combination of lectures, discussions, and readings drawn mainly from the primary literature. Assessment will be based on biweekly problem sets, two midterms and one final exam. Expected: BIOL 0200 or equivalent.
Fall BIOL0380 S01 15744 MW 10:00-10:50(14) (D. Weinreich)

Many questions about the workings of living creatures can be answered by joining math, physics, and biology. We will identify basic physical science concepts that help biologists understand the structure and function of animals, plants, and microorganisms, and use these to study how the physical world constrains and facilitates the evolution of the extraordinary design and diversity of organisms. For first and second year students; others by permission. Recommended background: BIOL 0200, or equivalent. Enrollment limited to 40. Instructor permission required.
Spr BIOL0400 S01 24923 MW 2:00-2:50(07) (S. Swartz)

BIOL 0410. Invertebrate Zoology.
A survey of invertebrate animals emphasizing evolutionary patterns and ecological relationships. Functional morphology, physiology, reproduction, development, and behavior of invertebrates will be examined. Laboratory exercises and two separate day-long field trips provide firsthand experience with the animals. Expected: BIOL 0200 or equivalent. Enrollment limited to 44. Students MUST register for the lecture section and a lab.
Fall BIOL0410 S01 15746 TTh 9:00-10:20(02) (E. Ewanchuk)

The principles, concepts, and controversies involved in the study of the distribution and abundance of plant and animal populations and their integration into natural communities. Emphasizes interactions among organisms and the hierarchical nature of ecological processes affecting individuals, populations, and communities. Expected: BIOL 0200 (or equivalent) and MATH 0090. Lectures and weekly discussion.
Spr BIOL0420 S01 24408 Th 9:00-10:20(01) (J. Wittman)

BIOL 0430. The Evolution of Plant Diversity.
Examines the evolutionary history of plants from a phylogenetic perspective. Introduces the science of phyllogenetics - how to infer phylogenies and how to use them to understand organismal evolution. Highlights major trends in plant evolution over the past 400 million years. Lectures survey major plant lineages, with special focus on flowering plants. Weekly labs, field trips, and assignments stress basic plant anatomy and morphology, identification, and learning the local flora. Expected: BIOL 0200 (or equivalent placement).
Spr BIOL0430 S01 24410 TTh 9:00-10:20(01) (F. Jackson)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
BIOL 0440. Inquiry in Plant Biology: Analysis of Plant Growth, Reproduction and Adaptive Responses. This course focuses on what plants do and how they do it. Introduces the biology of plants, their growth and development, structural features, and their cellular and organisinal responses to key stimuli. Examines physiological, reproductive and developmental strategies throughout the plant life cycle and in relation to environmental challenges. During laboratory section meetings, students pursue inquiry-based group research projects addressing novel questions about mechanisms that control plant growth and development. Laboratory section is required. Prerequisites: One Brown course with laboratory section in either Biology or Chemistry. Enrollment limited to 24 students.

Spr BIOL0440 S01 24767 TTh 10:30-11:50(09) (A. DeLong)

BIOL 0470. Genetics. Genetic 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 15780 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 15749 MWF 9:00-9:50(01) (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. 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: 40 undergraduates.-20 juniors and 20 sophomores. Registration for seniors requires permission from the instructor.

Spr BIOL0495 S01 24412 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 24445 MW 8:30-9:50(02) (P. Heywood)

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. Expected: BIOL 0200 (or equivalent placement). Students MUST register for the lecture section, conference, and the lab. Enrollment limited to 106.

Spr BIOL0510 S01 24346 MWF 1:00-1:50(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 15689 TTh 2:30-3:50(03) (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 15823 TTh 10:30-11:50(13) (J. Stein)

Spr BIOL0800 S01 24469 MWF 10:00-10:50(03) (C. Hai)

BIOL 0810. Applied Cell and Molecular Biology. Applied cell and molecular biology focuses on the structure and function of macromolecules and cells and how they are altered in disease and therapy. This course will explore physical principles underlying cell function, along with biophysical approaches for solving problems of cell and molecular biology of both a basic and applied nature. Cutting-edge molecular and cellular-based therapies will be discussed throughout this course; this includes viral gene delivery constructs, novel platforms for tissue engineering, CRISPR genome editing, and immune checkpoint therapy. This course is particularly suitable for undergraduate students interested in graduate school, undergraduate research, biotechnology, or research-based careers.

Spr BIOL0810 S01 24475 TTh 9:00-10:20(01) (M. Johnson)

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.

Fall BIOL0940A S01 15791 Th 4:00-6:30(04) (W. Atwood)

BIOL 0940B. Sophomore Seminars in Biology: Life in a Shell. This Sophomore seminar is an examination of broad themes in whole animal physiology with an emphasis on environmental adaptations. The foundation of the course will be the instructor’s recent book “Life in a Shell: A Physiologist’s View of Turtle.” A consideration of this iconic animal’s novel biological traits will lead into comparisons with our own biology and that of other animals. Topics: respiration, circulation, metabolic rate, buoyancy control, overwintering, migration, reproduction, and bone structure and function. Relevant original research papers will be used. Mandatory S/NC; enrollment of 20 students; override required. Expected: BIOL 0200 or equivalent placement credit.

Fall BIOL0940B S01 15760 T 4:00-6:30(09) (D. Jackson)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
BIOL 0940E. Precision Medicine or Privileged Medicine? Addressing Disparities in Biomedical Research.
This course examines the biomedical research behind precision medicine, disparities in the inclusiveness of this research, and implications of these disparities for the relevance of precision medicine innovations for people and places in Rhode Island. We will focus on these four questions: What new knowledge is making precision medicine possible? Who has been the focus of the biomedical research generating this knowledge, and why? How might inclusiveness of this research impact healthcare disparities in Rhode Island? What is needed to improve the design and outcomes of precision medicine research so that it provides benefits and mitigates harms for all?
Fall BIOL0940E S01 24476 T 4:00-6:30(16) (R. Campbell)

BIOL 0960. Independent Study in Science Writing.
BIOL 0960 (fall/spring) is a half credit Independent Study in Science Writing course incorporating a nontechnical science journalism component into the Biology curriculum. Assignments may include investigative or analytical reviews, or feature articles on ethical or social impacts of new discoveries in the biological sciences. BIOL 0960 requires the submission of a formal project proposal completed collaboratively by the student and faculty mentor (see the Biology Undergraduate Education research page for details). BIOL 0960 is not for concentration credit in the biological sciences programs.
Fall BIOL0960 S01 24448 M 2:00-5:00 (G. Williams)

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 or 0470 or 0500, or instructor permission. Graduate students register for BIOL 2050.
Fall BIOL1050 S01 15792 TTh 1:00-2:20(08) (K. Miller)

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 15828 MTh 2:00-3:20 (J. Schell)

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 junior/senior -- graduate students, seniors, then juniors. (Not for first and second-year undergraduates.)
Spr BIOL1100 S01 24477 M 3:00-5:30(13) (D. Horrigan)

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 background: BIOL 0200, 0280, 0470, or 0500. Enrollment limited to 20 juniors and seniors. Instructor permission required.
Fall BIOL1110 S01 15829 W 3:00-5:30(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 24478 Th 6:30-7:50 (J. Scott)

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 15830 Th 3:00-5:50 (D. Hoffman-Kim)

BIOL 1150. Stem Cell Engineering.
Stem cell engineering focuses on using adult, embryonic, and induced pluripotent 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 can be used for tissue engineering and cell-based regenerative therapies. We will also discuss the ethical, legal, and regulatory issues that accompany current and emerging stem cell engineering endeavors. The course will use an inverted lecture and classroom discussion format to effectively deliver relevant information. Emphasis is placed on oral and written communication skills applied to assignments, tests, and individual projects. As an additional part of this course, students will receive hands-on training in how to culture cells and assess samples for stemness characteristics in a group laboratory setting.
Spr BIOL1150 S01 24910 Th 3:00-5:20 (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 15831 MWF 1:00-1:50(06) (C. Hae)

BIOL 1222A. Current Topics in Functional Genomics.
A technological revolution in genomics has exponentially increased our ability to gather biological data. A host of new methods and types of analysis has arisen to accommodate this dramatic shift in data collection. The broad scope of inquiry has ushered in an era of "system-wide" approaches and brute-force strategies where rare signals can be detected and studied. In this seminar we will cover papers that embody this new approach. Students typically have taken an advanced undergraduate-level course in biology.
Spr BIOL1222A S01 24904 Arranged (W. Fairbrother)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
BIOL 1250. Host-microbiome Interactions in Health and Disease. Will focus on current understanding of how various microbiomes communicate and interact with the host and the factors that influence these interactions. We will discuss how the new technologies such as metagenomics and metabolomics have enhanced our understanding of host-microbiome interactions in health and disease. Students will have the opportunity to participate in discussions on how to apply recent discoveries to disease processes, health restoration and maintenance. The course will help students develop skills in critical thinking and in reading and evaluating original scientific literature. Expected: students with a background in basic microbiology (BIOL 0530 or its equivalent). 20 enrollment.

Spr B1OL1250 S01 24350 Th 2:30-5:30 (S. Vaishnavah)

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 15795 TTh 2:30-3:50(03) (A. Salomon)

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 OR BIOL 0470 OR BIOL 0500.

Fall BIOL1290 S01 16092 MW 3:00-4:20(17) (A. Zhirkovich)

BIOL 1300. Biomolecular Interactions: Health, Disease and Drug Design. Interactions between the molecules of life-proteins, RNA, DNA, membrane components-underlie all functions necessary for life. This course focuses on how nature controls these interactions, how these interactions can go awry in disease, and how we can learn the rules of these interactions to design drugs to treat disease. Students will review the physical basis of molecular interactions, learn classic and state-of-the-art high-resolution and high-throughput tools used to measure interaction, and survey the experimental and computational strategies to harness these interactions using a case study in rational drug design. Prerequisite: Introductory Biochemistry (BIOL 0290). Enrollment limited to 20; instructor permission.

Fall BIOL1300 S01 15833 M 3:00-5:30(05) (N. Fawi)

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.

Spr BIOL1310 S01 24764 MW 8:30-9:50(02) (K. Wharton)

BIOL 1330. Biology of Reproduction. This course is an advanced, seminar-based course. Primary literature is emphasized to complement the format of extensive student seminar presentations. It is intended 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 0500 or 1050), and two additional Biology courses above the introductory (BIOL 0200) level. Enrollment limited to 20.

Spr BIOL1330 S01 24447 M 3:00-5:30(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 16479 W 3:00-5:30(17) (J. Wittman)

BIOL 1430. Population Genetics. Population genetics considers the genetic basis of evolution: temporal changes in the genetic composition of populations in response to processes such as mutation, natural selection and random sampling effects. Starting from first principles, this course will develop a theoretical understanding of these dynamics. We will also explore the application of these tools to genomic-scale data in order to quantify the influence of various evolutionary processes at work in natural populations. Assessments will be based on problem sets, two midterm exams and one final exam. Prerequisites: MATH 0100 and one of BIOL 0470 or 0480, or permission.

Fall BIOL1430 S01 16480 MW 11:00-11:50(16) (D. Weinreich)

BIOL 1450. Community Ecology. This course will explore foundational concepts in community ecology, and will draw on examples and case studies from marine and terrestrial ecosystems, including species-rich tropical rain forests and coral reefs, the marine intertidal and benthic environments, and species-poor forests and grasslands of the temperate zone. Overarching themes will emphasize theoretical frameworks to understand the evolutionary origins and maintenance of this biological diversity. This will be accomplished using traditional lectures, weekly student-led discussions, readings of the primary literature, and class activities. Expected background: BIOL 200 or equivalent placement; and BIOL 0420; OR instructor permission.

Spr BIOL1450 S01 24921 MW 10:00-10:50(03) (J. Kellner)

BIOL 1465. Human Population Genomics. An introduction to human genomics and the evolutionary forces that shape observed genetic variation across humans today. Topics will include the relationship among humans and other primates, human population genetics and genomics, and examples of the concomitant evolution of both cultural traits and domesticated organisms. Assignments include a class presentation and reviewing papers on a selected topic. Expected background: BIOL 0470 or 0480, and BIOL 0495, PHP 2500, or equivalent. Enrollment limited to 25. Instructor permission required.

Fall BIOL1465 S01 16080 Th 1:00-2:20(08) (E. Huerta-Sanchez)

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 15752 TTh 9:00-10:20(02) (D. Sax)

BIOL 1495. 500 Million Years of Land Plants. Explores the evolution of terrestrial plants and the ecosystems they structure. Introduces the fossil record of plants and basic patterns of plant diversification on land. Highlights major trends in the evolution of plant morphology, anatomy, and ecology. Lectures survey the diversity and community structure of different geological time periods. Weekly discussion sections, field trips, and assignments examine major evolutionary trends, particularly with regard to climatic changes over time. Expected: BIOL 0400, BIOL 0430, (or equivalent placement). Enrollment limited to 15 students; instructor permission; register for section and conference.

Spr BIOL1495 S01 24918 MW 9:00-9:50(02) "To Be Arranged"
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 15695 MW 8:30-9:50(01) (L. Brossay)  
BIOL 1540. Molecular Genetics.
Even in this era when whole genome DNA sequencing has become routine, there are still thousands of eukaryotic genes with unknown functions. Genetic screens for mutations that alter pathways of interest remain the premier approach to understanding gene function in the context of the organism. In Molecular Genetics students will learn the key concepts involved in designing and interpreting genetic screens using the powerful tools available in model animal, plant, and fungal organisms. Students will also learn how to understand and analyze results presented in the primary scientific literature. Furthermore, students will gain an appreciation of how the field of genetics has changed through discoveries and technological advances made over the past 50 years. Graduate students should register for BIOL 2540.
Spr BIOL1540 S01 24448 TTh 2:30-3:50(11) (J. Bender)  
BIOL 1545. Human Genetics and Genomics.
This course will exemplify the power of genetically informed approaches to understanding human biology. It is intended for advanced undergraduate students and graduate students; prerequisites include BIOL0470 or equivalent. The course is based in lectures, reading material (textbook and primary literature), and in-class discussions. Course topics include: medical genetics and genomics; methods to study human genotypes and related phenotypes; industry-related topics; and ethical and societal implications of genome science. It will benefit students with career interests in basic science, medicine, biotechnology, or science policy. Enrollment is limited to 20 students; selection will be based on seniority, prerequisites, and registration order.
Spr BIOL1545 S01 24449 TTh 9:00-10:20(01) (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 significant 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 24351 MWF 11:00-11:50(04) (R. Bungiro)  
BIOL 1555. Methods in Informatics and Data Science for Health.
The goal of this course is for students to develop a solution that uses data science and informatics approaches to address a biomedical or health challenge. This course will teach informatics and data science skills needed for public health and biomedical research. Emphasis will be given to algorithms used within the context of biomedical research and health care, including those used in biomolecular sequence analysis, electronic health records, clinical decision support, and public health surveillance. This course has been developed as a Course-based Undergraduate Research Experience (CURE), where students will gain experience with the scientific method, its application, and presentation.
Spr BIOL1555 S01 24391 TTh 10:30-11:50(09) (N. Sarkar)  
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. Prerequisites: BIOL 0280, 0470, or 0530, or instructor permission.
Fall BIOL1560 S01 15699 MWF 9:00-9:50(01) (A. Jamieson)  
BIOL 1565. Survey of Biomedical Informatics.
Survey course provides overview of field of biomedical informatics. Topics include computer science, healthcare, biology, social science. This course is designed to be complementary to BIOL 1555. Emphasis given to understanding the organization of biomedical information, effective management of information using computer technology, impact of such technology on biomedical research, education, patient care. Major aim explores the process of developing and applying computational and information science techniques for assessing current information practices, determining information needs of health care providers and patients, developing interventions or supporting clinical practice using informatics, and evaluating the impact of informatics solutions from a biomedical perspective.
Fall BIOL1565 S01 15736 TTh 10:30-11:50(13) (N. Sarkar)  
This course covers the field of evaluation of health information systems (HIS) in a range of roles and environments, in the US and worldwide. It includes topics in health information system (HIS) design and deployment, healthcare workflow, quantitative and qualitative evaluation methods and socio-technical environment for HIS. Emphasis is given to understanding the range of evaluation questions that can be asked, identifying the key stakeholders, understanding available evaluation techniques, and designing rigorous but achievable studies. Examples will include Open Source systems, medical Apps, and economic evaluation, the role of evaluation frameworks and theories, and notable HIS successes and failures. Recommended: past or concurrent enrollment BIOL 1565 or a public health course covering clinical research.
Fall BIOL1575 S01 15737 TTh 1:00-2:20(08) (H. Fraser)  
BIOL 1595. Artificial Intelligence in Biomedicine.
This course will teach the fundamental theory and methods of artificial intelligence (AI) alongside their application to the biomedical domain. It will give a representative overview of traditional methods as well as modern developments in the areas of (deep) machine learning, natural language processing and information retrieval. The course is designed to be accessible to non-computer science audiences and will not require extensive prior programming experience. The course will be accompanied by practical assignments applying the discussed techniques in a biomedical context. Understanding of formal theoretical knowledge will be assessed in a final exam.
Spr BIOL1595 S01 24392 TTh 9:00-10:20(01) (C. Eickhoff)  
BIOL 1600. Development of Vaccines to Infectious Diseases.
Provides background steps involved in vaccine development, from conceptualization to production to deployment. Considers infectious diseases and associated vaccines in context of community health. Appropriate for students wanting to gain an understanding of vaccine science. Provides a foundation for advanced courses in immunology and infectious disease, biomedical research, or medical/graduate studies. Activities include a weekly section meeting for discussion of relevant primary literature, and a final project of the student’s choice in the form of an in-class presentation, a research paper or an approved alternative format. Expected: BIOL 0200 or equivalent placement; BIOL 0530, and at least one additional biology course.
Spr BIOL1600 S01 24352 MW 3:00-4:20(10) (R. Bungiro)  
BIOL 1820. Environmental Health and Disease.
Humans live, work, and play in complex chemical environments. BIOL1820 examines how environmental exposures impact human health and contribute to disease. The course covers basic concepts in toxicology, epidemiology, and safety assessment, and is divided into 4 sections: radiation, lead, perfluorinated chemicals, and endocrine disruptors. For each section, students will examine the molecular mechanisms that mediate toxicity, learn how toxicant exposure impacts physiology, evaluate exposure risk, and discuss issues of environmental justice. Prerequisites: introductory level biology and chemistry. BIOL 1820 is designed to be accessible to non-computer science audiences and will not require extensive prior programming experience. The course will be accompanied by practical assignments applying the discussed techniques in a biomedical context. Understanding of formal theoretical knowledge will be assessed in a final exam.
Spr BIOL1820 S01 24623 TTh 10:30-11:50(09) (J. Plavio)
BIOL 1865. Toxicology.
Toxicology is the science that describes the adverse biological effects of exogenous chemical and physical stressors, including environmental, industrial, and agricultural chemicals and pharmaceuticals. This course will introduce the principal biological processes that determine an organism’s response to a toxicant, including absorption, distribution through a biological system, metabolism, elimination, and effects at the site(s) of action. We will discuss modern challenges in toxicology, such as assessing toxicity of mixtures and testing some of the thousands of untested chemicals in commerce. The material will be presented in lecture and student-led discussions, with readings from the toxicology literature. Suggested prerequisites include BIOL 0280 (biochemistry), CHEM 0350 (organic chemistry), and BIOL 600 (principles of physiology); or BIOL 1520 (Environmental Health and Disease) or BIOL 2860 (Molecular Mechanisms of Disease); or instructor approval.

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. Projects can serve as the basis for Honors theses, or to fulfill research requirements in a Bio-Med concentration program. Students planning to use 1950/1960 to fulfill a concentration requirement must receive approval from the concentration advisor. No more than two (2) semesters of BIOL 1950/1960 may be used toward a concentration program in the biological sciences. Faculty from outside the Division may supervise projects for bio-med program concentrators, but should do so using their Department's own Independent Study course number.

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. Projects can serve as the basis for Honors theses, or to fulfill research requirements in a Bio-Med concentration program. Students planning to use 1950/1960 to fulfill a concentration requirement must receive approval from the concentration advisor. No more than two (2) semesters of BIOL 1950/1960 may be used toward a concentration program in the biological sciences. Faculty from outside the Division may supervise projects for bio-med program concentrators, but should do so using their Department's own Independent Study course number.

BIOL 1970A. Stem Cell Biology.
Senior seminar course will provide an interactive forum by which up to twenty seniors (and qualified juniors with permission) will explore the biology of stem cells from their humble beginnings in the embryo to their potential use in regenerative medicine. The potency and regulation of embryonic and adult stem cell populations derived from diverse organisms will be contrasted with laboratory-derived human stem-like cells for biomedical applications. Critical reading of classical and modern literature in the field of stem cell biology will form the basis of student-led presentations, papers and ethical forums. Required for PhD students in the MCB Graduate Program; all others must obtain instructor permission. Enrollment is limited to graduate students. Fall BIOL1970A S01 15796 M 2:00-4:30 (R. Freiman)

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.
Spr BIOL2010 S01 24451 T 10:00-1:00 (N. Neretti)

This course, taken the second semester, goes in depth into the numerous strategies in biotechnology. Significant differences in the strategies of small companies versus large companies, and device companies versus drug companies will be discussed with ample use of biotechnology case studies. At the end of this course, the successful student will: Understand the process of managerial decision making in the pharma/biotech industry. Understand the basic principles of Decision Science, the application of quantitative analysis (modeling) to inform managerial decision making. Gain exposure to basic frameworks and tools used by management consultants to define strategic options.
Spr BIOL2018 S01 24479 M 5:00-7:30 (Y. Jong)

This course provides a comprehensive overview of the primary functional roles and steps involved in developing and commercializing a novel technology/scientific breakthrough within the biotechnology industry. This course is particularly suitable for students interested in pursuing a career within a biotechnology company, or for those interested in developing an in-depth knowledge of how the science of biotechnology becomes real world products. Pre Requisites: Foundations of Living Systems (BIOL0020), Principles of Physiology (BIOL0080), and Principles of Economics (ECON0110)/equivalent or instructor's permission is required.
Fall BIOL2020 S01 15835 Th 4:00-6:30(04) (J. Scott)

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, organelle biogenesis and inheritance, cell cycle control). Required for PhD students in the MCB Graduate Program; all others must obtain instructor permission. Enrollment is limited to graduate students.
Fall BIOL2030 S01 15797 F 10:00-11:35 (A.DeLong)
Fall BIOL2030 S01 15797 MTTh 9:00-10:20 (A. DeLong)

BIOL 2040. Ultrastructure/Bioimaging.
This course examines microscopy and image analysis in the life sciences. Theoretical and practical aspects of microscopy will be discussed. Students will obtain hands-on experience with electron microscopy, light microscopy, fluorescence microscopy, and confocal microscopy. Students will learn to display images in 3D. For graduate students and advanced undergraduates. Instructor permission required.
Spr BIOL2040 S01 24452 M 2:00-5:00 (G. Williams)

BIOL 2050. Biology of the Eukaryotic Cell.
(Undergraduate students should register for BIOL 1050.)
Fall BIOL2050 S01 15798 Th 1:00-2:20(08) (K. Miller)

BIOL 2075. Evaluation of Health Information Systems.
This course covers the field of evaluation of health information systems (HIS) in a range of roles and environments, in the US and worldwide. It includes topics in health information system (HIS) design and deployment, healthcare workflow, quantitative and qualitative evaluation methods and socio-technical environment for HIS. Emphasis is given to understanding the range of evaluation questions that can be asked, identifying the key stakeholders, understanding available evaluation techniques, and designing rigorous but achievable studies. Examples will include Open Source systems, medical Apps, and economic evaluation, the role of evaluation frameworks and theories, and notable HIS successes and failures.
Fall BIOL2075 S01 15738 Th 1:00-2:20(08) (H. Fraser)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
BIOL 2089. The Importance of Intellectual Property in Biotechnology.
This course delves into the various roles of intellectual property in biotechnology. In addition to providing a solid foundation in the fundamentals of intellectual property, the course will use case studies in biotechnology to explore in depth the interplay between specific scientific breakthroughs and intellectual property. An understanding of the science of biotechnology is critical for advanced understanding of the value and possibilities of biotechnology intellectual property.
Fall BIOL2089 S01 15838 W 4:00-5:30 (J. Morgan)

BIOL 2145. Molecular Targets of Drug Discovery.
This course emphasizes the role of cell physiology in the identification of drug targets and the development of novel drugs. Specific protein drug targets such as G-protein coupled receptors will be examined in detail from identifying a target to development of drugs for that target and the physiological consequences. Prerequisite: BIOL 0800. Enrollment limited to 20. Preference is given to graduate students in Biotechnology and BME, especially Masters students. Graduate students from other programs may enroll if permission of the instructor is granted.
Fall BIOL2145 S01 24481 T 10:00-12:20 (D. Horrigan)

Focused on the effective dissemination of scientific information in the molecular biosciences. Students will develop the skills necessary to effectively communicate scientific ideas, experiments, and results relating to their PhD dissertation projects through activities common to the profession including writing a grant proposal and presenting research work orally. Each of the activities will be dissected into key components and developed through interactive discussions and peer review. Required for most second-year PhD students in the MCB Graduate Program. Other qualified students may enroll with instructor’s permission.
Fall BIOL2150 S01 15800 W 2:00-5:30 (J. Bender)
Fall BIOL2150 S02 15802 W 2:00-5:30 (S. Ramachandran)

BIOL 2156. Special Topics in Biotechnology Writing.
This course is open to Biotechnology Masters students not involved in lab-based research. Students choose from a list of topics and faculty mentors in the field of biotechnology. Teams conduct in-depth research and writing, with the goal of producing a final report and presentation equivalent to a professional consultant’s report. Students meet weekly with mentors to monitor progress. Prerequisite: BIOL 0280 and 1120; CHEM 0350/0360 or equivalent. Enrollment limited to 20 students. Instructor permission required. Course is offered in both, Semester 1 and 2, and may be repeated once for credit.
Spr BIOL2156 S01 24485 Arranged (E. Mathiowitz)

BIOL 2167. In Vitro Models for Disease.
This course will use case studies to examine high burden diseases, their pathophysiology, treatment, and the models used to study the disease. Literature will be used to discuss the current models for the disease and the associated limitations of each of these models. The course will also cover the use of animals in research and how new in vitro models could be used to decrease their use. This course is intended for graduate students in biology, engineering, or related fields. Prerequisites: BIOL 0200 and 0800, or equivalent. Enrollment limited to 20 graduate students.
Spr BIOL2167 S01 24486 M 1:00-3:20 (J. Schell)

BIOL 2170. Molecular Pharmacology and Physiology.
Fundamental concepts in pharmacology and physiology from the cellular/molecular level to organ systems. Required of first-year graduate students in Molecular Pharmacology and Physiology.
Fall BIOL2170 S01 15838 MWF 10:00-11:30 (D. Horrigan)

BIOL 2180. Experiential Learning Industry, ELI.
Experiential Learning in Industry is restricted to biomedical engineering (BME) Sc.M. and biotechnology (Biotech) Sc.M. students, permission also required. The course is an extended in-depth learning experience in an industry environment related to the discipline of BME and Biotech. Industry environments include; medical device, pharmaceutical or biotechnology and industries that provide BME and Biotech relevant services to the aforementioned companies including patent law, licensing, regulatory and consulting. Students will pursue Experiential Learning in Industry during one summer plus one semester or during two semesters for which they will receive credit towards their degree. This course is restricted to BME and Biotech Masters students only. Students must have successfully completed the first year of the BME Masters Program. Slots are limited so permission is required.
Fall BIOL2180 S01 15839 Spr 10:00-12:20 (J. Morgan)
Spr BIOL2180 S01 24487 Arranged (J. Morgan)

BIOL 2190. MPP Professional Development 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.
Fall BIOL2190 S01 15840 M 12:00-1:30 (D. Horrigan)

BIOL 2222B. Current Topics in Functional Genomics.
A technological revolution in genomics has exponentially increased our ability to gather biological data. A host of new methods and types of analysis has arisen to accommodate this dramatic shift in data collection. The broad scope of inquiry has ushered in an era of “system-wide” approaches and brute-force strategies where rare signals can be detected and studied. In this seminar we will cover papers that embody this new approach. Students typically have taken an advanced undergraduate-level course in biology.
Spr BIOL2222B S01 24906 Arranged (W. Fairbrother)

BIOL 2230. Biomedical Engineering and Biotechnology Seminar.
Biomedical engineering and biotechnology are interdisciplinary fields that incorporate progress in biomedical sciences, the physical sciences, and engineering. To achieve success in these fields requires facility with interdisciplinary oral communication – this is the specific and practical focus of this course. Each week, students will give research presentations and receive feedback from the audience to help improve their public speaking skills.
Fall BIOL2230 S01 15841 T 4:30-7:00 (E. Darling)

BIOL 2240. Biomedical Engineering and Biotechnology Seminar.
See Biomedical Engineering and Biotechnology Seminar (BIOL 2230) for course description.
Spr BIOL2240 S01 24488 T 4:30-7:10 (J. Morgan)

Blood serves many critical functions including respiratory gas transport, hemostasis and host defense. Plasma and cellular components of blood, their functional mechanisms, pathophysiologic consequences when deficient and current treatments will be reviewed. Finally, development of blood component substitutive therapeutics (blood substitutes) based on protein and cellular engineering technologies (biotherapeutics) will be discussed. Open to Graduates students and Juniors and Seniors who meet the pre-requisites BIOL 0800 and BIOL 0280 or with instructor’s permission.
Fall BIOL2245 S01 15844 MW 10:30-11:50 (H. Kim)

BIOL 2270. Advanced Biochemistry.
(Undergraduate students should register for BIOL 1270.)
Fall BIOL2270 S01 15803 TTh 2:30-3:50(03) (A. Salomon)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Interactions between the molecules of life-proteins, RNA, DNA, membrane components-underlie all functions necessary for life. This course focuses on how nature controls these interactions, how these interactions can go awry in disease, and how we can learn the rules of these interactions to design drugs to treat disease. Students will review the physical basis of molecular interactions, learn classic and state-of-the-art high-resolution and high-throughput tools used to measure interaction, and survey the experimental and computational strategies to harness these interactions using a case study in rational drug design. Prerequisite: Introductory Biochemistry. Enrollment limited to 20; instructor permission.
Fall BIOL2300 S01 15846 M 3:00-5:30(05) (N. Fawzi)

BIOL 2310. 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 are discussed. Differential gene regulation, intercellular signaling and evolutionary conversation are 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 complement and reinforce concepts covered in class. Expected: BIOL2200 (or equivalent), and one course in genetics, embryology, cell biology or molecular biology. Enrollment limited to 36. (Undergraduate students register for BIOL 1310.)
Spr BIOL2310 S01 24766 MW 8:30-9:50(02) (K. Wharton)

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 2020, 2080, 0470, 0800. Enrollment limited to 20. Advanced undergraduates with permission of instructor.
Spr BIOL2350 S01 24453 Th 2:00-3:20 (J. Sedivy)

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 15758 Arranged (D. Rand)

BIOL 2440. Topics in Ecology and Evolutionary Biology.
See Topics In Ecology And Evolutionary Biology (BIOL 2430) for course description.
Spr BIOL2440 S01 24416 Arranged (D. Rand)

BIOL 2450. Exchange Scholar Program.
Fall BIOL2450 S01 15257 Arranged 'To Be Arranged'
Fall BIOL2450 S02 15258 Arranged 'To Be Arranged'

BIOL 2528. Innovation and Commercialization in Medical Devices, Diagnostics, and Wearables.
This course provides a comprehensive overview of concepts and steps involved in developing and commercializing novel technology/scientific breakthroughs for medical devices, diagnostics and wearables. This course is particularly suitable for students interested in pursuing a career within a medical device segment, or creating innovation-based companies, as well as for those interested in developing an in-depth knowledge of evolution of medical devices from research concepts to products in the market.
Spr BIOL2528 S01 24489 Th 9:30-12:00 (M. Analoui)

BIOL 2540. Molecular Genetics.
Even in this era when whole genome DNA sequencing has become routine, there are still thousands of eukaryotic genes with unknown functions. Genetic screens for mutations that alter pathways of interest remain the premier approach to understanding gene function in the context of the organism. In Molecular Genetics students will learn the key concepts involved in designing and interpreting genetic screens using the powerful tools available in model animal, plant, and fungal organisms. Students will also learn how to understand and analyze results presented in the primary scientific literature. Furthermore, students will gain an appreciation of how the field of genetics has changed through discoveries and technological advances made over the past 50 years. Undergraduate students should register for BIOL 1540.
Spr BIOL2540 S01 24454 TTh 2:30-3:50(11) (J. Bender)

BIOL 2545. Human Genetics and Genomics.
This course will exemplify the power of genetically informed approaches to understanding human biology. It is intended for advanced undergraduate students and graduate students; prerequisites include BIOL470 or equivalent. The course is based in lectures, reading material (textbook and primary literature), and in-class discussions. Course topics include: medical genetics and genomics; methods to study human genotypes and related phenotypes; industry-related topics; and ethical and societal implications of genome science. It will benefit students with career interests in basic science, medicine, biotechnology, or science policy. Enrollment is limited to 20 students; selection will be based on seniority, prerequisites, and registration order.
Spr BIOL2545 S01 24455 TTh 9:00-10:20(01) (E. Morrow)

BIOL 2560. Advanced Virology.
The emphasis of this course will be on understanding the molecular mechanisms of viral pathogenesis. It will begin with a general introduction to the field of virology, a basic review of the immune response to viruses, and then focus primarily on the molecular biology of specific viruses that are associated with clinical human disease. Lectures will be based on the current literature and provide historical context. Students will become familiar with primary literature and produce their own original research proposal by the end of the semester.
Fall BIOL2560 S01 15700 MWF 9:00-5:00(01) (A. Jamieson)

BIOL 2595. Artificial Intelligence in Biomedicine.
This course will teach the fundamental theory and methods of artificial intelligence (AI) alongside their application to the biomedical domain. It will give a representative overview of traditional methods as well as modern developments in the areas of (deep) machine learning, natural language processing and information retrieval. The course is designed to be accessible to non-computer science audiences and will not require extensive prior programming experience. The course will be accompanied by practical assignments applying the discussed techniques in a biomedical context. Understanding of formal theoretical knowledge will be assessed in a final exam.
Spr BIOL2595 S01 24393 TTh 9:00-10:20(01) (C. Eickhoff)

BIOL 2640A. Viral Immunology.
Viral Immunology is an advanced topics course in Microbiology and Immunology which will be focused on viral immunology. Weekly meetings will cover different issues concerning defense against viral infections and pathology related to viral infection, with focus on viral-host interactions. Topics will be selected to present either important basic concepts in the context of immune responses and/or major challenges in controlling viral infections. Recent advances in understanding virus-host interactions, host responses to viruses, cytokine regulation of immune responses or cytokine-mediated pathology during viral infections will be emphasized. The organizational meeting is set for Wednesday Jan 23 at 2:30PM in this 6th floor conference room (BMC 605). There is also a requirement for a previous immunology course.
Spr BIOL2640A S01 24353 Arranged (C. Biron)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
BIOL 2860. Molecular Mechanisms of Disease.

BIOL 2860 is designed for graduate students and focuses on the underlying causes of human disease. Students should have a solid background in the life sciences with an understanding of the fundamental principles of molecular biology, genetics, biochemistry, and cell biology. The first half of the course will focus on cystic fibrosis and will use this topic to explore toxicology and the molecular basis of environmental disease. A typical class will consist of a lecture, individual student presentations, and experimental planning exercises. Emphasis will be placed on the development of presentation skills and research design. Readings will be assigned from Robbins Basic Pathology 10th Edition, Junqueira Basic Histology Text & Atlas 14th Edition, primary literature, and reviews. Both textbooks are available online through the library website. Undergraduates require permission from Dr. Bartnikas.

Class Meetings Throughout the semester, the class will usually meet twice each week for one and a half hours each time. The two weekly class meeting times will be determined at the initial organizational meeting for the course to be held at 70 Ship St, Room 501A, during first week of September (date tbd).

Fall BIOL2860 S01 15849 Arranged (T. Bartnikas)

BIOL 2865. Toxicology.

Toxicology is the science that describes the adverse biological effects of exogenous chemical and physical stressors, including environmental, industrial, and agricultural chemicals and pharmaceuticals. This course will introduce the principal biological processes that determine an organism’s response to a toxicant, including absorption, distribution through a biological system, metabolism, elimination, and effects at the site(s) of action. We will discuss modern challenges in toxicology, such as assessing toxicity of mixtures and testing some of the thousands of untested chemicals in commerce. The material will be presented in lecture and student-led discussions, with readings from the toxicology literature. Suggested prerequisites include BIOL 0280 (biochemistry), CHEM 0350 (organic chemistry), and BIOL 800 (principles of physiology); or BIOL 1820 (Environmental Health and Disease) or BIOL 2860 (Molecular Mechanisms of Disease); or instructor approval.

Spr BIOL2865 S01 25800 TTh 1:00-2:20(08) (D. Spade)

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 15259 Arranged "To Be Arranged"
Spr BIOL2970 S01 24158 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 residency requirement and are continuing research on a full time basis.

Fall BIOL2990 S01 15260 Arranged "To Be Arranged"
Spr BIOL2990 S01 24159 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.

BioMed-Neuroscience

NEUR 0010. The Brain: An Introduction to Neurosciences.

Introduction to the mammalian nervous system with emphasis on the basic 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 16264 TTh 1:00-2:20(08) (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 24727 MWF 1:00-1:50(08) (J. Simmons)

NEUR 0680. Introduction to Computational Neurosciences.

An introductory class to computational neuroscience. Students will learn the main tools of the trade, namely differential equations, probability theory and computer programming, as well as some of the modern computational strategies. Assignments will include the writing of simple Matlab code.

Fall NEUR0680 S01 16282 MW 3:00-4:20(17) (L. Bienenstock)

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 24728 TTh 9:00-10:20(01) (C. Aizenman)

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 and Graduate students require instructor approval.

Fall NEUR1030 S01 16265 TTh 10:30-11:50(13) (M. Linden)

NEUR 1040. Introduction to Neurogenetics.

Recent advances in molecular biology and molecular genetics have allowed researchers to test specific hypotheses concerning the genetic control of behavior and neurological disease. This course will familiarize you with the relatively new and exciting field of neurogenetics. We will cover basic topics, new ideas, and unsolved problems in neurogenetics primarily through the two assigned texts. However, neurogenetics is essentially a "frontier" area in neuroscience, and the best way to approach this topic is by scientific literature, which will be covered in some lectures.

Spr NEUR1040 S01 24729 TTh 10:30-11:50(09) (K. Kaun)

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 24731 MWF 11:00-11:50(04) (M. Linden)

NEUR 1560. Developmental Neurobiology.

The course will explore core concepts of developmental biology in the context of the developing nervous system. Topics will include: neuronal specification, cell migration, axon guidance, synapse formation, and neural plasticity. Students will gain experience with the primary literature and learn about cellular and molecular mechanisms of brain development and the tools and model organisms used to study them. To express interest, please add this course to your primary cart. The decision will be made based on a variety of factors including: seniority, concentration requirement, etc.

Spr NEUR1560 S01 24732 W 3:00-5:30(10) (A. Jaworski)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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. Instruction on and practice of effective science writing is another component to this course. Labs are supplemented by informal lectures. Enrollment limited to 18.
Spr NEUR1600 S01 24733 W 1:00-5:50 (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 neural tissue, and discussion of clinical cases. Prerequisites: NEUR 0010, NEUR 1020, and NEUR 1030.
Fall NEUR1650 S01 16272 TTh 2:30-3:50(03) (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 S01 16273 TTh 9:00-10:20(02) (R. Patrick)

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 monolactic diseases (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 24734 MW 8:30-9:50(02) (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.
To sign up, please add this course to your primary cart. Doing so does not mean that you are automatically enrolled in this class. This decision will be made based on a variety of factors including, but not limited to, time you added the course to your cart, seniority, concentration requirement, etc.
Fall NEUR1930G S01 16280 Arranged (J. Fallon)

NEUR 1930N. Region of Interest: An In-Depth Analysis of One Brain Area.
An in-depth 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. 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 techniques for studying the area. Topic Fall 2018: Amygdala
To sign up, please add this course to your primary cart. Enrollment decision will be made based on seniority, concentration requirements, etc.
Fall NEUR1930N S01 16276 W 12:30-3:00 (M. Linden)

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. To express interest, please add this course to your primary cart. The decision will be made based on a variety of factors including, but not limited to seniority, concentration requirement. Limited to 15.
Spr NEUR1940G S01 24738 Arranged (R. Patrick)

Laboratory-oriented research in neuroscience, supervised by staff members. A student, under the guidance of a neuroscience faculty member, proposes a topic for research, develops the procedures for its investigation, and writes a report of the results of his or her study. Independent study may replace only one required course in the neuroscience concentration. Prerequisites include NEUR 0010, 1020 and 1030. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Permission must be obtained from the Neuroscience Department.

NEUR 2010. Graduate Proseminar in Neuroscience.
A study of selected topics in experimental and theoretical neuroscience. Presented by neuroscience faculty, students, and outside speakers. A required course for all students in the neuroscience graduate program.
Fall NEUR2010 S01 16277 Arranged (G. Barnea)

See Graduate Pro-Seminar In Neuroscience (NEUR 2010) for course description.
Spr NEUR2020 S01 24735 Arranged (G. Barnea)

NEUR 2030. Advanced Molecular and Cellular Neurobiology I.
Focuses on molecular and cellular approaches used to study the CNS at the level of single molecules, individual cells and single synapses by concentrating on fundamental mechanisms of CNS information transfer, integration, and storage. Topics include biophysics of single channels, neural transmission and synaptic function. Enrollment limited to graduate students.
Fall NEUR2030 S01 16278 Arranged (K. O'Connor-Giles)

NEUR 2040. Advanced Molecular and Cellular Neurobiology II.
This course continues the investigation of molecular and cellular approaches used to study the CNS from the level of individual genes to the control of behavior. Topics include patterning of the nervous system, generation of neuronal diversity, axonal guidance, synapse formation, the control of behavior by specific neural circuits and neurodegenerative diseases. Enrollment is limited to graduate students.
Spr NEUR2040 S01 24736 Arranged (G. Barnea)

Focuses on systems approaches to study nervous system function. Lectures and discussions focus on neurophysiology, neuroimaging and lesion analysis in mammals, including humans. Cognitive neuroscience approaches will become integrated into the material. Topics include the major sensory, regulatory, and motor systems. Enrollment limited to graduate students.
Fall NEUR2050 S01 16279 Arranged (T. Desrochers)

NEUR 2060. Advanced Systems Neuroscience.
Focuses on cognitive approaches to study nervous system function. Lectures and discussions focus on neurophysiology, neuroimaging and lesion analysis in mammals, including humans. Computational approaches will become integrated into the material. Topics include the major cognitive systems, including perception, decisions, learning and memory, emotion and reward, language, and higher cortical function. Instructor permission required.
Spr NEUR2060 S01 24737 Arranged 'To Be Arranged'

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
outside scheduled lectures.

strongly advised for all Organizational Studies track seniors. Application
and social innovation projects. BEO 1930A (fall) required; 1940A (spring)
will be organized into client-mentored teams for social entrepreneurship
public sector experiences of entrepreneurship and innovation. Students
theoretical understanding and practical application, and across private and
in BEO courses, specifically concepts from SOC 1311 and 1315. Students
seniors, open to all BEO seniors. Capstone builds upon concepts covered
Business, Entrepreneurship and
American medicine.

and the evolution of the medical-industrial complex through ESRD in
consequences in the treatment advanced kidney disease. The course
public policy initiatives, and corporate consolidation led to major
This course explores how the concurrence of technological advances,
dialysis centers.

This course explores the conjunction of the introduction of hemodialysis, a unique 1972
expansion of the Medicare program to cover the costs of end-stage renal
disease (ESRD) and the simultaneous spread of corporate-run, for-profit
dialysis centers. This course explores how the concurrence of technological advances,
public policy initiatives, and corporate consolidation led to major
consequences in the treatment advanced kidney disease. The course
reviews the history, treatment, implications of the technological imperative
and the evolution of the medical-industrial complex through ESRD in
American medicine.

CHEM 0080B. Molecular Structures in Chemistry and Biology.
This course will consist of a survey of historical developments and
concepts of three dimensional structures of molecules. The course
will conclude with a survey of the current state of the art of structure
determination and 3D structure motifs for small molecules, nanomaterials
and biological macromolecules. This freshman only seminar will be strictly
limited to a maximum of 19 students.

CHEM 0100. Introductory Chemistry.
Explores stoichiometry, atomic and molecular structure, chemical bonding,
solutions, gases, chemical reactions, equilibria, thermochemistry. Three
hours of lecture, one conference per week, no laboratory section. S/N/C.

Brown University
CHEM 0330. Equilibrium, Rate, and Structure.
Explores the electronic structure of atoms and molecules, thermodynamics, and reaction mechanisms. Course includes lecture and laboratory sections. Laboratory cannot be taken without the lecture. Students who previously passed 0330 lab may be excused from repeating the lab portion of the course. Required background: CHEM 0100 or AP Chemistry 4 or CHEM Placement Test 8 or IBC Chemistry.

CHEM 0332. Equilibrium, Rate and Structure - Tutorial.
The CHEM 0332 tutorial program offers the opportunity to master the concepts taught in the fall semester CHEM 0330: Equilibrium, Rate and Structure course by focusing on active problem solving. Students who struggle in the fall CHEM 0330 course may be invited to join the tutorial program. Students accepted into the tutorial program begin by reviewing compound and reaction stoichiometry at the beginning of the spring semester. Tutorial students enroll in CHEM 0332 during the spring semester to complete their studies of equilibrium, acid-base equilibria, thermodynamics, atomic and molecular structure and kinetics. Students in the CHEM 0332 tutorial program complete weekly problem sets during the spring semester and participate in two mandatory, regularly scheduled problem sessions during each week of the spring semester. To qualify for consideration, the student must be struggling in the mid-term exams and on track to pass the laboratory. Accepted students receive a grade of incomplete for the Fall CHEM 0330 course. Upon successful completion of the CHEM 0332 tutorial program in the spring semester, the incomplete in Fall CHEM 0330 is replaced by the student's tutorial program grade.

An override by Ms Sheila Quigley is required.

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 prelaboratory and laboratory attendance. Prerequisite: CHEM 0360.

Students MUST register for a lecture section and a lab.

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 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.

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 all explored. Prerequisites: CHEM 0330, MATH 0180 or equivalent, PHYS 0030 and PHYS 0040 or PHYS 0050 and PHYS 0060 or PHYS 0070 and PHYS 0470 or ENGN 0030 and ENGN 0040.

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.

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.

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 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 on the waiting list.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
CHEM 1240. Biochemistry. Examine 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 0360, A or B performance preferable) plus at least one semester of Biochemistry (BIOL 0280). Enrollment limited to: 25 students, written permission required. Fall CHEM1240 S01 16714 MW 8:30-9:50(01) "To Be Arranged"

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, conference and a lab. Spr CHEM1450 S01 24786 MW 8:30-9:50(02) "To Be Arranged"

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 biomedicine. Prerequisites: CHEM0350, PHYS 0030 or 0050, BIOLOG280 recommended. Fall CHEM1700 S01 16340 MWF 11:00-11:50(16) "To Be Arranged"

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 16341 TTh 9:00-10:20(02) "To Be Arranged"

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 24789 MWF 9:00-9:50(02) "To Be Arranged"

CHEM 2310. Organometallic Chemistry. Modern organometallic chemistry continues to find unique applications including next generation lighting displays, therapeutics and imaging, energy science, and green chemical synthesis. In this course we will briefly review fundamentals of inorganic chemistry (MO theory, ligand field theory, Pearson’s HSAB theory), and then delve into the structure, bonding, synthesis, reactivity, and mechanisms associated with organometallic complexes and their associated applications. Significant emphasis will be placed on effective oral and written communication skills, with frequent peer and instructor feedback provided. Prerequisites: CHEM 0360, CHEM 0500. PLEASE NOTE: This class is WRIT designated for Undergraduates Only. Graduate Students register for CHEM 2310. Fall CHEM2310 S01 16342 TTh 10:30-11:50(13) (J. Robinson)

CHEM 2320. Solid State Chemistry. The course focuses on descriptive understanding of structures and properties of inorganic materials. It covers symmetry operations in crystals, crystal structure, physical properties of inorganic materials, materials phase diagram and preparation, and solid state electrochemistry for battery, fuel cell and supercapacitor applications. Prerequisites: CHEM 0500 and 1060 or equivalents or written permission. Recommended for seniors and first-year graduate students. Spr CHEM2320 S01 24790 TTh 10:30-11:50(09) "To Be Arranged"

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 concerted, free radical, elimination, and photochemical reactions, and the chemistry of radicals, carbocations, carbanions, and carbenes. Fall CHEM2410 S01 16343 MWF 10:00-10:50(14) "To Be Arranged"

CHEM 2420. Organic Reactions. Study of organic reactions and reaction mechanisms. Discussion and analysis of organic transformations. Topics can include arrow pushing mechanisms and synthetic methods. Fall CHEM2420 S01 16346 TTh 9:00-10:20(02) "To Be Arranged"

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 24791 MWF 11:00-11:50(04) "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 16347 TTh 10:30-11:50(13) "To Be Arranged"

CHEM 2780. Quantum Mechanics. Semester II: Lectures focus on the theory and application of electronic structure methods to describe both time-independent and time-dependent phenomena in chemical physics. Modern methods including Hartree-Fock Theory, Moller Plesset Perturbation Theory, Configuration Interaction, Coupled Cluster Theory, and Density Functional Theory will be described. Numerical techniques for implementing these methods will also be introduced and applications based upon problems in molecular spectroscopy will be outlined. Prerequisite: CHEM 2770. Spr CHEM2780 S01 24794 TTh 10:30-11:50(09) "To Be Arranged"

CHEM 2870. Departmental Colloquia. Open to first year chemistry graduate students only. Fall CHEM2870 S01 16348 F 4:00-5:20 "To Be Arranged" Spr CHEM2870 S01 24792 F 4:00-5:20 "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 15261 Arranged "To Be Arranged" Spr CHEM2970 S01 24160 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 residency requirement and are continuing research on a full time basis.

CHEM XLIST. Courses of Interest to Students wishing to Study Chemistry. For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
CLAS 0010. The Greeks.
From poetry to philosophy, from music to economics to political theory, it is hard to find a subject of study that did not originate with the Greeks, at least in word. Biology? Greek. Physics? Still Greek. Math? Technology? Gym? You guessed it. Since we cannot escape the Greeks, in this class we will be on the lookout for them, reading the first classics of Western literature and discussing the great ideas behind them. All texts read in English.

CLAS 0210B. Death in Ancient Greece.
Examine how ancient Greeks understood, described, and experienced death. Making use of sources in translation, consider 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 19 first year students.
Fall CLAS0210B S01 16956 MWF 1:00-1:50(08) (P. Nieto Hernandez)

CLAS 0210T. Travelers in Greece: from Pausanias to Shirley Valentine.
Ever since Pausanias the Periegete wrote his "Description of Greece" in the 2nd century CE, travelers have been inspired both to see the sights of Greece and to narrate their travels. The subject of this course is travel narratives about Greece, and our own journey will lead us to sites throughout the country. Yet we will also be using these narratives as launchpads for exploring the imaginary and imagined power of the Greek landscape: from its ancient status as seat of the gods to its modern appeal as a land of anonymity, relaxation and freedom for the wearied 'westerner'.
Spr CLAS0210T S01 25534 TTh 9:00-10:20(01) (J. Hanink)

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.
Spr CLAS0660 S01 25558 TTh 2:30-3:50(11) (B. MacDougall)

CLAS 0750. Gender and Sexuality in Classical Antiquity.
This course will analyze women in classical Greek and Roman society and literature. Using gender as a critical tool, we will examine Greek and Roman women in various sources, from Homeric epics and public inscriptions to scathing Roman satire. These sources show how the Greeks and Romans defined normative gender categories and how they used these categories as a vehicle for social and political criticism. We will cover both social history and gender discourse, focusing especially on the body and sexuality as a site for power. The limitations imposed by the source materials, both literary and non-literary, will be a topic of discussion throughout, as well as the relation of these ideas to contemporary constructions of gender.
Spr CLAS0750 S01 25640 W 3:00-5:30(10) 'To Be Arranged'

What do video vixens and Foxy Brown have in common with "Witchy Woman"? These modern metaphors continue a long history of equating female sexual allure with dangers found in/ or capable of subverting Nature. This course will use contemporary methodologies to make sense of similar descriptions of women found in Greco-Roman literature: how do the Greeks and Romans express a concern about gender, ethnicity, class, and/or politics using these metaphors? How do these same categories help distinguish what is "natural" from "unnatural"? To what end does this discourse about women and nature affect law, public space, or other aspects of "civilization"?
Fall CLAS0765 S01 16949 TTh 10:30-11:50(13) (S. Eccleston)

CLAS 0810A. Alexander the Great and the Alexander Tradition.
This course focuses on a single historical figure, Alexander the Great, using him as a point of departure for exploring a wide range of problems and approaches that typify the field of Classical Studies. How knowledge of Alexander has been used and abused provides a fascinating case study in the formation and continuous reinterpretation of the western Classical tradition.
Fall CLAS0810A S01 16945 MWF 10:00-10:50(14) (J. Cherry)

CLAS 1120B. Epic Poetry from Homer to Lucan.
Traces the rich history and manifold varieties of the genre of epic poetry in the literatures of ancient Greece and Rome, beginning with Homer's Iliad and Odyssey (VII c. B.C.) and ending with Lucan's Civil War (I. c. A.D.). Masterpieces such as Virgil's Aeneid and Ovid's Metamorphoses are included. Original sources read in translation.
Spr CLAS1120B S01 25540 TTh 1:00-2:20(08) (P. Nieto Hernandez)

CLAS 1120G. The Idea of Self.
Literature gestures us toward a certain kind of knowledge not quite psychological, not quite philosophical. We read widely in the classical and medieval traditions in order to gauge the peculiar nature of what this knowledge tells us about experience and the ways in which expressions of selfhood abide or are changed over time. Authors include but are not limited to Sappho, Pindar, Catullus, Horace, Augustine, and Fortunatus.
Fall CLAS1120G S01 16958 MWF 11:00-11:50(16) (J. Pucci)

CLAS 1120L. Archaeology of Feasting.
No description available.
Spr CLAS1120L S01 25638 MWF 10:00-10:50(03) 'To Be Arranged'

CLAS 1120R. Social Conflict and Political Factions in the Roman Republic.
Traces the evolution of social conflict and political factions at Rome from the foundation to the dissolution of the Republic (C5-C1 BCE). Roman armies secured a vast empire of territory, raw materials, and manpower governed by the senate and the people of Rome itself. The influx of resources, however, destabilized Rome's constitution and upset political power balances at the city of Rome. How did the Romans—elites and masses—compete amongst themselves for the bounty of empire abroad and confront their own internal conflicts at home? Was concord possible, or were the developments of empire inconsistent with the constitution of the Republic?
Spr CLAS1120R S01 25639 MWF 2:00-2:50(07) 'To Be Arranged'

CLAS 1120U. The American Presidents 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.
Spr CLAS1120U S01 25533 MWF 2:00-2:50(07) (J. Pucci)

CLAS 1160. Classics of Indian Literature.
This course will introduce, in English translations, the most powerful examples of the literature of India. The course will introduce students to India's unparalleled literary richness by reading selections of the best poetry, drama, and narrative literature of Indian civilization from any of its many languages (Sanskrit, Tamil, Hindi, Bengali, etc., and, English), ancient and modern.
Spr CLAS1160 S01 25541 TTh 2:30-3:50(11) (D. Buchta)
CLAS 1205. The Long Fall of the Roman Empire.
Once thought of as the "Dark Ages," this period of western European history should instead be seen as a fascinating time in which late Roman culture fused with that of the Germanic tribes, a mixture tempered by a new religion, Christianity. Issues of particular concern include the symbolic construction of political authority, the role of religion, the nature of social loyalties, and gender roles.
Fall CLAS1205 S01 16946 TTh 10:30-11:50(13) (J. Conant)

CLAS 1210. Mediterranean Culture Wars: Archaic Greek History, c. 1200 to 479 BC.
From the end of the Bronze Age to the end of the Persian Wars is a period of considerable change in the Mediterranean and beyond. The Greek polis challenges the powers of the ancient Near East. Over seven centuries we meet Greek writing, Homeric epic, and the first historian (Herodotus). But the Greek world lay on the edges of the Ancient Near East and this course tries to offer a more balanced approach than the typically Hellenocentric perspective of the standard textbooks. CLAS 1210 addresses political, social and economic history. Literary, epigraphical and archaeological cultures provide the evidence.
Fall CLAS1210 S01 16957 MWF 9:00-9:50(01) (G. Oliver)

CLAS 2220. The Fall of Empires and Rise of Kings: Greek History 478 to 323 BC.
The Greek world was transformed in less than 200 years. The rise and fall of Empires (Athens and Persia) and metamorphosis of Macedon into a supreme power under Philip II and Alexander the Great provide the headlines. The course covers an iconic period of history, and explores life-changing events that affected the people of the eastern Mediterranean and the topics that allow us to understand aspects of life and culture of the peoples of the eastern Mediterranean. and through these transformations, offers insights into the common pressures that communities confronted. No prior knowledge of ancient history is required.
Spr CLAS2220 S01 25527 MWF 9:00-9:50(02) (G. Oliver)

(1) We examine theater and its relation to society, particularly, its reflection of legal culture (detections of murderers, adulterers, and young lovers); we also examine law's 'theatricality' ('productions' of trials). (2) We also explore more broadly how dramas were performed, using as comparanda Japanese Noh and Kabuki (in each, for example, we find all-male casting). (3) Attention is also directed toward twentieth century receptions of these plays; we focus largely on Japanese productions, particularly of Yukio Ninagawa, mastermind of Japanese theater who directed numerous Greek tragedies and Shakespearean plays in different venues, absorbing and subverting phenomena of traditional Japanese theater.
Spr CLAS1750P S01 25718 TTh 10:30-11:50(09) (A. Scafuro)

CLAS 1930B. Dying God.
The figure of the dying god (like Adonis, Osiris, or Attis), embodying both beauty and tragedy, has exerted a fascination from ancient times to the present day. His worship was sometimes central to the community, sometimes marginal, yet compelling in its "outsider" status. His myths invited meditations on love and death in various modes from comedy to epic. This course, through the great mythological texts of Greece and Rome as well as modern literature and art, will explore the figure in all its variety, along with Christian adaptations and recent interpretations. There will be writing assignments.
Fall CLAS1930B S01 16985 TTh 1:00-2:20(08) "To Be Arranged"

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.

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

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 16952 TTh 9:00-10:20(02) (S. Kidd)

CLAS 2450. Exchange Scholar Program.

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 15264 Arranged "To Be Arranged"
Spr CLAS2970 S01 24162 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 residency requirement and are continuing research on a full time basis.
Fall CLAS2990 S01 15265 Arranged "To Be Arranged"
Spr CLAS2990 S01 24163 Arranged "To Be Arranged"

CLAS XLIST. Courses of Interest to Classics Concentrators.

Greek
GREK 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 GREK0100 S01 16950 MWF 2:00-2:50(07) (J. Hanink)

GREK 1050C. Sophocles.
An introduction to the study of Athenian tragedy. Thorough translation of one drama, with attention to literary analysis. Rapid survey of other Sophoclean plays.
Spr GREK1050C S01 25652 TTh 2:30-3:50(11) (A. Scafuro)

GREK 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.
Spr GREK1100 S01 25538 TTh 10:30-11:50(09) (P. Nieto Hernandez)

GREK 1110F. Poetry of Gods and Heroes.
Readings in early Greek hymns, creation myths (especially Hesiod's Theogony), and short poems about human struggle and values.
Fall GREK1110F S01 16951 MWF 1:00-1:50(06) (J. Hanink)

In this class we will read Books I, II, III, and X of Aristotle's Nichomachean Ethics and discuss his treatment of the highest human good, moral virtue, the doctrine of the mean, and his theory of action.
Spr GREK11100 S01 25651 TTh 1:00-2:20(08) (M. Gill)

GREK 1111F. The Greek Chorus.
One of the most striking features of Greek drama is the presence of a chorus whose members dance, sing, and contribute to the dramatic action in ways that puzzle modern audiences. Besides the drama, choruses are also found in other genres: in victory odes for champions of athletic competitions, in hymns to gods and goddesses, and in other forms such as the dithyramb. In this class, we will read a representative selection of choral lyric, from Alcman to Aristophanes, including major figures such as Pindar, Aeschylus, Sophocles, and Euripides.
Fall GREK1111F S01 17099 TTh 10:30-11:50(13) (K. Haynes)
LATN 1060K. Seneca. 
Philosopher, statesman, teacher, husband, and friend, Seneca (the Younger) was respected in his life and revered for his spectacularly Stoic death. This course will introduce students to aspects of Senecan thought, style, and influence while refining general facility with Latin.
Fall LATN1060K  S01 17096  MW 8:30-9:50(01)  (S. Eccleston)

LATN 1110B. Augustine, Confessions.
We will focus on the Christian humanism of Augustine's Confessions, reading excerpts from the autobiographical books against the diction found in them owed to Catullus, Cicero, Horace, Lucretius, Ovid, Sallust, and Virgil. The question of why a Christian might make use of such diction will be answered through attention to Augustine's training and his literary aims in writing the Confessions.
Fall LATN1110B  S01 16959  MWF 1:00-1:50(06)  (J. Pucci)

LATN 1110E. Comedy.
No description available.
Fall LATN1110E  S01 16989  Thh 1:00-2:20(08)  (A. Scafuro)

LATN 1110J. Petronius.
Close reading of Petronius's comic masterpiece, the Satyricon, with emphasis on questions of form, narrative technique, and literary intention.
Fall LATN1110J  S01 16936  Thh 2:30-3:50(03)  (J. Bodel)

LATN 1110S. Catullus.
We will read all the extant poetry of Catullus with an emphasis on close reading of the Latin text and discussion of linguistic, literary, and cultural problems.
Fall LATN1110S  S01 16947  MW 2:00-2:50(07)  (J. Debrohun)

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 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.
Fall LATN1120D  S01 25529  MWF 11:00-11:50(04)  (J. Pucci)

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 25536  Thh 10:30-11:50(09)  (J. Debrohun)

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.
Fall LATN1810  S01 16948  MWF 11:00-11:50(16)  (J. Debrohun)

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

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
LATN 2050. Thebes at Rome: Ovid, Seneca, Statius. This seminar studies the significance of Thebes, and the mythological stories associated with it, in the epic and dramatic poetry of the early Empire. The themes of civil war, identity (familial and political), and relations of power central in Theban mythology were useful for Romans to "think with" in the political, social, and cultural climate of the 1stc. CE.; also, the poets’ emphasis on Thebes provided a useful foil to that on Troy represented especially by Vergil’s Aeneid. We will focus in particular on Ovid Metamorphoses 3 and 4, Seneca’s Theban plays, and Statius’ Thebaid.

Spr LATN2050 S01 25717 Th 4:00-6:30(17) (J. Debrohun)

LATN 2120A. Roman Epigraphy. A practical introduction to the study of Latin inscriptions, with emphasis on the reading, editing, and interpretation of texts on stone. Class time will be divided between discussion of various categories of texts in the light of the ‘epigraphic habit’, literacy, and the sociology of reading in antiquity and hands-on experience with editing inscriptions on stone.

Fall LATN2120A S01 16934 M 3:00-5:30(05) (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 15310 Assigned ’To Be Arranged’
Spr LATN2970 S01 24200 Assigned ’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 residency requirement and are continuing research on a full time basis.

Fall LATN2990 S01 15311 Assigned ’To Be Arranged’
Spr LATN2990 S01 24201 Assigned ’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 S02 16867 MTWTh 12:00-12:50 (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 25531 MWF 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 16930 TTh 1:00-2:20(08) (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 25539 TTh 1:00-2:20(08) (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 16932 Arranged ‘To Be Arranged’

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 25549 Arranged (E. Amanatidou)

MGRK 1910. Special Topics in Modern Greek. No description available.

LATN 2200. Modern Greek for Classicists and Archaeologists. This graduate level course promotes the acquisition and further refinement of the necessary translanguagical and transcultural skills to prepare students in the fields of Classics and Archaeology to carry out research in Greece and Cyprus. In addition, it involves training in linguistic skills that will enable students to study closely a range of texts of relevance to these disciplines. Primary emphasis will be on the development of reading, oral and aurual skills using a variety of text and web based materials, of discipline specific content but also in professional and other communicative contexts of cultural currency.

Fall MGRK2200 S01 16983 Arranged (E. Amanatidou)
Spr MGRK2200 S01 25553 Arranged (E. Amanatidou)

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 Devanāgarī 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 16930 MWF 12:00-12:50(15) (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 25530 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 16940 MWF 10:00-10:50(14) (D. Buchta)

SANS 1020. Early Sanskrit Philosophy and Religion. Reading in Sanskrit of selections from the Upanishads, Bhagavad Gītā, Dharmasāstras, etc. Prerequisite: SANS 0200.

Spr SANS1020 S01 25550 Arranged (D. Buchta)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
SANS 1800. Classical Schools of Indian Philosophy. Introduction to the classical Brahminic darsanas (comprehensive, rationalized systems of philosophy and, or, theology dealing with Hermeutics and Philosophy of Language, Logic, Metaphysics, and Ultimate Beatitude) and to corresponding Buddhist and Jain traditions through reading, in Sanskrit, of selected works. Prerequisite: SANS 0400. Fall SANS1800 S01 16944 Arranged (D. Buchta)

SANS 1970. Independent Study - Special Topics. 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 2970. Sanskrit Preliminary Examination. 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 15343 Arranged 'To Be Arranged' Spr SANS2970 S01 24224 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. Mind, Brain and Behavior: An Interdisciplinary Approach. This course will provide an interdisciplinary approach to the science of the mind through lens of psychology, cognitive science, cognitive neuroscience, behavioral neuroscience, computational modeling and linguistics, as uniquely represented by our department. It will focus on questions that drive the field, current state-of-the-art, and successful techniques and approaches. Questions addressed will include: What is the nature of the human mind? How do we get input from the world? How do we communicate? How do we change as infants and adults through experience? How do we make decisions and judgments? How do minds meet other minds in a social world? Fall CLPS0010 S01 16605 MWF 11:00-11:50(16) (E. Festa)

CLPS 0050A. Computing as Done in Brains and Computers. 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. Fall CLPS0050A S01 16606 MWF 12:00-12:50(15) (J. Anderson)

CLPS 0100. Learning and Conditioning. 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 25039 MWF 1:00-1:50(06) (R. Colwill)

CLPS 0200. Human Cognition. 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 25040 MWF 10:00-10:50(03) (K. Spoehr)

CLPS 0220. Making Decisions. Life is full of decisions. Some decisions are made rationally, others could be improved. This course considers the psychology of human decision-making, the analysis of optimal decision-making, and implications for individual action and social policy. Topics include: chance and preference (e.g., how do consumers weigh attributes when making purchases?); the value of information (e.g., when should physicians order expensive diagnostic tests?); risky choice (e.g., is it rational to play the lottery?). Spr CLPS0220 S01 25041 MWF 12:00-12:50(05) 'To Be Arranged'

CLPS 0300. Introduction to Linguistics. 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 the principles underlying phonology (the principles that govern how sounds are put together), syntax (the rule system governing sentence structure), and semantics (the system that relates sentences to meanings). Fall CLPS0300 S01 16607 MWF 10:00-10:50(14) (U. Cohen Priva)

CLPS 0400. Cognitive Neuroscience. 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 (fMRI, 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 CLPS0400 S01 25042 MWF 9:00-10:20(01) (D. Amso)

CLPS 0500. Perception and Mind. 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 25043 MWF 9:00-9:50(02) (L. Welch)

CLPS 0540. Simulating Reality: The (Curious) History and Science of Immersive Experiences. Can an experimental approach enhance our critical-historical understanding of immersive experiences? We will look at the history of 3D vision from an interdisciplinary perspective combining the science of perception and the cultural history of technology. Through a series of collaborative activities and team experiments, we will learn how popular, pre-digital optical devices (such as camerae obscurae, magic lanterns, panoramas or stereoscopes) foreshadow contemporary VR, AR, or XR experiences designed for education and entertainment. Among the themes explored: virtual travel, social voyeurism and surveillance, utopian and dystopian imagination. Spr CLPS0540 S01 25660 M 3:00-5:30(13) (F. Domin)

CLPS 0550. Science of Consciousness. This course will focus on consciousness related to visual perception, attention, memory, and cognitive control. The learning goal is to understand the neural correlates of consciousness, with an emphasis on visual consciousness. We will examine 1) basic neural mechanisms of perceptual and cognitive processing; 2) philosophical and neuroscientific models of consciousness; 3) the interaction between attention, reward, and memory and visual consciousness; 4) recent advances in research of consciousness by neuroscientific experiments with animals and humans. Fall CLPS0550 S01 16608 MWF 10:00-11:10(01) (T. Watanabe)

CLPS 0610. Children's Thinking: The Nature of Cognitive Development. 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. Fall CLPS0610 S01 16610 MWF 1:00-1:50(06) (D. Sobe)
CLPS 0700. Social Psychology. 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.

Fall CLPS0700 S01 16611 TTh 2:30-3:50(03) (B. Malle)

CLPS 0701. Personality. 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.

Fall CLPS0701 S01 16612 TTh 9:00-10:20(02) (B. Hayden)

CLPS 0800. Language and the Mind. Explores fundamental issues in psycholinguistics: what is the nature of language; what are its biological underpinnings; how does the mind process speech, recognize words, parse sentences, comprehend discourse; what do effects of brain injuries on language reveal about the organization of language in the mind? Syntheses of results from multiple modes of analysis – linguistic, psychological, computational, and neurophysiological – are emphasized.

Fall CLPS0800 S01 25044 MWF 1:00-1:50(06) (J. Morgan)

CLPS 0900. Statistical Methods. 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 16613 TTh 10:30-11:50(13) (K. Spoehr)

CLPS 0950. Introduction to programming. This course will provide an introduction to matlab programming for students in the life sciences with no prior programming experience. At the end of the course, students will be able to implement matlab functions independently to solve many common programming challenges associated with the study of the mind, brain and behavior — from conducting sophisticated data analyses to parsing complex data files to implementing psychophysics experiments. The course is designed for students in psychology, cognitive science, neuroscience and other non-computer science majors interested in learning matlab. Beyond teaching specific coding skills, this course will support students' development as computational thinkers.

Spr CLPS0950 S01 25046 TTh 1:00-2:20(08) (T. Serre)

CLPS 1193. Laboratory in Genes and Behavior. Laboratory course in behavioral neuroscience designed to provide research experience in assessing effects of genetic alterations on behavior. Students examine the behavioral phenotype of a mouse model of human disease. Mice are tested on behavioral batteries to assess, for example cognitive, affective, and sensorimotor behavior. Recent classes tested models of early life stress, Fragile X Mental Retardation, and Alzheimer's Disease. Students will test the mice, analyze the data, and prepare a manuscript suitable for publication in a scientific journal. Prerequisites: CLPS 0410 or NEUR 0010, and CLPS 0900 or instructor permission. Enrollment limited to 10, not open to first-year students

Spr CLPS1193 S01 25048 TTh 3:00-5:00 (K. Bath)

CLPS 1250. Human Factors. The application of knowledge of human characteristics to the design of equipment, facilities, and environments for human use. Research on attention, perception, learning, and decision making will be applied to problems in various areas including: aviation, highway safety, industrial safety, consumer products, human-computer interaction, and aging. Enrollment limited to 25.

Spr CLPS1250 S01 25049 MWF 2:00-2:50(07) (K. Spoehr)

CLPS 1310. Phonology. 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.

Spr CLPS1310 S01 25050 TTh 10:30-11:50(09) (U. Cohen Priva)

CLPS 1342. Formal Semantics. 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 16615 TTh 2:30-3:50(03) (P. Jacobson)

CLPS 1370. Introduction to Pragmatics. Any time we utter a sentence in conversation, the perceived meaning of that sentence depends on the context in which the sentence is used. During the course, students will examine the character of such context dependence, with the goal of learning how to analyze and predict the meaning of sentences in context. Prerequisites: CLPS 0900 or NEUR0010; and preferably at least one of the following: CLPS1150, CLPS1480, CLPS0400, CLPS2100, NEUR1740; NEUR1540.

Fall CLPS1370 S01 16616 TTh 10:30-11:50(13) (S. AnderBois)

CLPS 1478. Translational Models of Neuropsychiatric Disorder. This course will be an upper level seminar course focused on reading and understanding the primary literature related to the use of animals to study neuropsychiatric disorders. Throughout the course we will discuss the appropriateness, use, and limitations of animal models for studying neuropsychiatric disorders. We will discuss a range of topics building from basic concepts of evolution, development, and genetics to the practice of using animals to study aging and memory function, affective pathology, and developmental disorders. Prerequisites: CLPS0010 or NEUR0010; and preferably at least one of the following: CLPS1150, CLPS1480, CLPS0400, CLPS2100, NEUR1740; NEUR1540.

Fall CLPS1478 S01 16619 T 4:00-5:30(09) (K. Bath)

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.

Spr CLPS1480C S01 25159 F 3:00-5:30(15) (D. Badre)

CLPS 1492. Computational Cognitive Neuroscience. 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 graphical neural network software, allowing deeper appreciation for how these systems work. Prerequisites: CLPS 0040 or CLPS 0200 or NEUR 0010.

Fall CLPS1492 S01 16620 TTh 1:00-2:20(08) (M. Frank)
CLPS 1495. Affective Neuroscience.
This course will survey key topics and methods in research on the neuroscience of affect and emotion. It is ideally suited for advanced undergraduates or graduate students who have taken an introductory cognitive neuroscience and/or psychology course. This course will use a variety of behavioral and neuroscientific data to examine the structure of affect/emotion; how affective processes shape cognition and action; how cognition in turn shapes affect; and the nature of variable affective reactions within/across individuals. The course will include in-class presentations, discussions, short lectures, and long forms of reading responses, and a final research proposal.

Fall CLPS1495 S01 16621 T 4:00-6:30(09) (A. Shenhav)

CLPS 1500. Perception and Action.
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 inferential 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 0010), CLPS 0500 (COGS/PSYC 0440), or CLPS 0510 (COGS 0110).

Spr CLPS1500 S01 25052 TTh 2:30-3:50(11) (W. Warren)

CLPS 1510. Auditory Perception Laboratory.
This course considers how we sense and comprehend the world through sound. Laboratory sessions will focus on recording and analyzing sounds, creating sound effects, and completing experiments on the psychology of loudness, pitch, and musical timbre. Class discussions will explore topics in music perception, instrumental design, room acoustics, the emotional impact of sounds, and development of hearing sensitivity and hearing loss. The final project for this course is recording and analyzing the soundscape of Brown, with the overall goal of developing an acoustic map of campus.

Spr CLPS1510 S01 25047 M 3:00-5:30(13) (A. Simmons)

CLPS 1570. Perceptual Learning.
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 25053 Th 4:00-6:30(17) (T. Watanabe)

CLPS 1580C. Visualizing Information.
There has been an explosion of interest in how to present information in a visual way rather than as a bunch of boring numbers. Visualizations can be outstanding at conveying information, but there have also been colossal failures. We will explore the good, the bad, and the ugly and harness knowledge of visual perception to understand why some are more successful than others. Someone interested in how to create effective visual displays (posters, infographics) would benefit from this course. Some background in visual perception is recommended such as a CLPS or NEUR course about vision or familiarity with graphic design.

Fall CLPS1580C S01 16622 M 3:00-5:30(05) (L. Welch)

CLPS 1590. Visualizing Vision.
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 functions in biological systems. Labs will rely on matlab and several computer graphics packages (e.g; Lightwave). Enrollment limited to 20.

Fall CLPS1590 S01 16623 TTh 1:00-2:20(08) (F. Domini)

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 complete a set of writing assignments. Prerequisites: CLPS 0600 (PSYC 0810) or CLPS 0610 (COGS 0630).

Spr CLPS1610 S01 25054 ThH 1:00-2:20(08) (D. Sobel)

CLPS 1620. Developmental Cognitive Neuroscience.
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 (PSYC 0810), CLPS 0610 (COGS 0630), EDUC 0800, or permission of the instructor. Enrollment limited to 40.

Fall CLPS1620 S01 16686 M 3:00-5:30(05) (D. Amso)

CLPS 1700. Abnormal Psychology.
The study of anxiety, stress, and neuropsychiatric disorders, psychosomatic disorders, deviant social behavior, affective disorders, and schizophrenia. Considers theories of etiology (causes) and methods of therapeutic treatment, case studies, experimental research, and clinical research.

Spr CLPS1700 S01 25055 TTh 9:00-10:20(01) (B. Hayden)

This course explores answers to the question of what enables some individuals to escape the worst psychological consequences of extreme personal disruption caused by a range of human-made and natural disasters. It examines personal accounts, pertinent psychological research, theoretical discussions, and the creative works of catastrophe survivors. Enrollment limited to 20.

Spr CLPS1720 S01 25056 TTh 1:00-2:20(08) (J. Wright)

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 within 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 and Behavioral Decision Making concentrators.

Fall CLPS1730 S01 16624 Th 10:30-11:50(13) (J. Krueger)

CLPS 1760. The Moral Brain.
How do we learn to cooperate, help others in need, and appropriately respond after being treated unfairly? The human mind strives to resolve the competing pressures of self-interest against the greater good. By drawing upon many disciplines including philosophy, social and affective neuroscience, abnormal psychology, law, and experimental economics, this course covers topics from 18th-century philosophy to modern-day neuroscience. We will examine 1) the philosophical and epistemological foundations of moral thought, 2) the influence of emotion and contextual framing on moral action, 3) the psychopathology of immoral choice, and 4) the underlying cognitive and neurobiological processes that guide moral decision-making.

Fall CLPS1760 S01 16687 Th 4:00-6:30(04) (O. FeldmanHall)

Spr CLPS1760 S01 25057 Th 4:00-6:30(17) (O. FeldmanHall)
CLPS 1790. Personality and Clinical Assessment.
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 16625 TTh 2:30-3:50(03) (J. Wright)

CLPS 1791. Laboratory in Social Cognition.
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 24.
	Spr CLPS1791 S01 25058 TTh 10:30-11:50(09) (J. Krueger)

CLPS 1890. Laboratory in Psycholinguistics.
An advanced course in methodological approaches to the study of psycholinguistics. Processes (e.g. with adult lexical access, sentence processing, corpus linguistics, etc.) Recommended prerequisites: CLPS 0800 (COGS 0450) and CLPS 0900 (COGS/PSYC 0090), or equivalent. Fall CLPS1890 S01 16626 TTh 1:00-2:20(08) (J. Morgan)

CLPS 1900. Research Methods And Design.
This course is designed to provide CLPS concentrators (psychology/ cognitive science/cognitive neuroscience) with a variety of tools needed to conduct research: sources of data, standard designs (e.g., factorial experimental, correlational, longitudinal), research ethics, and best practices of literature review (e.g., meta-analysis). The course will include lectures, laboratory exercises, data collection, statistical analysis, and presentation of findings in written and oral reports. (Previously CLPS 1091)
	Fall CLPS1900 S01 16627 TTh 9:00-10:20(02) (L. Welch)
	Spr CLPS1900 S01 25059 TTh 2:30-3:50(11) (A. Shenhav)

This is the capstone course for the Behavioral Decision Sciences (BDS) concentration. It entails a research project that serves as a culmination of each student’s experience within the concentration. Students should choose a research topic compatible with the three electives that they have taken or will take as part of the concentration. They will also need a faculty advisor for the project. The course entails presentation of your ideas and plans, as well as your final results.
	Fall CLPS1960 S01 16628 M 3:00-5:30(05) (S. Stoman)

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.

This course is the first of a two-course sequence that provides graduate students with background in the core topics and themes in the cognitive and psychological sciences. Topics include sensory systems, perception, action, evolution and development, phonetics and phonology, attention, learning, memory, and executive function. Students are also introduced to a wide range of approaches and levels of analysis that scientists adopt to study these topics. Weekly topics are addressed in lectures and assigned readings. A separate seminar session involves presentation of current papers by students and discussion with faculty. Open to graduate students only.
	Fall CLPS2001 S01 16629 TTh 1:00-2:20(08) (D. Badre)

CLPS 2091. Graduate First Year Project Research.
Please check Banner for the correct section number and CRN to use when registering for this course.

CLPS 2092. Graduate First Year Project Research.
Please check Banner for the correct section number and CRN to use when registering for this course. Instructor permission required.

CLPS 2095. Practicum in Teaching.
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 2096. Directed Graduate Research.
No description available. Instructor permission required.

CLPS 2450. Exchange Scholar Program.
Fall CLPS2450 S01 15266 Arranged 'To Be Arranged'

CLPS 2908. Multivariate Statistical Techniques.
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.
	Spr CLPS2908 S01 25060 TTh 10:30-11:50(09) (B. Malle)

CLPS 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 CLPS2970 S01 15267 Arranged 'To Be Arranged'
	Spr CLPS2970 S01 24164 Arranged 'To Be Arranged'

CLPS 2990. Thesis Preparation.
For graduate students who have met the residency requirement and are continuing research on a full time basis.
	Fall CLPS2990 S01 15268 Arranged 'To Be Arranged'
	Spr CLPS2990 S01 24165 Arranged 'To Be Arranged'

Humanities


HMAN 2400P. The Idea of the University.
What is the future of the university? Its very idea has undergone drastic changes, from the formulation of “academic freedom” in 1155 to what, under neoliberal capitalism, has been called the “uberification of the university.” Our seminar is dedicated to key texts—from Kant to Derrida and Butler—in this history, focusing on topics such as the corporatization of universities, political protest, and the unconditional. Students will pursue collaborative inquiries into the idea of a university or jointly translate significant historical and theoretical documents; their research will be the foundation of a critical lexicon hosted on a dedicated webpage.
	Fall HMAN2400P S01 15358 Th 1:00-3:30(08) (G. Richter)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
This is a seminar about what happens when arts and ideas move. It defines processes of artistic and literary translation, from the repetition and reuse of narratives to the uncanonical meeting of pictorial conventions to the tweaks, adjustments, and inventions that propelled arts across the early modern world. We will address theories of translation and imitation, and focus on problems of style, language, impostors, dictionaries, media, and ethnography, especially in Asia, Europe, and the Middle East. Class will include training in artistic practices of replication and a collaborative project with special collections.
Fall HMAN2400R S01 16649 W 12:00-2:30 (S. Bashir)

HMAN 2400S. Race, Nation, Immigration.
This collaborative seminar investigates the imbrications of race, nation, and immigration from the comparative perspectives of the social sciences and the humanities. Taught by a political scientist with an emphasis on state/society relations in Asia and a historian with a focus on modern European intellectual history, politics, and arts, the course examines questions of belonging, inclusion, and exclusion in areas of the world that provide fruitful sites of analysis, such as the United States, Europe, South Asia (India), Latin America (Brazil), and Africa (South Africa). Materials will include films, fiction, theoretical writings, and data sets.
Fall HMAN2400S S01 16647 W 3:00-5:30(17) (M. Steinberg)

HMAN 2400T. Imagining Cities: Early Modern Urban Perspectives.
Every city is a palimpsest in space and time. Calvino’s “Invisible Cities” of reputation and imagination and Miéville’s double-awareness in “The City and the City” provide points of entry to visualizations and narrations of real and imagined urban centers. This course considers cities as varied as Rome, Seville, Mexico City, and the City of God in literature, political and architectural treatises, maps, images, and archaeological and historical records. This multidisciplinary archive forms a basis for collaborations in recovering and reconstructing built environments from different perspectives in text, image, and digital media, working with original materials in special collections.
Fall HMAN2400T S01 24388 Th 1:00-3:30 (E. Lincoln)

HMAN 2400U. Italian Thought: Inside and Out.
This collaborative seminar surveys contributions of Italian Thought to debates on theory in Italy and abroad and also identifies exclusions at work in that corpus. The seminar provides an introduction into classic texts (Roberto Esposito, Gramsci, texts from the Autonomia movement from the 1960s and early 1970s and from the terrorism debate, and texts on the question of work and the category of the “impolitical”). The seminar also seeks to include and make functional other languages excluded from this discourse (feminism, queer theory, psychoanalysis). Students will engage with the Pembroke Center Archive and collaborate on translation and glossary projects.
Spr HMAN2400U S01 24389 Th 4:00-6:30(17) (S. Stewart-Steinberg)

HMAN 2400W. The Visual Frequency of Black Life.
How does one represent black life? Historical and contemporary black photo books offer densely layered accounts of blackness and black sociality that, far from restricted to the visual, are haptic and sonic engagements and improvisations. Placing these works in conversation with sonic scripts, embodied performances, and moving images inspired by and in dialogue with them, we will unpack multiple visual frequencies of black life with an eye toward understanding practices of black refusal and futurity that structure their varied creative practices. This collaborative seminar is taught in parallel by Tina Campt at Brown University and Saidiya Hartman at Columbia University.
Spr HMAN2400W S01 24462 Th 4:00-6:30(17) "To Be Arranged"

HMAN 2400X. Premodern Art-Science, or the Work of Knowing in Europe before 1800.
This collaborative seminar examines premodern ways of knowing through entangled histories of art, craft, science, and medicine in Europe before 1800. Whether through the visual representations of naturalists or the manipulation of matter by artists/artisans to render nature meaningful, useful, or both, premoderns made knowledge in ways that defy modern disciplinary divisions. In studying premodern knowledge work through its own disciplinary understandings, we explore the research methodology of reconstruction, i.e., the argument that we must reconnect material objects with texts, and both with laboratory research practices, to fully understand premodern knowledge work. Taught in parallel at the University of Minnesota.
Spr HMAN2400X S01 25467 Arranged (H. Cook)

Comparative Literature

Che Guevara and Fidel Castro are among the twentieth century’s most iconic figures, thanks to their roles in the Cuban Revolution and in anti-imperialist struggles across the globe. They are also among the most divisive, eliciting passionate disapproval among some and strong admiration among others. In this seminar, we will read Guevara and Castro's speeches and writings alongside literary, visual and cinematic representations of them, paying particular attention to the ways in which their lives and deaths have generated distinct interpretations, in Cuba and beyond. Open only to first-year students.
Fall COLT0510F S01 16527 TTh 1:00-2:20(08) (E. Whitfield)

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 Chrétien de Troyes, Quevedo, Prévost, Balzac, Brontë, Twain, Faulkner, Vesaas, Rhys, Satrapi and Foer. Enrollment limited to 19 first year students.
Fall COLT0610D S01 16604 Th 1:00-2:20(08) (A. Weinstein)

COLT 0610E. Crisis and Identity in Mexico, 1519-1968.
Examines four moments of crisis/critical moments for the forging of Mexican identity: the "Conquest" as viewed from both sides; the hegemonic 17th century; the Mexican Revolution as represented by diverse stakeholders; the "Mex-hippies" of the 1960s. We especially explore how key literary, historical, and essayistic writings have dealt with Mexico's past and present, with trauma and transformation. Readings include works by Carlos Fuentes, Sor Juana Inés de la Cruz, Octavio Paz, Juan Rulfo, and the indigenous Nican Mopohua on the Virgin of Guadalupe. All in English. No prerequisites.
Fall COLT0610E S01 25417 TTh 2:30-3:50(11) (S. Merrim)

COLT 0710C. Introduction to Scandinavian Literature.
An introduction to major works of Scandinavian writers, painters and filmmakers over the past 150 years. Figures include Kierkegaard, Ibsen, Strindberg, Munch, Hamsun, Josephson, Södergran, Lagerkvist, Vesaas, Cronqvist, Bergman, August and Vinterberg, as well as children's books by Astrid Lindgren and Tove Jansson.
Spr COLT0710C S01 25171 TTh 10:30-11:50(09) (A. Weinstein)

COLT 0710L. New Worlds: Reading Spaces and Places in Colonial Latin America.
An interdisciplinary journey—combining history, literature, art, film, architecture, cartography—through representations of the many worlds that comprised the colonial Hispanic New World. We trace the paradisical Antilles, the U.S. Southwest, Tenochtitlan/Mexico City, Lima, Potosí. We read European, indigenous, and Creole writers, including: Columbus, Las Casas, Bernal Diaz, Aztec poets, Guaman Poma, Sor Juana. In English. Excellent preparation for study abroad in Latin America. Enrollment limited to 19 first year students.
Fall COLT0710L S01 15961 M 3:00-5:30(05) (S. Merrim)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
COLT 0710. A Comparative Introduction to the Literatures of the Americas.
Considers the common links between the diverse literatures of North and South America, approached in relation to one another rather than to Eurocentric paradigms. Focuses on the treatment of such topics as the representation of the past and the self, the role of memory and the imagination, the nature of literary language, and the questions of alienation, colonialism and post-colonialism, communication versus silence, and fiction versus history in the works of selected writers from North and Latin America, including García-Márquez, Faulkner, Cortázar, Allende, Lispector, Morrison, Doctorow, Rosa, and DeLillo. Enrollment limited to 15 first year students.
Fall COLT0710NS01 16524 TTh 2:30-3:50(03) (L. Valente)

COLT 0810. How Not to Be a Hero.
One of Shakespeare's greatest plays is about a character who was an irredeemable failure: Coriolanus. What can failure teach us? What kind of strength does a language of failure possess? We will read the ancient sources themselves (Livy, Lucian, Plutarch), and modern adaptations of these stories (Bertolt Brecht, T. S. Eliot, Günter Grass). We will also look at other "exemplary" failures who inspired Shakespeare and later literature, including Lucullus and Timon.
Fall COLT0810HS01 15959 TTh 9:00-10:20(02) (K. Haynes)

COLT 0810L. 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 COLT0810L S01 25416 MWF 10:00-10:50(03) (D. Levy)

COLT 0811L. Classical Mythology and the Western Tradition.
Reads classical texts that expound the fundamental mythological stories and elements of the Western tradition, then will read selected texts from the Renaissance through the twentieth century that utilize these myths. Ancient texts covered will include the Epic of Gilgamesh, Hesiod's Theogony and Works and Days, Ovid's Metamorphoses, and plays by Aeschylus, Sophocles, and Euripides. Later texts will include Shakespeare's Venus and Adonis and Rape of Lucrece, Milton's "Lycidas," and lyric poetry by Keats, Shelley, Browning, Swinburne, Rilke, Auden, and Yeats. This course is suitable for anyone wishing to understand the classical background to Western literature.
Fall COLT0811L S01 15960 MW 11:00-11:50(16) (M. Ierulli)

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, formalisms and ideological criticism (questions of race, gender, sexuality, postcolonialism). Primarily for advanced undergraduates. Lectures, discussions; several short papers.
Fall COLT1210 S01 16520 MW 2:00-2:50(07) (P. Szendy)

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.
Fall COLT1430DS01 16803 TTh 1:00-2:20(08) (D. Levy)

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 COLT1430LS01 15956 MWF 11:00-11:50(16) (S. Bernstein)

COLT 1431C. Poets, Poetry, and Politics.
The award of the 2016 Nobel Prize for Literature to Bob Dylan ignited a lively debate about who is, and who is not, a poet. Historically, who were deemed poets, what was their function? What do their poems do and how do they work? Do they foment revolution or “make nothing happen,” as Auden once wrote? How does the poet aspire to a unique, individual voice even as he or she may (be seen to) best represent a constituency? This course relates the poetic act to political action and interrogates the commonly aired contention that politics makes for bad poetry.
Fall COLT1431CS01 15957 MWF 2:00-2:50(07) (V. Calotychos)

COLT 1440P. Nationalism and Transnationalism in Film and Fiction.
Reports of the demise of nationalism always seem greatly exaggerated. How are notions of transnationalism dependent on rewriting the nation? This course revisits films of world cinema acclaimed for their national cachet from a transnational perspective and in dialogue with their literary intertexts. We will study these films’ fictional narration, cinematic articulation, and critical reception and consider how they signify in multinational networks of funding, distribution, production, conception, and critical reception. Students will analyze the political, ethical, and artistic stakes of confronting difference as both a located and universal stance or commodity. Films and texts chosen from across the globe.
Spr COLT1440PS01 25337 TTh 6:40-8:00PM(07) (V. Calotychos)

COLT 1610B. Irony.
Spr COLT1610BS01 25284 TTh 1:00-2:20(08) (S. Bernstein)

COLT 1710C. Literary Translation Workshop.
The primary focus of this course is the practice of literary translation as an art. Using the workshop format, each student will complete a project by the end of the semester. Examples and theoretical texts will illuminate the historical, ethical, cultural, political, and aesthetic values that underlie every translation, keeping an eye towards opening up the field beyond inherited practices to consider the contemporary implications of our choices, intentions, and purposes in translation. Open to all levels. Heritage speakers are welcome, collaboration is permitted, and an open-spirited approach to this developing and fascinating practice is strongly recommended.
Fall COLT1710CS01 16720 W 3:00-5:30(17) (S. Nakayasu)

COLT 1810P. Literature and Medicine.
The purpose of this course is to examine a number of central issues in medicine-disease, pain, trauma, madness, the image of the physician--from the distinct perspectives of the sciences and the arts. Texts will be drawn from authors such as Sophocles, Hawthorne, Gilman, Tolstoy, Kafka, Anderson, O'Neill, Hemingway, Ionesco, Vergheze, Barker, Sacks, Foucault, Sontag, Scarry, Gawande and others. Open enrollment course: lecture + section.
Fall COLT1810PS01 16644 TTh 10:30-11:50(13) (A. Weinstein)

COLT 1811L. Travel, Tourism, Trafficking through the Ages.
Why go away to find ourselves? How does the self constitute itself “elsewhere”? This course considers the genre of travel writing and its theory: how are roots, routes, and rootlessness treated in diverse racial, spiritual, sexual, national, and imperial encounters. Today, when cosmopolitan tourists, intellectuals, or exotic and erotic adventurers share the same beach as downtrodden, abject refugees and their traffickers, what are the cultural, ethical and political implications of leisurely seeking out (self-) discovery, disappearing authenticity, and commodified otherness? Readings include Herodotus, Equiano, Chatwin, Kingsley, Montagu, Darwin, Twain, Miller, Durrell, Baldwin, Phillips, Iyer, Houellebecq, Woolf, Thompson, Theroux, Baudrillard.
Fall COLT1811LS01 16777 MWF 12:00-12:50(15) (V. Calotychos)
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 and fame. Authors include Anne Bradstreet, Margaret Lucas Cavendish, Sor Juana Inés de la Cruz, Mme de Lafayette, Maria de Zayas. Enrollment limited to 20. Texts and class in English.

COLT 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.

COLT 1980. 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.

COLT 1990. 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.

COLT 2450. Exchange Scholar Program.
Fall COLT2450 S01 15269 Arranged 'To Be Arranged'
Spr COLT2450 S01 24168 Arranged 'To Be Arranged'

COLT 2540L. Moving Modernisms. This seminar explores concepts and practices of movement in and across early twentieth-century literary, visual, and performance arts. We will track modernism’s movements across regions and artforms, examining its articulations and receptions in different contexts, and at its creative and critical deployment of and reflection on movement, with flexibility built into its modus operandi. The course will range across Europe and the Americas, and will feature sessions on poetry, drama, narrative, technology, world’s fairs/museums, silent film, dance, music, and artworks from the 1890s through the 1920s, alongside critical and theoretical writings from that period through our own.
Fall COLT2540L S01 16719 F 3:00-5:30(11) (M. Clayton)

COLT 2720C. Literary Translation. Study and practice of translation as art and a potent form of literary criticism. Translation is an act of interpretation, which informs the language of the translator and the text as a whole: context, intent, and language. Discussion will include the impact of cultural difference, tone and time on translation, and the role of analytical as well as intuitive understanding of the original in the translator’s endeavor.
Spr COLT2720C S01 25419 M 3:00-5:30(13) (O. Mostefai)

COLT 2820M. Discourses of the Senses. A comparative study of a variety of discourses dealing with the relation among the senses, the arts, and the problems of comparativity, interdisciplinarity, and intermediariness. Topics will include ekphrasis, synaesthesia, mysticism and the theory of correspondence, the Gesamtkunstwerk, and the limits between media. Readings from Condillac, Lessing, Kant, Swedenborg, the German Romantics, Baudelaire, Wagner, Balzac, Lacoue-Labarthe, Nancy, Panofsky, Tschumi and others.
Fall COLT2820M S01 15955 M 3:00-5:30(05) (S. Bernstein)

COLT 2822A. War. A century ago, the mass scale of modern industrial warfare seemed to mark a break in Western philosophy and literature. Innovative theoretical analyses and a new, self-conscious genre of “war poetry” emerged to engage with the consequences of the mass slaughter, concerned with such topics as nihilism, the limits of empathy, and the discontinuity of experience. These issues only intensified after the Second World War, and have remained pressing. We will read representative texts from the First World War to the present, exploring such issues as the linguistic representation of war, the problem of visibility, and the civilian-military divide.
Spr COLT2822A S01 25283 W 3:00-5:30(10) (E. Whitfield)

COLT 2880. 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.

COLT 2990. Thesis Preparation. For graduate students who have met the residency requirement and are continuing research on a full time basis.
Fall COLT2990 S01 15270 Arranged 'To Be Arranged'
Spr COLT2990 S01 24167 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 and many aspects of multimedia, along with explanations of the underlying digital technology and its relevance to our society. Other topics include artificial intelligence, IT security, ethics and the 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, Excel and Python assignments. CSCI 0020 is a good introduction to a wide range of CS topics that have broad relevance in our society. No prerequisites.
Fall CSCI0020 S01 16119 Th 9:00-10:20(02) (D. Stanford)

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 TA’d. Instructor permission required.
Fall CSCI0081 S01 16120 Arranged (T. Doepnner)
Spr CSCI0081 S01 24984 Arranged (T. Doepnner)

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 TA’d. Instructor permission required.
Fall CSCI0082 S01 16121 Arranged (T. Doepnner)
Spr CSCI0082 S01 24985 Arranged (T. Doepnner)

CSCI 0100. Data Fluency for All. This course is intended to introduce Brown students to computational techniques that data scientists use to tell stories. Data fluency encompasses both data literacy, the basics of statistics and machine learning, and data communication, which relies heavily on principles of design. Students will gain hands on experience using statistical tools such as “R” to analyze real world data sets, and ‘ggplot’ to visualize them. Sample application domains include just about every field, since the only requirement is data, which there almost always are (e.g., the complete works of Shakespeare is a sample data set).
Fall CSCI0100 S01 16148 MW 1:00-1:50(06) (A. Greenwald)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
CSCI 0130. User Interfaces and User Experience.
Topics include understanding when to use different interfaces, modeling and representing user interaction, principles of user experience design, eliciting requirements and feedback from users, methods for designing and prototyping interfaces, and user interface evaluation. Students interested in learning the process behind building a user interface and gaining hands-on experience designing a user interface should take this course. Programming experience is unnecessary. There will be assignments, readings, and design labs. CSCI 0130 is the same lecture, labs, and readings as CSCI 1300 but half of the assignments will be different (CSCI 1300 will have assignments with computer science prerequisites). Website: http://cs.brown.edu/courses/csci1300/

Fall CSCI0130 S01 16122 TTh 1:00-2:20(08) (J. Huang)

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, and culminating in a significant final project, helps provide a serious introduction to the field intended for both potential concentrators and those who may take only a single course. No prerequisites, no prior knowledge of programming required.

Fall CSCI0150 S01 16123 TTh 2:30-3:50(03) (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 24986 TTh 1:00-2:20(08) (To Be Arranged)

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 16124 MWF 10:00-10:50(14) (J. Hughes)

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 or CSCI 0190.

Spr CSCI0180 S01 24987 MWF 11:00-11:50(04) (K. Fisler)

CSCI 0190. Accelerated Introduction to Computer Science.
A one-semester introduction to CS covering programming integrated with core data structures, algorithms, and analysis techniques, similar to the two-course introductory sequences (CSCI 0150-0160 and CSCI 0170-0180). Students wishing to take CSCI 0190 must pass a sequence of online placement assignments. Though the placement process is most appropriate for students who have had some prior programming experience, it is self-contained so all are welcome to try learning the provided material and attempting placement. Placement information will be available by June 1st at http://cs.brown.edu/courses/csci0190/. Students who do not successfully pass the placement process won’t be allowed to register.

Fall CSCI0190 S01 16125 MWF 10:00-10:50(14) (S. Krishnamurthi)

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 24988 MWF 1:00-1:50(06) (M. Littman)

CSCI 0320. Introduction to Software Engineering.
Techniques for designing, building, and maintaining large, scalable, and reusable systems. We will cover advanced programming techniques using Java and Javascript. Course assignments will familiarize students with software testing, relational databases, concurrency techniques such as threads, and software engineering tools like git, profilers, and debuggers. A major component of the course will be a group software project of your own design.

Prerequisite: CSCI 0160, CSCI 0180 or CSCI 0190; CSCI 0220 is recommended.

Spr CSCI0320 S01 24989 TTh 1:00-2:20(08) (T. Nelson)

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 Unix systems, as well as to multi-threaded programming with POSIX threads. Students will be introduced to the functions of operating systems.

Prerequisite: CSCI 0150, 0180, or 0190.

Fall CSCI0330 S01 16126 MWF 2:00-2:50(07) (T. Doepner)

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. Some knowledge of basic linear algebra is helpful but not required. Strong object-oriented programming ability (e.g., in C++, Java or Python) is required.

Fall CSCI1230 S01 16127 TTh 10:30-11:50(13) (A. van Dam)

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 16129 Arranged (A. van Dam)
CSCI 1250. Introduction to Computer Animation. 
Introduction to 3D computer animation production including story writing, production modeling, shading, animation, lighting, and compositing. The first part of the course leads students through progressive exercises that build on each other to learn basic skills in 2D and 3D animation. At each step, student work is evaluated for expressiveness, technical correctness and aesthetic qualities. Students then work in groups creating a polished short animation. Emphasis on in-class critique of ongoing work which is essential to the cycle of visually evaluating work in progress, determining improvements, and implementing them for further evaluation.

Please see course website for application procedure.
Fall CSCI1250 S01 16147 WF 12:00-1:50 (B. Meier)

CSCI 1260. Compilers and Program Analysis. 
Lexical analysis, syntactic analysis, semantic analysis, code generation, code optimization, translator writing systems. Prerequisites: CSCI 0220 and 0320; 0510 is recommended.
Fall CSCI1260 S01 16971 F 3:00-5:30(11) (S. Reiss)

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 16145 MW 3:00-4:20(17) (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 24990 WF 12:00-1:50 (B. Meier)

CSCI 1300. User Interfaces and User Experience. 
Topics include understanding when to use different interfaces, modeling and representing user interaction, principles of user experience design, eliciting requirements and feedback from users, methods for designing and prototyping interfaces, and user interface evaluation. Students interested in learning the process behind building a user interface and gaining hands-on experience designing a user interface should take this course. There will be assignments, readings, and design labs. CSCI 1300 and CS 0130 share the same lecture, labs, and readings but half of the assignments will be different (CSCI 1300 will have assignments with computer science prerequisites). Website: http://cs.brown.edu/courses/csci1300/
Fall CSCI1300 S01 16130 TTh 1:00-2:20(08) (J. Huang)

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 (equiv 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 24991 MWF 10:00-10:50(03) (S. Reiss)

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 16131 TTh 10:00-11:50 (D. Laidlaw)

CSCI 1380. Distributed Computer Systems. 
Explores the fundamental principles and practice underlying networked information systems, first we cover basic distributed computing mechanisms (e.g., naming, replication, security, etc.) and enabling middleware technologies. We then discuss how these mechanisms and technologies fit together to realize distributed databases and file systems, web-based and mobile information systems. Prerequisite: CSCI 0320 or CSCI 0330.
Spr CSCI1380 S01 24992 TTh 10:30-11:50(09) ‘To Be Arranged’

CSCI 1410. Artificial Intelligence. 
Practical approaches to designing intelligent systems. Topics include search and optimization, uncertainty, learning, and decision making. Application areas include natural language processing, machine vision, machine learning, and robotics. Prerequisites: CSCI 0160, CSCI 0180 or CSCI 0190; and one of CSCI0220 or CSCI1450 or APMA1650 or APMA1655.
Fall CSCI1410 S01 16132 TTh 1:00-2:20(13) (G. Konidaris)

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. Comfort with basic Multivariable Calculus is recommended.
Spr CSCI1420 S01 24993 TTh 2:30-3:50(11) (S. Bach)

CSCI 1430. 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.
Spr CSCI1430 S01 24994 MW 3:00-4:20(10) (J. Tompkin)

CSCI 1450. Probability for Computing and Data Analysis. 
Probability and statistics have become indispensable tools in computer science. Probabilistic methods and statistical reasoning play major roles 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 Bayesian and frequentist statistical inference. Basic programming experience required for homework assignments. Students cannot get concentration credit for both CSCI1450 and APMA1650/APMA1655.
Fall CSCI1450 S01 16133 TTh 2:30-3:50(03) (E. Upfal)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
CSCI 1450. Software Security and Exploitation
Covers software exploitation techniques and state-of-the-art mechanisms for protecting (vulnerable) software. It begins with a summary of prevalent software defects, typically found in applications written in memory unsafe languages, like C/C++, and proceeds with studying traditional and modern exploitation techniques, ranging from classical code-injection and code-reuse up to the newest goodies (just-in-time code reuse). For the most part, it focuses on defenses against certain vulnerability classes and exploitation methods. Students will learn about the boundaries and effectiveness of virtualization, stack and heap protections, and address space randomization, and analyze advanced exploitation techniques and countermeasures.
Fall CSCI1650 S01 16137 M 3:00-5:30(05) (V. Kemerlis)

CSCI 1670. Operating Systems
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 0330.
Spr CSCI1670 S01 24997 MW 2:00-2:50(07) (T. Doepner)

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 16138 TTh 1:00-2:20(08) "To Be Arranged"

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 24998 Arranged (T. Doepner)

CSCI 1730. Design and Implementation of Programming Languages
Explores the principles of modern programming languages by implementation. Examines linguistic features, especially control operators such as if-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, and one of CSCI 0220 or CSCI 1450.
Fall CSCI1730 S01 16139 MWF 11:00-11:50(16) (S. Krishnamurthi)

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.
Spr CSCI1800 S01 24999 MW 3:00-4:20(10) (J. Savage)
Who is the Big Brother that we most fear? Is it the NSA -- or is it Google and Facebook? Rapidly changing social mores and the growing problem of cybersecurity have all contributed to a sense that privacy is dead. Laws protecting privacy and civil liberties are stuck in the analog age, while the capabilities for mass digital surveillance continue to advance rapidly. This course will examine a variety of informational privacy and technology issues. A major theme: the historical and contemporary struggle to bring surveillance under democratic control to protect against abuses of privacy, civil liberties and human rights.
Fall CSCI1850 S01 16715 TTh 9:00-10:20(02) (T. Edgar)

CSCI 1810. Computational Molecular Biology
High-throughput experimental approaches now allow molecular biologists to make large-scale measurements of DNA, RNA, and protein, the three fundamental molecules of the cell. The resulting datasets are often too large for manual analysis and demand computational techniques. This course introduces algorithms for sequence comparison and alignment; molecular evolution and phylogenetics; DNA/RNA sequencing and assembly; recognition of genes and regulatory elements; and RNA and protein structure. The course demonstrates how to model biological problems in terms of computer science.
Prerequisites: CSCI 0160, CSCI 0180 or CSCI 0190, or consent of instructor.
Fall CSCI1810 S01 16140 TTh 2:30-3:50(03) (S. Istrail)

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 25000 TTh 2:30-3:50(11) (S. Istrail)

CSCI 1900. csciStartup.
In csciStartup, you will incorporate and run a startup. Apply as a team to be part of a prototype class to remove the mystery from starting a company and to focus entirely on a product you're passionate about. Teams will incorporate, build a product for real customers, advertise their product, and improve it week after week. We'll spend half our class meetings with individual attention to each group's progress and how to improve your offerings. Assignments will be designed to apply to any company, with enough flexibility to ensure you're always working on something that makes sense for your business.
Spr CSCI1900 S01 25001 M 3:00-5:30(13) (J. Jannotti)

CSCI 1950N. 2D Game Engines.
2D Game Engines covers core techniques used in the development of the software that drives computer games and other interactive software. Projects involve building different varieties of 2D game engines 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 16778 W 3:00-5:30(17) 'To Be Arranged'

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 checkers, model constructers, 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 25002 MWF 10:00-10:50(03) (T. Nelson)

CSCI 1951A. Data Science.
Mastering big data requires skills spanning a variety of disciplines: distributed systems over statistics, machine learning, and a deep understanding of a complex ecosystem of tools and platforms. Data Science refers to the intersection of these skills and how to transform data into actionable knowledge. This course provides an overview of techniques and tools involved and how they work together. SQL and NoSQL solutions for massive data management, basic algorithms for data mining and machine learning, information retrieval techniques, and visualization methods.
Prerequisites: CSCI 0160, CSCI 0180, or CSCI 0190. One of CSCI 0330 or CSCI 0320 strongly recommended.
Spr CSCI1951A S01 25003 TTh 9:00-10:20(01) (E. Pavlick)

CSCI 1951C. Designing Humanity Centered Robots.
Offered by Brown's Computer Science department under the auspices of the Humanity Centered Robotics Initiative. It is focused on the iterative design process and how it can be used to develop robots for solving tasks that help people. It will expose students to a suite of fabrication and prototyping technologies sufficient for creating a functioning robotic system.
https://www.youtube.com/watch?v=DBvis_j_b78
The course has two tracks, one intended for CS concentrators, and one intended for non-concentrators with previous design experience. The non-concentrator track cannot be used toward fulfilling a Computer Science concentration requirement.
Fall CSCI1951C S01 16716 MW 9:00-11:50 (L. Gonsker)

CSCI 1951I. CS for Social Change.
Working in a studio environment to iteratively design, build, and test technical projects in partnership with different social change organizations, students will be placed in small teams to collaboratively work on projects that will range from developing a chatbot to aid community engagement to conducting geospatial data analytics. We will also reflect on our positionality and ethics in engaging in social impact work and what it practically means to leverage technology to create social change on an everyday basis. Enrollment limited to 12. Entry to this course is through application only: https://docs.google.com/forms/d/1wmCbmB6dop0lFCHjE5oHtgXAOOG8E3BtmD71JUt/edit
Spr CSCI1951I S01 25004 MW 3:00-4:20(10) (U. Cetintemel)

CSCI 1951K. Algorithmic Game Theory.
This course examines topics in game theory from a computer scientist's perspective. Through the lens of computation, this course will focus on the design and analysis of systems involving self-interested agents, investigating how strategic behavior should influence algorithm design, the design and analysis of systems involving self-interested agents, and the ramifications of conflicts of interest between system designers and participating agents. Topics include: auctions and mechanism design, equilibria, and learning.
Spr CSCI1951K S01 25005 W 3:00-5:30(10) (A. Greenwald)

CSCI 1951R. Introduction to Robotics.
Each student will learn to program a small quad-rotor helicopter. We will provide each student with their own robot for the duration of the course. The course will cover PID controllers for stable flight, localization with a camera, mapping, and autonomous planning. At the end of the course, the aim is for students to understand the basic concepts of a mobile robot and aerial vehicle. Enrollment by instructor permission.
Fall CSCI1951R S01 16141 TTh 10:30-11:50(13) (S. Tellex)

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.

CSCI 1971. Independent Study in 2D Game Engines.
2D Game Engines covers core techniques used in the development of 2D game engines. Projects involve building different varieties of 2D game engines 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.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
CSCI 1972. Topics in 3D Game Engine Development.
Covers core techniques in 3D game development with an emphasis on engine architecture. Students independently develop their own engines using C++, OpenGL, and the Qt framework, then work in groups to create a polished game. Topics include: spatial subdivision, player representation, collision detection and response, game networking, GPUs, and OpenGL. Prerequisite: CSCI 1230 and one of the following: CSCI 0320, CSCI 0330, CSCI 1950N, or CSCI 1971.

For graduate students who have met the residency requirement and are continuing research on a full time basis. Required: A completed proposal form and syllabus and faculty sponsor’s approval prior to 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: Instructor’s permission or both CSCI 0320 AND CSCI 1230.

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.

Deep learning is the name for a particular version of neural networks—a version that emphasizes multiple layers of networks. Deep learning, plus the specialized techniques that it has inspired (e.g. convolutional features and word embeddings) have led to rapid improvements in many applications such as computer vision, machine translation, and computer Go. This course intends to give students a practical understanding of deep learning as applied in these and other areas. It also teaches the Tensorflow programming language for the expression of deep learning algorithms. A final project will implement an advanced piece of work in one of these areas. Prerequisite: A basic programming course: (CSCI 0150, 0170 or 0190) A linear algebra course: (CSCI 0530, MATH 0520 or 0540) A stats / probability course: (CSCI 0220, 1450, 0450, MATH 1610, APMA 1650 or 1655). Prerequisite: CSCI 1410, 1420, 1460, 1480, or 1950F or instructor permission.

CSCI 2500B. Optimization Algorithms for Planar Graphs.
Planar graphs arise in applications such as road map navigation and logistics, graph drawing and image processing. We will study graph algorithms and data structures that exploit planarity. Our focus will be on recent research results in optimization. Prerequisite: CSCI 1570 or the equivalent.

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.

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.

CSCI 2951K. Topics in Collaborative Robotics.
Practical approaches to designing intelligent systems. Topics include search and optimization, uncertainty, learning, and decision making. Application areas include natural language processing, machine vision, machine learning, and robotics. Prerequisite: CSCI 1410, 1420, 1460, 1480, or 1950F or instructor permission.

This course investigates the state-of-the-art in software exploitation and defense. Specifically, the course is structured as a seminar where students present research papers to their peers. We will begin with a summary of prevalent software defects, typically found in applications written in memory unsafe languages, and proceed to surveying what we are up against: traditional and modern exploitation techniques, ranging from classical code injection and code reuse up to the newest goodies (JIT-ROP, Blind ROP). For the bulk part, we will focus on the latest advances in protection mechanisms, mitigation techniques, and tools against modern vulnerability classes and exploitation methods.

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 residency requirement and are continuing research on a full time basis.

CSCI XLIST. Courses of Interest to Concentrators in Computer Science.

Development Studies
Section numbers vary by instructor. Required: A completed proposal form and syllabus and faculty sponsor's and concentration advisor's approval prior to registering.

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.

DEVL 2990. Thesis Preparation.
For graduate students who have met the residency requirement and are continuing research on a full time basis.

DEVL XLIST. Courses of Interest to Concentrators in Development Studies.

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

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 15597 MWF 9:00-9:50(01) "To Be Arranged"
Fall CHIN0100 S01 15597 TTh 9:00-10:20(01) "To Be Arranged"
Fall CHIN0100 S02 15598 MWF 10:00-10:50(14) "To Be Arranged"
Fall CHIN0100 S02 15598 TTh 10:30-11:50(14) "To Be Arranged"
Fall CHIN0100 S03 15599 MWF 1:00-1:50(06) "To Be Arranged"
Fall CHIN0100 S03 15599 TTh 1:00-2:20(06) "To Be Arranged"
Fall CHIN0100 S04 15600 MWF 2:00-2:50(07) "To Be Arranged"
Fall CHIN0100 S04 15600 TTh 2:30-3:50(07) "To Be Arranged"

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 24301 MWF 9:00-9:50(02) "To Be Arranged"
Spr CHIN0200 S01 24301 TTh 9:00-10:20(02) "To Be Arranged"
Spr CHIN0200 S02 24683 MWF 10:00-10:50(03) "To Be Arranged"
Spr CHIN0200 S02 24683 TTh 10:30-11:50(03) "To Be Arranged"
Spr CHIN0200 S03 24684 MWF 1:00-1:50(06) "To Be Arranged"
Spr CHIN0200 S03 24684 TTh 1:00-2:20(06) "To Be Arranged"
Spr CHIN0200 S04 24685 MWF 2:00-2:50(07) "To Be Arranged"
Spr CHIN0200 S04 24685 TTh 2:30-3:50(07) "To Be Arranged"

CHIN 0300. Intermediate Chinese.
An intermediate course in Standard Chinese designed to further communicative competence and to develop reading and writing skills. Five classroom meetings weekly. Prerequisite: CHIN 0200 or permission of instructor.

Fall CHIN0300 S01 15601 MWF 12:00-12:50(15) "To Be Arranged"
Fall CHIN0300 S01 15601 TTh 12:00-12:50(15) "To Be Arranged"
Fall CHIN0300 S02 15602 MWF 1:00-1:50(06) "To Be Arranged"
Fall CHIN0300 S02 15602 TTh 1:00-2:20(06) "To Be Arranged"
Fall CHIN0300 S03 15603 MWF 2:00-2:50(07) "To Be Arranged"
Fall CHIN0300 S03 15603 TTh 2:30-3:50(07) "To Be Arranged"

This course is designed to enhance listening, speaking, reading, and writing skills for Chinese heritage students who have some prior knowledge of Chinese. Five classroom meetings weekly. Placement interview required.

Fall CHIN0350 S01 15604 TTh 12:00-12:50(15) "To Be Arranged"
Fall CHIN0350 S01 15604 MWF 12:00-12:50(15) "To Be Arranged"

CHIN 0400. Intermediate Chinese.
An intermediate course in Standard Chinese designed to further communicative competence and to develop reading and writing skills. Five classroom meetings weekly. Prerequisite: CHIN 0300 or permission of instructor.

Spr CHIN0400 S01 24688 MWF 12:00-12:50(05) "To Be Arranged"
Spr CHIN0400 S01 24688 TTh 12:00-12:50(05) "To Be Arranged"
Spr CHIN0400 S02 24689 MWF 1:00-1:50(06) "To Be Arranged"
Spr CHIN0400 S02 24689 TTh 1:00-2:20(06) "To Be Arranged"
Spr CHIN0400 S03 24690 MWF 2:00-2:50(07) "To Be Arranged"
Spr CHIN0400 S03 24690 TTh 2:30-3:50(07) "To Be Arranged"

CHIN 0450. Advanced Chinese for Heritage Learners.
This course is primarily designed for Chinese heritage students who have successfully completed CHIN 0350. If you have not taken CHIN 0350, please contact the instructor for a proficiency evaluation. Upon completing this course, you can take CHIN 0700 or equivalent, i.e. courses that have a prerequisite of CHIN 0600. This is an advanced-level course offering comprehensive work on all four language skills, with a focus on developing your ability to use sophisticated grammatical structures, vocabulary, and improving your reading and speaking skills. Materials used in this course will include a textbook, supplementary articles, and video clips.

Spr CHIN0450 S01 24686 TTh 12:00-12:50(05) "To Be Arranged"
Spr CHIN0450 S01 24686 MWF 12:00-12:50(05) "To Be Arranged"

CHIN 0500. Advanced Modern Chinese I.
An advanced course designed to enable students to read authentic materials. Students enhance their listening, speaking, reading, and writing skills; improve their narrative and descriptive abilities; and learn to express abstract ideas both orally and in writing. Five classroom meetings weekly. Prerequisite: CHIN 0250 or CHIN 0400 or permission of instructor.

Fall CHIN0500 S01 15605 MWF 9:00-9:50(01) "To Be Arranged"
Fall CHIN0500 S01 15605 TTh 9:00-10:20(01) "To Be Arranged"
Fall CHIN0500 S02 15606 MWF 10:30-11:50(16) "To Be Arranged"
Fall CHIN0500 S02 15606 MWF 11:00-11:50(16) "To Be Arranged"
Fall CHIN0500 S03 15607 MWF 12:00-12:50(15) "To Be Arranged"
Fall CHIN0500 S03 15607 TTh 12:00-12:50(15) "To Be Arranged"

CHIN 0600. Advanced Modern Chinese I.
An advanced course designed to enable students to read authentic materials. Students enhance their listening, speaking, reading, and writing skills; improve their narrative and descriptive abilities; and learn to express abstract ideas both orally and in writing. Five classroom meetings weekly. Prerequisite: CHIN 0500 or permission of instructor.

Spr CHIN0600 S01 24691 MWF 9:00-9:50(02) "To Be Arranged"
Spr CHIN0600 S01 24691 TTh 9:00-10:20(02) "To Be Arranged"
Spr CHIN0600 S02 24692 MWF 10:30-11:50(04) "To Be Arranged"
Spr CHIN0600 S02 24692 MWF 11:00-11:50(04) "To Be Arranged"
Spr CHIN0600 S03 24693 MWF 12:00-12:50(05) "To Be Arranged"
Spr CHIN0600 S03 24693 TTh 12:00-12:50(05) "To Be Arranged"

CHIN 0700. Advanced Modern Chinese II.
This course is designed to enhance the Chinese proficiency of those who have taken Advanced Modern Chinese I (CHIN 0600) or the equivalent. All four language skills are emphasized through selected authentic materials. 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 15608 MWF 10:00-10:50(14) "To Be Arranged"

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 24694 MWF 10:00-10:50(03) "To Be Arranged"

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
CHIN 0920D. Business Chinese. Business Chinese focuses on practical language skills that are most useful in business interactions in Chinese-speaking communities. Classroom activities are largely based on authentic documents and correspondence as well as a textbook. Through intensive practice in the listening, speaking, reading and writing of the Chinese language for business purposes, this course aims at enhancing students’ linguistic knowledge in a business context. Classes are conducted in Chinese. Prerequisite: CHIN 0800 or instructor permission. Enrollment limited to 18.
Spr CHIN0920D S01 24912 TTh 2:30-3:50(11) (Y. Wang)

CHIN 0920E. Two Sides of the Coin: Advanced Chinese Conversation. Many of us know about the trolley scenario- would you kill one to save five? What do you think about organ trade- is it immoral for wealthy people to buy organs from the poor in order to save their lives or those of their loved ones? Who are really responsible for the atrocious organ harvesting in China? What is your stance on the Affirmative Action? Did you know China has an affirmative action as well? The goal of this course is to develop students’ communication skills in Chinese, with an emphasis on their listening and speaking skills, through in-depth discussions on controversial issues and moral dilemmas. Class materials will cover a broad range of topics and will not be limited to those unique to China. The majority of primary sources will be in Chinese. Prerequisite is CHIN0800 or equivalent.
Spr CHIN0920E S01 24696 TTh 10:30-11:50(09) (Y. Wang)

CHIN 0920H. The Chinese Mind: Language and Culture. This course is designed for advanced learners of Chinese to enhance their language proficiency, as well as to grasp essential skills to observe and appreciate Chinese culture from the perspective of language, especially through Chinese radicals, idioms, proverbs, taboos, verses, vernacular language and internet language. The teaching methods in this course include lecture, case studies, and heuristic approach etc. After taking this course, students are expected to have much deeper understanding of Chinese language and culture and be able to use the language in a near native and artistic way.
Fall CHIN0920H S01 16313 TTh 2:30-3:50(03) (L. Jiao)

CHIN 1010. Stories from the Chinese Empire: Scholars, Demons and Swindlers. This bilingual course introduces the culture and society of late imperial China by reading short stories, novels, prose essays between 1368 and 1911. To maintain students’ language skills, the lecture is primary in Mandarin aided by English explanation. Students can choose to complete the assignments in either English or Chinese. The course explores the interwoven spectacular fantasy and societal reality of the imperial China. A chronological exposure to different cultural practice and social structures is organized under three rubrics, namely, scholar-official as social elite; merchants and courtesans as mobile agents; and criminals and demons as outcast.
Spr CHIN1010 S01 24576 TTh 6:40-8:00PM(18) (K. Chen)

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 15609 Th 4:00-6:30(04) (L. Wang)

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 15263 Arranged "To Be Arranged"

East Asian Studies

EAST 0500. Childhood and Culture in Japan. This seminar offers students an interdisciplinary look at how children became central to social life in modern Japan. What set of historical and philosophical conditions made childhood newly visible in the late 19th century? How has the relationship between the marketplace and childhood evolved over the past one hundred years? How have class, gender, ethnicity and sexuality inflected the ways childhood has been experienced?
Fall EAST0500 S01 15612 TTh 10:30-11:50(13) (S. Perry)

EAST 0531. Complicating Korean History: Topics and Issues. Korea is known for its musicians, serene palaces, and North Korea. Under these ubiquitous stereotypes, however, it has an even more fascinating culture and history, punctuated by numerous invasions, colonialism, and division. In this inter-disciplinary survey course, we explore various facets of Korean North and South, from foundation myths to contemporary life and address Korean history broadly, examining key debates around origins, colonialism, and division. We move chronologically through major cultural, political, economic moments that inform Korean identity, arriving at the particulars of North and South Korea today, from daily life, gender, the diaspora, to KPop, and consider peninsular futurity.
Spr EAST0531 S01 24682 TTh 2:30-3:50(11) (E. Choi)

EAST 0650. Language, Culture, and Society: Korea. This course aims to look into the interaction between language, culture and society. It will specifically examine the role of language in myriad social contexts with special focus on Korean society. Topics to be covered in this course include language contact (e.g. with Japan and China), language variation (e.g. regional, generational, gender), language and identity, language and social class, language perceptions and attitudes, language education in a social context, and so on. Knowledge of the Korean language is preferred but not required.
Spr EAST0650 S01 24703 W 3:00-5:30(10) (H. Wang)

EAST 0800. Off the Beaten Path: A Survey of Modern Japanese Literature. An introduction to major and minor works of Japanese literature produced during the Japanese Empire as well as in post-WWII Japan. Covered writers include canonical novelists such as Tanizaki Junichiro, Kawabata Yasunari, and Oe Kenzaburo, as well as writers lesser known outside of Japan today, including women, queers, revolutionaries and colonial/resident Koreans.
Spr EAST0800 S01 24702 TTh 10:30-11:50(09) (S. Perry)

EAST 1030. Words on Things: Literature and Material Culture in Early Modern China. This course examines Chinese literary representation of artifacts written during 1000 to 1900 CE. Our discussion will highlight international trade and the transforming science and technology in early modern China. The course aims to guide students to conduct inter-artistic analysis as a means to decipher the political, religious, gendered, and technical significance embedded in literary representation of material objects. To emphasize a comparative perspective, we will also draw on scholarship outside of the field of Chinese literature. We will explore artifacts in the following categories: illustration, painting and calligraphy, seals, ceramics, furniture, and textile.
Spr EAST1030 S01 24577 Th 4:00-6:30(17) (K. Chen)

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 24719 Th 1:00-2:20(08) (L. Wang)
EAST 1090. Translating Korean: Fiction, Poetry & Film.
This class explores the theory and practice of translation in the context of Korean cultural production. Each week we shall grapple with a particular issue in translation studies in dialogue with a Korean-language text. By the end of this course students should be able to locate the tools necessary to carry out translations from Korean to English, to demonstrate an understanding of translation as a craft with its own standards, responsibilities, and complexities, and to have completed a significant translation project themselves. Learners of the Korean language who have completed Korean 600 as well as native speakers of Korean are welcome. Fall EAST1090  S01  15611  Th  4:00-6:30(04) (S. Perry)

EAST 1190. Literature and Science in Early Modern China.
This course explores the relations between Chinese literature and the studies of nature and technological know-how from 1368 to 1911. Introducing recent insight in the history of science and technology, the course challenges students to re-define science in the context of the changing Confucian curriculum, the booming market economy, and the multiethnic empire. The course investigates the ways in which the form and content of poetry, novel, and essays transformed because of their appropriation of knowledge about medicine, handicraft, and foreign lands. Topics include: encyclopedia for merchants, carpenters’ spell, autofiction of Confucian engineers, novel medicine, and so on. Fall EAST1190  S01  16765  TTh  6:40-8:00PM(10) (K. Chen)

This is a critical introduction to the history of mainland Chinese film. It focuses on three dimensions of cinematic practice: the historical context of film productions, the specific context/form of each film, and the critical reception of Chinese films in film studies. Important themes such as nation, visual modernity, cinematic narrative, and commercialism will be studied across the three dimensions. Fall EAST1270  S01  15613  TTh  1:00-2:20(08) (L. Wang)

EAST 1290. The Korea “Brand”: Understanding KPop, Film, and Culture of the Two Koreas in the Global Context.
The global media has recently showcased two newsworthy events related to Korea: BTS at the 2018 BMAs, and the Inter-Korea Summit. This course examines the arrival of “Korea” globally, from the West’s fascination with the North Korean nuclear crises, to the hype around KPop, KFilm, cosmetics, food, and eSports. We will question the fascination with NK in US media outlets, versus its treatment in SK media. The ways in which the particular, local, and authentic, within Korean cultural production negotiates the global market is of particular interest. Fall EAST1290  S01  16263  T  4:00-6:30(09) (E. Choi)

Korean films are often identifiable within two distinct tropes – the beautiful, tranquil Orient and a violent, frenetic hyper-modernity. Koreans, however, grapple with identifying themselves and their modern experiences differently beyond how the international community and the “West” sees them – as the exotic “East.” Seeking to understand and complicate this dichotomy, we will explore how Korea has struggled to hone and complicate national identity (their critique, their futurities) through film, and examine how Korea has been struggling since the 1990s to overcome the national in the face of globalization and cosmopolitanism to address the local and the liminal. Spr EAST1292  S01  25713  T  4:00-6:30(16) (E. Choi)

English has tense, Chinese has aspect; English has inflection and conjugation, and Chinese uses word order and function words to sort out syntactic structures. This course will explore and bridge such great differences between the two languages through linguistic readings and translation exercises. Prerequisite: two years of Chinese study or the equivalent proficiency Spr EAST1490  S01  24699  F  3:00-5:30(15) (Z. Li)
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.

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.

Further practice of patterns and structures of the language. Readings are introduced on 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.

JAPN 0500. Advanced Japanese I.
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.

JAPN 0600. Advanced Japanese II.
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.

JAPN 0700. Advanced Japanese II.
See Advanced Japanese I (JAPN 0500) for course description.

JAPN 0800. Advanced Japanese II.
See Advanced Japanese II (JAPN 0700) for course description.

JAPN 0910A. Classical Japanese.
This is an introductory course to pre-modern Japanese. It will explore the lifestyle and philosophy of samurai in 17th century Japan through reading the book, Gorin no Sho. The book comprises Miyamoto Musashii's thoughts on swordplay, winning, and mind training. The course includes reading background information in English and viewing films and dramas. Enrollment limited to 20.

JAPN 0910C. Japanese Linguistics.
This course will provide a structural overview of the Japanese language. Students will learn how to develop skills for analyzing the language through looking at sounds, meaning, and grammar. Topics include linguistic analysis of various sentence structures that students often find difficult to use, learning to choose words and sentences in appropriate situations, looking at the relation between language and culture.

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.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
This advanced Japanese class offers students the chance to read classic works of modern Japanese literature in the original as we work our way through each decade of the 20th century. We will consider both the formal properties of fiction and the historical pressures of gender, ethnicity, class, imperialism and globalization. Authors include Natsume Soseki, Akutagawa Ryunosuke, Yoshia Nobuko, Kubokawa Ineko, Mishima Yukiko and Murakami Haruki, as well as ethnic Korean writers Ch’oe Ch’ong-hui and Yan So-giru, and others depending on student interest.

Korean
KREA 0100. Korean.
Begin 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. Students must have taken KREA 0100 to receive credit for this course. The final grade for both semesters.

KREA 0200. Korean.
Begin 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 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. Five classroom hours per week. Prerequisite: KREA 0200 or instructor permission.

See Intermediate Korean (KREA 0300) for course description. Prerequisite: KREA 0100-0200 or equivalent.

KREA 0500. Advanced Korean.
Aims to help students develop an advanced level of communicative competence, with special focus on enhancing their reading comprehension, essay writing, and discourse (discussion and presentation) skills. Authentic reading materials from a variety of sources will be used to introduce various topics and issues pertaining to Korean society and culture, thus students’ cultural understanding will also be enhanced. Prerequisite: KREA 0400 or equivalent or permission of instructor.

Economics
ECON 0110. Principles of Economics.
Extensive coverage of economic issues, institutions, and terminology, 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).

ECON 0170. Essential Mathematics for Economics.
This undergraduate level course satisfies the mathematics requirement for the Economics concentration, but does not serve as a prerequisite for upper level courses in Math, Applied Math, or other departments. Students planning further courses in those areas should take MATH 0100 or MATH 0170 (which also satisfy the Economics concentration requirement) instead. Ideally, ECON 0170 should be taken before ECON 1110, or at least simultaneously.

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.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
ECON 110. 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 ECON110 S01 15947 TTh 9:00-10:20(02) (J. Skarbek)
Fall ECON110 S02 15948 MWF 10:00-10:50(14) (P. Dal Bo)
Fall ECON110 S03 15949 MWF 2:00-2:50(07) (J. Skarbek)
Spr ECON110 S01 25388 MWF 12:00-12:50(05) (M. Lancastre)
Spr ECON110 S02 25389 TTh 9:00-10:20(01) (S. Michalopoulos)
Spr ECON110 S03 25390 MWF 1:00-1:50(06) (S. Michalopoulos)

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. The instructor(s) of this course utilize override codes to grant access for registration restrictions rather than the request/wait list feature in C@B. Please reach out to the instructor directly for an override.
Fall ECON1130 S01 15950 MW 8:30-9:50(01) (R. Vohra)
Spr ECON1130 S01 25391 TTh 9:00-10:20(01) (R. Serrano)

This is an advanced microeconomic theory class for undergraduates. Building on the intermediate microeconomics course, the approach is more formal and mathematically more rigorous, presenting arguments and expected student to carefully develop techniques in order to understand and produce logical proofs. Topics include the efficiency and coalitional stability properties of markets, as well as other mechanisms to allocate resources. Market failures are discussed, including advanced treatments of externalities, public goods, and asymmetric information. The second part of the course will discuss a number of topics in social choice theory, including different normative criteria of compensation, life and death choices, majority voting, Arrow's impossibility theorem.
Fall ECON1170 S01 17020 MW 8:30-9:50(01) (R. Serrano)

ECON 1200. History of Economic Thought.
This course covers the history of modern (20th century) economics and economic thinking from the marginal revolution through the first half of the 20th century. The aim will be to develop an understanding of the origin and evolution of central concepts in economic theory, including subjective utility, marginal analysis, competitive markets, examine methodological disputes over positivism and formalism, and the development of general competitive equilibrium. We will consider the emergence of certain subfields in modern economics, and end with a discussion of the relevance of these ideas for economics in the 21st century. Prerequisite: intermediate microeconomics (ECON 1110 or ECON 1130).
Fall ECON1200 S01 16697 TTh 9:00-10:20(02) (E. Skarbek)

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 15951 MWF 10:00-10:50(14) (M. Lancastre)
Fall ECON1210 S02 15952 MWF 11:00-11:50(17) (M. Lancastre)
Fall ECON1210 S03 15953 MWF 1:00-1:50(06) (M. Lancastre)
Spr ECON1210 S01 25393 MWF 12:00-12:50(05) (M. Lancastre)
Spr ECON1210 S02 25394 TTh 10:30-11:50(09) (S. Michalopoulos)
Spr ECON1210 S03 25395 TTh 1:00-2:20(08) (S. Michalopoulos)

The course is concerned with macroeconomic policy in the US, 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 25461 TTh 2:30-3:50(11) (G. Eggertsson)

ECON 1310. Labor Economics.
Labor supply, human capital, income inequality, discrimination, immigration, unemployment. Prerequisite: ECON 1110 or 1130; and APMA 1650 or CSCI 1450 or ECON 1620 or 1630. Enrollment limited to 100.
Spr ECON1310 S01 25421 TTh 1:00-2:20(08) (K. Chay)

ECON 1340. Economics of Global Warming.
The problem of global warming can be usefully be described with the following simple economic model. We face a tradeoff between current consumption, future consumption, and future climate, have preferences over consumption and future climate and would like to choose our optimal climate/consumption bundle. This course is organized around filling in the details required to make this model useful, characterizing the optimal climate/consumption path suggested by the model, and, finally, investigating policies to achieve the optimal path.
Fall ECON1340 S01 16215 TTh 10:30-11:50(13) (M. Turner)

This course equips students with theoretical and empirical tools to analyze environmental issues from the perspective of economics. First, we review when and why the markets fail, competing policy solutions (e.g., cap-and-trade), and cost-benefit analysis. Second, we survey methods to quantify the benefits of environmental regulations, including revealed and stated preference methods, a primer on climate-economy modeling, and a real-world application in a class research project. Third, we study the costs of environmental regulations. We conclude with advanced policy considerations (e.g., trans-boundary pollutants), private market solutions/ corporate social responsibility, and select special topics (e.g., resources and economic development).
Spr ECON1350 S01 25598 MWF 2:00-2:50(07) (A. Poterack)

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, 1629, 1630, or APMA 1650 or CSCI 1450 or other statistics background. Enrollment limited to 24.
Spr ECON1360 S01 25600 M 3:00-5:30(13) 'To Be Arranged'

ECON 1370. Race and Inequality in the United States.
We examine racial inequality in the United States, focusing on economic, political, social and historical aspects. Topics include urban poverty, employment discrimination, crime and the criminal justice system, affirmative action, immigration, and low wage labor markets. Black/white relations in the US are the principle but not exclusive concern. Prerequisite: ECON 1110 or 1130. Enrollment limited to 25.
Spr ECON1370 S01 25669 MW 8:30-9:50(02) (G. Louy)

ECON 1400. The Economics of Mass Media.
The mass media shape our culture and politics but are also shaped by their economic incentives. In this course we will use tools from microeconomics and econometrics to study the effects of mass media on economic, social and political behavior, and to study the factors that shape media content and availability. We will develop implications for business and public policy. Students will complete weekly readings, bi-weekly assignments, a take-home midterm, and a final paper and presentation. Class time will be devoted to a mix of lecture and discussion of readings and lecture topics.
Spr ECON1400 S01 25469 TTh 9:00-10:20(01) (J. Shapiro)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 25508 MWF 9:00-9:50(02) (G. Siourounis)

Bargaining theory is emerging as an important area within the general rubric of game theory. Emphasis is on providing a relatively elementary version of the theory in order to make it accessible to a large number of students. Covers introductory concepts in game theory, strategic and axiomatic theories of bargaining and their connections, applications to competitive markets, strikes, etc. Prerequisite: ECON 1110 or 1130. Enrollment limited to 100.
Fall ECON1470 S01 16704 TTh 1:00-2:20(08) (J. Fanning)

ECON 1480. Public Economics.
This course is an introduction to the economics of the public sector. We will cover theoretical and empirical tools of public economics and apply these tools to a wide range of issues including externalities, public goods, collective choice, social insurance, redistribution and taxation. The course will focus on questions such as: What should government do? How much should governments insure individuals against misfortune? How much should governments redistribute resources from high-income to low-income households? Throughout the course we will emphasize real-world empirical applications rather than hypothetical examples.
Fall ECON1480 S01 17132 MWF 9:00-9:50(01) "To Be Arranged"

ECON 1486. The Economic Analysis of Political Behavior.
Slow economic growth, controversial policy, and over a decade of continuous war have led many to question the extent to which government is a force for the common good. Blame is often assigned to specific politicians or ideological perspectives. Public choice economics instead analyzes the incentive structure within which political decisions take place, seeking to uncover the forces guiding the behavior of voters, legislators, judges, and other political agents. This course will examine the insights and limitations of the public choice perspective in the context of electoral politics, legislation, bureaucracy and regulation, and constitutional rules.
Spr ECON1486 S01 25422 W 3:00-5:30(10) (D. D’Amico)

ECON 1490. Designing Internet Marketplaces.
How has the digital economy changed market interactions? The goal of this course is to help you think critically, using economic theory, about the future of the digital economy.
What are important economic activities now being conducted digitally? How has digital implementation of these activities changed economists’ classical views and assumptions?
What are ways in which we can use economics to engineer “better” digital markets?
We will focus on several real-world markets (e.g. eBay, Airbnb, Google advertising, Uber, Tinder, TaskRabbit) and topics (e.g. market entry, pricing, search, auctions, matching, reputation, peer-to-peer platform design).
Fall ECON1490 S01 16217 TTh 2:30-3:50(03) (B. Pakzad-Hurson)

ECON 1500. Current Global Macroeconomic Challenges.
Analysis of current economic challenges in the U.S., Europe, Japan, 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 the individual nations and their interaction with each other. Prerequisites: ECON 1210. Also recommended: ECON 1550 and 1850. Enrollment limited to 100.
Spr ECON1500 S01 25738 MWF 11:00-11:50(04) (G. Siourounis)

ECON 1510. Economic Development.
This course is an introduction to development economics and related policy questions. It discusses the measurement of poverty and inequality; growth; population change; health and education; resource allocation and gender; land and agriculture; and credit, insurance, and savings.
The course provides a theoretical framework for the economic analysis of specific problems associated with developing economies, and introduces empirical methods used to evaluate policies aimed at solving these problems. By the end of the class, students will be able to discuss some of the “hot topics” in development, like microfinance, family planning, or the problem of “missing women” in South-East Asia.
Spr ECON1510 S01 25725 MWF 2:00-2:50(07) "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. Enrollment limited to 30.
Fall ECON1530 S01 16764 M 3:00-5:30(05) (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.
Spr ECON1540 S01 25466 TTh 2:30-3:50(11) (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 25505 MWF 2:00-2:50(07) (G. Siourounis)

ECON 1590. The Economy of China since 1949.
This course examines the organization, structure, and performance of the economy of mainland China, with a focus on urban and regional development. The course analyzes the changing economic system including the roles of planning and markets and government economic strategy and policies. The pre-reform period (1949-78) receives attention in its own right, but especially as it influences developments in the market-oriented reform period since 1978. Topics covered include rural and urban development, industrialization and FDI, housing and land markets, rural-urban migration, income inequality and growth, and the evolving spatial structure of cities. Both analytical and descriptive methods are used. Prerequisite: ECON 1110 or 1130. ECON 1210 and 1410 are helpful but not required. Enrollment limited to 100.
Spr ECON1590 S01 25468 TTh 10:30-11:50(09) (L. Putterman)

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, or ECON 1110 or ECON 1130, and MATH 0090. Weekly one-hour computer conference required.
Fall ECON1620 S01 16218 TTh 9:00-10:20(02) "To Be Arranged"
Spr ECON1620 S01 25396 TTh 9:00-10:20(01) "To Be Arranged"
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 courses. Students will read and discuss papers published in professional journals and perform data analysis. Prerequisites: ECON 1110 or 1130; and (ECON 1620 or 1630 or APMA 1650 or APMA 1655). Fall ECON1620 S01 16227 MW 3:00-4:20(17) "To Be Arranged" Fall ECON1620 S01 25403 MW 3:00-4:20(10) "To Be Arranged"

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 1110 or advanced placement; and ECON 1110 or 1130; and APMA 1650 or CSI 1450, MATH 1620, or ECON 1620; or equivalent.
Fall ECON1630 S01 16234 TTh 1:00-2:20(08) (S. Schennach)
Spr ECON1630 S01 25420 TTh 2:30-3:50(11) (A. Norets)

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 or CSI 1450.
Fall ECON1710 S01 16235 MWF 11:00-11:50(16) (S. Kuo)
Fall ECON1710 S02 16236 MWF 1:00-1:50(06) (S. Kuo)
Spr ECON1710 S01 25424 MWF 11:00-11:50(04) (S. Kuo)
Spr ECON1710 S02 25425 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, leveraged buyouts and corporate restructuring. Prerequisite: ECON 1110 or 1130; and ECON 1620 or 1630 or APMA 1650 or CSI 1450; ECON 1710.
Fall ECON1720 S01 16754 MWF 12:00-12:50(15) (B. Gibbs)
Fall ECON1720 S01 25426 MWF 12:00-12:50(05) (B. Gibbs)

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 or CSI 1450; ECON 1710.
Fall ECON1750 S01 16708 TTh 2:30-3:50(03) (K. Rozen)

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.
Fall ECON1760 S01 16755 MWF 10:00-10:50(14) (B. Gibbs)

ECON 1820. Theory of Behavioral Economics.
This course provides a formal introduction to behavioral economics, focusing mostly on individual decision making. For different choice domains, we start by analyzing the behavior implied by benchmark models used by economists (e.g. rational choice, expected utility, exponential discounting). Experimental and empirical evidence is then used to highlight some limitations of these models, and to motivate new models that have been introduced to account for these violations. We will cover, for instance, models of limited attention, non-expected utility, and hyperbolic discounting.
Fall ECON1820 S01 16711 MW 8:30-9:50(01) (G. De Clippel)

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. Enrollment limited to 100.
Fall ECON1850 S01 16710 TTh 10:30-11:50(13) (O. Galor)

Existence and efficiency of equilibria for a competitive economy; comparative statistics; time and uncertainty. Prerequisite: ECON 1110 or 1130. Enrollment limited to 100.
Spr ECON1860 S01 25599 MW 8:30-9:50(02) (R. Vohra)

ECON 1870. Game Theory and Applications to Economics.
Study of the elements of the theory of games. Non-cooperative games. Repeated 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 CSI 1450, or MATH 1610. Enrollment limited to 100.
Spr ECON1870 S01 25649 TTh 1:00-2:20(08) (R. Serrano)

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. Note this course does not count toward Economics concentration credit.
Fall ECON1960 S01 16758 W 3:00-5:30(17) (K. Chay)

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 16756 MW 2:30-3:50 (A. Poterack)

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 25462 MW 10:30-11:50 ‘To Be Arranged’

ECON 2030. Introduction to Econometrics I.
The probabilistic and statistical basis of inference in econometrics.
Fall ECON2030 S01 16757 TTh 2:30-3:50(03) (S. Schennach)

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 25463 TTh 10:30-11:50(09) (A. Norets)
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 16759 MW 1:00-2:20 (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. 
Fall ECON2070 S01 16760 TTh 1:00-2:20(08) (G. Galor)

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 16760 TTh 1:00-2:20(08) (G. Eggertsson)

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 25465 TTh 1:00-2:20(08) (G. Eggeottsson)

ECON 2150. Market Design.
This is a theoretical course in market design, specifically studying the theory and applications of matching. It is designed for students interested in market and mechanism design, and may also be of interest to students interested in utilizing applied theory in their research. The course will begin with an overview of matching markets, but will quickly move to recent advances and open research topics. 
Spr ECON2150 S01 25470 F 1:00-3:30 (B. Pakzad-Hurson)

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. 
Spr ECON2160 S01 25471 MW 10:30-11:50 (K. Rozen)

ECON 2180. Game Theory.
Fall ECON2180 S01 16781 TTh 9:00-10:20(22) (J. Fanning)

ECON 2260. Political Economy I.
This first course in political economy provides theoretical and empirical coverage of the application of economic analysis to political behavior and institutions. This course is designed for students wishing to specialize in political economy but may also be useful for students specializing in related areas, such as development economics and macroeconomics. After starting with a basic overview of candidates and voters, we then turn to specific topics in the areas of electoral systems, legislatures and legislative bargaining, the role of the media, local public finance, and fiscal federalism. 
Fall ECON2260 S01 17001 TTh 9:00-10:20(02) (B. Knight)

ECON 2270. Political Economy II.
This is the second course in the political economy sequence. It continues the theoretical and empirical coverage of the economic analysis to political behavior and institutions. This course is designed for students wishing to specialize in political economy. A variety of topics will be covered paying special attention to the formation of skills necessary to become a producer of research and moving away from being just a consumer. 
Spr ECON2270 S01 25472 F 9:30-12:00 (P. Dal Bo)

ECON 2270. Political Economy II.
This course covers core issues in the design of optimal government policies, and the empirical analysis of those policies in the world. In addition, this course will familiarize students with the basic empirical methods and theoretical models in applied microeconomics. Emphasis is placed on connecting theory to data to inform economic policy. Specific topics include efficiency costs and incidence of taxation, income and corporate taxation, optimal tax theory, tax expenditures and tax-based transfer programs, welfare analysis in behavioral models, and social security and retirement policy. 
Fall ECON2485 S01 16784 MW 10:30-11:50 (J. Friedman)

ECON 2290. Topics in Labor Economics.
The course introduces students to procedures used to extract evidence from data and to perform rigorous causal inference in order to evaluate public policy on issues such as schooling, the return to education and returns on late intervention programs. Econometric methods, such as Instrumental Variable, Matching, Control Functions, Self Selection Models and Discrete Choice as well as Panel Data Methods, are discussed in detail. 
Spr ECON2330 S01 25473 W 1:00-3:30(11) (K. Chay)

ECON 2320. Applied Methods.
This course examines identification issues in empirical microeconomics. The focus on the sensible application of econometric methods to empirical problems in economics and policy research. The course examines issues that arise when analyzing non-experimental data and provides a guide for tools that are useful for applied research. 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 16782 TTh 10:30-11:50(13) (E. Oster)

ECON 2330. Topics in Labor Economics.
The course introduces students to procedures used to extract evidence from data and to perform rigorous causal inference in order to evaluate public policy on issues such as schooling, the return to education and returns on late intervention programs. Econometric methods, such as Instrumental Variable, Matching, Control Functions, Self Selection Models and Discrete Choice as well as Panel Data Methods, are discussed in detail. 
Spr ECON2330 S01 25473 W 1:00-3:30(11) (K. Chay)
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 and incomplete market assumptions; household and individual labor supply, self-employment, and the informal sector; rental market frictions and sharecropping arrangements; and environmental externalities (e.g., pollution, water usage, etc.), and sustainable development. Spring. ECON2510 S01 16785 MW 9:00-10:20 (A. Foster)

ECON 2520. Economic Development II.  This course deals with the economic analysis of development countries, with a particular focus on community-based institutions in developing countries. Institutions covered in this course includes cooperatives, ROSCAS, networks, marriage and the family. Spring. ECON2520 S01 25477 TTh 9:00-10:20(01) (B. Steinberg)

ECON 2530. Behavioral and Experimental Economics.  An introduction to the methodology of experimental economics with an emphasis on experiments designed to illuminate problems in organizational design and emergence of institutions, and experiments investigating the operation of social and social-psychological elements of preference such as altruism, inequality aversion, reciprocity, trust, concern for relative standing, envy, and willingness to punish norm violators. Experiments studied will include ones based on the prisoners’ dilemma, dictator game, ultimatum game, and especially the voluntary contribution mechanism (public goods game) and the trust game. Spring. ECON2530 S01 25479 TTh 1:00-2:20(08) (L. Putterman)

ECON 2600. Bayesian and Structural Econometrics.  This course will cover a number of topics in Bayesian econometrics and estimation of structural dynamic discrete choice models. The Bayesian econometrics part of the course will start with introductory textbook material (Geweke, 2005, Contemporary Bayesian Econometrics and Statistics, denoted by G). A list of 11 topics with corresponding readings is given below. Topics 1-5 will be covered. If time permits, a subset of topics 6-11 determined by interests of the course participants will be covered as well. Readings marked with asterisk * are not required. Fall. ECON2600 S01 16786 MW 2:30-3:50 (A. Norets)

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 16787 F 1:00-3:30 (S. Schennach)

ECON 2830. Economic Growth and Comparative Development.  This course will explore the origins of the vast inequality in income per capita across countries, regions and ethnic groups. It will analyze the determinants of growth process over the entire course of human history and will examine the role of deeply-rooted geographical, institutional, cultural, and genetic factors in the observed pattern of uneven development across the globe. Fall. ECON2830 S01 16789 F 9:30-12:00 (O. Galor)

ECON 2860. Comparative Development.  Weighing the shadow of history on contemporary economic performance occupies an increasing part of the agenda among growth and development economists. This course will focus on recent contributions in the literature of the historical determinants of comparative development paying particular attention on how to integrate the use of Geographic Information Systems (GIS) in the research inquiry. The goal is to get you thinking about the big historical processes that have shaped the modern world. We will go over background concepts, critically review recent works and talk about new research designs, like that of spatial regression discontinuity. Spring. ECON2860 S01 25487 T 5:00-7:30 (S. Michalopoulous)

ECON 2890C. Topics in Macro and Monetary Economics.  This is a graduate class that covers selected topics at the intersection of macroeconomics and monetary economics, for students in the second year of the PhD and above. The leading theme of the class is the current economic crisis and how it can be modeled. The syllabus is evolving. Fall. ECON2890CS01 16790 TTh 10:30-11:50(13) (G. Eggerdsson)

ECON 2890D. 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. Spring. ECON2890DS01 25488 TTh 10:30-11:50(09) (J. Blaum)

ECON 2930. Workshop in Applied Economics.  No description available. Fall. ECON2930 S01 17133 Th 4:00-5:30 'To Be Arranged'

ECON 2950. Workshop in Econometrics.  No description available. Fall. ECON2950 S01 17134 T 4:00-5:30 'To Be Arranged'

ECON 2960. Workshop in Macroeconomics and Related Topics.  No description available. Fall. ECON2960 S01 17135 W 4:00-5:30 'To Be Arranged'

ECON 2970. Workshop in Economic Theory.  No description available. Fall. ECON2970 S01 17136 M 4:00-5:30 'To Be Arranged'

ECON 2980. Reading and Research.  Individual research projects. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Fall. ECON2980 S01 25752 M 4:00-5:30 'To Be Arranged'

ECON 2990. Thesis Preparation.  For graduate students who have met the residency requirement and are continuing research on a full time basis. Fall. ECON2990 S01 15278 Arranged 'To Be Arranged'

ECON 2990. Thesis Preparation.  For graduate students who have met the residency requirement and are continuing research on a full time basis. Fall. ECON2990 S01 24172 Arranged 'To Be Arranged'

Education

EDUC 0410A. New Faces, New Challenges: Immigrant Students in U.S. Schools.  What challenges do immigrant students face in adapting to a new system of education? By comparing and contrasting the perspectives education stakeholders—students, teachers, administrators, and parents—this course examines a number of key contributions to the study of the immigrant experience in education, as well as a selection of memoirs and films about the pathways these newcomers take in navigating school and transforming their developing identities. Enrollment limited to 19 first year students. Fall. EDUC0410AS01 15865 W 3:00-5:30(17) (A. Flores)

EDUC 0600. Juveniles for Justice: Youth Civic Engagement and Activism.  This course examines the meaning of youth activism in terms of individual civic development and collective social transformation. Guiding questions include: How does youth civic engagement affect young’s understandings of themselves, their civic identity, and belonging? How do youth engage in their communities? What effect does this engagement have? What are the barriers and bridges to engagement? Is civic engagement a universal good? The course uses ethnographic cases to explore: 1) how time, place, and social context affect youth’s engagement and notions of citizenship and 2) what transferable insights about citizenship, engagement, and change can be gleaned from study across contexts. Spring. EDUC0600 S01 24510 W 3:00-5:30(10) (A. Flores)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Using sources in history, education, and law this course will explore the landmark Supreme Court case of *Brown v. Board of Education* which found school segregation unconstitutional and challenged the entire foundation of legal segregation. We will explore the legal, political, and social issues that culminated in Brown and examine the development and deployment of remedies, with particular emphasis on school integration and educational equity. We will consider the legacy of Brown for education and explore the meaning of equity in the past and present. Enrollment limited to 20 sophomore students.
Fall EDUC0610 S01 15805 M 3:00-5:30(05) (T. Steffes)

**EDUC 0620. Cradle of Inequality: The Role of Families, Schools, and Neighborhoods.**
In this Sophomore Seminar, we will examine contours of inequality that begin in early childhood and accumulate over time, with particular focus on issues of race, class, and gender. Moreover, we will examine how these factors matter in early childhood and the role of families, schools, and neighborhoods in shaping, ameliorating, and propagating larger inequalities. Through our reading and active discussion, we will develop answers to questions that motivate much inquiry into inequality: Who gets what, and why?
Spr EDUC0620 S01 24484 MWF 11:00-11:50(04) (D. Rangel)

**EDUC 0800. Introduction to Human Development and Education.**
Introduces the study of human development and education from infancy through young adulthood. Provides a broad overview of scientific understanding of how children develop and how research is generated in the field. Major topics include biological foundations, mind, cognition, language, emotion, social skills, and moral understanding based on developmental theories and empirical research. The educational implications of research on human development are discussed.
Fall EDUC0800 S01 15847 TTh 1:00-2:20(08) (J. Li)

**EDUC 0900. Fieldwork and Seminar in Secondary Education.**
Combines study of current educational issues with extensive fieldwork that allows the student to observe how these issues translate themselves into reality on a daily basis. Each student reads and discusses recent writing about educational history, theory, and practice, and observes a class in a local school for 32 hours. The final paper synthesizes reading and observations.
Fall EDUC0900 S01 15851 Th 4:00-6:30(04) (D. Silva Pimentel)

**EDUC 1010. The Craft of Teaching.**
What is the "craft of teaching"? A wide variety of texts are used to investigate the complexity of teaching and learning. Considering current problems as well as reform initiatives, we examine teaching and learning in America from the perspectives of history, public policy, critical theory, sociology, and the arts. Weekly journals and reading critiques; final portfolio presented to the class.
Spr EDUC1010 S01 24512 TTh 2:30-3:50(11) "To Be Arranged"

**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 school. 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 16100 TTh 9:00-10:20(02) (L. Jones)

**EDUC 1040. Sociology of Education.**
While the United States educational system is widely considered the main institution through which the nation delivers on its promise of social mobility, sociologists have long recognized that schools exacerbate – or even produce – social inequality. This course provides an introduction to the application of sociology to questions of education, with a focus on the United States education system. We will ask questions such as: What do schools teach besides academics? How do social class, gender, and racial/ethnic relations shape student experiences? How can we address critical social issues through education policy?
Spr EDUC1040 S01 24483 MWF 9:00-9:50(02) (D. Rangel)

**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 EDUC1040 S01 15860 MWF 10:00-10:50(14) (C. Thomas)

**EDUC 1070A. Student Teaching: English.**
S/NC.
Spr EDUC1070AS01 25601 Arranged (L. Snyder)

**EDUC 1070B. Student Teaching: History and Social Studies.**
S/NC.
Spr EDUC1070BS01 25602 Arranged (C. Villarreal)

**EDUC 1070C. Student Teaching: Science.**
S/NC.
Spr EDUC1070CS01 25604 Arranged (D. Silva Pimentel)

**EDUC 1080A. Analysis of Teaching: English.**
S/NC.
Fall EDUC1080AS01 16992 W 4:30-7:00 (L. Snyder)
Spr EDUC1080A501 25605 W 4:30-7:00 (L. Snyder)

**EDUC 1080B. Analysis of Teaching: History and Social Studies.**
S/NC.
Fall EDUC1080BS01 16994 W 4:30-7:00 (C. Villarreal)
Spr EDUC1080BS01 25606 W 4:30-7:00 (C. Villarreal)

**EDUC 1080C. Analysis of Teaching: Science.**
S/NC.
Fall EDUC1080CS01 16995 W 4:30-7:00 (D. Silva Pimentel)
Spr EDUC1080CS01 25607 W 4:30-7:00 (D. Silva Pimentel)

**EDUC 1090. Adolescent Literature.**
What are teens and tweens reading? What should they read? Do books that adults view as "trashy" ruin kids' literary sensibilities? Provide access to the wider world of academic discourse? How can reading adolescent literature provide adolescents with a path toward holding a reader identity? This course will present a general overview of the historical, socio-cultural, academic, and political issues that provide context for the use and availability of adolescent literature today. It presents a strong introduction to contemporary texts that interest adolescents inside and outside of the classroom. Particular attention is paid to issues of reading engagement for striving adolescent readers, issues of access to literacy through adolescent literature, ways that adolescent literature can be paired with the classics, and issues of censorship in American public school classrooms and public libraries. Students in this course will walk away with an understanding of the place of adolescent literature in today’s debates as well as a background in choosing, reading, and analyzing the literature itself. Written assignments include weekly reading responses, an annotated bibliography, and a short, 3-5 page paper. There is a substantial amount of independent self-selected reading as well as one collaborative group project with a presentation.
Fall EDUC1090 S01 15861 M 3:00-5:30(05) (L. Snyder)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 S01 24634 T 4:00-6:30(16) (H. Levey Friedman)

EDUC 1110. Introductory Statistics for Education Research and Policy Analysis. This course provides an introduction to applied statistics for conducting quantitative research in the social sciences, with a focus on education policy. Students will become acquainted with the fundamentals of probability, descriptive and summary statistics, tabular and graphical methods for displaying data, statistical inference, analytic methods for exploring relationships with both categorical and continuous measures, and multivariate regression. Concepts and methods are taught using real-world examples with multiple opportunities for students to apply these methods in practice. The course uses the statistical software program, STATA.

Fall EDUC1110 S01 15862 TTh 10:30-11:50(13) (M. Kraft)
Fall EDUC1110 S02 15863 Arranged (M. Kraft)
Fall EDUC1110 S03 15864 Arranged (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.

Spr EDUC1130 S01 24636 TTh 9:00-10:20(01) (J. Tyler)

EDUC 1150. Education, the Economy and School Reform. This seminar examines the linkages between educational achievement and economic outcomes for individuals and nations. We study a range of system, organizational, and personnel reforms in education by reviewing the empirical evidence and debating which reforms hold promise for improving public education and closing persistent achievement gaps. Understanding and critiquing the experimental, quasi-experimental and descriptive research methods used in the empirical literature will play a central role in the course. 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 24430 F 3:00-5:30(15) (J. Tyler)

EDUC 1270. Adolescence in Social Context. Both an individual and a collective perspective on adolescence are used to provide an understanding of how this life stage is differently experienced by youth cross-culturally. Readings include theoretical and empirical papers from such areas as psychology, sociology, anthropology, and education.

Spr EDUC1270 S01 24509 MWF 1:00-5:00(06) (A. Flores)

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 problem? Focuses on the teaching-learning process and student behavior, as well as research, theory, and illustrations concerned with classroom applications of psychological principles and ideas. Enrollment limited to 50.

Fall EDUC1450 S01 16102 T 4:00-6:30(09) "To Be Arranged"

EDUC 1580. Cross-Cultural Perspectives on Child Development. Focus on role of culture in child development, infancy to young adulthood. Reviews contemporary theories and empirical research to examine various age periods and domains of development. Major topics: infant care, parenting, socialization, gender roles, cognition, moral development, affect, adolescence, and education and schooling in formal and informal settings. Enrollment limited to 50.

Spr EDUC1580 S01 24480 MWF 10:00-10:50(03) (J. Li)

EDUC 1560. Policy Implementation in Education. This course offers an "analytical foundation" for students interested in public policy implementation, with particular emphasis on education. Drawing on social science research, the course examines strengths and limitations of several frameworks, including the "policy typology" school of thought, the rational actor paradigm, the institutional analysis, the bargain model, the organizational-bureaucratic model, and the "consumer choice" perspective. Enrollment limited to 20.

Spr EDUC1560 S01 24692 W 3:00-5:30(10) (J. Collins)

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.

Spr EDUC1860 S01 24482 M 3:00-5:30(13) (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. No credit course.

Spr EDUC2070A-S01 24493 Arranged (L. Snyder)

EDUC 2070B. Student Teaching: History and Social Studies. No credit course.

Spr EDUC2070B-ES01 24498 Arranged (C. Villarreal)

EDUC 2070C. Student Teaching: Science. No credit course.

Spr EDUC2070C-ES01 24504 Arranged (D. Silva Pimentel)

EDUC 2080A. Analysis of Teaching: English. No credit course.

Fall EDUC2080A-S01 15853 W 4:30-7:00 (L. Snyder)
Spr EDUC2080A-S01 24494 W 4:30-7:00 (L. Snyder)

EDUC 2080B. Analysis of Teaching: History and Social Studies. No credit course.

Fall EDUC2080B-S01 15856 W 4:30-7:00 (C. Villarreal)
Spr EDUC2080B-S01 24499 W 4:30-7:00 (C. Villarreal)

EDUC 2080C. Analysis of Teaching: Science. No credit course.

Fall EDUC2080C-S01 15859 W 4:30-7:00 (D. Silva Pimentel)
Spr EDUC2080C-S01 24505 W 4:30-7:00 (D. Silva Pimentel)

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.

Fall EDUC2360 S01 16469 MW 2:00-2:50(07) (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 15870 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. For graduate students who have met the residency requirement and are continuing research on a full time basis.

Fall EDUC2990 S01 15279 Arranged 'To Be Arranged'
Spr EDUC2990 S01 24173 Arranged 'To Be Arranged'

EDUC XLIST. Courses of Interest to Concentrators in Education.

Egyptology and Assyriology

ASSYR 0800. The Cradle of Civilization? An Introduction to the Ancient Near East. This course explores the cultures of ancient Mesopotamia and the Near East (present-day Iraq, Syria, Turkey, and Iran) from prehistory until the end of the first millennium BC. We will investigate the rich history and archaeology of this region through literary and historical texts (in translation) and archaeological evidence, including visual culture and architecture. Central to our discussion will be questions about how and why scholars study the Middle East in this early period. Topics include: early complex societies, state formation, the origins and development of writing, ancient empires, religion, culture and ethnicity, trade, diplomacy, warfare, agriculture, and craft production.

Fall ASSYR0800 S01 15594 TTh 2:30-3:50(03) (M. Rutz)

ASSYR 1600. Astronomy Before the Telescope. This course provides an introduction to the history of astronomy from ancient times down to the invention of the telescope, focusing on the development of astronomy in Babylonia, Greece, China, the medieval Islamic world, and Europe. The course will cover topics such as the invention of the zodiac, cosmological models, early astronomical instruments, and the development of astronomical theories. We will also explore the reasons people practiced astronomy in the past. No prior knowledge of astronomy is necessary for this course.

Fall ASSYR1600 S01 15639 TTh 10:30-11:50(13) (J. Steele)

ASSYR 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.

Fall ASSYR2310AS01 15640 Arranged (J. Steele)

ASSYR 2430. Akkadian Historical Texts. This course offers focused study of the most significant Akkadian historical and chronicographic texts from the second and first millennia BCE. Readings in cuneiform will come for the major genres of Mesopotamian history-writing found at sites throughout the ancient Near East, including commemorative inscriptions, annals, chronicles, literary historical texts, and historical miscellanea. We will contend with the disjunctions between ancient and modern modes of historical thinking and work to contextualize the ancient texts. Knowledge of Akkadian cuneiform required. Reading knowledge of German and French will be useful but is not required. Intended primarily for graduate students.

Fall ASSYR2430 S01 15568 M 3:00-5:30(05) (M. Rutz)

ASSYR 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.

ASYR 2990. Thesis Preparation. For graduate students who have met the residency requirement and are continuing research on a full time basis.

Fall ASYR2990 S01 15256 Arranged 'To Be Arranged'
Spr ASYR2990 S01 24157 Arranged 'To Be Arranged'

ASYR XLIST. Courses of Interest to Concentrators in Egyptology and Assyriology.

Egyptology

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 will be expected to translate and discuss assigned texts. Prerequisite: EGYT 1310, 1320.

Fall EGYT1330 S01 15641 Arranged 'To Be Arranged'

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.

Fall EGYT1430 S01 15642 MWF 10:00-10:50(14) (L. Bestock)

EGYT 1495. The Science and the Medicine of the Ancient Egyptians. This course presents a survey of the science and medicine of the ancient Egyptians in light of the primary sources. Only fields of learning represented in some systematic way in the primary sources are deemed worthy of study, mainly four: mathematics, medicine, astronomy, and time-reckoning. Zoology, botany, chemistry, architecture, etc., are not discussed. The Egyptians probably had some notion of the kinds of knowledge on which these subjects focus. But no systematic treatment of any survives in the extant sources and none probably ever existed. There are no prerequisites for this class.

Fall EGYT1495 S01 16786 MWF 11:00-11:50(16) (L. Depuydt)

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.

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

Fall EGYT2970 S01 15280 Arranged 'To Be Arranged'
Spr EGYT2970 S01 24174 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 residency requirement and are continuing research on a full time basis.

Fall EGYT2990 S01 15281 Arranged 'To Be Arranged'
Spr EGYT2990 S01 24175 Arranged 'To Be Arranged'

EGYT XLIST. Courses of Interest to Concentrators in Egyptology and Assyriology.

Assyriology

ASYR 1920. Senior Seminar. For graduate students who have met the tuition requirement and are continuing research on a full time basis.

Fall ASYR1920 S01 15641 Arranged 'To Be Arranged'
Spr ASYR1920 S01 24175 Arranged 'To Be Arranged'

ASYR 2990. Thesis Preparation. For graduate students who have met the residency requirement and are continuing research on a full time basis.

Fall ASYR2990 S01 15256 Arranged 'To Be Arranged'
Spr ASYR2990 S01 24157 Arranged 'To Be Arranged'

ASYR XLIST. Courses of Interest to Concentrators in Egyptology and Assyriology.

Engineering

ENGN 0020. Transforming Society-Technology and Choices for the Future. 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 24803 MWF 11:00-11:50(04) (J. Harry)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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. 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 15388 MWF 1:00-1:50 (K. Haberstroh)
Fall ENGN0030 S01 15363 T 9:00-10:20 (K. Haberstroh)
Fall ENGN0030 S02 15364 T 2:30-3:50 (K. Haberstroh)
Fall ENGN0030 S03 15365 Th 10:30-11:50 (K. Haberstroh)
Fall ENGN0030 S04 15366 Th 2:30-3:50 (K. Haberstroh)
Fall ENGN0030 S05 15367 Arranged (C. Bull)

ENGN 0031. Honors Introduction to Engineering.
Introduction to various engineering disciplines, thought processes, and issues. Computing in engineering, engineering design, optimization, and estimation. Case studies illustrate engineering fields and scientific principles, including in-depth studies of statics. Laboratories and design projects are included. The section of the Honors course will focus on scientific programming using MATLAB with applications in statics. Students pursuing concentrations in Mechanical, Electrical or Materials Engineering who complete the Honors course successfully may substitute an approved Engineering or Computer Science course in place of CSCI 0040. Prerequisite: one of the following: MATH 0100, 0170, 0180, 0190, 0200, 0350, 0520, 0540, which may be taken concurrently.

Fall ENGN0031 M01 15382 MWF 1:00-1:50 (K. Kim)
Fall ENGN0031 S01 15381 T 1:00-2:20 (K. Kim)
Fall ENGN0031 S02 15383 Th 1:00-1:20 (K. Kim)

ENGN 0040. Dynamics and Vibrations.
A broad introduction to Newtonian dynamics of particles and rigid bodies with applications to engineering design. Concepts include kinematics and dynamics of particles and rigid bodies; conservation laws; vibrations of single degree of freedom systems; and use of MATLAB to solve equations of motion and optimize engineering designs. Examples of applications are taken from all engineering disciplines. Lectures, recitations, and team design projects, including use of Brown Design Workshop. Prerequisite: ENGN 0030. Corequisite: MATH 0200 or MATH 0180.

Spr ENGN0040 S01 24808 Th 9:00-10:20(01) (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 15390 Th 1:00-2:20(08) (T. Chaltas)
Fall ENGN0090 S02 15391 Th 2:30-3:50(03) (T. Chaltas)

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 cross the chasm to broad application? Can we help them to by combining design, engineering, marketing, communications, education, art, and business strategies?

Student teams identify potential new products, conceptualize, package, and define their business mode. By plotting their course across the chasm, we confront the cross-disciplinary barriers to realizing benefits from technology.

Enrollment limited to 18 first year students. Instructor permission required.
Spr ENGN0120/S01 24814 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 limited to 18 first year students. Instructor permission required.
Spr ENGN0120E/S01 24815 MWF 2:00-2:50(07) (R. Fleeter)

ENGN 0130. The Engineer's Burden: Why Changing the World is Difficult.
We will examine the assertion that most of the changes that have improved people's lives are essentially technological and then we will look at the difficulties in creating sustainable and beneficial change. Topics of interest include unintended consequences, failure to consider local culture, and engineering ethics. Many, but not all, of the examples will have a third world context. The engineering focus will be on infrastructure--housing, water and sanitation, transportation, and also mobile devices as used in health care and banking.

Fall ENGN0130 S01 15392 MWF 11:00-11:50(16) 'To Be Arranged'

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 15393 T 10:30-11:50 (C. Bull)
Fall ENGN0260 S02 15394 T 1:00-2:20 (C. Bull)
Fall ENGN0260 S03 15395 Th 10:30-11:50 (C. Bull)
Fall ENGN0260 S04 15396 Th 1:00-2:20 (C. Bull)
Spr ENGN0260 S01 24816 T 10:30-11:50 (C. Bull)
Spr ENGN0260 S02 24817 T 1:00-2:20 (C. Bull)
Spr ENGN0260 S03 24818 Th 10:30-11:50 (C. Bull)
Spr ENGN0260 S04 24819 Th 1:00-2:20 (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 S01 15387 MWF 9:00-9:50(01) (D. Henann)

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 and optical properties of materials; strengthening mechanisms in solids and relationships between microstructure and properties. Lectures, recitations, laboratory.

Fall ENGN0410 S01 15397 MWF 9:00-10:20(02) (S. Kumar)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
ENGN 0900. Fundamentals of Environmental Engineering. This course presents a broad introduction to environmental engineering, and will help students to explore environmental engineering as an academic major and as career option. The course covers topics in environmental engineering: chemistry fundamentals, mass balance, air pollution, water pollution, sustainable solid waste management and global atmospheric change. The course is essential for the environmental engineering students who are planning to take more advanced courses in environmental engineering. This course is also for the students in other engineering disciplines and sciences, who are interested in environmental constraints on technology development and practice, which have become increasingly important in many fields.

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 24830 MW 9:00-12:00 (L. Gonsher)

ENGN 0930L. Biomedical Engineering Design and Innovation. This course is an incubator for innovative ideas in biomedical design. Students across all disciplines are invited to collaborate with biomedical engineers to enhance the development of design solutions that address clinical and public health concerns. Students will form teams with their peers and a clinical advisor, identify and define a design project to meet a clinical need, and engage in the design process throughout the semester. Engineering concentrators should register for ENGN1930L.

Fall ENGN0930L S01 15410 MW 8:30-9:50(01) (C. Kofron)

ENGN 0931L. Biomedical Engineering Design and Innovation II. This course is an incubator for innovative ideas in biomedical design. Students across all disciplines are invited to collaborate with biomedical engineers to enhance the development of design solutions that address clinical and public health concerns. Student teams formed in the previous semester will continue develop a design project based on an unmet clinical need with a clinical advisor, gaining hands-on process experience and generating innovative solutions. Engineering concentrators should register for ENGN 1931L.

Spr ENGN0931L S01 24833 M 3:00-5:30(13) (C. Kofron)

ENGN 1000. Projects in Engineering Design I. Fall semester projects in design for concentrators in electrical, materials, and mechanical engineering. Students 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. Students may elect to combine ENGN 1000 with ENGN 1001 to work on a year-long project with permission of the instructor. Students electing to pursue this option must take ENGN 1000 and ENGN 1001 in the same academic year, and must submit a project proposal no later than October 1. Instructor permission required.

Fall ENGN1000 S01 15411 M 3:00-5:30(05) (J. Fontaine)

ENGN 1001. Projects in Engineering Design II. Spring semester projects in design for concentrators in electrical, materials, and mechanical engineering. Students work in teams on projects defined through discussions with instructor. An assembled product or detailed design description is the goal of the semester’s effort. Students may elect to combine ENGN 1000 with ENGN 1001 to work on a year-long project with permission of the instructor. Students electing to pursue this option must take ENGN 1000 and ENGN 1001 in the same academic year and must have submitted a project proposal by October 1 of the previous Fall semester. Instructor permission required.

Spr ENGN1001 S01 24834 M 3:00-5:30(13) (L. Gonsher)

ENGN 1010. The Entrepreneurial Process: Innovation in Practice. 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.

Fall ENGN1010 S01 15412 TTh 10:30-11:50(13) (D. Warshay)
Fall ENGN1010 S02 15413 M 6:00-8:30PM (J. Cohen)
Fall ENGN1010 S03 15414 TTh 2:30-5:30(03) (J. Harry)
Fall ENGN1010 S01 24835 TTh 10:30-11:50(09) (D. Warshay)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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; absorption; 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. Prerequisite: Junior level or higher standing.
Spr ENGN1110 S01 24837 TTh 2:30-3:50(11) (L. Wong)

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 or Corequisites: ENGN 1110, 1120, 1130.
Spr ENGN1140 S01 24638 TTh 6:40-8:00PM(18) (M. Wojtowicz)

ENGN 1210. Biomechanics.
Spr ENGN1210 S01 24839 MWF 2:00-2:50(07) (V. Srivastava)

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 24840 TTh 1:00-2:20(08) (A. Nummikko)

ENGN 1230. Instrumentation Design.
Fall ENGN1230 S01 15436 MWF 10:00-10:50(14) (D. Borton)

ENGN 1300. Structural Analysis.
Classical and modern methods of analysis for statically indeterminate structures. Development of computer programs for the analysis of civil, mechanical, and aerospace structures from the matrix formulation of the classical structural theory, through the direct stiffness formulation, to production-type structural analysis programs. Introduction to Finite Element Methods (FEM) and Isostatic Analysis (IGA). Prerequisite: ENGN 0310.
Spr ENGN1300 S01 24875 MWF 9:00-9:50(02) (H. Gao)

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 24878 TTh 9:00-10:20(01) (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 15437 TTh 6:30-7:50 'To Be Arranged'

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 15436 Th 4:00-6:30(04) (A. Van De Walle)

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 24879 TTh 9:00-10:20(01) (B. Sheldon)

A study of the structure and properties of nonmetallic materials such as glasses, polymers, elastomers, and ceramics. The crystal structure of ceramics and polymers, and the noncrystalline networks and chains of glasses, polymers, and elastomers and the generation of microstructures and macrostructures are considered. The mechanical, chemical, electrical, magnetic, and optical properties and their dependence on structure are developed. Prerequisite: ENGN 0410.
Fall ENGN1470 S01 15440 W 6:00-8:30PM (G. Palmore)

ENGN 1480. Metallic Materials.
The central theme is to familiarize students with typical microstructures in metals and alloys, their origin, and factors that control stability. The role of processing (primary and secondary) in influencing microstructures will be demonstrated. The ability to change microstructure through composition and processing to obtain a "desired" microstructure that provides specific properties will be highlighted with examples in different alloy systems including Al, steels, and Ni-based. Factors that control stability and shape of second phase particles will be discussed for L/S and S/S processing. The consequences of microstructural changes on physical and mechanical properties will be illustrated. Prerequisite: ENGN 0410, ENGN 1410.
Spr ENGN1480 S01 25623 TTh 10:30-11:50(09) (G. Palmore)

ENGN 1510. Nanoengineering and Nanomedicine.
Students in this course will develop a fundamental understanding of nanoengineering and its applications in medicine. We will discuss nanomaterials synthesis, fabrication, and characterization. Medical applications of these materials will include drug delivery, imaging and diagnostics, and tissue engineering approaches. Nanotoxicology will also be discussed. Research methods in nanotechnology and nanomedicine will be emphasized (i.e. critical analysis of scientific literature, effective oral and written communication). Students will also have the opportunity to gain an introduction to several nanoengineering research tools available on campus. This course is for engineering and science graduate students and advanced upper-level engineering undergraduates.
Fall ENGN1510 S01 15442 TTh 1:00-2:20(08) (A. Shukla)
ENGN 1520. Cardiovascular Engineering. In this course, students will learn quantitative physiological function of the heart and vascular system, including cardiac biomechanics and vascular flow dynamics, through lectures and discussion of current scientific literature. A systems approach will integrate molecular biophysics, cell biology, tissue architecture, and organ-level function into a quantitative understanding of health and disease. Discussion topics will include cardiovascular diseases, pre-clinical regenerative therapies, stem cell ethics, and clinical trials.

ENGN 1560. Optics. A first course on electromagnetic waves and photonics. Topics to be covered include basic wave phenomena with an emphasis on geometric optics, the interaction of light with matter, scattering, and interference and diffraction effects. Also covered will be a selected number of more advanced topics including laser physics, nonlinear optics, transmission lines, and antennas.

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.

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.

ENGN 1610. Image Understanding. Image processing is a technology experiencing explosive growth; it is central to medical image analysis and transmission, industrial inspection, image enhancement, indexing into pictorial and video databases, e.g., WWW, and to robotic vision, face recognition, and image compression. This senior-level undergraduate course covers theoretical underpinnings of this field and includes a series of practical MATLAB image processing projects. ENGN 1570 is recommended but not required.

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.

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.

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. Prerequisite: ENGN 1630 or passing of a quiz on basic digital logic concepts, or instructor permission.

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.

ENGN 1660. Modern Trends in Microelectronics. A first course on microelectronic devices that provide foundation to a broad range of technologies from lasers to detectors, from cameras to computer displays, from solar cells to molecular sensing, from internet to quantum cryptography, and to new lighting sources for illuminations in the city and in biomedical treatments. Topical content: Light as waves in media, on surfaces, and through micro and nanostructures; interference and waveguiding; light generation by spontaneous emission, stimulated emissions, photodetection, infrared and night visions, LED, lasers, optical amplifiers and modulators, etc. Prerequisite: ENGN 0510 or equivalent.


ENGN 1680. Design and Fabrication of Semiconductor Devices. Contemporary practice in the design and fabrication of semiconductor devices. The realization of basic electronic device functions on the semiconductor platform is a central theme in a coordinated lecture and laboratory course. Topics include microcircuit photolithography; layout and design scaling rules for integrated circuits; and techniques in semiconductor and thin film processing as they apply to ULSI circuit manufacturing. Prerequisite: ENGN 1590 or permission.

ENGN 1690. Photonics Devices and Sensors. Science and engineering principles of photonics and optoelectronic devices that provide foundation to a broad range of technologies from lasers to detectors, from cameras to computer displays, from solar cells to molecular sensing, from internet to quantum cryptography, and to new lighting sources for illuminations in the city and in biomedical treatments. Topics covered include basic wave phenomena with an emphasis on geometric optics, the interaction of light with matter, scattering, and interference and diffraction effects. Also covered will be a selected number of more advanced topics including laser physics, nonlinear optics, transmission lines, and antennas.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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/CAE 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 24899 TTh 7:30-8:50PM "To Be Arranged"


ENGN 1760. Design of Space Systems. Working in design groups, students conceive a space mission and design all of the elements necessary for its execution including launch and orbit / trajectory, space and ground systems, including analysis of structure, thermal, radio link, power and mass budgets, attitude control and dynamics. Each group builds a hardware project to demonstrate a core element of their mission design. Prerequisites: Engineering core curriculum or equivalent. Spr ENGN1760 S01 24890 MWF 1:00-1:50(08) (R. Fleeter)

ENGN 1860. Advanced Fluid Mechanics. 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 24891 MWF 11:00-11:50(04) (D. Harris)

ENGN 1930B. Biomedical Optics. Biomedical optics is a rapidly growing field with applications in medicine, biology, and neuroscience. The course covers principles and applications of wave optics for biomedical imaging. The principles include refraction, reflection, scattering, diffraction and interference. The applications include Michelson interferometry and optical coherence tomography (OCT). OCT is the emerging technology for 3D imaging, considered by the American Institute for Medical and Biological Engineering (AIMBE) as the latest innovation milestone in the history of biomedical engineering. Throughout the course, we will also learn various numerical analysis techniques with working examples in MATLAB. Prerequisites: Undergraduate level ENGN 0510 Minimum Grade of S Spr ENGN1930BES01 24892 MWF 12:00-12:50(05) (J. Lee)

ENGN 1930L. Biomedical Engineering Design and Innovation. This course is the culmination “capstone” of the biomedical engineering educational experience. The primary objective of this course is to recall and enhance design principles introduced through the engineering core curriculum and to apply this systematic set of engineering design skills to biomedical engineering projects. Students will form teams with their peers and a clinical advisor, identify and define a design project to meet a clinical need, and engage in the design process through the course of the semester. For seniors only. Non-engineering concentrators should register for ENGN 0930L. Fall ENGN1930LS01 15452 MW 8:30-9:50(01) (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 15453 Arranged (C. Bull)

ENGN 1930T. Aircraft Design. The process of aircraft conceptual design as practiced in industry: requirements definition to initial sizing, configuration layout, analysis, sizing, optimization, and trade-off studies. Concepts and calculation methods for aerodynamics, stability and control, propulsion, structures, weights, performance, and cost; coverage of conventional and unconventional design methods drawing from knowledge gained in engineering science courses, synthesized towards novel imaginative aircraft designs guided by participants’ interests. Prerequisite: the level of senior in engineering studies. Fall ENGN1930TS01 15454 MWF 12:00-12:50(15) "To Be Arranged"

ENGN 1930U. Renewable Energy Technologies. Renewable Energy Technology examines energy conversion, transport, and storage with the goal of devising courses of action that transform the current state of energy use into one that relies more fully on renewable resources and efficient processes. The course will give priority to photovoltaics, wind, and hydro conversion technologies and to the electrical grid for energy transport. From year-to-year other topics will be explored based on the wishes of the participants. Research, discussion, projects, and presentations will be the primary learning methods. The engineering core and thermodynamics are suggested preparation for this course. Spr ENGN1930UL S01 24893 TTh 2:30-3:50(11) (C. Bull)

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 ENGN1931DS01 15455 M 7:00-9:40PM "To Be Arranged" Spr ENGN1931DS01 24895 TTh 7:00-9:30PM "To Be Arranged"

ENGN 1931I. Design of Robotic Systems. Designing kinetic systems (i.e., systems requiring movement or motion) relies on both mechanical and electrical engineering. These systems include everything from mobile robots for rescue operation to electrically powered moving sculptures. Through a series of projects, students combine knowledge of electronic circuit design, sensors, actuators, motors, microcontrollers, control theory, and programming to build interactive art and robotic systems. Projects culminate in the design of a creative kinetic system that incorporates several of the principles learned in class. Some programming experience is helpful but not required. Prerequisites: ENGN 0040 and (ENGN 0520 or ENGN 1230 or ENGN 1630 or some hardware experience). Otherwise, seek instructor approval. Spr ENGN1931IS01 24897 Th 10:30-11:50(09) "To Be Arranged"

ENGN 1931J. Social Impact of Emerging Technologies – The Role of Engineers. The role of engineering sciences in an ever-changing technology-driven world. Students will develop basic working knowledge of selected contemporary technologies that help identify and forecast future prospects while discerning future disruptions. Emphasis on the importance of ethical and social responsibilities that technologists must shoulder in answering societal challenges and contributing to policy making and corporate leadership. How do we create beneficial technologies yet anticipate their potential social costs, such as workforce automation or overdependence on the internet? Will we give up brains as our last private space? Who will control the data / technology ecosystem that influences our decisions? Fall ENGN1931JS01 15456 Th 4:00-6:30(04) (A. Nummikko)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
ENGN 1931L. Biomedical Engineering Design and Innovation II.
This course is part two of the culmination "Capstone" of the biomedical engineering educational experience. The primary objective of this course is to recall and enhance design principles introduced through the engineering core curriculum and to apply this systematic set of engineering design skills to biomedical engineering projects. Student teams formed in the previous semester will continue develop a design project based on an unmet clinical need with a clinical advisor, gaining hands-on process experience and generating innovative solutions. For seniors only. Non-engineering concentrators should register for ENGN 0931L.

Spr ENGN1931LS01 24898 M 3:00-5:30(13) (C. Kofron)

ENGN 1931Q. Entrepreneurial Management in Adversity.
Companies get into trouble all the time – making wrong products for the market, failing to meet sales quotas. This course examines actions a company must take in adverse conditions. There is never enough time to hire consultants, do research, hire new employees. Top Management must make decisions, often with insufficient data and alternative 'sub-optimal' options. Primary objectives are to understand analysis and rapid action when faced with adversity; identify the cause of adversity, building solutions to prevent recurrence or give management the skills to solve problems; and develop recommendations and action plans to "sell" to the Board of Directors.

Spr ENGN1931QS01 24899 TTh 9:00-10:20(01) ‘To Be Arranged’

ENGN 1931W. Selling & Sales Leadership in the Entrepreneurial Environment.
Is there any skill more important to entrepreneurs than sales? Startups only have two problems: sales and all else. The entrepreneur starts with a product or service and must convince an embryonic team to join a firm before there is a product, financing or customers; and convince investors the idea is sound, doable, and profitable; and convince customers to rely on a company with no track record. Sales skills are essential. Entrepreneurs sell an intangible and must make it feel immensely tangible. Until company/product become tangible, sales responsibility never stops. Entrepreneurs are key sales figures and face of the company.

Spr ENGN1931WS01 24901 TTh 1:00-2:20(08) ‘To Be Arranged’

ENGN 1931Y. Control Systems Engineering.
Control Systems is an Engineering discipline that applies control theory to analyze and design systems with desired response behavior. The objective of this course is to introduce the student to the topic of feedback control design with applications on many diverse systems. The course will cover the fundamentals of classical control theory such as modeling, simulation, stability, controller design and digital implementation. It will also address basic aspects of state-space and modern control theory. The course is open to all Engineering majors and will make use of existing simulation packages such as Matlab/Simulink.

Spr ENGN1931YS01 24902 MTh 6:40-8:00PM (A. Zaki)

ENGN 1931Z. Interfaces, Information and Automation.
Laboratory-intensive course to help students develop and implement simple computer programs in Python to control, query, and integrate discrete (traditionally isolated) systems, ranging from automobiles to websites. Assignments will provide hands-on practice using programmatic interfaces to control both physical and virtual systems. Topics include physical interfaces and communication protocols (e.g., GPIB, RS-232, USB) as well as accessing online resources (e.g., SOAP and RESTful web services) and building hybrid systems for data acquisition and analysis. Formal programming experience is not required, but familiarity with either Matlab or Python (at the level of CSCI 0040 or higher) would be very helpful.

Spr ENGN1931ZS01 24903 MWF 11:00-11:50(04) ‘To Be Arranged’

Independent Study in Engineering. Instructor permission required after submitting online proposal (https://docs.google.com/a/brown.edu/forms/d/1FAlpQLSeXzgX19sKcq7xrL9ca5jr4Md_NqFYe70hn5i8aYy077MhqA/viewform). Section numbers vary depending on concentration. Please check Banner for the correct section number and CRN to use when registering for this course.

Independent Study in Engineering. Instructor permission required after submitting online proposal (https://docs.google.com/a/brown.edu/forms/d/e/1FAIpQLSeXzgX19sKcq7xrL9ca5jr4Md_NqFYe70hn5i8aYy077MhqA/viewform). Section numbers vary depending on concentration. Please check Banner for the correct section number and CRN to use when registering for this course.

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 15515 T 3:00-5:50 (E. Suuberg)

The primary objective of the course is to train students on tools, skills, and behaviors required for effective management of complex engineering, research, and business development projects. Although the course will be framed in the context of early-stage technology companies, the skills and principles will be applicable to businesses of any size and maturity. The course is organized around three actionable themes: project management, team management, and decision making.

Fall ENGN2125 S01 15516 W 3:00-5:50 (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.

Spr ENGN2130 S01 24395 M 3:00-5:50 (M. Norige)
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 "experiential learning", with work undertaken as a two-semester project. Enrollment limited to 30 graduate students in the IMEE program.

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 "experiential learning", with work undertaken as a guided two-semester project. Prerequisite: ENGN 2150. Enrollment limited to 30 graduate students in the IMEE program.

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.


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 transformation 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.

ENGN 2450. Exchange Scholar Program. Fall ENGN2450 S01 15285 Arranged "To Be Arranged"

ENGN 2500. Medical Image Analysis. Explosive growth in medical image analysis has enabled noninvasive methods to diagnose and treat diseases. The course will first discuss the fundamentals of formation of medical images such as CT, MRI, ultrasound, and nuclear imaging; then consider clinical constraints and discuss methods in image guided therapy/surgery, techniques to detect, delineate, measure, and visualize medical organs and structures.

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.

ENGN 2530. Digital Signal Processing. An introduction to the basics of linear, shift invariant systems and signals and doing real processing of signal on a digital computer. 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.

ENGN 2660. Physics and Technology of Semiconductor Heterostructures. Covers, largely from an experimental point of view, topics of current interest in semiconductor heterostructure physics and technology; magnetotransport in two-dimensional electron gas; integer and fractional quantum Hall effects; resonant tunneling and superlattice transport; optical and transport properties of quantum wires and dots; heterostructure-based devices; other topics of student interest. Prerequisites: PHYS 1410 or equivalent quantum mechanics and ENGN 1590 or introductory device course helpful but not required.

ENGN 2750. Chemical Kinetics and Reactor Engineering. This course focuses on the fundamentals of chemical kinetics with engineering applications. Topics include: quantum chemistry, statistical thermodynamics, and transition state theory; tight versus loose transition states; the kinetics of gases, liquids, and surfaces; adsorption, desorption, surface diffusion; enzyme kinetics and biological processes; formation, solution, and interpretation of elementary mechanisms; global versus local sensitivity analysis; uncertainty quantification; and the coupling between fluid dynamics and chemical reactions.

ENGN 2810. Fluid Mechanics I. Formulation of the basic conservation laws for a viscous, heat conducting, compressible fluid. Molecular basis for thermodynamic and transport properties. Kinematics of vorticity and its transport and diffusion. Introduction to potential flow theory. Viscous flow theory; the application of dimensional analysis and scaling to obtain low and high Reynolds number limits.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 25614 MWF 10:00-10:50(03) (M. Maxey)

ENGN 2910G. Topics in Translational Research and Technologies.
To improve human health, engineering and scientific discoveries must be explored in the context of application and translated into human/societal value. Translational research is creating a fundamental change in the way basic science and engineering research has operated for decades, breaking down the literal and figurative walls that separate basic scientists/ engineers and clinical researchers. Such discoveries typically begin at "the bench" with basic research—and in the case of medicine—then progress to the clinical level, or the patient’s "bedside." This seminar course will utilize case studies to demonstrate to students how the translational research unfolds. Lectures will be delivered by clinicians, medical researchers, engineering students, and other researchers with case studies focused on topics ranging from value creation, IRB, HIPAA, FDA approval, etc.
Spr ENGN2910GCS01 25618 F 3:00-5:30(15) (A. Tripathi)

ENGN 2910Q. Chemically Reacting Flow.
This course focuses on problems in chemical engineering that involve both transport and chemical reaction. The emphasis will be on numerical methods for practical problems. The students will learn to use the open-source code Cantera. Examples will draw from combustion chemistry, porous media, and electrochemistry.
Fall ENGN2910QCS01 15524 MWF 1:00-1:50(06) 'To Be Arranged' 

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 ENGN2912ESC01 15527 MW 5:40-7:00 (G. Taubin)

ENGN 2912Q. Coherence of Light in Nanoptics and Plasmonics.
This class is a special topics graduate course focusing on advanced concepts in optics, including spatial and temporal coherence of optical fields, higher-order coherence phenomena in space-time domain, coherence effects at the nano- and micro-scale, optical and plasmonic interferometry using partially coherent sources. The subject is aimed at graduate and undergraduate students interested in optical communications, propagation of laser beams in biological or turbulent media, optical microscopy and imaging, as well as medical diagnostics. The concepts of "flipped teaching" and "learning by teaching" will be explored. Knowledge of advanced electricity and magnetism concepts is required.
Spr ENGN2912QSC01 25666 Arranged (D. Pacifici)

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 15286 Arranged 'To Be Arranged'
Spr ENGN2970 S01 24178 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 residency requirement and are continuing research on a full time basis.
Fall ENGN2990 S01 15287 Arranged 'To Be Arranged'
Spr ENGN2990 S01 24179 Arranged 'To Be Arranged'

English

ENGL 0100A. How To Read A Poem.
It is difficult to get the news from poems/ yet men die miserably every day/ for lack/ of what is found there. Poet William Carlos Williams captures this course’s focus on the special ways that poetic language represents and gives shape to human experience. Organized around concepts and practical skills, the readings cross historical and geographical boundaries.
Fall ENGL0100AS01 16020 TTh 1:00-2:20(08) (M. Rabb)

ENGL 0100D. 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, lais by Marie de France, and Chaucer's "Wife of Bath's Tale." Primarily for freshmen and sophomores. Students should register for ENGL 0100D S01 and may be assigned to conference sections by the instructor during the first week of class.
Spr ENGL0100DSS01 25736 MW 11:00-11:50(04) (E. Bryan)

ENGL 0100F. Devils, Demons, Do-Gooders.
Who hasn’t struggled with the problem of good and evil? We will investigate how various writers grapple with these fundamental questions of judgment. What constitutes good and evil in the first place, and who gets to make such judgments? Works may include John Milton, Mary Shelley, Jhumpa Lahiri, Frederick Douglass, Toni Morrison, and Herman Melville. Students should register for ENGL 0100F S01 and be assigned to conference sections by the instructor during the first week of class.
Fall ENGL0100FS01 17112 MW 10:00-10:50(14) (J. Egan)

ENGL 0100P. Love Stories.
What do we talk about when we talk about love? We will see how writers have addressed this question from Shakespeare's day to the present. Writers may include Shakespeare, Austen, Eliot, Flaubert, Graham Greene, Marilynne Robinson, and/or others. Students should register for ENGL 0100P S01 and may be assigned to conference sections by the instructor during the first week of class.
Fall ENGL0100PSS01 16022 MW 11:00-11:50(16) (J. Kuzner)

ENGL 0100V. Inventing Asian American Literature.
What insights can literature provide into the complicated workings of race in America? What role can the invention of a literary tradition play in illuminating and rectifying past and present injustices? We explore these questions by examining how the idea of an Asian American literary tradition came into being and by reading influential works that have become part of its canon. Students should register for ENGL 0100V S01 and may be assigned to conference sections by the instructor during the first week of class.
Fall ENGL0100VSS01 17105 TTh 2:30-3:50(03) (D. Kim)

ENGL 0100Y. Do the Right Thing.
An examination of literary works as developing our modern framework of moral values, along the way taking up questions of temptation, corruption, punishment, redemption, and responsibility. We will start with Christian allegorical texts (Dr. Faustus and Pilgrim's Progress), complicate the picture with 19th century psychological fiction, and conclude with some masterpieces of art cinema.
Spr ENGL0100YS01 24568 MWF 2:00-2:50(07) (B. Parker)

ENGL 0100Z. The Experiment: Poetry and Knowledge.
How does the notion of the experiment in both science and poetry offer an opportunity for close observation, manipulation and description of the material world? Is poetry a form of knowledge? This course will examine the role of experimentation in poetry and science as a way of generating heightened modes of sensation and focused modes of inquiry.
Fall ENGL0100ZS01 16024 MWF 1:00-1:50(06) (A. Smajlubegovic)

ENGL 0150C. 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 19 first-year students.
Fall ENGL0150CS01 16038 TTh 9:00-10:20(02) (E. Bryan)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
ENGL 0150D. 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 19 first-year students.
Fall ENGL0150D S01 16040 MWF 2:00-2:50(07) (S. Foley)

ENGL 0150E. Love and Friendship.
What do we talk about when we talk about love? This course poses this question in various ways. How, for instance, can we tell the difference between love’s various forms—between love that is friendly and love that is romantic? How do the different forms of love differently shape people? How does love work when it involves sex, or marriage, or children, or divinity? And what must love involve to be called “good”? Why? Materials will range from Plato and St. Augustine to Leo Bersani and Allen Bloom and will also include popular filmic representations of love. Limited to 19.
Spr ENGL150E S01 24578 TTh 10:30-11:50(09) (J. Kuzner)

ENGL 0150K. The Transatlantic American Novel.
This course reads American literature across national boundaries, focusing on the novel genre and the question of “American” identity as a problem in itself. The course takes up this problem in a wide array of novels spanning the period between the late eighteenth and twentieth centuries. Writers include Crevecoeur, Susanna Rowson, Poe, Melville, Twain, and Nella Larsen. Limited to 19 first-year students.
Spr ENGL150K S01 24579 TTh 2:30-3:50(11) (P. Gould)

ENGL 0150Q. 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 19 first-year students. Banner registration after classes begin requires instructor approval.
Spr ENGL150Q S01 24580 MWF 11:00-11:50(04) (P. Armstrong)

ENGL 0150X. The Claims of Fiction.
This course explores the interplay of tropes of strangeness, contamination, and crisis in a range of novels and shorter fiction, in English or in translation. We will ask why social misfits and outsiders somehow become such fascinating figures in fictional narratives. How do these fictions entice and equip readers to reflect on collective assumptions, values, and practices? Writers will include Baldwin, Brontë, Coetzee, Conrad, Faulkner, Ishiguro, Morrison, Naipaul, Rushdie, Salih, Shelly. Limited to 19 first-year students.
Fall ENGL150X S01 16044 TTh 10:30-11:50(13) (O. George)

ENGL 0150Y. Brontë and Brontëism.
The novels of Anne, Charlotte, and Emily Brontë alongside works (fiction and film) influenced by or continuing their powerful (and competing) authorial visions: Wide Sargasso Sea (Rhys), Rebecca (Hitchcock), The Piano (Campion), and Suspiria (Argento). Among other questions, we will discuss the role of Romanticism, feminism, the bodily imaginary, colonialism, and genre. Enrollment limited to 19 first-year students.
Fall ENGL150Y S01 17106 Th 4:00-6:30(04) (B. Parker)

ENGL 0151A. Hitchcock!
An exploration of the work of one of the most famous directors of the twentieth century. We will watch many of Alfred Hitchcock’s best-loved films, including The Birds, North by Northwest, Vertigo, Psycho, Rear Window, and Rope. In addition, we will read some of the most important criticism of these films. No knowledge of film theory required. Enrollment limited to 19 first-year students.
Fall ENGL151A S01 17110 Th 4:00-6:30(04) (S. Burrows)

ENGL 0200K. Trans-: Transformation, Translation, Transgression in Literature.
From transgression to transformation to trans rights, why does the prefix “trans” appear inescapable whenever one is discussing radical change? Centering on this mercurial prefix, this course examines the possibilities and limits of change from ancient anxieties about transcendence to contemporary discussions of transnationalism and transgender identities. Authors include: Wordsworth, Woolf, Ginsberg, Plath, Morrison, Imogen Binne, hooks, Dyson, Against Me! Enroll limited to 17.
Fall ENGL200K S01 17119 TTh 2:30-3:50(03) "To Be Arranged"

ENGL 0200L. Between Home and Haven: Contemporary Narratives of Revolt and Refuge.
What forces dictate our perception of “home”? Is it where we come from? Somewhere we must find? Or is home what persecutes us - a place from which we must escape or rebel? This course will contemplate sanctuary, family, authoritarianism, and resistance across fiction, graphic memoir, and film. Writers may include Marjane Satrapi, Julia Alvarez, and Viet Thanh Nguyen. Enrollment limited to 17.
Fall ENGL200L S01 17120 MWF 2:00-2:50(07) "To Be Arranged"

ENGL 0310A. Shakespeare.
We will read a representative selection of Shakespeare’s comedies, tragedies, histories, and romances, considering their historical contexts and their cultural afterlife in terms of belief, doubt, language, feeling, politics, and form. Students should register for ENGL 0310A S01 and may be assigned to conference sections by the instructor during the first week of class.
Fall ENGL310A S01 16046 MWF 11:00-11:50(16) (S. Foley)

ENGL 0310G. Gender and Genre in Medieval Celtic Literatures.
This course traces images of masculinity and femininity in Welsh, Cornish, Breton, and Irish narratives within and around early medieval Britain. You will be introduced to the genres of saga, romance, and the short poetic lai as you consider how the nature and gender of the hero changes in specific cultural and linguistic moments.
Spr ENGL310G S01 24581 MWF 12:00-12:50(05) (L. Jacobs)

ENGL 0500P. The Examined Self: Lives of the Soul.
This course examines a crucial tradition in American letters and culture: the literature of self-examination and the spiritual quest. Each work focuses in some way on questions of identity and identification: We will be reading a wide range of authors and genres—spiritual autobiography, short fiction, the novel, conversion narratives, confessions, and lyric and epic poetry. Limited to 30 students.
Fall ENGL500P S01 17098 MWF 11:00-11:50(16) (P. Gould)

ENGL 0511A. Dickens: The Novel and Society.
This course rehabilitates Charles Dickens from his reputation as a mainstream writer paid by the word, most famous as the author of sentimental, implausible works for children, such as A Christmas Carol. We will be looking at Dickens’s social novels as a formally innovative response to the urban and industrial capitalism of his time. Issues will include: realism, the relation of his fiction to his journalism, serial form, and representations of work, the city, and bureaucracy.
Spr ENGL511A S01 24637 MWF 11:00-11:50(04) (B. Parker)

ENGL 0511E. Melville, Conrad, and the Sea.
Stories begin with the sea: Jason and the Argonauts, Sinbad and the Seven Seas, Odysseus trying to sail home. The sea is the place of ‘tall tales,’ of adventure, and of terror, but also of industrial labor and modern commerce. This class reads the sea narratives of Herman Melville and Joseph Conrad within this larger narrative and historical context.
Fall ENGL511E S01 17108 TTh 1:00-2:20(05) (S. Burrows)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
ENGL 0511H. Late Romantics.
An introduction to the varied work of canonical and non-canonical writers often described as British second-generation or late Romantics: Keats, the Shelleys, Byron, Clare, de Quincey, Hemans, Austen. We will explore what lateness constitutes for these authors as a political, aesthetic, and ethical category, and consider how it informs the kind of distinctly "Romantic" work that characterizes their writings. Particular emphasis on close readings of poetry and theoretical texts, as well as excursions into late nineteenth-century authors.
Spr ENGL0511HS01 25719 TTh 10:30-11:50(09) (J. Khalip)

ENGL 0511J. Renegades, Reprobates, and Castaways.
In this ONLINE course, we’ll look at a range of literary works--including short stories, novels, graphic novels, films, and electronic literature--populated by characters cast as pirates, degenerates, depraved, and miscreants. We’ll examine how the seemingly disreputable characters, settings, and/or forms offer alternative visions of a just society by challenging powerful institutions, conventional moral principles, and/or dominant conceptions of the “normal” and “natural.”
Spr ENGL0511J S01 25723 Arranged (J. Egan)

ENGL 0700E. Postcolonial Literature.
Examines fiction, drama, poetry, travel writing, and cultural criticism by Anglophone writers from African, Caribbean, and South Asian backgrounds. Issues that will concern us include: cultural-nationalism, diaspora, and globalization; histories, identities, and generational shifts; literary form and the idea of "postcolonial literature." Authors will include Coetzee, Gosh, Hartman, Naipaul, Ondaatje, Kincaid, Soyinka, Walcott, and Wicomb. Enrollment limited to 30.
Fall ENGL0700ES01 17103 TTh 2:30-3:50(03) (O. George)

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.
Fall ENGL0710BS01 16048 MWF 1:00-1:50(06) (R. Murray)

ENGL 0710V. Death and Dying in Black Literature.
How is death represented in black literature as a topic and as a figure of genre? Which theoretical ideas help us think about the intertwining of blackness and death? How does notions of gender and sexuality inform this thinking? This course will explore works from the twentieth and twenty-first centuries to consider the scope of black literary imaginings of death.
Spr ENGL0710VS01 24822 TTh 9:00-10:20(01) (K. Quashie)

Study of the way inequality has been represented in US literature from 1945 to the present. Authors to be considered include Morrison, Updike, Wright, Highsmith, Lee, Adichie, Leavitt.
Spr ENGL0710YS01 25735 MWF 10:00-10:50(03) (D. Nabers)

ENGL 0900. 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. Enrollment limited to 17. Banner registrations after classes begin require instructor approval. S/NC.
Fall ENGL0900 S01 16671 MWF 10:00-10:50(14) (K. Schapira)
Fall ENGL0900 S09 16673 TTh 9:00-9:50(01) (L. Stanley)
Fall ENGL0900 S04 16674 TTh 10:00-10:50(14) (K. Quashie)
Fall ENGL0900 S05 16675 MWF 9:00-9:50(01) (J. Egan)
Fall ENGL0900 S06 16676 MWF 9:00-9:50(01) (R. Ward)
Fall ENGL0900 S07 16677 MWF 1:00-1:50(06) (J. Egan)
Fall ENGL0900 S08 16678 TTh 1:00-1:50(06) (K. Schapira)
Fall ENGL0900 S09 16679 MWF 1:00-1:50(06) (J. Khalip)
Fall ENGL0900 S04 16680 MWF 2:00-2:50(07) (J. Khalip)
Fall ENGL0900 S05 16681 MWF 2:00-2:50(07) (J. Egan)
Fall ENGL0900 S06 16682 MWF 2:00-2:50(07) (K. Schapira)

ENGL 0903D. Myth + Modern Essay.
This "ONLINE" section of "ENGL030: Critical Reading and Writing II: Research" will prepare you for academic and real-world discourse. In Canvas, you will discuss essays demonstrating deep research distilled into engaging intellectual journey. You will research and revise four explanatory, analytical, persuasive essays, using varied sources to explore subjects or issues of your choice. Mandatory peer reviews and conferences ONLINE. Enrollment limited to 17. Banner registrations after classes begin require instructor approval. S/NC.
Spr ENGL0903D S01 16680 TTh 9:00-10:20(02) (L. Stanley)
Spr ENGL0903D S02 16681 MWF 8:30-9:50(01) (K. Schapira)
Spr ENGL0903D S03 16682 MWF 10:00-10:50(14) (K. Quashie)
Spr ENGL0903D S04 16683 MWF 10:00-10:50(14) (J. Egan)
Spr ENGL0903D S05 16684 MWF 8:30-9:50(01) (K. Schapira)
Spr ENGL0903D S06 16685 TTh 10:30-11:50(13) (R. Ward)
Spr ENGL0903D S07 16686 MWF 1:00-1:50(06) (J. Egan)
Spr ENGL0903D S08 16687 MWF 8:30-9:50(02) (J. Egan)
Spr ENGL0903D S09 16688 MWF 8:30-9:50(02) (J. Egan)
Spr ENGL0903D S05 16689 TTh 10:30-11:50(13) (J. Readey)

ENGL 1030A. The Thoughtful Generalist.
This "ONLINE" section of "ENGL103: Critical Reading and Writing II: Research" will prepare you for academic and real-world discourse. In Canvas, you will discuss essays demonstrating deep research distilled into engaging intellectual journey. You will research and revise four explanatory, analytical, persuasive essays, using varied sources to explore subjects or issues of your choice. Mandatory peer reviews and conferences ONLINE. Enrollment limited to 17. Banner registrations after classes begin require instructor approval. S/NC.
Spr ENGL1030AS01 25195 Arranged (K. Schapira)

ENGL 1030C. Writing Science.
This course explores how science, as an academic way of thinking and a method, affects our critical thinking and expression of culture. Readings examine the various dialects of scientific discourse. Students will prepare three major research essays on self-selected scientific topics from both within and outside their fields of study. Enrollment limited to 17. Writing sample may be required. Banner registrations after classes begin require instructor approval. S/NC.
Spr ENGL1030CS01 24584 TTh 9:00-10:20(01) (K. Schapira)

ENGL 1030D. Myth + Modern Essay.
A writing and research focused course, in which students read a small selection of ancient texts (including The Epic of Gilgamesh and Ovid’s Metamorphoses) and use the myths retold to illuminate the contemporary world and to inform the essays they write. Enrollment limited to 17. Writing sample may be required. Banner registrations after classes begin require instructor approval. S/NC.
Fall ENGL1030DS01 16060 MWF 12:00-12:50(15) (A. Golaski)
ENGL 1030G. Backstory. Everything has a backstory—every event, every object, every idea. In this workshop-based course we will explore the archives at Brown and RISD to write three research essays for general audiences. You can expect readings, looking at how authors like David Foster Wallace, John McPhee and Eula Biss structure their pieces, workshops and in-class writing prompts to get you going. Enrollment limited to 17. Writing sample may be required. Banner registrations after classes begin require instructor approval. S/NC.

Fall ENGL1030GS01 16061 MWF 11:00-11:50(16) (M. Stewart)

ENGL 1050A. Narrative. This course offers a broad exploration of the many kinds of essays you can write in creative nonfiction. We will be looking at how authors structure their pieces and the range of narrative techniques they often use. You can expect workshops, in-class prompts and readings by Jamaica Kincaid, John McPhee, David Foster Wallace, Annie Dillard, David Sedaris and others. Enrollment limited to 17. Writing sample required. Banner registrations after classes begin require instructor approval. S/NC.

Spr ENGL1050AS01 24585 TTh 9:00-10:20(01) (E. Hardy)

ENGL 1050F. Line Work: Experiments in Short-Form Writing. This class is based on the premise that to improve your writing, you need to write often. By responding to almost daily drills, you will develop a regular writing habit and explore a range of styles. We will take your most successful pieces through a series of workshops, helping you refine your work and ultimately build a writing portfolio. Enrollment limited to 17. Writing sample required. Banner registrations after classes begin require instructor approval. S/NC.

Spr ENGL1050FS01 24587 TTh 10:30-11:50(09) (M. Stewart)

ENGL 1050G. Journalistic Writing. This course teaches students how to report and write hard news and feature stories. Students learn to gather and organize material, develop in-depth interviewing techniques, use public records to report stories and become better observers of everyday life. The first half of the semester focuses on hard news and investigative reporting -- crime, government and court news. The second half is devoted to feature writing -- profiles and the art of narrative storytelling. Class list will be reduced to 17 after writing samples are reviewed. Banner registrations after classes begin require instructor approval. S/NC.

Fall ENGL1050GS01 16063 TTh 10:30-11:50(13) (T. Breton)
Fall ENGL1050GS02 16064 TTh 2:30-3:50(03) (T. Breton)

ENGL 1050H. Journalistic Writing. This course teaches students how to report and write hard news and feature stories for newspapers and online. Students learn to gather and organize material, develop interviewing techniques, and hone their writing skills – all while facing the deadlines of journalism. The first half of the semester focuses on "hard" news: issues, crime, government, and courts. The second half is devoted to features, profiles, and narrative story telling. Writing sample required. Class list will be reduced to 17 after writing samples are reviewed in first week of classes. Banner registrations after classes begin require instructor approval. S/NC.

Spr ENGL1050HS01 24599 MW 8:30-9:50(02) 'To Be Arranged'

ENGL 1050P. Reframing Race in Art Writing. This seminar will consider how contemporary writers and critics respond to art that directly addresses race and challenges institutional power. We will discuss past and recent controversies involving race and representation in exhibitions and examine the relationships between artists, museums and other art institutions, and public audiences. We will consider how writing about arts and culture can advance public discourse about race, equity, and justice. Enrollment limited to 17. No pre-requisites. Writing sample required. Instructor permission required.

Fall ENGL1050PS01 17115 MWF 12:00-12:50(15) 'To Be Arranged'

ENGL 1140A. Intellectual Pleasures: Reading/Writing the Literary Text. Riffing on the generative tensions between intellectual rigor and aesthetic pleasure, this seminar will examine (through the theoretical framework of cognitive poetics) a richly diverse range of literary texts, from Susan Howe to Beowulf. Our objective: to develop an awareness of language that will reshape how we read and how we write literary texts in various genres. Writing centered. Enrollment limited to 12. Prerequisite: ENGL 0930 or any 1000-level nonfiction writing course. S/NC.

Spr ENGL1140AS01 24590 TTh 10:30-11:50(09) (L. Stanley)

ENGL 1140E. Writing for Activists. How can writing support and further change? In this course students will practice grant applications, budget narratives, mission and strategy statements, press releases, position papers, op-eds, and other writing strategies with practical application in activist work. We'll read examples and theoretical grounding, and guest speakers will introduce us to writing and needs specific to a range of fields. Prerequisite: ENGL 0930 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. Instructor permission required. S/NC.

Spr ENGL1140ES01 25729 W 3:00-5:30(10) (K. Schapira)

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: ENGL1050G, ENGL1050H or ENGL1160A (Advanced Feature Writing). Enrollment limited to 17. Instructor permission required. Preference will be given to English concentrators. S/NC.

Spr ENGL1160FS01 24591 M 3:00-5:30(13) (T. Breton)

ENGL 1180B. Digital Nonfiction. In this class, we will join the host of other artists, activists, and writers that have used Twitter bots, iPhone apps, virtual reality experiences, and more to tell compelling stories. No previous digital writing experience is necessary, however, as an advanced creative nonfiction class, Digital Nonfiction requires students to have completed ENGL 0930 or any 1000-level nonfiction writing course. Enrollment is limited to 17. Instructor permission required. S/NC.

Spr ENGL1180BS01 24592 TTh 2:30-3:50(11) (M. Stewart)

ENGL 1180C. Advanced Creative Nonfiction: Writing with Food. This course examines writing about food and how writing affects food and food culture. We shall explore the relationship of food to the pen through reading classic texts, writing in and out of class, guest lectures, and touring culinary archives. The goal is to polish personal voice in menus, recipes, memoir, history, reportage, and the lyric essay. Prerequisite: ENGL 0930 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 ENGL1180CS01 24593 TTh 1:00-2:20(08) (C. DeBoer-Langworthy)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
ENGL 1180G. Lyricism and Lucidity.  
For the advanced writer. This course will explore two subsets of the personal essay that blur or cross boundary lines—the lyric essay and the photographic essay—in both traditional and experimental formats. Writing sample required. Prerequisite: ENGL 0930 or any 1000-level nonfiction writing course. Not open to first year students. 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 ENGL1180G S01 24594 TTh 2:30-3:50(11) (C. Imbriglio)  

ENGL 1180H. Satire and Humor Writing.  
For the advanced writer. This course will introduce students to the practice of writing satire and humorous essays. Readings will include works by Jonathan Swift, Mark Twain, Garrison Keillor, Bill Bryson, David Foster Wallace, David Sedaris, and others, and students will develop skills in analyzing, writing, and workingshopping in the genre. Prerequisite: ENGL 0930 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 ENGL1180H S01 24595 Th 4:00-6:30(17) (J. Readey)  

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: ENGL0900, ENGL0930, 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 ENGL1180I S01 16065 MWF 1:00-1:50(06) (K. Schapira)  

ENGL 1180P. Further Adventures in Creative Nonfiction.  
For the advanced writer. A workshop course for students who have taken ENGL 0930 or the equivalent and are looking for further explorations of voice and form. Work can include personal essays, literary journalism and travel writing. Readings from Ian Frazier, Joan Didion, David Sedaris, John McPhee and others. Writing sample required. Prerequisite: ENGL 0930 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.  
Fall ENGL1180P S01 16066 MWF 2:00-2:50(07) (E. Hardy)  

ENGL 1180U. Testimony.  
How does the creative nonfiction writer bear witness to profound political, social, and environmental change? In this course students engage with the world as writers. They will conduct extensive interviews within the Brown community and beyond and will turn those first hand testimonials into a suite of creative nonfiction pieces in various genres including the lyric, personal, “found,” and multimedia essay. Writing sample required. Prerequisite: ENGL 0930 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.  
Spr ENGL1180U S01 24596 F 3:00-5:30(15) (E. Rush)  

ENGL 1180V. Asian American Narrative.  
This course considers themes, forms, and contexts of Asian American narratives. We will examine diverse representations of Asian American experience and explore the questions these texts raise about race and ethnicity, self-invention and identity; and visibility and representation. We'll consider how Asian American authors have used writing to reclaim agency, preserve cultural memory, and redress past and present injustice. Prerequisite: ENGL0930 or any 1000-level nonfiction writing course. Writing sample required. Class list will be reduced to 17 after writing samples are reviewed during the first week of classes. Preference given to English concentrators. Instructor permission required. S/NC.  
Spr ENGL1180V S01 24597 MWF 12:00-12:50(05) "To Be Arranged"  

ENGL 1190M. The Teaching and Practice of Writing: Writing Fellows Program.  
This course prepares students for their work as Writing Fellows. Course readings, activities, and assignments introduce students to: post-process writing theory and pedagogy; data-based investigations of the revision habits of experienced and inexperienced writers; and effective methods for responding to student writing and conferencing with student writers. 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 16067 TTh 10:30-11:50(13) (S. Kastner)  
Fall ENGL1190M S02 16068 TTh 1:00-2:20(08) "To Be Arranged"  

ENGL 1190U. Nature Writing.  
This course seeks to develop your skills as a sensitive reader and writer of the natural world. You will build a portfolio of revised work through a process of workshops, tutorials, and conferences, and engage in discussion of a range of written and visual narratives with reference to their personal, political, and ecological contexts. Writing sample required. Prerequisite: ENGL 0930 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 ENGL1190U S01 16069 T 4:00-6:30(09) (R. Ward)  

ENGL 1190X. Nonfiction Now.  
Nonfiction Now introduces students to contemporary nonfiction writing through in-person exposure to professional writers, who will visit the course to deliver a craft lecture, read from their latest work and discuss the labor that goes into maintaining a professional writing life. Students will be expected to read the work of the visitor and produce creative work in response. Prerequisite: ENGL 0930 or any 1000-level nonfiction writing course. Class list will be reduced to 30 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 ENGL1190X S01 16488 F 3:00-5:30(11) (M. Stewart)  

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. S/NC.  

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. How does Shakespeare imagine the affection that happens to that affection when Shakespeare is adapted into film? Prerequisite: ENGL 1311M. Renaissance Poetry and Its Kinds.  
Fall ENGL1311G S01 25727 TTh 2:30-3:50(11) (J. Kuzner)  

ENGL 1311M. Renaissance Poetry and Its Kinds.  
English poetry from 1500-1650 traces a revolutionary arc of poetic invention remarkable for diverse individual voices and literary kinds. Forms such as lyric, heroic, pastoral, satiric, epistle, and epigram emerged concerns that were at once affective, political, and religious. How does this variety constitute literature? Wyatt, Surrey, Raleigh, Spenser, Sidney, Marlowe, Donne, Jonson, Herrick, Herbert, Crashaw, Milton.  
Spr ENGL1311M S01 25724 Th 10:30-11:50(09) (S. Foley)  

ENGL 1360H. Introduction to the Old English Language.  
This course offers a thorough introduction to the earliest period of English language and literature. We begin with an extensive coverage of grammar and syntax before reading short texts and a few Old English poems, including The Battle of Brunanburh and Judith. Enrollment limited to 20.  
Spr ENGL1360H S01 24598 MWF 2:00-2:50(07) (L. Jacobs)
ENGL 1360J. Middle English Literature.
In the age of Chaucer, literature in Middle English ranged from lyrics to romance narratives to mystery plays and medieval genres like dream visions and debate poems. This course will introduce students to reading texts like Sir Gawain and the Green Knight and The Owl and the Nightingale in their original Middle English. No prerequisites. Not open to first-year students. Enrollment limited to 20.
Fall ENGL1360J S01 16049 TTh 1:00-2:20(08) (E. Bryan)

ENGL 1361D. Women's Voices in Medieval Literature.
This course explores literary works from the early medieval period, both literature by women and literature that represents women's voices and desires. Traditions examined will include the Old and Middle English, Norse, Welsh, and Irish. The course provides evidence into the construction of premodern sexualities as well as into the cultural and social histories of multiple national traditions.
Fall ENGL1361D S01 16050 MWF 12:00-12:50(15) (L. Jacobs)

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. Enrollment limited to juniors and seniors.
Spr ENGL1510A S01 24599 TTh 1:00-2:20(08) (M. Rabb)

ENGL 1511A. American Literature and the Civil War.
An examination of the way the Civil War is represented in American literature from Reconstruction to the present. Authors to be considered include Grant, Twain, Dixon, Chesnutt, DuBois, Faulkner, Morrison, Ellison.
Fall ENGL1511A S01 17107 TTh 10:30-11:50(13) (D. Nabers)

ENGL 1511F. Wordsworth and Coleridge: Lyrical Ballads.
An introduction to and close reading of the Lyrical Ballads, one of the most radical and innovative volumes in British Romantic literature. We will pay special attention to the aesthetic, historical, ethical, and political dimensions of the text, patiently working through the poems and prefaces, as well as reading antecedent texts, in order to understand why the book was an experiment for its authors, and what are its enduring effects on our contemporary moment.
Fall ENGL1511F S01 17101 MWF 10:00-10:50(14) (J. Khalip)

ENGL 1511Y. Emily Dickinson and the Theory of Lyric Form.
This class examines the extraordinary work of Emily Dickinson in an attempt to understand what lyric poetry is and how it works. We will read a generous sampling of Dickinson's poetry as well as a number of the major theoretical accounts of the lyric. Enrollment limited to juniors and seniors.
Spr ENGL1511Y S01 25720 MWF 10:00-10:50(03) (S. Burrows)

ENGL 1560A. Jane Austen and George Eliot.
A survey of the major novels of Austen and Eliot. Readings will also include contemporary reviews and responses, letters, and Eliot's critical prose, as well as literary theory and criticism addressing questions such as novelistic form, realism and narrativity, the problem of the subject, the politics of aesthetics, and the changing status of the woman writer in the 19th century. Enrollment limited to 20 seniors and juniors. Instructor permission required.
Fall ENGL1560A S01 16051 TTh 1:00-2:20(08) (E. Rooney)

ENGL 1561C. Swift and His Contemporaries.
Jonathan Swift's works are central to this course's investigation of early 18th-century literature and culture. The reading focuses on the period as an "information age" energized by issues not unlike those of our own time: partisan politics, money, proliferation of new forms of textuality, globalization, changing views on gender and sexuality, love, religion, and war. The emphasis will be on irony, parody, and satire. Other writers include Congreve, Defoe, Manley, Pope, Gay, Montagu, Addison, and Steele. Students who have taken ENGL1510T may not register for this course. Not open to first-year students or students who have taken ENGL1510T. Enrollment limited.
Spr ENGL1561C S01 24600 M 3:00-5:30(13) (M. Rabb)

ENGL 1561K. Restoration and Eighteenth-Century Drama.
After almost two decades of closure, public theaters re-opened in 1660. This new beginning occasioned new plays, new kinds of performance and production, and new intersections between the stage and society. We will study works by Etheredge, Wycherly, Congreve, Dryden, Behn, Gay, Lillo, Sheridan, and others. Not open to first-year students.
Fall ENGL1561K S01 16052 M 3:00-5:30(05) (M. Rabb)

ENGL 1561N. What is an Author?: Poe, Hawthorne, Dickinson.
What does it mean to be identified as an "author"? How did the practices of writing and reading change in 19th-century America? This course addresses such questions by reconsidering the literary careers of Hawthorne, Poe, and Emily Dickinson. Our work will investigate literary culture and book history, focusing on 19th-century authors, readers, magazines, publishing, criticism, and popular media. Enrollment limited to 20.
Fall ENGL1561N S01 17100 W 3:00-5:30(17) (P. Gould)

Tutorial instruction oriented toward a literary research topic. Section numbers vary by instructor. Instructor's permission required.
ENGL 1710P. The Literature and Culture of Black Power Reconsidered.
This course reexamines the Black Power movement as a signal development in American literature and culture. We will read classics from the period with a view toward reassessing the nuances and complexities of their form and politics. At the same time, we will recover less familiar texts that complicate conventional understandings of what defines this movement. Authors include Malcolm X, Huey P. Newton, Angela Davis, Eldridge Cleaver, John Edgar Wideman, Ernest Gaines, and Amiri Baraka.
Spr ENGL1710P S01 24601 TTh 1:00-2:20(08) (R. Murray)

ENGL 1710Q. Bloomsbury and Modernism.
The contribution of the avant-garde "Bloomsbury Group" to the development of literary modernism. The focus will be on the central literary figures (Virginia Woolf, E. M. Forster, and T. S. Eliot), but attention will also be paid to the visual arts (Roger Fry, Vanessa Bell, and Post-Impressionism) and to social criticism (Lytton Strachey, Leonard Woolf, and John Maynard Keynes).
Fall ENGL1710Q S01 17109 TTh 10:30-11:50(13) (P. Armstrong)

The lyric within contemporary poetry has often been associated with experimental traditions have often imagined the poem as a site of formal or conceptual play devoid of specific concerns of identity. This course draws on poets such as Rankine, Moten, Robertson, Hejinian and the critical tools of affect theory to trouble these distinctions.
Fall ENGL1711H S01 16025 MWF 10:00-10:50(14) (A. Smailbegovic)

ENGL 1711M. Gertrude Stein and What Comes After.
In this course, we will read a range of works written by Gertrude Stein and examine how they have influenced the landscape of post-1945 literature, focusing primarily on poetry.
Spr ENGL1711M S01 24638 TTh 1:00-2:20(08) (A. Smailbegovic)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
ENGL 1711N. Monsters in our Midst: The Plantation and the Woods in the Trans-American Literature.
This course focuses on how literary and visual culture grappled with land as a topographic entity in relation to race, gender, and time. Students read literature about the Caribbean and parts of the U.S., produced from the 19th century to the present. Readings include Marlon James's *The Book of Night Women* and Jean Rhys's *Wide Saragasso Sea.*
Fall ENGL1711NS01 17114 MWF 2:00-2:50(07)  (D. Ramirez)

ENGL 1760Y. Toni Morrison.
This course will consider Toni Morrison's novels and essays through four prisms: her interest in the anxieties of Americanness; her attention to language, which includes a consideration of form and of literary theory; her study of love; and her figuring humanity through the experiences of people who are racially black and (often) gendered female. Not open to first-year students. Enrollment limited to 20.
Fall ENGL1760YS01 16053 M 3:00-5:30(05) (K. Quashie)

ENGL 1761D. Hollywood and American Modernism from FDR to JFK.
Study of the interactions among Hollywood and modernism from the beginning of the sound era through the early 1960s. Authors and directors to be considered include, Loos, Fitzgerald, Faulkner, West, Ferber, Hawks, Wilder, Hitchcock, Mann, and Ford. Enrollment limited to 20.
Fall ENGL1761DS01 16026 TTh 2:30-5:30(03) (D. Nabers)

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. Not open to first-year students. Prerequisite: At least one course on neuroscience or cognitive science and one 1000-level literature course. Instructor permission required.
Fall ENGL1761VS01 24602 F 3:00-5:30(15) (D. Kim)

ENGL 1762D. Kubrick.
On Kubrick's feature films, documentaries, and photography, starting with his sci-fi masterpiece 2001, followed by his early noirs (*Killer's Kiss; The Killing*); sex films (*Lolita; A Clockwork Orange; Eyes Wide Shut*); and war films (*Paths of Glory; Dr. Strangelove; Full Metal Jacket*). Topics include: adaptation; genre; masculinity in extremis; technophilia and technophobia; the aesthetics of violence; and sex on film. Limited to 20 junior and senior concentrators in English and MCM. Instructor permission required.
Spr ENGL1762DS01 24854 W 3:00-5:30(10) (R. Rambuss)

ENGL 1780. Undergraduate Independent Study in Modern and Contemporary Literatures.
Tutorial instruction oriented toward a literary research topic. Section numbers vary by instructor. Instructor's permission required.

ENGL 1900Z. Neuroaesthetics and Reading.
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 20. Prerequisite: At least one course on neuroscience or cognitive science and one 1000-level literature course. Instructor permission required.
Spr ENGL1900ZS01 24604 F 3:00-5:30(15) (P. Armstrong)

ENGL 1901J. Fanon and Spillers.
This course will consider the conceptual/theoretical contributions of Frantz Fanon and Hortense Spillers, as frames for reading some iconic texts in the black literary canon. Central to our study will be an exploration of blackness, subjectification, and gendering—as well as thinking about how these idioms relate to the genre conventions of our course’s literary works. Enrollment limited to 20 juniors and seniors. Instructor permission required.
Spr ENGL1901JS01 25726 TTh 2:30-5:30(11) (K. Quashie)

ENGL 1950H. The Recent Novel and its Cultural Rivals.
A careful consideration of several major late twentieth- and early twenty-first century Anglophone novels in terms of their relationship to rival aesthetic forms and media—film, television, radio, video games, and the like. Writers to be considered included: Morrison; Lee, Rushdie, Smith, Didion, Diaz, Pynchon, and Egan. Enrollment limited to 20 senior English concentrators. Others admitted by instructor permission only.
Spr ENGL1950HS01 25730 MWF 2:00-2:50(07) (D. Nabers)

ENGL 1950K. Shakespeare’s Comedies.
We will read a selection of Shakespeare’s comedies with attention to his European sources and analogues. Consideration of both formal and historical questions including genre, convention, the Shakespearean text, gender, sexuality, status and degree, and nation. Written work to include two papers, one a close reading and a longer final paper on a topic of your choice. Limited to 20 senior English concentrators.
Fall ENGL1950KS01 16028 T 1:00-3:30 (K. Newman)

ENGL 1950L. Inoperative Selves.
Romantic and post-Romantic literature often imagines characters that appear to break down, serve no purpose, act in ways that seem faulty and withdrawn. They resist social conventions and narratives of development and progress. How do such inoperative figures suggest alternative aesthetic, ethical, and political visions? And how can we conceive of inoperativity as a viable challenge to thought? Enrollment limited to 20 senior English concentrators.
Spr ENGL1950LS01 24569 Th 4:00-6:30(17) (J. Khalip)

ENGL 1991. Senior Honors Seminar in English.
Weekly seminar led by the Advisor of Honors in English. Introduces students to sustained literary-critical research and writing skills necessary 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 ENGL1991SO1 16054 Th 4:00-6:30(04) (P. Armstrong)

Independent research and writing under the direction of a faculty member. Permission should be obtained from the Honors Advisor in English. Open to senior English concentrators pursuing Honors in English. Instructor permission required.
Fall ENGL1992SO1 17152 Arranged (P. Armstrong)
Spr ENGL1992SO1 25773 Arranged (P. Armstrong)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
ENGL 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 Nonfiction Writing. Instructor permission required. S/N.C. Fall ENGL1993 S01 16055 F 3:00-5:30(11) (C. Imbriglio)

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 17153 A000 Arranged (C. Imbriglio) Spr ENGL1994 S01 25774 A000 Arranged (C. Imbriglio)

ENGL 2210. Proseminar.
This seminar, required for first-year graduate students in English, considers the state and stakes of literary studies today. The course aims to familiarize students with contemporary critical debates and stances in the wider discipline, and to engage with current methodological, theoretical, and analytical tensions. We also address issues of professionalization as they relate to the first years of graduate work. Enrollment limited to 10. S/N.C. Fall ENGL2210 S01 16056 F 10:00-12:30 (R. Reichman)

ENGL 2361C. Books of Love: Ruiz and Chaucer.
Discourses of love animated the vernacular literary masterworks of Juan Ruiz (c.1283-c.1350) and Geoffrey Chaucer (c.1342-1400), near-contemporaries who became celebrated canonical authors in Spain and England, respectively. This course considers their writings comparatively, in literary and historical context. Readings include *La Roman de la rose*; Ruiz’s *El Libro de buen amor*; Chaucer’s *Troilus and Criseyde* (with instruction in Middle English). Qualified, advanced undergraduates will be admitted by instructor permission only. Spr ENGL2361CS01 24570 M 3:00-5:30(13) (E. Bryan)

ENGL 2380. Graduate Independent Study in Medieval and Early Modern Literatures.
Section numbers vary by instructor. May be repeated for credit. Instructor’s permission required.

ENGL 2450. Exchange Scholar Program.
Fall ENGL2450 S01 15282 A000 Arranged ‘To Be Arranged’

ENGL 2561T. Rhetoric and Narrative Discourse, from Austen to James.
An introduction to narrative theory and problems of meaning in fiction, including Roland Barthes’s "readerly text," Wayne Booth’s "implied author," Kenneth Burke’s "socially symbolic" narration, Mikhail Bakhtin’s "polyphonic novel," and others. To be studied alongside novels by: Jane Austen, Charles Dickens, George Eliot, Henry James, Anthony Trollope. Attention especially paid to the contested zone between author, narrator, and character. Enrollment limited to 15. Fall ENGL2561TS01 16029 F 3:00-5:30(11) (B. Parker)

Section numbers vary by instructor. May be repeated for credit. Instructor’s permission required.

ENGL 2761B. Temporalities.
Centered on modernism and the early 20th century, this course will investigate the varied models of time pulsing through literary and theoretical texts, and consider a range of issues, including memory and forgetting, historical progress and decay, utopian futurity, and queer temporalities. Readings include work by Freud, Bergson, Nietzsche, Benjamin, Joyce, Woolf, Barnes, Stein, Faulkner. Enrollment limited to 15. Fall ENGL2761BS01 16057 Th 4:00-6:30(04) (T. Katz)

ENGL 2761S. Naturalism and the Anthropocene.
The world of naturalist fiction is strange and terrifying: monstrous new forms of life; speaking animals; suicide; madness; financial ruin; ecological disaster. We will study this world in light of our catastrophic present, reading recent work in new materialism, neuroscience, animal studies, science studies, and environmentalism. Authors include Zola, Stein, Wharton, Chesnutt, Conrad, Hardy, Nietzsche, Bergson, Freud, Du Bois, James. Enrollment limited to 15 graduate students. Spr ENGL2761S S01 24571 F 3:00-5:30(15) (S. Burrows)

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 2901K. Theory, Technics, Religion.
Critical theory has a rich history of engagement with fundamental and overlapping questions of technics, media and religion. This seminar focuses mainly on important texts from the last century (Benjamin, Heidegger, Levinas, Derrida, Agamben), but also reads more broadly in the post-Enlightenment critical and speculative tradition (Kant, Hegel, Marx, Freud, Weber). Selections from the Bible and readings from a few literary texts from various eras will also be assigned. Enrollment limited to 15 graduate students. Spr ENGL2901K S01 24572 M 3:00-5:30(13) (M. Redfield)

ENGL 2901L. Studying Humanities in an Information Age.
What roles can the humanities serve in a culture increasingly dominated by and imagined in terms of information? What are the conceptual and political implications of the use of “big data” in humanistic study? More broadly, what role does the digital turn play in shaping cultural concepts that provide the foundation for dominant ways of organizing knowledge and social structures? Enrollment limited to 15. Spr ENGL2901L S01 24575 W 3:00-5:30(10) (J. Egan)

ENGL 2940. Scholarly Writing for Journal Publication.
Writing and professionalization workshop intended for graduate students in literary studies. Topics covered include selection of journal; framing, structuring and composition of the article; the logistics of peer review; sharing and workshopping drafts; working with academic mentors and advisors. Every passing student will have a publishable article under consideration by the end of the semester. Enrollment limited to 12 English Ph.D. students. Instructor permission required. S/N.C. Fall ENGL2940 S01 16058 M 3:00-5:30(05) (J. Kuzner)

ENGL 2950. Seminar in Pedagogy and Composition Theory.
An experimental and exploratory investigation into writing as a preparation for teaching college-level writing. Reviews the history of writing about writing, from Plato to current discussions on composition theory. Against this background, examines various processes of reading and writing. Emphasizes the practice of writing, including syllabus design. Enrollment restricted to students in the English Ph.D. program. Fall ENGL2950 S01 16059 T 12:00-2:30 (J. Readly)

ENGL 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 ENGL2970 S01 15283 Arranged ‘To Be Arranged’ Spr ENGL2970 S01 24176 Arranged ‘To Be Arranged’

ENGL 2990. Thesis Preparation.
For graduate students who have met the residency requirement and are continuing research on a full time basis. Fall ENGL2990 S01 15284 Arranged ‘To Be Arranged’ Spr ENGL2990 S01 24177 Arranged ‘To Be Arranged’

ENGL XLIST. Courses of Interest to Students Concentrating in English.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Environmental Studies

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 19 first year students. Instructor permission required.
Fall ENVS0070C S01 16515 TTh 1:00-2:20(08) (K. Teichert)

This is an engaged scholars course that offers an introduction to contemporary environmental issues. 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, waste streams, 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. Students must join a 90-minute weekly discussion section. Each section will partner with a community organization to complete an engaged, local project.
Fall ENVS0110 S01 16518 MWF 10:00-10:50(14) (D. King)

ENVS 0150. Climate Futures and a Sociology of Just Transitions.
This course, team-taught with Professor Damian White of RISD, seeks to build a reconstructive environmental sociology of the sustainable transition, incorporating debates from political ecology, critical design studies and energy/technology studies. It debates the merits of green capitalism and post-capitalist, socio-centric and technocratic visions of the transition away from fossil fuels. Class will meet on the RISD campus.
Fall ENVS0150 S01 16521 Th 4:00-5:30(04) (J. Roberts)

ENVS 0160. Migration and Borders in a Time of Climate Crisis.
This course foregrounds the political implications of migration and border regimes in the context of environmental change, historically, today, and in the future. It examines in what sense environmental and climate factors might be causally related to human movement. We will seek to understand the fears of a future “climate refugee crisis,” and how states and security regimes are already preparing for climate displacement. Furthermore, we will ask how migrant justice groups are challenging the closed-border policies of many states in the Global North as well as the global structural inequalities that create the vulnerabilities that drive movement and migration.
Spr ENVS0160 S01 24948 MWF 11:00-11:50(04) (K. Bosworth)

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, food and water supply, population growth, and energy.
Spr ENVS0490 S01 24972 TTh 9:00-10:20(01) (T. Kartzinel)

ENVS 0705. Equity and the Environment: Movements, Scholarship, Solutions.
The environmental justice movement emerged in the U.S. South from the observation that African-Americans were more exposed to toxins than whites. It spurred decades of academic and activist efforts to understand and address the relationship between inequality and environment. The issue has expanded around the world, and beyond unequal exposures to “bads,” to unequal access to “goods,” along lines of equity by race, class, gender, ethnicity, indigenous identity, and position in the global economy. Issues of assigning responsibility and applying theories of justice with legal instruments have made environmental justice policy difficult. This course seeks to serve first-years and sophomores.
Spr ENVS0705 S01 24949 TTh 2:30-3:50(11) (J. Roberts)

This course introduces students to political ecology—an approach to environmental issues that emphasizes power relations, inequalities, and difference. After surveying the genealogy, diversity and theoretical basis of political ecology, we will examine case studies that draw on the approach. By focusing on the relationship between nature, power, economics and the making of environmental knowledge, this course will illustrate how environmental questions are always deeply political. We will discuss new analyses of intersections political ecologists have developed in recent decades and assess what we gain as environmental researchers when we actively interpose power.
Spr ENVS0715 S01 24950 MWF 2:00-2:50(07) (E. Lord)

ENVS 1105. Introduction to Environmental GIS.
This course introduces the tools, techniques, and fundamentals of Geographic Information Systems (GIS) using the ArcGIS software package. GIS has broad applications in environmental, natural, and social sciences. Examples include disaster management, transportation planning, and environmental quality assessment. By the end of this course, students will understand the processes of spatial data analysis, geographic databases, visualization and cartography, and uncertainty quantification. Students will produce an independent final research project and present their results in a highly-visual flash talk and an open-access poster presentation session. Course override required. Contact the instructor (samiah_moustafa@brown.edu) with year, concentration, and statement of interest.
Spr ENVS1105 S01 24951 T 4:00-6:30(16) (S. Moustafa)

ENVS 1400. Sustainable Design in the Built Environment.
Course develops students’ analytical abilities to apply fundamental concepts of environmental issues, building systems analysis, and architectural and engineering design. Students learn how to reduce the negative environmental impacts, and maximize positive social and economic impacts, of the built environment. Students cultivate applied skills in sustainable design; including fundamental energy calculations, heat flow analysis, schematic design analysis, and building operating impacts assessment. Course emphasis is on building energy flows. Students conduct independent research projects, providing the opportunity to study broader impacts of the built environment and propose solutions. Class meetings combine lectures, student presentations, and group workshops.
Fall ENVS1400 S01 16525 W 3:00-5:30(17) (K. Teichert)

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.
Fall ENVS1490 S01 11283 Arranged "To Be Arranged"

ENVS 1491. SES-Terrestrial Ecosystem Analysis.
Team-taught course examining the structure of terrestrial ecosystems and fundamental biogeochemical processes, physiological ecology, impacts of environmental change on the landscape; the application of basic principles of ecosystem ecology to investigating contemporary environmental problems. Part of the Semester in Environmental Science at the Marine Biological Laboratory; enrollment is limited to students in this program. Instructor permission required.
Fall ENVS1491 S01 11284 Arranged "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 ENVS1492 S01 11285 Arranged "To Be Arranged"

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 ENVS1493 S01 11286 Arranged ‘To Be Arranged’

ENVS 1555. Urban Agriculture: The Importance of Localized Food Systems.  This is an engaged scholar course. Urban agriculture has a critical function in a small but increasing movement toward more localized and sustainable food systems. This course focuses on research and readings from multiple disciplines addressing urban agriculture and local food systems’ role in shaping food policies, labor practices, sustainable agricultural practices, and human health (to name a few). More importantly, students will work with community partners to actively engage in a local food system project. Enrollment limited to 40. Instructor permission required. Email Prof. King to request override (Dawn_King@brown.edu).

ENVS 1557. Birding Communities.  This seminar explores and builds communities around a charismatic and conspicuous class of animals: birds. The irony is that birds are marvelously diverse and abundant, but birding is associated with a narrow and privileged sector of society. Course readings address the politics of knowledge and modes of inclusion and exclusion in birding practice. While studying these hierarchies worldwide and historically, we create our own community of knowledge and practice through a “birding buddies” program in a local urban school. Students will learn from interdisciplinary scholarship, school children, and not least, the birds. History matters. Be woke. Think globally. Bird locally.
Fall ENVS1557 S01 15357 Th 4:00-6:30(04) (N. Jacobs)

ENVS 1574. Engaged Climate Policy in the U.S.: Rhode Island and Washington, DC.  Sufficient and equitable policies addressing the crisis of climate change have been elusive, and United States leadership is crucial for an adequate global response. After several weeks of readings and lectures on climate policy, the course shifts to team-based research to produce strategic, policy-relevant briefings and scholarly outputs with partner organizations in Rhode Island, Washington, and internationally. Students will travel to D.C. for three days to attend meetings and a mini-conference with experts and staff from government agencies, industry organizations, think tanks, and environmental NGOs, and to hold a briefing on our joint research.
Fall ENVS1574 S01 16526 M 3:00-5:30(05) (J. Roberts)

ENVS 1580. Environmental Stewardship and Resilience in Urban Systems.  This course investigates current environmental impacts and risks related to urban infrastructure systems. Students analyze efforts to minimize negative environmental, health and economic impacts of the built environment. The course explores urban initiatives to increase sustainability and resiliency of infrastructure systems in anticipation of increased risks related to climate change. The goal is to learn the rationale, process and technical aspects of the practice of environmental stewardship and resilience planning in an urban context. Students will develop competence in technical analysis, policy analysis, and program implementation through case studies and systems analyses.
Spr ENVS1580 S01 24966 TTh 10:30-11:50(09) (K. Teichert)

ENVS 1615. Making Connections: The Environmental Policy Process.  The diminishing quantity and quality 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 10.
Fall ENVS1615 S01 17094 M 3:00-5:30(05) (A. Lynch)

ENVS 1913. China’s Environment: Power, Pollution and Hope.  This course focuses on key environmental issues transforming Chinese landscapes and society. It introduces students to China’s geography and identifies contemporary environmental problems (including air, water and soil pollution, biodiversity loss, etc.) as well as their proposed solutions. Considering China’s recent history of rapid economic growth and stark socio-economic inequalities, a central objective of the course is to develop tools to effectively locate environmental issues within a broader political, social and economic context — a skill transposable to other geographical and environmental contexts. We will draw on scholarship from geography, anthropology, political science, and environmental science.
Fall ENVS1913 S01 16529 T 4:00-6:30(09) (E. Lord)

ENVS 1920. Methods for Interdisciplinary Environmental Research.  This course provides an introduction to a wide range of research approaches in the social and environmental sciences. We will cover the epistemological and theoretical foundations of various research approaches and discuss implications of these foundations for what research questions are answerable and what evidence one can bring to bear to answer such questions. By the end of the semester, students will be able to write a clear and answerable research question, and know what methods are appropriate to use to answer such a question. Enrollment limited to ENVS Juniors. ENVS seniors must receive instructor override from Professor Bosworth, kai_bosworth@brown.edu.
Fall ENVS1920 S01 16792 TTh 1:00-2:20(08) (K. Bosworth)

ENVS 1925. Energy Policy and Politics.  From coal power to solar power, energy decisions economies and increases quality of life world-wide. However, this same energy use can, and often does, lead to severe environmental destruction/pollution and global warming. This course serves as an introduction to energy policy in the United States and also explores global attempts to solve energy problems. This course examines different types of energy sources and uses, different ideological paths driving energy policy, the environmental impacts of energy use, current global and domestic attempts to solve energy problems, and the role of renewable and alternative forms of energy in future energy policy.
Spr ENVS1925 S01 24971 M 3:00-5:30(13) (D. King)

ENVS 1970. Independent Study.  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.
ENVS 1971. Independent Study.  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.

ENVS 2450. Exchange Scholar Program.

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.

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.

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.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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.

Fall
FREN 0400 S01 15537 MWF 10:00-10:50(14) (L. Seifert)
Fall
FREN 0400 S02 15650 MWF 12:00-12:50(15) (L. Seifert)
Spr
FREN 0400 S01 24254 MWF 10:00-10:50(03) (Y. Kervennic)
Spr
FREN 0400 S02 24312 MWF 12:00-12:50(05) (Y. Kervennic)
Spr
FREN 0400 S03 24313 MWF 1:00-1:50(08) (Y. Kervennic)

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, a graphic novel, films and a longer novel. Activities include a creative project using Comic Life, and a systematic grammar review. Prerequisite: FREN 0400, FREN 0200 with written permission, or placement.

Fall
FREN 0500 S01 15538 MWF 10:00-10:50(14) (J. Izzo)
Fall
FREN 0500 S02 15652 MWF 11:00-11:50(16) (J. Izzo)
Fall
FREN 0500 S03 15653 MWF 12:00-12:50(15) (J. Izzo)
Fall
FREN 0500 S04 15654 MWF 1:00-1:50(06) (J. Izzo)
Spr
FREN 0500 S01 24255 MWF 10:00-10:50(03) "To Be Arranged"
Spr
FREN 0500 S02 24314 MWF 12:00-12:50(05) "To Be Arranged"
Spr
FREN 0500 S03 24315 MWF 1:00-1:50(06) "To Be Arranged"

FREN 0620. Writing and Speaking French II: Literature - L'inquiétant étranger.
Same level as FREN 0600. The other, whether it is the immigrant, the transgendered, the new neighbor, has always inspired curiosity, mistrust and often fear. This course will examine the different representations of the stranger in contemporary Francophone literature and film, cultural theory and media representations. Topics include race, sexuality, tourism, immigration, identity, mental illness and exclusion. Readings will feature contemporary works (Ananda Devi, Edouard Louis, Amélie Nothomb, Laferrière, Diome). Discussions and writing assignments are based on those sources and introduce students to the analysis of literature. Prerequisite: FREN 0500. Enrollment limited to 15. Taught in French.
Spr FREN 0620 S01 24273 MWF 12:00-12:50(05) "To Be Arranged"
Spr FREN 0620 S02 24317 MWF 11:00-11:50(04) (S. Ravillon)
Spr FREN 0620 S03 24318 MWF 1:00-1:50(06) (S. Ravillon)

Examines constructions of class, race, 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, fatal femininity, bisected masculinity, sexuality and race, prostitution, bored housewives. Works by Duras, Balzac, Flaubert, Zola, Maupassant, Rachiédle, accompanied by non-fictional sources in early sexology and criminology. Taught in English.
Spr FREN 0720F S01 24308 TTh 2:30-3:50(11) (T. Ravindranathan)
A study of the evolution of the French language from the Middle Ages to the present. We will trace the main periods of this linguistic, social, historical and political development. Among topics to be explored: France's encounter with English from the Norman conquest to the current so-called English "invasion," the French Revolution's destruction of dialects (patois), and the status of French in France's former colonial empire. Through a variety of French and francophone texts we will investigate the transformations brought about by Feminists and by youth from the banlieues and examine the status of French outside of France. In French. Prerequisite: a course at the 600- or 700-level or equivalent proficiency. Contact the instructor to verify your proficiency if you have not taken French at Brown.
Spr FREN1020A S01 24257 TTh 10:30-11:50(07) (O. Mostefai)

FREN 1040C. Le Grand Siècle à l'écran.
Why is the "Grand Siècle" depicted so frequently in contemporary French film? To answer this question we will explore the roles 17th-century culture plays in French identity through readings in history and literature and recent films focusing on 17th-century texts, personalities, or events. We will highlight both continuities and discontinuities between the 17th century and our own time. Readings by Corneille, Cyrano de Bergerac, Lafayette, Maintenon, Molière, Pascale, Racine, Sévigné. 10 films. Two short papers, two oral presentations, a weekly blog, and a final project (paper or multimedia project). Prerequisite: a course at the 600- or 700-level or equivalent proficiency. Contact the instructor to verify your proficiency if you have not taken French at Brown.
Spr FREN1040C S01 24399 MWF 10:00-10:50(03) (L. Seifert)

FREN 1040F. Des monstres et de l'anormal.
What are monsters and why do they fascinate us so much? How and why have representations of "abnormal" creatures changed over time? We will examine these questions through literary, philosophical, and scientific texts from the 18th century to the present. In addition to films, iconography, and criticism, readings will include: Paré, Montaigne; Malebranche, Perrault, d'Aulnoy; Le Prince de Beauumont; Geoffroy Saint-Hilaire, Mendès; Bataille, Cocteau, Darrieussecq, Foucault, Nothomb. Taught in French. Prerequisite: a course at the 600- or 700-level or equivalent proficiency. Contact the instructor to verify your proficiency if you have not taken French at Brown.
Fall FREN1040F S01 17053 MWF 12:00-12:50(15) (L. Seifert)

FREN 1130E. Le Poétique et le quotidien.
In this course on the relationship between the poetic and the ordinary, unremarkable or otherwise apparently "non-lyrical" matters and textures of modern living, we will consider formal and conceptual innovations in French poetry through the last 100 years as it has responded to a changing world, and continually reimagined the place of poetry in it. After situating certain coordinates of our investigation in the early decades of the 20th century (Apollinaire, Cendrars, Char, technology, war, speed, time) we will read works by later and contemporary poets including Francis Ponge, Jacques Roubaud, Michelle Grangaud, Sabine Macher. Prerequisite: a course at the 600- or 700-level or equivalent proficiency. Contact the instructor to verify your proficiency if you have not taken French at Brown. Taught in French.
Spring FREN1130E S01 24258 TTh 2:30-3:50(11) (T. Ravindranathan)

FREN 1140A. French Theory.
Something called both "French" and "theory" came ashore in the Anglo-American academic scene of the 1970s. Supposedly both impenetrable and hegemonic, it was seen to reconstitute what was discussed in programs in literature and the social sciences, and how it was discussed. Today the shoreline of study in the humanities has been transformed, but French theory's moment is presumed to have past. This course will trace that history through key French texts (read in translation) written between the 1960s and 1990s. Taught in English.
Fall FREN1140A S01 17050 TTh 2:30-3:50(03) (D. Willis)

FREN 1410L. Sorcellerie et Renaissance: le sort de la sorcière.
An interdisciplinary exploration of witches and witchcraft in Renaissance France based on close analysis of primary texts-confessions from trials, iconography, literary texts, and witchcraft theory. Topics include the trial of Joan of Arc, the science of demons, skepticism, and the nature of belief. Readings in Montaigne, Mauss, among others. Enrollment limited to 20. Taught in French. Prerequisite: a course at the 0600- or 0700-level or equivalent proficiency. Contact the instructor to verify your proficiency if you have not taken French at Brown.
Spr FREN1410L S01 24513 TTh 10:30-11:50(09) (V. Krause)

FREN 1410T. L'expérience des réfugiés: déplacements, migrations.
An exploration of the experience of refugees and immigrants with two components. The first component consists of close study of the French context from Decolonization up through the current refugee crisis based on literature, film, the press, and critical essays. The second component of this course will give students the opportunity to work with refugee/recient immigrant communities in Providence. This is a community-engaged course requiring substantial commitment beyond the classroom. Taught in French. Prerequisite: a course at the 0600- or 0700-level or equivalent proficiency. Contact the instructor to verify your proficiency if you have not taken French at Brown.
Fall FREN1410T S01 15541 M 3:00-5:30(05) (V. Krause)

FREN 1410U. La France en guerre.
Analyzes the impact of warfare on France and its former colonies. Considers various types of violent conflict (wars of expansion and independence, the world wars, terrorism) while consulting diverse sources (literary, historical, journalistic, epistolary, filmic). Also addresses contemporary events relevant to the subject of this course and follows them as they unfold. Topics include: war and collective memory, virility and violence, extreme situations and crises of representation, resistance and collaboration, colonization and nationhood, jihadism. Taught in French. Prerequisite: a course at the 600- or 700-level or equivalent proficiency. Contact the instructor to verify your proficiency if you have not taken French at Brown.
Fall FREN1410U S01 16998 TTh 1:00-2:20(08) (G. Schultz)

FREN 1410V. French-American (Dis)Connections: histoire, société, culture.
The relationship between France and the United States is one of paradoxes. Reaching back to the American and the French Revolutions, these two countries have displayed profound admiration for each other, but have also experienced moments of deep distrust and hostility. We will first trace the history of political, intellectual, and cultural relations between France and the United States since the late 18th century, and then concentrate on several moments and topics from the contemporary period, including the Iraq War, multiculturalism, gender and sexuality, popular culture, and "French theory." Taught in French. Prerequisite: a course at the 600- or 700-level or equivalent proficiency. Contact the instructor to verify your proficiency if you have not taken French at Brown.
Spr FREN1410V S01 25662 M 3:00-5:30(13) (L. Seifert)

FREN 1510J. Advanced Oral and Written French: Photographie.
Follows FREN 0600 in the sequence of language courses. Development of oral and written skills via presentation, debate, conversation and discussion on a variety of topics. Through novels, articles, photographs and discussions, this course will explore the world of photography from its beginnings until today. Theory and practice; professionals and amateurs; famous people and paparazzi; photo reportage and photo studio; argentic and digital; your own photos, etc. Taught in French. Pre-requisites include FREN 0600 or FREN 0610 or FREN 0620.
Spr FREN1510J S01 24515 MWF 11:00-11:50(04) (Y. Kervennic)
FREN 1510L. À nous deux la mode.
A bird’s eye view of the fashion world, this course will explore the birth and evolution of the French fashion industry (from the development of department stores to the birth and rise of Haute Couture), its impact on society and social change, as well as its relationship with art and advertisement. Materials range from literary excerpts to journalistic texts, online resources, and films, and will include portraits of fashion designers, studies of iconic fashion pieces, descriptions of techniques and crafts, and analyses of fashion shows. Activities include presentations, discussion, essays, commentaries, and the creation of a trend book. In French.
Fall FREN1510L SO1 17048 MWF 11:00-11:50(16) (S. Ravillion)

FREN 1610C. Advanced Written French: Atelier 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 15. Instructor permission required. Taught in French.
Fall FREN1610C SO1 15894 MWF 2:00-2:50(07) (V. Krause)

FREN 1710H. Villes africaines.
This course examines space, politics, and urban life in Francophone Africa from the 1960s to the 21st century. How has the African city changed since the colonial period? And how do writers, filmmakers, and artists imagine the African city’s global dimensions today? Our course will examine these and related questions as we study how cities in Francophone Africa reflect changing visions of art, politics, gender/sexuality, and literature. Taught in French.
Prerequisite: a course at the 600- or 700-level or equivalent proficiency. Contact the instructor to verify your proficiency if you have not taken French at Brown.
Spr FREN1710H SO1 25663 TTh 1:00-2:20(08) (J. Izzo)

FREN 1710L. Politique, démocratie, et corruption en Afrique francophone.
What do representations of democracy (its promises as well as its shortcomings) and corruption have to tell us about postcolonial and postmillennial politics in contemporary Francophone Sub-Saharan Africa? How have these interrelated problems and discourses been negotiated in French and African literature, film, journalism, and anthropology? This course will address these and related questions in a number of national and historical contexts, paying special attention to the ways in which current events on the continent both complement and complicate our understandings of Francophone African cultural production. Taught in French. Prerequisite: a course at the 600- or 700-level or equivalent proficiency. Contact the instructor to verify your proficiency if you have not taken French at Brown.
Fall FREN1710L SO1 17047 MWF 1:00-1:50(06) (J. Izzo)

FREN 1900M. La question animale.
This seminar studies representations of animals in French literature, visual arts, popular culture and critical thought through the 19th-21st centuries, attending to their specific cultural and material histories. We will consider the fates of animals as industrial modernity progressed (discussing in turn urban space, agriculture, the battlefield, zoos, science, meat, the beginnings of photography and cinema), and the important philosophical and ethical questions they raise. Authors include Renard, Michaux, Cixous, Roubaud, Pastoureau, Baratay, Philibert, de Fontenay, Derrida, Bally et Despret. Taught in French.
Spr FREN1900M SO1 25684 F 3:00-5:30(15) (T. Ravindranathan)

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 2110H. Savoirs et non-savoirs de la Renaissance.
How were the lines between the known, the unknown, and the unknowable drawn for the Renaissance? This course examines the period's "will to know" underlying humanism, Natural Philosophy, and demonology (the "science of demons"). It also tracks challenges to positive knowledge through madness and the rediscovery of Greek skepticism. Readings in Erasmus, Marguerite de Navarre, Rabelais, Montaigne, and Foucault, among others. Taught in French.
Spr FREN2110H SO1 24619 W 3:00-5:30(10) (V. Krause)

FREN 2150F. Théâtre des Lumières.
This course will focus on the role of the stage in the 18th century as a major instrument of philosophical and political propaganda for both the Enlightenment and its adversaries. We will examine the controversies surrounding the question of acting in 18th-century France. Plays by Lesage, Voltaire, Marivaux, Diderot, Sedaine and Beaumarchais will be read. In addition, the dramatic theories of Diderot and Beaumarchais as well as Rousseau's critique of dramatic representation will be studied in the context of the reform of the theater. Taught in French.
Fall FREN2150F SO1 15734 W 3:00-5:30(17) (O. Mostefa)

FREN 2190K. Roman et réel au XXïle siècle.
Study of major authors, texts and trends in contemporary novel. Authors include Darrieussecq, NDiaye, Rolin, Carrère, Toussaint, Kristof, de Kerangal, Chevillard, Redonnet, Volodine. Critical perspectives from Rabaté (on spectrality and voice), Ruffel (post-Communism), Posthumus (ecocriticism), Rancière (the political), Westphal (geocriticism). Focus on formal and conceptual commitments by which post-millennial novels "think" our present, and what existing or newly imagined categories of analysis might be mobilized in reading them as experiments in the genre's history. Taught in French.
Fall FREN2190K SO1 15759 F 3:00-5:30(11) (T. Ravindranathan)

FREN 2450. Exchange Scholar Program.
Fall FREN2450 SO1 15288 Arranged 'To Be Arranged'
Spr FREN2450 SO1 24180 Arranged 'To Be Arranged'

FREN 2600M. French Postcolonial Theory.
This seminar will study major works in postcolonial theory from the French-speaking world. We will pay close attention to classic works from the anticolonial moment, asking how they resonate today, and to important new texts that recuperate and transform earlier modes of thought. We will also study innovative new secondary texts from history, anthropology, and literary criticism to ask how French postcolonial theory is embodied and debated in contemporary scholarship. Authors to be studied include Fanon, Mbembe, Glissant, Vergès. Taught in English.
Spr FREN2600M SO1 24394 Th 4:00-6:30(17) (J. Izzo)

FREN 2620J. Traduire dit-il.
Translation is rarely, if ever, conceived of outside practice. And the practice of it, unlike the practice of literature except in specific instances, involves submitting to a complicated and implacable machinery of constraint. By means of readings about translation, and experience of it and in it, we will attempt to examine the broad sense of what gets “carried across” the spaces between one language and another. Taught in French.
Fall FREN2620J SO1 16082 Th 4:00-6:30(04) (D. Willis)

FREN 2970. Preliminary Examination Preparation.
For graduate students who have completed their course work and are preparing for a preliminary examination.
Fall FREN2970 SO1 15289 Arranged 'To Be Arranged'
Spr FREN2970 SO1 24181 Arranged 'To Be Arranged'

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.

FREN 2990. Thesis Preparation.
For graduate students who have met the residency requirement and are continuing research on a full time basis.
Fall FREN2990 SO1 15290 Arranged 'To Be Arranged'
Spr FREN2990 SO1 24182 Arranged 'To Be Arranged'

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Gender and Sexuality Studies

GNSS 0120. Introduction to Gender and Sexuality Studies. Explores the interdisciplinary fields of Gender and Sexuality Studies, considering the relation between formations of gender and those of sexuality across a range of historical and disciplinary contexts. Considers how both sexuality and gender are shaped in relation to race and ethnicity, economic inequality, and the postcolonial legacy.

Fall GNSS0120 S01 16651 MWF 1:00-1:50(06) (D. Davis)

GNSS 1520. Latin American Horror. Latin American horror film is often overlooked within the world of film studies. This course will delve into the dark and intriguing world of the Latin American horror film genre. We will study Latin American horror cinema considering works across time periods, national contexts, and directors. This course will ask the following questions: How does the genre express individual and national anxieties in the cultural, social, political and economic realms? To what degree does horror film serve as a social barometer that explores, negotiates, and at times reifies social anxieties about difference, identity, sexuality, normativity, repression, technology, the environment, etc.?  

Fall GNSS1520 S01 17044 W 3:00-5:30(17) (J. Lehnen)

GNSS 1720. Technologies of/and the Body: Mediated Visions. The relationship between body and machinery, technology and biology is often thought in terms of the mechanical doll, the animated robot and other hybrid figures. Science fiction films for example offer double visions of the gendered body: women are masters/slaves of the technology and still symbolic bodies of biological surviving of the human species. We will explore mediated visions in films and other media of different kinds spanning a bridge between SciFi-films and performance art. We will also study theoretical texts (Donna Haraway et al.) on the problem of the merging of technology and body.

Fall GNSS1720 S01 16650 T 4:00-6:30(09) (G. Koch)

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.

GNSS 1820. 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.

GNSS 1970. Directed Research and Thesis. 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 1980. Directed Research and Thesis. 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.

GNSS 2000. Method, Evidence, Critique: Gender and Sexuality Studies across the Disciplines. Gender and Sexuality Studies is by its very nature transdisciplinary. Can we speak of a single methodology that ties GNSS together? How might scholars work on gender and/or sexuality while respecting disciplinary boundaries and training? We will start with the premise that studies in gender and sexuality are tied together by critique that questions foundational assumptions and takes account of its own position within a given field of knowledge. By studying canonical theoretical texts alongside disciplinary studies characterized by a feminist and/or queer focus, we will investigate how critique operates and how standards of evidence are marshaled in particular disciplines.

Spr GNSS2000 S01 25161 T 3:00-5:30 (D. Walker)

GNSS 2010M. The Question of Critique. This course will explore the spaces and times of the work of critique. A return to the question is timely, for over the past two decades and in a broad range of disciplines we have witnessed what may be described as a sense of exhaustion or fatigue with “theory” and other forms of critical work. The course will ask what it means to speak of “limits” of critique: can critique be limited, and if so: how and why? It will also ask about the political impact and stakes of critique in our contemporary moment.

Fall GNSS2010M S01 17045 W 10:00-12:30 (S. Stewart-Steinberg)

GNSS 2720. Graduate Independent Study. Section numbers vary by instructor. Instructor's permission required.

GNSS XLIST. Courses of Interest to Concentrators in Gender and Sexuality Studies.

Geological Sciences

GEOL 0101. 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 nonscience 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.

Fall GEOL0101 S01 24609 MWF 10:00-10:50(03) (S. Farman)

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 15374 MWF 2:00-2:50(07) (J. Mustard)

GEOL 0070. Introduction to Oceanography. Examines the ocean’s role in Earth’s global environment, emphasizing the dynamical interaction of the ocean with the atmosphere, biosphere, cryosphere, and lithosphere. Focus on physical/chemical/biological systems’ interconnections needed to understand natural and anthropogenic variability on various time and space scales, from El Niño to global warming. Three lectures, written exercises on oceanographic problems; two field trips to study estuarine and coastal processes.

Spr GEOL0070 S01 25098 MWF 2:00-2:50(07) (S. Clemens)

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 their environmental impacts and the economic benefits and cultural aspects of volcanism. Two-day field trip. Enrollment limited to 19 first year students.

Fall GEOL0160E S01 15588 TTh 10:30-11:50(13) (A. Saal)

GEOL 0160F. Patterns: in Nature, in Society. 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." CAP course. Enrollment limited to 19 first year students.

Spr GEOL0160F S01 25523 TTh 1:00-2:20(08) (R. Cooper)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
GEOL 0160G. Energy Resources.
Most of our energy comes directly from the Earth - predominantly as fossil fuels, but also from geothermal, wind, and hydro sources. Developing technologies for alternative energy such as solar, nuclear, biomass and fuel cells also rely on Earth resources. The potential for these energy sources will be discussed. The science behind their utilization and environmental impact (e.g. carbon sequestration and nuclear waste disposal) will be introduced and the trade-offs in making decisions for the future will be explored. CAP course. Enrollment limited to 19 first year students.
Fall GEOL0160G S01 15480 TTh 10:30-11:50(13) (G. Hirth)

GEOL 01610. Diamonds.
Examines both the science and human history of diamonds, and shows how they have interacted over the years. Investigates how and where diamonds are formed in nature and what they tell us about the Earth. At the same time, explores the role diamonds have played in our history and culture. Enrollment limited to 12 first year students.
Fall GEOL01610 S01 15690 TTh 2:30-3:50(03) (S. Parman)

GEOL 0220. Physical Processes in Geology.
Introduction to the physical and chemical processes that shape the Earth's surface, govern the structure of its interior, and affect the human environment. Topics include interior processes (plate tectonics, mountain building, volcanism, earthquakes, and flow of solid rocks) and environmental processes (climate, oceanic and atmospheric circulation, flow of rivers, glaciers, and groundwater). Four labs and two field trips arranged. Intended for science concentrators or those wishing in-depth treatment. CAP course. Enrollment limited to 100. After pre-registration, instructor permission is required to register or get on wait-list. Please see or email instructor (Jan_Tullis@brown.edu).
Fall GEOL0220 S01 15373 MWF 11:00-11:50(16) (K. Fischer)

Introduction to the chemical and mineralogical nature of the Earth, Moon, and meteorites, and the role of chemical processes in their evolution. Topics include: composition of rock-forming minerals; origin of crustal and mantle rocks; stable and radiogenic isotope systems; models of nucleosynthesis, planet formation and differentiation. Weekly laboratory and two field trips. Intended for science concentrators. Prerequisites: basic chemistry and GEOL 0010 or 0050 or 0220, or instructor permission.
Labs will meet Tuesdays from 7:00 pm to 9:00 pm.
Spr GEOL0230 S01 24610 TTh 1:00-2:20(08) (A. Saal)

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.
Spr GEOL0240 S01 25113 MWF 11:00-11:50(04) (T. Herbert)

GEOL 0350. Mathematical Methods of Fluid and Solid Geophysics and Geology.
Intended for undergraduates concentrating in geological and physical sciences or engineering, especially those interested in the quantitative study of Earth. Problem sets will cover common approaches to quantify the dynamics and chemistry of oceans and fluids in nature. Mathematical topics to be introduced include linear algebra, vectors and tensors, differential equations, dynamical systems, eigenvalues and eigenvectors, empirical orthogonal functions, fractals, chaos, and statistics. Applications include waves in the oceans, atmosphere, and solid earth, convective and conductive heat flow, reaction rates, gravitational potential energy. Newton's laws on a rotating planet, measuring coastlines and ranges, and dating errors in stratigraphy.
Fall GEOL0350 S01 16941 MWF 11:00-11:50(16) (B. Fox-Kemper)

GEOL 0810. Planetary Geology.
This introductory level course will examine the evolution of our Solar System and the geology of planetary bodies, including Mercury, Venus, the Moon, Mars, asteroids, and the moons of Jupiter and Saturn. We will discuss the origin of the Solar System from a geological perspective and explore how scientists combine observations from extraterrestrial samples such as meteorites with data returned by satellites and rovers to develop and test hypotheses related to planetary evolution. Emphasis will be on comparing geologic processes on these bodies to well-understood processes on Earth, results from past, current, and upcoming planetary missions, and the future of human and robotic exploration of space.
Spr GEOL0810 S01 24605 MWF 10:00-10:50(03) (R. Milliken)

GEOL 0850. 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 the structure and composition of the atmosphere, sources of energy that drive atmospheric processes, weather forecasting, the hydrological cycle, forces that create severe weather, the influence of humans on the atmosphere, and factors that influence climate, climate variability and climate change. Recommend courses or equivalent: MATH 0090, MATH 0101, PHYS 0050.
Spr GEOL0850 S01 25100 TTh 10:30-11:50(09) (M. Hastings)

GEOL 1120. Paleoecography.
An examination of the Cenozoic history of the world ocean with attention to the processes which have acted to change its circulation, climate, and oceanic processes on Earth, results from past, current, and upcoming planetary missions, and the future of human and robotic exploration of space.

GEOL 1130. Ocean Biogeochemical Cycles.
A quantitative treatment of the cycling of biologically important elements in the world ocean. Special attention paid to the carbon system in the oceans, and the role that organisms, in conjunction with ocean circulation, play in regulating the carbon dioxide content of the atmosphere through exchange with the surface ocean. For science concentrators. Offered alternate years. Prerequisite: CHEM 0330 or equivalent, or instructor permission.
Fall GEOL1130 S01 15481 MWF 2:00-2:50(07) (T. Herbert)

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.
Fall GEOL1240 S01 15482 TTh 10:30-11:50(13) (J. Russell)

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.
Spr GEOL1330 S01 24607 MWF 2:00-2:50(07) (J. Mustard)

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 0100 or 0330, or instructor permission.
Fall GEOL1370 S01 15483 TTh 9:00-10:20(02) (Y. Huang)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).

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 0100 or 0330, or instructor permission.

Fall GEOL1370 S01 15483 TTh 9:00-10:20(02) (Y. Huang)
GEOL 1380. Environmental Stable Isotopes.
Introduction to the concepts, analytical methods, theory and environmental applications of stable H, O, C, N and S isotopes. Emphasis will be placed on theory and applications of light isotopes in paleoclimate studies, environmental hydrogeology and biogeochemistry. Prerequisites: CHEM 0100, GEOL 0220 or 0230 recommended, or instructor permission.
Spr GEOL1380 S01 25118 TTh 9:00-10:20(01) (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 centered on optical identifications of rock-forming minerals. Prerequisites: GEOL 0230, CHEM 0100 or 0330, or equivalent.
Fall GEOL1410 S01 15477 MWF 11:00-11:50(16) (Y. Liang)

GEOL 1420. Petrology.
Introduction to the origin and evolution of igneous rocks. Topics include: physical properties of magma, thermodynamics and phase equilibria, igneous rocks and their classification, magmatic processes, trace elements and isotopes, basalts and layered intrusions, survey of lunar and planetary petrology. Prerequisites: GEOL 1410, or instructor permission.
Spr GEOL1420 S01 24612 MW 1:00-1:50(06) (Y. Liang)

GEOL 1430. Principles of Planetary Climate.
This course provides the physical building blocks for understanding planetary climate. Topics include thermodynamics applied to planetary atmosphere, basic radiative transfer, energy balance in the atmosphere, and climate variability. In-class exercises and homework problems are designed to strengthen the understanding of basic concepts and to improve problem-solving skills.
Fall GEOL1430 S01 15484 TTh 2:30-3:50(03) (J. Lee)

GEOL 1510. Introduction to Atmospheric Dynamics.
The objective of GEOL1510 is to understand the fundamental physical principles that govern the motion of the atmosphere. Students will explore the dynamics of the atmosphere and the mathematical laws governing weather and climate. Topics include the fundamental equations of motion in rotating fluids, hydrostatic, geostrophic and thermal wind balance, and vorticity, as applied to phenomena, including sea breezes, planetary waves, midlatitude cyclones, fronts, and the global general circulation. The emphasis will be on physical interpretation of the equations but facility with vector calculus is critical. Enrollment limited to 30.
Spr GEOL1510 S01 25099 MWF 10:00-10:50(03) (A. Lynch)

GEOL 1560. 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 geochronological 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 24611 TTh 1:00-2:20(08) (G. Hirth)

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 15479 TTh 1:00-2:20(08) (C. Dalton)

GEOL 1615. The Environmental Policy Process.
The diminishing quantity and quality 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.
Fall GEOL1615 S01 16943 M 3:00-5:30(05) (A. Lynch)

GEOL 1620. Continuum Physics of the Solid Earth.
Physics of the Earth with emphasis on fundamental physical principles and mathematical tools. Topics include application of: conductive and convective heat transfer to cooling of the Earth; potential theory to interpretation of gravity anomalies; solid mechanics to deformation of Earth’s lithosphere; fluid mechanics to flow in the Earth’s interior and in porous media. Recommended courses: GEOL 0220, APMA 0340, PHYS 0470 or ENGN 0510.
Spr GEOL1620 S01 25122 TTh 1:00-2:20(08) (C. Huber)

Geologic applications of remotely sensed information derived from interaction of electromagnetic radiation (X-ray, gamma-ray, visible, near-IR, mid-IR, radar) with geologic materials. Applications emphasize remote geochemical analyses for both terrestrial and extraterrestrial environments. Several spectroscopy and image processing labs. GEOL 1410 (Mineralogy), PHYS 0080, or equivalent recommended.
Fall GEOL1710 S01 15372 TTh 1:00-2:20(08) (R. Milliken)

Edition Explores theories of the large-scale ocean and atmosphere, including quasigeostrophic, planetary geostrophic, and shallow water equations. Topics will vary to focus on features of the general circulation and climate system (e.g. thermocline, westward intensification, jet stream dynamics, polar vortex, meridional overturning circulations), instabilities and waves (e.g. gravity, Rossby, and Kelvin), or rotating stratified turbulence. May be repeated with permission of instructor. Pre-requisites: Pre-requisite: GEOL0350 or PHYS0720 or APMA 0340 and GEOL1510 or GEOL1520.
Spr GEOL1820 S01 25102 MWF 9:00-9:50(02) (B. Fox-Kemper)

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 2300. Mathematical and Computational Earth Sciences.
For graduate students interested in quantitative study of the Earth in geological, physical, or engineering sciences. Mathematical topics to be introduced include tensor analysis, asymptotic and perturbation analysis of differential equations, numerical integration of differential equations, basic functions and pattern recognition, fractals and multifractals, and turbulence. Applications will vary by offering, but examples include: statistics of turbulence and earthquakes, advection-reaction-diffusion systems, boundary layers, development of shocks and singularities, climate change, carbon sensitivity, and dimensional reduction of geophysical data. Intensive review of introductory mathematical methods through leading discussions in a lower level class. Earth, fluid, or solid science background recommended.
Fall GEOL2300 S01 16942 W 3:00-5:30(17) (B. Fox-Kemper)

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, millennium-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 25116 Arranged (J. Russell)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
GEOL 2450. Exchange Scholar Program.

GEOL 2630. Interpretation Theory in Geophysics.
Use basic statistical theory and its matrix algebra representation and modern approaches for the optimum design of experiments, constructing model solutions to measurements, and describing nonuniqueness in models, with particular emphasis on generalized linear-inverse techniques. Introduction to stochastic processes and prediction. Recommended courses: GEOL 1610; MATH 0290, 0520, or APMA 0330, 0340, and computer programming skills. Offered alternate years.
Spr GEOL2630 S01 25120 MWF 2:00-2:50(07) (C. Dalton)

New data for the Moon and Mercury from recent missions (including Channayaan-1, Lunar Reconnaissance Orbiter, GRAIL and MESSENGER) permit new insights into “The Crater to Basin Transition on the Moon and Mercury”. In this seminar course we will examine this transition using these new data and recent developments in cratering theory and modeling. The course will feature research from the NASA SSERVI activity. Prerequisites: Instructor permission.
M Hour (3:00 PM-5:20 PM Mondays). Professor James Head; Research Associates Ross Potter and David Baker.
Fall GEOL2810 S01 16938 M 3:00-5:30(05) (J. Head)

The Moon forms a fundamental baseline for our understanding of the origin of planets and their early evolution, in terms of primary and secondary crustal formation, core and mantle formation and evolution, magnetism, impact basins, and global tectonics. A major goal of this course is to identify major outstanding questions and scientific and exploration goals for future robotic and human exploration missions to the Moon. Sponsored by NASA SSERVI, the lecture series is jointly organized by SSERVI teams at Brown University and the Lunar and Planetary Institute in Houston with many affiliated SSERVI institutes participating.
Spr GEOL2870 S01 25522 W 3:00-5:30(10) (J. Head)

The goal of this course is to introduce students to our current understanding of how planetary systems form and evolve. We will focus on the physical theories describing how the structures of planetary systems develop and how planets, moons, and other heavenly bodies form. We will also consider the relationship between these theories and observations (astronomical, geophysical, cosmochemical) of the Solar System and extraterrestrial planetary systems. This will include some discussion how the Solar System fits into our understanding of the veritable menagerie of planetary systems.
Spr GEOL2910P S01 24608 TTh 10:30-11:50(09) (B. Johnson)

GEOL 2920C. The Sedimentary Rock Cycle of Mars and Earth.
This course consists of a mixture of instructor and student-led discussions on topics related to the sedimentary rock cycle on Mars as viewed through the lens of how we understand such processes on Earth. Topics: sediment transport and deposition, erosion processes and rates, lithification + diagenesis, water-rock interaction, and cyclicity in strata. Major goal: Assess how the sedimentary rock record of Mars can be used to understand changes in depositional processes and environmental conditions through time. Results from Mars satellite and rover data will be discussed, with an emphasis on fundamental processes as understood from detailed studies of Earth's sedimentary rock record. Prerequisite: Undergraduate level sedimentology/stratigraphy, or permission of instructor.
Spr GEOL2920CS S01 24606 Arranged (R. Milliken)

GEOL 2920L. Special Topics: Dynamics of Tropical Climate and Ecosystem.
In this course, we will discuss two major themes: climate of tropics and how climate influences tropical ecosystem. Major topics include Hadley circulation, intraseasonal variation, tropical convection, carbon cycle, and biodiversity. We will also discuss how climate may influence tropical ecosystem and our society. This class is aimed at graduate students. Students are expected to have some familiarity with differential equations and climate science. Advanced undergraduate students with a relevant background can also take this class.
Spr GEOL2920L S01 25101 Arranged (J. Lee)

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 residency requirement and are continuing research on a full time basis.
Fall GEOL2990 S01 15291 Arranged 'To Be Arranged'
Spr GEOL2990 S01 24183 Arranged 'To Be Arranged'

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 16300 MWF 9:00-9:50(01) (J. Fine)
Fall GRMN0100 S01 16300 T 12:00-12:50(01) (J. Fine)
Fall GRMN0100 S02 16301 MWF 11:00-11:50(16) (J. Fine)
Fall GRMN0100 S02 16301 T 12:00-12:50(16) (J. Fine)
Fall GRMN0100 S03 16302 MWF 12:00-12:50(15) (J. Fine)
Fall GRMN0100 S03 16302 T 12:00-12:50(15) (J. Fine)
Fall GRMN0100 S04 16303 T 12:00-12:50(06) (J. Fine)
Fall GRMN0100 S04 16303 MWF 1:00-1:50(06) (J. Fine)

GRMN 0110. Intensive Beginning German.
An intensive, double-credit language course that meets five days a week for 9 hours and focuses on speaking, listening, reading and writing skills and the cultures of the German-speaking countries. At the end of the semester, students will be able to communicate successfully about everyday topics relating to the university, jobs, daily life and traveling. Ideal for undergraduate students interested in learning German for study abroad or for concentration requirements and for graduate students interested in starting their foreign language requirements. The course is designed for new students of German, regardless of any previous experience with German.
Spr GRMN0110 S01 24757 MWF 1:00-1:50(06) 'To Be Arranged'
Spr GRMN0110 S02 24758 MWF 2:00-2:50(07) 'To Be Arranged'

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 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.
Spr GRMN0200 S01 24752 MWF 9:00-9:50(02) (J. Fine)
Spr GRMN0200 S02 24753 T 12:00-12:50(04) (J. Fine)
Spr GRMN0200 S03 24754 MWF 12:00-12:50(05) (J. Fine)
Spr GRMN0200 S04 24754 T 12:00-12:50(05) (J. Fine)

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 16304 MWF 10:00-10:50(14) (J. Fine)
Fall GRMN0300 S02 16304 Th 12:00-12:50(14) (J. Fine)
Fall GRMN0300 S02 16306 MWF 12:00-12:50(06) (J. Fine)
Fall GRMN0300 S02 16306 MWF 1:00-1:50(06) (J. Fine)

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.
Spr GRMN0400 S01 24755 MWF 10:00-10:50(03) (J. Fine)
Spr GRMN0400 S01 24755 Th 12:00-12:50(05) (J. Fine)
Spr GRMN0400 S02 24756 Th 12:00-12:50(06) (J. Fine)
Spr GRMN0400 S02 24756 MWF 1:00-1:50(06) (J. Fine)

GRMN 0500. 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.
Fall GRMN0500 S01 16307 MWF 11:00-11:50(16) (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.
Spr GRMN0600B S01 24761 TTh 10:30-11:50(09) (T. Kiesche)

GRMN 0750F. Historical Crime Fiction.
There is almost no time period that has not been covered by historical crime fiction. From ancient Egypt and Rome to 18th century China, historical crime fiction has complemented and contested our knowledge of history. In this seminar, we will do some extensive time travel and explore how crime fiction explores the past and challenges our understanding of bygone times. Readings of texts by Ellis Peters, Umberto Eco, Peter Tremayne, Lindsey Davis, Alan Gordon, Robert van Gulik, Laura Rowland, among others.
Fall GRMN0750F S01 16308 MWF 10:00-10:50(14) (T. Kiesche)

GRMN 1200K. Languages of Seduction.
According to Genesis, languages of seduction can be traced back to Paradise. But where does seduction come from? Where does it lead the seducer and the seduced? This seminar will follow traces of seduction in Esopian fables; in Ulysses' encounter with the sirens (Homer, Kafka); in Orpheus' songs (Vergil, Rilke); in Sheherazade; in excerpts from Casanova's Story of My Life; in Kierkegaard's Diary of a Seducer; and in the (seductive) suggestion from a song by Bob Dylan: "Don't follow leaders, watch the parkin' meters". What would happen were you to follow such an advice, seduced by its charm? In English.
Spr GRMN1200K S01 25518 TTh 1:00-2:20(08) (T. Schestag)

GRMN 1340W. Writing Revolution.
How is revolution articulated, recorded, and scripted? The word "re-volution" implies a turning-again. Revolution, however, is also marked, from the French Revolution to the revolutionary movements of the twentieth century, by a rhetoric of cutting, interrupting, and disjoining. Turning to the tropes of the turn and the cut for orientation, among others, this seminar will examine the modes by which revolutionary history is written from the eighteenth through the twentieth century. Readings include works by Rousseau, Kant, von Arnim, Hölderlin, Büchner, Marx, and Luxemburg. In English.
Spr GRMN1340W S01 25519 W 3:00-5:30(10) (K. Mendicino)

GRMN 1340X. Literature and Multilingualism.
Has literature ever really been monolingual? Has it not always spoken with a split tongue and a fractured voice, enabling it to move in the interstices between languages, cultures, and identities? In this seminar, we examine some authors from the twelfth century for whom speaking is always speaking otherwise: speaking about the other, speaking as other, as something other than merely speaking. Our goal is to think beyond the 'monolingual paradigm' and come up with ways to describe the richness of linguistic multiplicity beyond the easy binaries of native vs foreign, self vs other. In English.
Spr GRMN1340X S01 25721 MWF 12:00-12:50(05) (Z. Sng)

GRMN 1440S. Grimms' Fairy Tales.
"One doesn't know the sorts of things one has in one's house," says the servant girl in Kafka's "A Country Doctor," as a stranger, who will soon act violently towards her, emerges on all fours from an unused sty. The precarious moment of finding more than one seeks in one's midst is among the key motifs of Grimms' "Household Tales" that we will trace, following the way they move writers of literature, psychoanalysis, and critical theory. Reading the Grimms among others, we will find: what was "once upon a time" is not finished, nor can these uncanny tales be domesticated.
Fall GRMN1440S S01 16309 MWF 1:00-1:50(06) (K. Mendicino)

GRMN 1441E. Krüge.
What kind of thing does a jug represent or materialize? How is one to describe and judge its (literal or metaphorical) shape or use? And in which words? This seminar is split in two: its first part will focus on Heinrich von Kleist's comedy Der zerbrochne Krug; its second part will consider Martin Heidegger's essay Das Ding, which is centered around the question: What does a jug reveal – or hide – about the thing-character of every thing? The seminar opens with a small prose piece by French writer Francis Ponge: La cruche. Taught in German.
Spr GRMN1441E S01 25520 TTh 10:30-11:50(09) (T. Schestag)

GRMN 1441G. Städtebilder.
Cities mark sites of humans gathering and dwelling as political animals, bound to language. But while cities confirm this Aristotelian definition of human beings, they also expose its vulnerability. Cities have to be founded and surrounded by walls. They are in need of protection and driven by something other than merely speaking. Our goal is to think beyond the 'monolingual paradigm' and come up with ways to describe the richness of linguistic multiplicity beyond the easy binaries of native vs foreign, self vs other. In English.
Spr GRMN1441G S01 25521 MWF 12:00-12:50(06) (Z. Sng)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
GRMN 1661K. Gesellschaftskritik im deutschen Gegenwartskrimi.
Contemporary crime fiction in Germany in many cases (1) turns to and
on certain kinds of crime that very much occur in the real world: From
terrorism to crimes against the environment and from corruption in
government and big business to the plight of migrants, crime fiction
negotiates and re-writes problems that haunt our late-capitalist societies.
Globalization and digitization often play a major role in these stories and
a critique of these historical developments is part and parcel of the novels
we will read. Taught in German.
Fall GRMN1661S S01 16928 MWF 12:00-12:50(15) (T. Kniesche)

GRMN 1900P. Erinnerung in der deutschen Gegenwartsliteratur.
Erinnerung (memory, remembrance) is one of the big topics in
contemporary German literature. Erinnerungsliteratur deals with the
ramifications of highly problematic periods of nineteen- and twentieth
German century, such as colonialism, the rise of Nazism, the Holocaust,
or the communist dictatorship in former East Germany. Coming to terms
with the past — one way or another — is the focus in texts by Günter Grass,
W.G. Sebald, Uwe Timm, Marcel Beyer, Herta Müller, or Ulrike Draesner,
to name just a few. Senior seminar. Taught in German.
Spr GRMN1900PS S01 25521 TTh 2:30-3:50(11) (T. Kniesche)

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 2450. Exchange Scholar Program.
Fall GRMN2450S S01 15294 Arranged 'To Be Arranged'
Spr GRMN2450S S01 24186 Arranged 'To Be Arranged'

GRMN 2661R. Poetry and Politics.
Poets have been accused, persecuted, exiled from the Polis. They have
been killed. Their poems have been burned and their ashes dispersed.
Why does poetry provoke these lethal affects? What is at stake in a
poem for the proclaimed integrity of the political sphere? Texts read and
discussed in this seminar include Sophocles (in Hölderlin's translations);
Cicero's public defense of the poet Archias; Thoreau and Arendt (on Civil
Disobedience); Roman Jakobson (The Generation That Squandered Its
Poets); poems by Velimir Chlebnikov and Osip Mandelstam (in Celan's
translations); and Georges Bataille (La haine de la poésie / L'Impossible).
Taught in English.
Fall GRMN2661S S01 16925 T 1:00-3:30 (T. Schestag)

GRMN 2661S. What Was A Medium?
Scholars of literature, media, and aesthetics have weighed in from various
viewpoints on the question "What is a medium?" This seminar takes a
historical approach by examining how the medium and mediaity were
imagined prior to the 20th century. We will look at the history of the
question itself. What was the "medium" for classical antiquity and the
18th-century (two historical moments on which we will focus)? How did
it emerge from discussions about moderation, mediocrity, or mediation?
Discussions and readings in English; students also welcome to work with
texts in the originals.
Fall GRMN2661S S01 17113 W 3:00-5:30(17) (Z. Sng)

GRMN 2970. Preliminary Examination Preparation.
For graduate students who have met the residency requirement and are
paying the Registration Fee to continue active enrollment while preparing
for a preliminary examination.
Fall GRMN2970 S01 15295 Arranged 'To Be Arranged'
Spr GRMN2970 S01 24187 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 residency requirement and are
continuing research on a full time basis.
Fall GRMN2990 S01 15296 Arranged 'To Be Arranged'
Spr GRMN2990 S01 24188 Arranged 'To Be Arranged'

GRMN XLIST. Courses of Interest to Students Concentrating in
German Studies.

Swedish

SWED 0100A. Beginning Swedish.
Swedish 0100 is an introduction to both Sweden and Swedish, covering
various aspects of Swedish history, art and society, as well as screening
at least three Swedish films per semester. The course packet contains the
text/workbook, Mål 1, with additional materials. We will cover one chapter
of Mål per week, with quizzes every three weeks. There will be a midterm
and a final exam, along with a short take-home project.
This is a small class, so your presence is absolutely required. Emphasis
will be placed on speaking and understanding Swedish. Good will and
and good humor are required.
This is the first half of a year-long course (SWED 0100A and SWED
0200A) whose first semester grade is temporary. Neither semester may be
elected independently without special written permission. The final grade
at the end of the course work in SWED 0200A covers the entire year and
is recorded as the final grade for both semesters.
Fall SWED0100S S01 17059 TTh 4:00-5:30 (A. Weinstein)

SWED 0200A. Beginning Swedish.
Swedish 200 is a continuation of Swedish 100, with the same goals,
materials and methods. It may also be suited to students with some prior
background in Swedish.
This is the second half of a year-long course (SWED 0100A and SWED
0200A) whose first semester grade is temporary. Neither semester may be
elected independently without special written permission. The final grade
at the end of the course work in SWED 0200A covers the entire year and
is recorded as the final grade for both semesters.
Spr SWED0200S S01 25667 TTh 4:00-5:30 (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 15; 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.
Fall HISP0100 S01 16186 MW 9:00-9:50(02) (S. Sobral)
Fall HISP0100 S01 16186 TTh 9:00-10:20(02) (S. Sobral)
Fall HISP0100 S02 16187 MW 10:00-10:50(13) (S. Sobral)
Fall HISP0100 S02 16187 TTh 10:30-11:50(13) (S. Sobral)
Fall HISP0100 S03 16188 MW 1:00-1:50(08) (S. Sobral)
Fall HISP0100 S03 16188 TTh 1:00-2:20(08) (S. Sobral)
Fall HISP0100 S04 16189 TTh 1:00-2:20(08) (S. Sobral)
Fall HISP0100 S04 16189 MW 2:00-2:50(08) (S. Sobral)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 SATII 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.
Spr HISP0110 S01 24642 MTWTh 1:00-2:50 (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 460 and 510, or 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.
Spr HISP0200 S01 24642 MTWTh 1:00-2:50 (S. Sobral)

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. Pre-requisite: either HISP 0200, HISP 0110, or placement: SAT II scores between 460 and 510, or 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.

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.

Fall HISP0300 S01 16191 MW 9:00-9:50(02) (V. Smith)
Fall HISP0300 S01 16191 TTh 9:00-10:20(02) (V. Smith)
Fall HISP0300 S02 16192 MW 10:00-10:50(13) (V. Smith)
Fall HISP0300 S02 16192 TTh 10:30-11:50(13) (V. Smith)
Fall HISP0300 S03 16193 MW 12:00-12:50(08) (V. Smith)
Fall HISP0300 S03 16193 TTh 1:00-2:20(08) (V. Smith)
Fall HISP0300 S04 16194 MW 1:00-1:50(08) (V. Smith)
Fall HISP0300 S04 16194 TTh 1:00-2:20(08) (V. Smith)
Spr HISP0300 S01 24648 TTh 9:00-10:20(01) (V. Smith)
Spr HISP0300 S02 24649 MW 12:00-12:50(01) (V. Smith)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
HISP 0490A. Spanish for Health Care Workers.
This course is designed to provide students with the linguistic and cultural competencies necessary to communicate with and help treat Spanish speaking patients with limited English. The course includes a general review of pertinent grammar and vocabulary relating to the health care professions, assessment, and vocabulary useful for establishing patient rapport. Students will practice communicating in common medical situations, conducting patient interviews, and increase their understanding of possible responses from patients. We will broaden knowledge of different cultures, explore health care systems/ professions in a variety of settings, and have pertinent speakers invited to class. Please note this course does not qualify as a pre-requisite for study abroad or for HISP 0600. Students who complete 0490A successfully can continue in our program with HISP 0500 as the next level.

Fall  HISP0490A S01  16198  MW  12:00-12:50(15)  'To Be Arranged'

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 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.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
HISP 0740. Intensive Survey of Spanish Literature.
This course provides students an overview of the major authors and movements in Spain's literature from the Middle Ages to the twentieth century. It teaches students to close-read and engage critically with individual texts and their literary, historical, and social conditions of production. Throughout, we will interrogate canon formation, examine the literary construction of the self and the nation, and analyze the reflection -- and creation -- of culture in literature. Conducted in Spanish. Prerequisite: HISP 0600, or AP score of 5, or SAT II (Literature) score of 750 or above, or Brown placement score of 651 or above.

Fall HISP0740 S01 16354 TTh 9:00-10:20(02) (S. Thomas)

HISP 0750B. The Latin American Diaspora in the US.
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.

Spr HISP0750B S01 24868 MWF 11:00-11:50(04) (F. Martinez-Pinzon)

HISP 0750C. Cultural Studies in Spanish America.
This is a culture class, taught in Spanish, in which we will explore the origins and meanings of the terms "culture" and "cultural studies," a particular approach to culture, as it is manifested in a Spanish American context. This critical approach crosses conventional disciplinary boundaries and so will we, examining a variety of texts, phenomena, and themes that extend traditional concepts of "culture." Topics considered will include: sports-- fútbol and lucha libre-- music in literature, melodrama and the telenovela, manifestations of Indian and mestizo identities in the late 20th-century culture, tourism, and contemporary urban existence.

Fall HISP0750C S01 16659 MWF 9:00-9:50(01) "To Be Arranged"

HISP 0760. Transatlantic Crossings: Readings in Hispanic Literatures.
This course provides students a comprehensive introduction to literature and culture of the Spanish-speaking world, through exploration of a wide range of genres (short story, poetry, theater, novel, and film) and periods of production. The course not only gives students a contextualized historical panorama of literature in Spanish, it also equips them with strategies for reading, thinking, and writing about texts and films in Spanish, preparing them for more advanced literature and culture courses in Hispanic Studies. The course is conducted entirely in Spanish.

Spr HISP0760 S01 24870 TTh 9:00-10:20(01) (S. Thomas)

HISP 1020A. Spanish Civil War in Literature and the Visual Arts.
The Spanish Civil War (1936-39) would culminate with the military overthrow of the Republican government and the beginning of Francisco Franco's long dictatorship. This course examines artistic representations of the war, from film (documentary and fictional), through painting (Picasso), to the written works of both Spanish and foreign authors including Orwell, Hemingway, Neruda, Cela, Sender, Rodoreda. Readings and discussion in English.

Spr HISP1020A S01 25170 MWF 2:00-2:50(07) "To Be Arranged"

HISP 1210F. History of the Spanish Language.
Introduction to the genealogy and development of the Spanish language. Includes the historical and cultural events that deeply influenced the shaping of the language, the nature of Medieval Spanish, and the development of the language beyond the Iberian Peninsula, especially in the Americas. This course will make the history of Spanish accessible to anyone with a knowledge of Spanish and a readiness to grasp basic linguistic concepts.

Fall HISP1210F S01 16369 TTh 1:00-2:20(08) (M. Vaquero)

In the early modern period, clothing and fabrics were meant to provide visible markers of social status, gender, religion, race, and nationality. Yet dress did not just so much reflect identity as construct it. It could blur differences even as it supposedly marked them. In other words, clothes often created fictions, and fiction itself frequently focused on clothing. Drawing on literary and historical texts as well as paintings, prints, and maps, this course traces the connections between fashion and fiction in a period of unprecedented change in Spain and the wider Hispanic world. In Spanish.

Fall HISP1240A S01 16374 TTh 10:30-11:50(13) (L. Bass)

HISP 1330T. El amor en español.
This course will visit a series of famous, colorful and controversial couples (novios, esposos y amantes) from the literature and history of Spain and Latin America. We will consider such themes as courtly love, erotically love, commonplace love and distortions of them, the degradation of idealized love, and the renunciation of love in favor of divine love in the medieval and Renaissance periods. We will also address contemporary rites of passage in the formation of couples, traditional and modern views of love and marriage, as well as the "death of the couple," love and melancholy, melodrama and hysteria.

Spr HISP1330T S01 24874 Th 4:00-5:30(17) (M. Vaquero)

HISP 1330U. Hauntings: Gothic Fictions, Banditry and the Supernatural in Latin America.
A specter haunts Latin America. The constitution of the nation-state in the region after the Wars of Independence (1810-1830) entailed creating fictions to include (and, naturally, exclude) those who belonged to the community of the nation. Usually the left-outs were the ones who did not comply with the profile of the desired citizen:lettered, male, white and urban. This course will focus on narrations about those 'left-outs' after the constitution of the Nation-Nations in the region. We will read fictions about mad monster women, spectral slaves, bloodthirsty bandits, priests-turned-sorcerers, dwarfs, animal rebellions, and many other "exceptions to the norm." In Spanish.

Spr HISP1330U S01 25432 MWF 9:00-9:50(02) (F. Martinez-Pinzon)

Throughout history, conquest and colonization have implied different kinds of appropriations: control over new lands, new bodies, new languages. With the appropriation of new languages came the confrontation between different ways of organizing the world and, in particular, alternative ways of understanding humankind's relationship to nature. This course explores the scientific literatures that emerged in the wake of Spanish conquest and colonization of the Americas (1500-1800). These hybrid scientific literatures, written in Spanish but also in Nahua, Maya, Quechua and graphic forms, illustrate the lasting cross-pollination between Old and New World notions about American nature.

Fall HISP1330X S01 16384 MWF 1:00-1:50(06) (I. Montero)

Spr HISP1330X S01 24741 MWF 1:00-1:50(06) (I. Montero)

HISP 1330Z. Tropical Fictions: Geography and Literature in Latin American Culture.
Tropical nature in Latin America has been represented in conflicting ways: a place of leisure and sensuality, but also of depravity and sloth; a place of infinite riches but also a space where disease and racial degeneration thrive. Tracing the variations and endurance of these tropes in 18th- to 21st-century Western consciousness, this course aims to re-think tropical literature as a whole and the arts from a vantage point different to that of temperate-climate European civilization. Readings include canonical fictions such as La vorágine (1924), 19th-century European travelogues from the region, as well as contemporary indigenous art.

Fall HISP1330Z S01 16779 TTh 2:30-3:50(03) (F. Martinez-Pinzon)

For up-to-date course information please visit Courses@Brown.edu (https://cabs.brown.edu).
HISP 1331F. Museum Fictions.
Museums: monuments to national pride or international pillage? Sites for exhibition or for exoticism? Anchored in the past or for the present? This course looks at the way that museums have been imagined and practiced in Spain and Latin America: spaces for art and anthropology, materials and memories, collections and encounters. We will explore poetry inspired by artworks and by museums; stories that take place in museums; films that show us the behind-the-scenes of institutions; theory that asks what we look at when we look at a collection. We will visit some museums, and perhaps create some of our own.
Spr HISP1331F S01 25259 TTh 2:30-3:50(11) (M. Clayton)

HISP 1331G. Latin American Horror (GNSS 1520).
Interested students must register for GNSS 1520.
Fall HISP1331G S01 17163 Arranged "To Be Arranged"

HISP 1370Y. Literature and Film of the Cuban Revolution.
Cuba’s revolution of 1959 gained extraordinary visibility internationally, motivating images of bearded rebels, jubilant crowds and middle-class flight. Yet even as the Cuban Revolution became an object of representation abroad, it guided the domestic production of new forms of literature and cinema. Over the course of the semester, we will trace the relationship between fiction and film, and between art and the revolutionary project, from 1959 to the present day.
Spr HISP1370Y S01 24871 TTh 1:00-2:20(08) (E. Whitfield)

HISP 1371E. Cómo ser modernxs en América Latina.
This course zooms in on three moments when Latin American poetry explicitly posed the question of how to be modern. We begin with a study of modernismo, the turn-of-the-century movement which inscribed Latin American poetry in the world while declaring literary independence. We next move to continent-wide avant-garde currents of the 1920s which installed poetry at the heart of discussions about modernity and modernism, in and across the arts. Finally, we explore experiments from the 1960s and 1970s which connected poetry to broader questions of politics and society, without abandoning experiments in lyric form.
Spr HISP1371E S01 25257 TTh 10:30-11:50(09) (M. Clayton)

HISP 1500L. Theory and Practice of Translation.
The objectives of the course are to give students a firm grounding in the theory of translation studies as well as extensive experience in the practice of literary translation, working closely with several canonical Spanish texts as well as texts of the student’s choice. Throughout the course of the semester, students will also be called upon to reflect actively on their experience as translators, and dialogue on this experience with their peers. This course is structured as a workshop, with students sharing their work — both translations and reading reflections — and collaborating with their peers.
Fall HISP1500L S01 16338 Th 4:00-6:30(04) (S. Thomas)

HISP 1700B. Rhythm and Silence: A Creative Writing Workshop.
The course focuses on learning the craft of creative writing in Spanish across genres. We will study underlying principles of writing through lectures, readings, discussions, and exercises. As we reflect upon the creative process, we will examine the relationship between author and text and explore narrative techniques used to construct complex characters, dialogue, and imagery. The object will be to expand our creative writing skills and discuss the works of influential contemporary Latin American authors such as Juan José Arreola, Eduardo Halfon, Juan Carlos Onetti, Juan José Saer and Mario Vargas Llosa.
Spr HISP1700B S01 25169 MWF 12:00-12:50(05) "To Be Arranged"

HISP 1880. 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.

HISP 2030I. Books of Love.
Discourses of love animated the vernacular literary masterworks of Juan Ruiz (c.1283-c.1350) and Geoffrey Chaucer (c.1342-1400), near-contemporaries who became celebrated canonical authors in Spain and England, respectively. This course considers their writings comparatively, in literary and historical context. Readings include Le Roman de la rose; Ruiz’s El Libro de buen amor; Chaucer’s Troilus and Criseyde (with instruction in Middle English). Qualified, advanced undergraduates will be admitted by instructor permission only.
Spr HISP2030I S01 25737 M 3:00-5:30(13) (M. Vaquero)

HISP 2160N. Antiquity and Innovation in the Hispanic Renaissance.
The artistic and literary florescence of the Siglo de Oro paralleled a broader current of cultural innovation, which extended beyond peninsular Spain to other parts of Europe and the Americas — a movement which can be conceived as a Hispanic Renaissance. After an introductory overview, the seminar will highlight four major tendencies, through close examination of some foundational authors and texts. The course will be organised thematically, but texts will generally be approached in chronological sequence, beginning with Antonio de Nebrija’s investigations in the 1490s and ending with Carlos de Sigüenza y Góngora’s showcasing of New Spain’s complex legacies.
Fall HISP2160N S01 16868 Th 4:00-5:30(04) (A. Laird)

HISP 2350P. Teoría Literaria: la literatura Transatlántica.
Dedicated to a teoría del texto transatlántico, en este seminario trabajaremos sobre la historia intelectual de la interculturalidad Atlántica. A partir de los modelos, contactos, apropiación, debate y dialogismo que entre Europa y América Latina configuran un sistema literario, nos detendremos en la construcción del Sujeto, la Representación y la Lectura. Estudiaremos a Guzmán Poma de Ayala y Garcilaso de la Vega, la saga de Calíbán, los modelos de la formación nacional en Martí y Sarmiento, y la genealogía de la mezcla como la diferencia moderna de la producción cultural latinoamericana. En español.
Spr HISP2350P S01 24872 W 3:00-5:30(10) (J. Ortega)

HISP 2350X. Literatures of Work and the Work of Literature in Latin America.
This seminar investigates the ways in which labor has been represented in Latin American literature from Independence until the mid-20th century. We will explore the representations of different agro-export tropical booms in fiction —tobacco, rubber and banana— in order to understand how work determined the ways in which populations and landscapes were imagined into being. Finally, this seminar will incorporate fictional labor that appear more difficult to control and as such are rendered as gothic: vagrancy and banditry. Seminar readings and discussion will be held in Spanish.
Fall HISP2350X S01 16371 W 3:00-5:30(17) (F. Martinez-Pinzon)

HISP 2450. Exchange Scholar Program.

HISP 2520I. 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 women of her extended literary milieu.
Fall HISP2520I S01 16367 F 3:00-5:30(11) (S. Mermin)

HISP 2620Q. Gender and the Body in Modern Spain.
This course explores Spanish cultural production from 1850- the present, using gender and the body as axes of analysis. It analyzes representations of gender roles and norms, as well as their subversion and critique, in a variety of works, including novels, films, visual culture, and essays. Interrogating the social and cultural production of gendered bodies and how these are represented in modern cultural forms, it examines topics such as: the development of feminism and persistence of machismo; relationships between gender, politics, and violence; biopolitics and medical discourse; the emergence of current debates regarding rape culture and toxic masculinity, among others.
Spr HISP2620Q S01 25255 Th 4:00-6:30(17) (S. Thomas)

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.
Fall HISP2970 S01 15301 Arranged "To Be Arranged"
Spr HISP2970 S01 24192 Arranged "To Be Arranged"
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 residency requirement and are continuing research on a full-time basis.
Fall HISP2990 S01 15302 Arranged ‘To Be Arranged’
Spr HISP2990 S01 24193 Arranged ‘To Be Arranged’

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 course presumes no economics background, nor previous history courses.
Fall HIST0150A S01 16019 MWF 10:00-10:50(14) (S. Rockman)

A long history lies behind the millions of men and women locked up today as prisoners, captives and hostages. Beginning in antiquity and ending in the present, this course draws on materials from a variety of cultures across the world to explore incarceration’s centuries-old past. In examining the experience and meaning of imprisonment, whether as judicial punishment, political repression, or the fallout of war, the class will ask fundamental questions about liberty as well. History 150 courses introduce students to methods of historical analysis, interpretation and argumentation. This course presumes no previous history courses.
Fall HIST0150C S01 16016 TTh 2:30-3:50(03) (A. Remensnyder)

HIST 0150H. Foods and Drugs in History.
What we consume connects us to the worlds of both nature and culture. Bodily and socially, “you are what you eat,” but if your well-being suffers, you often seek out other ingestible substances. In many times and places, changing what you eat is thought to be healing, while in other times and places drugs – either remedial or recreational – are thought to be distinct and more immediately restorative. Few human interactions with the larger world are more important or interesting than how comestibles and medicines have been discovered, mixed, transformed, distributed, and how those processes have changed us.
Fall HIST0150H S01 15989 Th 9:00-10:20(02) (H. Cook)

HIST 0202. African Experiences of Empire.
This is a "flipped" course on sub-Saharan Africa from the mid-nineteenth through the mid-twentieth centuries. It presupposes no knowledge of Africa and serves as an introduction to the continent. It focuses on daily life, families, and popular culture. Students will analyze change, question perspectives, and imagine life, and question what “Africa” was during the period of European imperialism. Most readings are primary sources, which include photographs, songs, and oral histories. The course is "flipped”; students' first introduction to the content comes before class meetings through the text and multi-media sources. Class meetings are dedicated to discussion and exercises, including role-playing.
Fall HIST0202 S01 16001 MWF 11:00-11:50(16) (N. Jacobs)

HIST 0244. Understanding the Middle East: 1800s to the Present.
This course is an introduction to the history of the modern Middle East from the mid-19th C to the present. Readings and topics are structured chronologically, and emphasize the key events and turning points in the political and economic history of the region. The goal of the course is to understand how the Middle East, as it is today, has been shaped by the events of the past.
Fall HIST0244 S02 16257 TTh 2:30-3:50(03) (S. Mitter)

This course uses the American Civil War of 1861-1865 to investigate certain issues relevant to current domestic and global affairs: the use of history in popular memory and popular culture (focusing on the Civil War in public art and film); the role of law in the prosecution and resolution of war; international law, especially as it applies to war and human rights. The course is aimed at students interested in history, law, and international relations. There are no prerequisites—the course is accessible to students at all levels—but some knowledge of U.S. history might be useful.
Fall HIST0252 S01 16035 MWF 1:00-1:50(06) (M. Vorenberg)

HIST 0522G. An Empire and Republic: The Dutch Golden Age.
Between about 1580 and 1690, a new nation emerged in Europe that became a bastion of liberty, ideas in ferment, fine art, military power, science and technology, and global economic reach: the Dutch Republic. A nation that thought of itself as peaceful, yet was constantly at war; as Protestant, yet was composed of people of many faiths; as personally aspirational, yet derived much wealth from the conquest and slavery of others. Its people and institutional arrangements greatly influenced Britain and America on their paths to power, too. Its rise and eclipse may be instructive... Enrollment limited to 19 first-year students. P
Fall HIST0522G S01 15988 Th 4:00-6:30(04) (H. Cook)

HIST 0522O. The Enlightenment.
The Enlightenment: Introduction to the Enlightenment as a fragmented series of projects that aimed at human liberation and the understanding of the social and natural worlds, with massive implications for the way that we conceive of ourselves today. Readings explore philosophy, science, slavery, economics, gender relations, and politics in the 18th century.
Fall HIST0522O S01 16017 Th 4:00-6:30(04) (J. Revill)

HIST 0523P. The First World War.
On the eve of the First World War, many Europeans cheered for a “war to end all wars.” It achieved nothing of the like, instead inaugurating a century of war and unthinkable destruction. This seminar explores the history of the first truly global conflict, examining its origins, its course, its aftermath, and how it might help us better understand our own world today. A broad set of primary sources, from soldiers’ diaries to rationing cards, artwork, and diplomatic cables, forms the basis for discussion. Designed as an introduction to historical inquiry and writing.
Fall HIST0523P S01 16256 F 5:00-6:30(11) ‘To Be Arranged’

HIST 0537B. Tropical Delights: Imagining Brazil in History and Culture.
Examines the many ways that Brazilians and foreigners have understood this vast continent-size country, ranging from early European explorers’ anxieties about Cannibalism to modern images of the Amazonian rainforest, Rio De Janeiro’s freewheeling Carnival celebrations, and the array of social movements mobilizing for social justice. Through an examination of historical sources, literature, movies, and popular culture, this seminar will consider how multiple images and projections of Brazil have shaped national and international notions about the country. Reserved for First Year students. Enrollment limited to 19.
Fall HIST0537B S01 15996 W 3:00-4:50(17) (J. Green)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
HIST 0551A. Abraham Lincoln: Historical and Cultural Perspectives. This seminar uses life, legacy, myth of Abraham Lincoln to explore central themes such as frontier in early republic, nature of political leadership, law/legal culture, and emergence of sectionalism, slavery, anti slavery, Civil War. Frequent short writing assignments and research investigations allow students in-depth explorations of Lincoln's works, the writings of his contemporaries, and modern non-fiction, fiction, and film. The course enables us to consider two larger themes: 1) the relationship between memory and history; and 2) the function of history in modern society. The course has no prerequisites and does not presuppose special knowledge of American history.

Fall HIST0551A S01 16034 W 3:00-5:30(17) (M. Vorenberg)

HIST 0556A. 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 19 first year students.

Fall HIST0556A S01 15986 M 3:00-5:30(05) (H. Chudacoff)

HIST 0557C. Narratives of Slavery. This course will uncover the history of the slave trade, the labor regimes of slavery in the Caribbean and North America, and the rise of the Cotton Kingdom through the voices of the very people who lived through it: enslaved people themselves. We will read slave narratives, court documents, abolitionist treatises, oral histories of formerly enslaved people, and fictional accounts produced in the period. We will give special attention the ways that different kinds of historical sources-different types of narratives-shape what we know and how we know it in the history of slavery.

Fall HIST0557C S01 16013 M 3:00-5:30(05) (E. Owens)

HIST 0580M. 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 19 first year students.

Fall HIST0580M S01 16006 M 3:00-5:30(05) (J. Mumford)

HIST 1080. Humanitarianism and Conflict in Africa. This course focuses on the major issues and debates concerning humanitarianism and international intervention in 20th century Africa. It will explore the history of humanitarianism and the many challenges that arise when governments and institutions intervene in a conflict. Then students will investigate specific sites of conflict in Africa (ranging from Nigeria, Somalia, Rwanda, Sudan, and Western Sahara) and analyze different models of intervention and aid. These case studies will expose students to pivotal events in African history and equip them with a critical vocabulary with which to assess contemporary conflicts.

Fall HIST1080 S01 16003 TTh 1:00-2:20(08) (J. Johnson)

HIST 1110. Imperial China/China: Culture and Legacy. As the current revival of Confucianism in the People's Republic of China demonstrates, the past is still very much alive in China today. This lecture- and-discussion course surveys the history of China from the origins of the first state through the twilight of the imperial period in the nineteenth century. Lectures are designed and the reading assignments chosen to emphasize in particular those ideas and beliefs, institutions and government structures, and literary and artistic developments that have shaped (and continue to shape) China today. "Imperial China" provides the knowledge necessary for informed study of modern China.

Fall HIST1110 S01 15985 MWF 9:00-9:50(01) (C. Brokaw)

HIST 1120. At China's Edges. What does it mean to live on the borders of a rising world power? This course introduces the modern histories of such places as Hong Kong; Macau; Taiwan; Manchuria; Sichuan; Yunnan; and Xinjiang by investigating their commonalities and differences. Themes include: ecology and identity; comparative colonialisms and experiences of decolonization; war and border regions; nation building, citizenship, and the "art of not being governed." Students will have an opportunity to research additional sites (e.g. Mongolia, Tibet) using frameworks introduced in class discussions.

Fall HIST1120 S01 16357 MWF 12:00-12:50(15) (R. Nedostup)

HIST 1141. Japan in the Age of the Samurai. This course is for students interested in exploring Japan's remarkable cultural, political and social transformations during the Age of the Samurai, which began in the late 12th century and came to a close in the mid-19th century. Lectures, readings and films will explore how the emergence of new forms of military expertise and technologies led to the creation of warrior-led "tent governments," that first co-existed with and eventually supplanted the structures of power centered on Kyoto and the Imperial Court. Open to all students.

Fall HIST1141 S01 16356 MWF 11:00-11:50(16) (K. Smith)

HIST 1200C. History of Greece: From Alexander the Great to the Roman Conquest. In 334 BCE, the 22-year-old Alexander crossed over to Asia and North Africa perhaps already in his own mind to conquer the known world, thus changing the history of the West forever. The values of a small, if intensely introspective, people (the Greeks) became the cultural veneer for much of West, as the period became known as the Hellenistic ("Greekish") Age. It led to the spread of a monotheistic idea, a profound belief in individualism, alienation from central power, and yet, conversely, the creation of natural law and human rights, along with a deep desire for universalism.

Fall HIST1200C S01 16031 TTh 1:00-2:20(08) (K. Sacks)

HIST 1230B. Modern European Intellectual and Cultural History: The Fin de Siecle, 1880-1914. A sequel to HIST 1230A focusing on radical intellectual and cultural currents that challenged and destabilized the assumptions of Victorian high culture during the fin de siecle. Through a careful reading of primary texts by Hobhouse, Nietzsche, Weber, and Freud. The course explores issues such as the rise of mass consumer culture, neoliberal and neofascist politics, philosphic irrationalism, psychoanalysis, and the woman question.

Fall HIST1230B S01 15995 MWF 1:00-1:50(06) (M. Gluck)

HIST 1240A. Politics of Violence in 20C Europe. Europe's 20th century saw the emergence of forms of violence unthinkable in a world without mass politics. To better understand the changes in European states and societies that gave rise to total war and the violence associated with totalizing ideologies such as fascism and communism, we will read Lenin, Mussolini, Hitler, Fanon and others who sought to interpret violence as an extension of ideology. We will also read selections from more recent works by state leaders, historians and cultural figures from Ukraine to France, from Turkey to Great Britain who have reinterpreted past violence for present political ends.

Fall HIST1240A S01 16041 MWF 2:00-2:50(07) (H. Case)

HIST 1266C. 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.

Fall HIST1266C S01 15999 MWF 2:00-2:50(07) (T. Harris)
HIST 1268A. The Rise of the Russian Empire.  
This course provides a broad survey of Russian history from Kievan Rus' to the Crimean War. Topics include the rise of Moscow, the Time of Troubles, the reforms of Peter the Great and Catherine the Great, the Napoleonic Wars, and the conservative reign of Nicholas I. The following themes are emphasized in the lectures and readings: the changing stratification of society; the expansion of the Russian empire; Russia and the West (including diplomatic and cultural relations); economic development; and the origins and growth of Russian intelligence and radical opposition to the autocracy. P  
Fall  
HIST1268A  S01  16015  MWF  10:00-10:50(14)  (E. Pollock)

HIST 1310. 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 countries political, economic, social, intellectual, and cultural development to understand the causes, interactions, and consequences of conflict, change, and continuity within Brazilian society.  
Fall  
HIST1310  S01  15997  TTh  2:30-3:50(03)  (J. Green)

HIST 1320. Rebel Island: Cuba, 1492-Present.  
Cuba, once the jewel in the Spanish imperial crown, has been home to some of the world's most radical revolutions and violent repressions. For two centuries, its influence has spread well beyond its borders, igniting the passion of nationalists and internationalists as well as the wrath of imperial aggression. This course traces the history of Cuba from its colonial origins through the present, foregrounding the revolutionary imaginary that has sustained popular action-from anti-slavery rebellions through the Cuban Revolution and its discontentments in addition to the historical processes that have forged one of the world's most vibrant socio-cultural traditions. P  
Fall  
HIST1320  S01  16005  TTh  10:30-11:50(13)  (J. Lambe)

HIST 1331. The Rise and Fall of the Aztecs: Mexico, 1300-1600.  
This course will chart the evolution of the Mexica (better known as the Aztecs) from nomads to the dominant people of central Mexico; examine their political, cultural, and religious practices (including human sacrifice); explore the structure and limitations of their empire; and analyze their defeat by Spanish conquistadors and their response to European colonization. We will draw upon a variety of pre- and post-conquest sources, treating the Aztecs as a case study in the challenges of ethnohistory. P  
Fall  
HIST1331  S01  15991  MWF  12:00-12:50(15)  (R. Cope)

HIST 1333. The Mexican Revolution.  
To study the Mexican Revolution is to examine the sweeping history of Modern Mexico: from the Liberal reforms of Benito Juárez to the enduring power of the Partido Revolucionario Institucional (PRI); from peasant revolutionary Emiliano Zapata to his namesake Zapatischas of Chiapas; from Pancho Villa's mass revolutionary army to transnational mystic Teresita Urrea; from the landlord Francisco Madero who led the insurgency to Lázaro Cárdenas who enacted land and labor reforms; from the constant flows of migrants crossing the border back and forth to Mexico's defiance against Trump's wall. P  
Fall  
HIST1333  S01  16000  TTh  6:30-7:50  (E. Hu-Dehart)

HIST 1340. History of the Andes from Incas to Evo Morales.  
Before the Spanish invasion 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. P  
Fall  
HIST1340  S01  16752  TTh  9:00-10:20(02)  (J. Mumford)

HIST 1381. Latin American History and Film: Memory, Narrative and Nation.  
This course provides an introduction to cinematic interpretations of Latin American history. Together we will explore how (and why) filmmakers have used motion pictures to tell particular narratives about the Latin American past. We will critically examine a broad range of films dealing with historical questions, and explore what these films have to say about how gender and sexuality, imperialism, slavery, the church, revolution and repression shaped the history of the region. In order to explore these topics we will examine films in relation to academic, autobiographical, and popular texts, all of which provide different ways of representing the past.  
Fall  
HIST1381  S01  16027  TTh  10:30-11:50(13)  (D. Rodriguez)

HIST 1445. The Making of the Ottoman World, 15th - 20th Centuries.  
This course treats some of the major themes of Ottoman state and society, one of the major empires of the world out of which many new polities in the Balkans, Anatolia, the Middle East and North Africa emerged during the twentieth century. At the center of the course is the transformation of the "classical" Ottoman state to the early modern and modern through the many shapes and forms it has taken. We will be covering the beginnings from the 15th century and end with the analysis of the making of the modern Ottoman society in the early 20th century.  
Fall  
HIST1445  S01  16033  TTh  1:00-2:20(08)  (M. Toksoz)

HIST 1511. Sinners, Saints, and Heretics: Religion in Early America.  
This course considers the major people, events, and issues in the history of religion in North America, from pre-contact Native cosmologies to the tumultuous events of the Civil War. Attention will be given to "religion as lived" by ordinary people, as well as to the ways that religion shaped (or not) larger cultural issues such as immigration, public policy, social reform, warfare, democracy, slavery, and women's rights. Prior knowledge of religion in North America is not required; there are no prerequisites to this course, and it is open to all students. P  
Fall  
HIST1511  S01  15994  TTh  10:30-11:50(13)  (L. Fisher)

HIST 1550. American Urban History, 1600-1870.  
Both a survey covering urbanization in America from colonial times to the present, and a specialized focus exploring American history from an urban frame of reference. Examines the premodern, "walking" city from 1600-1870. Includes such topics as cities in the Revolution and Civil War, the development of urban services, westward expansion, and social structure. P  
Fall  
HIST1550  S01  15987  MW  8:30-9:50(01)  (H. Chudacoff)

HIST 1571. The Intellectual History of Black Women.  
This course will introduce students to the intellectual productions and theoretical traditions of African American women. Focused on the canonical texts of African American women, this class gestures toward diaspora as well. Moving chronologically from the history of slavery to the present will require that we simultaneously confront the question of what counts as "intellectual" history. Thus even as we will read the written words of black feminists across time, we will also call into question what Barbara Christian calls "the race for theory," turning also to resistance practices, material culture, and bodily performance as sites of black feminist theorization. P  
Fall  
HIST1571  S01  16014  MWF  10:00-10:50(14)  (E. Owens)

Gandhi's India tracks the emergence and transformations of British colonial rule in the Indian subcontinent, the insurrections 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 lived by ordinary people, as well as to the ways that religion shaped (or not) larger cultural issues such as immigration, public policy, social reform, warfare, democracy, slavery, and women's rights. Prior knowledge of religion in North America is not required; there are no prerequisites to this course, and it is open to all students. P  
Fall  
HIST1620  S01  16037  TTh  9:00-10:20(02)  (V. Zamindar)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
This course explores the creation and circulation of scientific knowledge in Renaissance Europe, ca. 1450-1600. We will explore the practices, materials, and ideas not just of astronomers and natural philosophers, but also of healers, botanists, astrologers, alchemists, and artisans. How did social, political, economic, and artistic developments during this period reshape how naturalists proposed to learn about, collect, manipulate, and commercialize nature? We will also consider the ways in which colonial projects forced Europeans to engage with other “ways of knowing” and rethink classical knowledge systems. P
Fall HIST1825F S01 16012 MWF 11:00-11:50(16) (T. Nummedal)

HIST 1825M. Science at the Crossroads.
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.
Fall HIST1825M S01 16535 MWF 1:00-1:50(06) (L. Riepele)

Thinking Historically explores what it means to write about the past as well as to understand the present as the potential past. We examine major ways of interpreting the past through a survey of mostly Western historians and methods, from antiquity to contemporary practitioners, and observe how history is produced, used, and misused. There are weekly writing assignments, and active participation in discussions is essential. Students will write a final paper on a particular approach or methodology as applied to a historical document of their choosing.
Fall HIST1956A S01 16030 Th 4:00-6:30(04) (K. Sacks)

HIST 1956B. Rites of Power in Modern China.
Confucius and Mao shared at least one characteristic: a conviction that ritual is a critical part of exercising power. This course investigates the meaning of ritual and its importance in the formation of Chinese communities in the modern era, whether households, villages, empires, communes, regions, or nation-states. Topics include family and gender roles, imperial ceremonies, religious rites, revolutionary politics, cults of personality, grassroots movements, and popular protests. The class will collaboratively explore how political activists embraced new media (photographs, mass performance, music, film, video) and techniques (boycotts, mobilization, marches, parades) that merged ritual power with material action.
Fall HIST1956B S01 16211 Th 4:00-6:30(04) (R. Nedostup)

HIST 1961C. Knowledge and Power: China’s Examination Hell.
For centuries a rigorous series of examinations requiring deep knowledge of the Confucian Classics was the primary tool for the selection of those who are working in the humanities. A fundamental challenge to 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.
Fall HIST1961C S01 15984 M 3:00-5:30(05) (C. Brokaw)

HIST 1964F. 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 will 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. P
Fall HIST1964F S01 15998 M 3:00-5:30(05) (T. Harris)

HIST 1964S. Islands of the Mind.
Islands command an outsized place in history and imagination. They can drive politics and economies, inspire worldviews and fantasy, and impel movements of people. The power of islands has been brought to life in narratives about fictional figures like Sinbad, Odysseus, and Robinson Crusoe, and it has shaped the experience of many peoples, including premodern Pacific Ocean indigenous navigators and contemporary migrants in the Mediterranean. Using sources ranging from ancient epics and medieval books of islands to contemporary fiction and film, this seminar combines history and literary arts to explore the diverse meanings and roles islands have had for centuries.
Fall HIST1964S S01 16929 M 3:00-5:30(05) (A. Remensnyder)

HIST 1965R. The Crisis of Liberalism in Modern History.
Liberalism has flamed out before. Its collapse in the late 19c left a mark on the psychoanalytic theories of Sigmund Freud, the art of Gustav Klimt, and the fiction of Franz Kafka. Liberalism's second collapse in the 1930s, inspired the founder of neoliberal economics Friedrich Hayek and the philosopher of science Karl Popper. These men were all Austrian, a nationality they shared with the most infamous critic of liberalism, Adolf Hitler. This course wonders why this country in the center of Europe has exercised such an outsized influence on our modern experience.
Fall HIST1965R S01 16039 Th 4:00-6:30(04) (H. Case)

HIST 1966Q. Colonial Encounters and the Creation of Latin America.
This seminar examines how interactions between Europeans and indigenous peoples shaped the formation of early Latin America. From Florida to Brazil, invasion led to widely varied outcomes, including outright failures. Students will come to see colonization as a difficult, uneven process, as Europeans struggled to comprehend and engage unfamiliar natural and human environments; the new societies that emerged from the colonial era, supplemented by academic texts. Students will write a series of three-page response papers, along with at least two twelve-page essays on major themes from the course.
Fall HIST1966Q S01 16791 M 3:00-5:30(05) (R. Cope)

In January 1959, the forces of rebel leader Fidel Castro entered Havana and forever altered the destiny of their nation and world. We will examine the question of political hegemony and the many silences built into the achievement of Revolution—from race to sexuality to culture—even as we acknowledge that popular support for that Revolution has often been both genuine and heartfelt. It is this counterpoint between the Revolution’s successes in the social, economic, and political spheres and its equally patent failures that have shaped Cuba's history in the past and will continue to guide its path to an uncertain future.
Fall HIST1967C S01 16004 W 3:00-5:30(17) (J. Lamb)

HIST 1968A. Approaches to the Middle East.
This seminar introduces students to the interdisciplinary field of Middle East Studies in the broader context of the history of area studies in the humanities and social sciences. Why and when did the Middle East become an area of study? What are the approaches and topics that have shaped the development of this field? And what are the political implications of contending visions for its future? The readings sample canonical and alternative works and the classes feature visits by leading scholars who research and write on this pivotal and amorphous region.
Fall HIST1968A S01 15993 Th 4:00-6:30(04) (B. Doumani)

HIST 1969A. Israel-Palestine: Lands and Peoples I.
This advanced undergraduate seminar seeks to provide a deeper understanding of the links between the region now known as Israel and Palestine and the peoples that have inhabited it or have made it into part of their mental, mythical, and religious landscape throughout history. The course will be interdisciplinary and its core will engage the perspectives of historians, geologists, geographers, sociologists, scholars of religion and the arts, politics and media. At the very heart of the seminar is the question: What makes for the bond between groups and place - real or imagined, tangible or ephemeral. No prerequisites required.
Fall HIST1969A S01 15983 W 3:00-5:30(17) (O. Bartov)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
This seminar explores a global history perspective to the idea of civilization since the eighteenth century. Starting from the view that the Enlightenment was a specifically European phenomenon, a foundational premise of Western modernity, we explore how the master narrative around ‘civilization’ developed and crystallized through universal history and world history into today’s global history. Analyzing the making of this global idea includes topics like the politics of knowledge production, and transnational exchanges of ideas and practices of progress, nationalism, periodization, and intertextuality in the West, Ottoman Empire and others. Fall: HIST1974L 202 16314 M 3:00-5:30(05) (M. Toksoz)

HIST 1990. Undergraduate Reading Courses.
Guided reading on selected topics. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Prospective honors students are encouraged to enroll in HIST 1992 during semesters 5 or 6. HIST 1992 offers a consideration of historical methodology and techniques of writing and research with the goal of preparing to write a senior thesis in history. The course helps students refine research skills, define a project, and prepare a thesis prospectus, which is required for admission to honors. Students who complete honors may count HIST 1992 as a concentration requirement. Limited to juniors who qualify for the honors program. Fall: HIST1992 S01 16071 M 3:00-5:30(05) (N. Shibusawa)

HIST 1992 and HIST 1993 students meet together as the History Honors Workshop, offered in two separate sections per week. All students admitted to the History Honors Program must enroll in HIST 1993 for two semesters of thesis research and writing. They may enroll in the course during semesters 6 and 7, or 7 and 8. Course work entails researching, organizing, writing a history honors thesis. Presentation of work and critique of peers’ work required. Limited to seniors and juniors who have been admitted to History Honors Program. HIST 1993 is a mandatory S/NC course. See History Concentration Honors Requirements. Fall: HIST1993 S01 16072 Arranged (N. Shibusawa)

HIST 1994. History Honors Workshop for Thesis Writers, Part II
This is the second half of a year-long course, upon completion the grade will revert to HIST 1993. Prerequisite: HIST 1993. Fall: HIST1994 S01 16073 Arranged (N. Shibusawa)

HIST 2450. Exchange Scholar Program.
Fall: HIST2450 S01 15303 Arranged "To Be Arranged"
Fall: HIST2450 S02 15304 Arranged "To Be Arranged"
Spr: HIST2450 S01 24194 Arranged "To Be Arranged"

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. Fall: HIST2890 S01 15305 Arranged "To Be Arranged"
Spr: HIST2890 S01 24195 Arranged "To Be Arranged"

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.
"The Theory and Practice of History" encourages critical thinking about some of the different ways in which historians approach thinking and writing about the past. In particular, we will explore some of the major theoretical stances that have influenced the discipline of history. Our focus throughout will be the interplay between theory and practice. By examining how historians have grappled with questions posed by influential thinkers (often working within other fields of knowledge), we will chart the trajectory of the discipline and assess its working methods. Required for all incoming PhD students in History. Fall: HIST2930 S01 16079 W 3:00-5:30(17) (T. Nummedal)

HIST 2940. Writing Workshop.
Required of all 3rd semester Ph.D. students. Fall: HIST2940 S01 16070 M 3:00-5:30(05) (E. Pollock)

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 Muslims), 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. Fall: HIST2970E S01 16074 M 3:00-5:30(05) (A. Teller)

HIST 2971K. Slavery's New Materialisms.
This interdisciplinary seminar explores an emerging dynamic in Slavery Studies: a move away from an older materialist history that foregrounded modes of production, class struggle, and capitalist transformation; and toward a new(er) materialism organized around human/non-human entanglements and drawing on recent theoretical work on things, networks, and assemblages. Scholars are only beginning to weigh the implications of this move for Atlantic Slavery, weighing the implications of non-human agency in a field predicated on the experiences and subjectivities of black historical actors. This seminar will include graduate students at the coursework stage, as well as doctoral candidates, postdoctoral researchers, and faculty. Fall: HIST2971K S01 16997 T 9:00-11:30 (S. Rockman)

HIST 2971R. Approaches to Middle East History.
An overview of canonical and recent scholarship on the Middle East, beginning with neo-Orientalist and Modernization-theory writings that ruled until the early 1960s, then a consideration of two turns often in productive tension with each other: materialist approaches that lead to social history and political economy, and discursive approaches that lead to cultural and post-colonial studies. We then consider works on the environment and technopolitics, gender and sexuality, and law and society, among others. Throughout, we consider how theoretical trends in other disciplines shaped the writing of history. Requirements include weekly essays, oral presentations, and a literature review. Fall: HIST2971R S01 16185 W 3:00-5:30(17) (B. Doumani)

HIST 2971X. Graduate Readings in Atlantic World History.
This course is a wide-ranging readings course in the vast and changing field of Atlantic World History. Readings will engage the full range of empires and peoples in the wider Atlantic basin, including Africans, Indians, and the various European empires. Special attention will also be given to wider oceanic and global trends in the field, including the Pacific and Indian Oceans, emerging literature on environmental considerations, and theoretical approaches to foodways and medicine. All graduate students welcome. Fall: HIST2971X S01 16312 Th 4:00-6:30(04) (L. Fisher)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
HIAA 0075. Introduction to the History of Art: Modern Photography.
This class will survey the history of photography as an art form and its role in shaping modern culture. We will explore the technological and social contexts in which photography emerged, and trace its development through key moments such as the invention of the camera, the rise of commercial photography, and the advent of digital imaging. Through a combination of lectures, discussions, and hands-on assignments, students will gain a deep understanding of photography's evolution as a means of visual expression and as a cultural force. Enrollment limited to 45. Instructor permission required.

Fall HIAA0075 S01 15971 MWF 12:00-12:50(15) (D. Nickel)

This undergraduate lecture course focuses on one building type, the house, through time in Mesopotamia, China, Japan, the Islamic world, the African diaspora, India, Britain, Rhode Island, and Germany and France. Houses can be minute or monumental, vernacular or high art, provide minimal shelter or afford the material and psychic satisfaction of home. By studying houses, we can bypass some of architectural history's biases, explore some of the major debates in the discipline: What is architecture? Who determines what is included/excluded in this category? And on what basis do they make these claims? A
Fall HIAA0081 S01 15975 MWF 10:00-10:50(14) (L. Osayimwese)

HIAA 0089. Contemporary Photography.
This course surveys the rise of photography in the art world in the period after 1960. It examines both the development of photography as an independent medium and the appropriation of lens-based imagery by Pop Art, conceptual art, minimalism, and eventually Postmodernism.

Fall HIAA0089 S01 24559 MWF 10:00-10:50(03) (D. Nickel)

HIAA 1010. Introduction to Architectural Design Studio.
Introduces students to basic tools and strategies in architectural design. A number of exercises will introduce students to questions about form, function, and structure and teach them to learn from close observation of the built environment. The second half of the semester is devoted to the design of a small house by each student, which will be presented in a scale model and a full set of drawings at the end of the semester. A jury of invited architects and professors will conduct a discussion of each project. Enrollment limited to 15. Instructor permission required.

Fall HIAA1010 S01 15974 F 1:00-6:00 (D. Neumann)

Surveys the amazing art in Holland and Flanders that revolutionized all media. We will see how paintings, sculpture, and architecture formed the historical environment of life in the 17th-century Netherlands. The work of such artists as Rubens, Rembrandt, Van Dyck, and Vermeer is presented as part of this history of art in a "golden age." Weekly one-hour conference required.

Spr HIAA0062 S01 24556 MWF 12:00-12:50(05) (J. Moser)

HIAA 0580. Word, Image and Power in Renaissance Italy.
This class is designed to introduce cultural and historical perspectives on Italy from Siena in the Middle Ages to Venice in the High Renaissance. Taught by professors of Italian Literature, Art History and History, we will move across Italy and the centuries focusing on monuments of literature, art, architecture, and history through different disciplinary lenses.

Fall HIAA0580 S01 15969 MWF 11:00-11:50(16) (E. Lincoln)

HIAA 0660. Giotto to Watteau: Introduction to the Art of Europe from Renaissance to French Revolution.
Giotto to Watteau introduces the great works of European art from the Renaissance to French Revolution. What ideas and forces enabled artists such as Leonardo da Vinci, Hieronymus Bosch, El Greco, Caravaggio, and Rembrandt to transform the visual world so profoundly that their innovations still radiate outwards through history into the present? What are the best terms and concepts to describe and understand the new styles that developed between 1300 and 1800? Lectures, discussion, reading, and direct looking consider these questions in a way that works for students at an introductory level. A
Fall HIAA0660 S01 15970 TTh 1:00-2:20(08) (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 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 chronology and geography. Weekly one-hour section required.

Spr HIAA0770 S01 24562 TTh 1:00-2:20(08) (L. Osayimwese)

HIAA 0850. Modern Architecture.
The "classic" period of European and American modern architecture from the turn of the century to the 1950s. Presents both the established canon of masterpieces by among many others, Frank Lloyd Wright, Mies van der Rohe, and LeCorbusier, and counterbalances this approach with information about new building materials, changing conditions of architectural production, and the "mechanisms of fame."

Fall HIAA0850 S01 15973 MWF 1:00-1:50(06) (D. Neumann)
HIAA 0281. 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 have met the residency requirement and are continuing research on a full time basis.

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.

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.

HIAA XLIST. Courses of Interest to Concentrators.

International Relations

Open only to Senior students accepted into the honors program in international relations. Instructor permission required.

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. Four meetings per week, audio and video work, two Italian films. Note: This is a year course.

ITAL 0110. Intensive Elementary Italian.
Covers the same material presented in Italian 100-200. One semester equivalent to the standard two-semester sequence. Daily meetings plus audio and video assignments.
ITAL 0200. Elementary Italian. See Elementary Italian (ITAL 0100) for course description.
Spr ITAL0200 S01 24743 MW 1:00-1:50(08) (F. Fantarella)
Spr ITAL0200 S01 24743 Th 1:00-2:20(08) (F. Fantarella)
Spr ITAL0200 S02 24744 MW 10:00-10:50(09) (F. Fantarella)
Spr ITAL0200 S02 24744 Th 10:30-11:50(09) (F. Fantarella)
Spr ITAL0200 S03 24754 MW 2:00-2:50(11) (F. Fantarella)
Spr ITAL0200 S03 24754 Th 2:30-3:50(11) (F. Fantarella)

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 16326 MTWTh 11:00-11:50 (C. Abbona-Sneider)
Fall ITAL0300 S02 16327 Arranged (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.
Spr ITAL0400 S01 24746 MTWTh 11:00-11:50 (F. Fantarella)
Spr ITAL0400 S02 24747 MTWTh 12:00-12:50 (F. Fantarella)

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 16328 MTWTh 12:00-12:50 (C. Abbona-Sneider)

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, or placement by examination.
Spr ITAL0600 S01 24748 MTWTh 12:00-12:50 (F. Fantarella)

ITAL 0701. Simulating Reality: The (Curious) History and Science of Immersive Experiences. Can an experimental approach enhance our critical-historical understanding of immersive experiences? We will look at the history of 3D vision from an interdisciplinary perspective combining the science of perception and the cultural history of technology. Through a series of collaborative activities and team experiments, we will learn how popular, pre-digital optical devices (such as camerae obscurae, magic lanterns, panoramas or stereoscopes) foreshadow contemporary VR, AR, or XR experiences designed for education and entertainment. Among the themes explored: virtual travel, social voyeurism and surveillance, utopian and dystopian imagination.
Spr ITAL0701 S01 25714 M 3:00-5:30(13) (M. Riva)

ITAL 0975. Let's Eat, Italy: Italian History and Culture through Food. We are what we eat. This course focuses on Italian traditions and its daily culinary practices to understand how food shaped and continues to shape Italian culture and identity. We will explore the historical, economic and social factors that have influenced the development of a national cuisine. How does food connect memory and identity? Sources considered are family memoirs and cookbooks; political programs of Futurism and Fascism and their relationship to Italian foodways; food representations in literature and cinema. Course will look at Italian - American cuisine and its key role in shaping identities in the new world.
Fall ITAL0975 S01 16329 Arranged (F. Fantarella)

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.
Spr ITAL1020 S01 24749 Th 2:30-3:50(11) (R. Martinez)

ITAL 1350A. Transmedia Storytelling and the New Italian Epic. Transmedia Storytelling and the New Italian Epic. "New Italian Epic" describes a network of stories blending fiction and non-fiction across a variety of media, from books to blogs and zines, from feature or documentary films to TV/YouTube series and video games. These Untitled Narrative Objects often explore conflictual aspects of contemporary society, such as migration, organized crime, trafficking and corruption, environmental upheavals, from a militant perspective. We will look at the way these UNOs both exploit and evade technological and industrial constraints in order to shape their realistic, utopian or dystopian strategies. Sections in both English and Italian.
Fall ITAL1350A S01 16330 Th 4:00-5:30(04) (M. Riva)

ITAL 1580. Word, Image and Power in Early Modern Italy. This undergraduate lecture class is designed to introduce cultural and historical perspectives on Italy from Siena in the Middle Ages to Renaissance Florence and the early modern Veneto. Team taught by professors of Italian Art History, History, and Literature, we will move across Italy and the centuries focusing on monuments of literature, art, architecture, and history through different disciplinary lenses. In English.
Fall ITAL1580 S01 15386 MWF 11:00-11:50(16) (C. Castiglione)

Spr ITAL1610 S01 24750 W 3:00-5:30(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 2100. Introduction to Italian Studies. This seminar, a requirement for graduate students in Italian Studies, has three objectives: 1) to provide a panoramic view of the current research in the interdisciplinary field of Italian studies (literature, history, arts and media); 2) to provide a picture of the professional state of the field, within the framework of more global developments in academia and the job markets; 3) to provide useful information about the resources and the new tools and techniques for research available to students at Brown and elsewhere (special collections in the Brown libraries, digital resources such as data bases, electronic journals, web projects, etc.).
Fall ITAL2100 S01 16331 Arranged (S. Stewart-Steinberg)

ITAL 2450. Exchange Scholar Program. Fall ITAL2450 S01 15307 Arranged "To Be Arranged"
Spr ITAL2450 S01 24197 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 16333 F 12:00-1:30 (M. Riva)
Spr ITAL2820 S01 24751 F 12:00-1:30 (M. Riva)

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 15308 Arranged "To Be Arranged"
Spr ITAL2970 S01 24198 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 residency requirement and are continuing research on a full time basis.

Fall ITAL2990 S01 15309 Arranged "To Be Arranged"
Spr ITAL2990 S01 24199 Arranged "To Be Arranged"

Judaic Studies

Biblical Hebrew

BHR 0100. Introduction to Biblical Hebrew. 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 BHR0100 S01 15808 MWF 9:00-9:50(01) "To Be Arranged"

Hebrew

HEBR 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 HEBR0100 S01 15809 TTh 1:00-2:20(06) (R. Adler Ben Yehuda)
Fall HEBR0100 S01 15809 MWF 1:00-1:50(06) (R. Adler Ben Yehuda)

HEBR 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: HEBR 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 HEBR0300 S01 15810 TTh 12:00-12:50(15) (R. Adler Ben Yehuda)
Fall HEBR0300 S01 15810 MWF 12:00-12:50(15) (R. Adler Ben Yehuda)

HEBR 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 Israel and 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: HEBR 0400 or equivalent. Enrollment limited to 20.

Fall HEBR0500 S01 15811 TTh 2:30-3:50(03) (R. Adler Ben Yehuda)

Judaic Studies

JUDS 0650M. Difficult Relations? Judaism and Christianity from the Middle Ages until the Present. Jewish and Christian identity in Europe has traditionally been closely connected to the ways the two religions view each other. Mutual admiration, influence, and hatred have combined together in a difficult relationship, fundamental to European history. In this course, we will survey that relationship, examining some key issues and events which shaped it. The Jew’s attitudes and actions will be examined alongside those of their Christian neighbors. Topics covered include: medieval revolution and attraction; early modern re-evaluations of Judaism and Christianity; modern Christian anti-Semitism, Jewish diplomacy, and the Holocaust; the effects of Vatican II; Israel and the contemporary Christian world.

Fall JUDS0650M S01 15812 TTh 1:00-2:20(08) (A. Teller)

JUDS 0603. Race, Religion, and the Secular. The most “secular” presidential election in American history saw the language of Christian America apparently yield to a rhetoric of racism, misogyny, and white identity. But racialization and secularization are very much intertwined. In an effort to understand how “whiteness” is tied to the history of Christianity and secular, liberal democracies, this class will trace the figure of the “Jew” in the Christian imagination, and examine the racial and religious othering of Judaism as an entry point for reflecting upon contemporary American social and political struggles surrounding religious and racial identities.

Fall JUDS0603 S01 15814 W 3:00-5:30(17) (P. Nahme)

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.

Fall JUDS0670 S01 16372 TTh 9:00-10:20(02) (S. Olyan)

JUDS 0682. How Bible Became Holy. 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.

Fall JUDS0682 S01 16769 TTh 10:30-11:50(13) (M. Satlow)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
JUDS 0820. The Language of Religious Faith.
A course on the ways poetry provides a language of religious faith that emerges from the sense of a divine presence in human experience. We will explore how this language of religious faith expresses a wide range of both negative and positive responses by those seeking a relationship with this divine presence, including fear, doubt, guilt, abandonment, ecstasy, gratefulness, hopefulness, and security. Our study of this phenomenon will yield insights into the relationship between psychology and spirituality. Sources will include the biblical books of Psalms and Job and contemporary Jewish and Christian poetry.

The modern engagement with the many ways that we construct identity has been matched by a similar wave of studies about identity construction in the ancient world. In this course we will discuss the rise of "Judaism" and "Jewish identity" in the ancient period (looking at roughly 400 BCE-200 CE), and compare it with the movement of the followers of Jesus as a negotiation of a new identity within Judaism (roughly 30 CE-200 CE). We will conclude with the question of the "Parting of the Ways" of these two groups.

JUDS 1625. Problems in Israelite Religion and Ancient Judaism.
A series of topics in Israelite religion and ancient Judaism which are of current scholarly interest are explored in a seminar setting. Students are encouraged to read widely and pursue individual research interests. The course assumes a basic knowledge of biblical literature and scholarly criticism. Enrollment limited to 20.

The seminar explores the relationship between humor, popular culture and Jewish ethnic identity in early 20th-century Europe and America. It argues that self-deprecating humor and satiric performance of Jewish stereotypes were not expressions of self-hatred, but complex cultural gestures that led to integration within mainstream society. Topics to be considered are: the joke as a social gesture; the Jewish music hall as an urban institution; the politics of blackface in American Vaudeville; the East-European Jews in Hollywood.

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.

Section numbers vary by instructor. Please see Banner for the correct course reference number (CRN) to use when registering for this course.

Archaeological exploration in the "Holy Land" began in the mid-19th century and was motivated by the quest to discover the biblical sites. This region features among the most important visual and material remains from the Bronze Age through the end of the Ottoman period, and examine how these finds and their interpretations were affected by religious and political motivations from the earliest endeavors to the present day.

JUDS 2450. Exchange Scholar Program.

Center for Language Studies

American Sign Language

SIGN 0100. American Sign Language I, II.
An immersive approach using authentic communication inside and outside of the classroom will be used to develop introductory communicative skills in American Sign Language. Authentic materials from diverse sources will provide an overview of the American Deaf community. Basic media literacy skills will be taught.

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.

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.

SIGN 0300. American Sign Language I. III.
This course will use an immersive approach incorporating authentic communication to develop intermediate communicative skills in American Sign Language. Through authentic materials from diverse sources, students will engage in classroom discussion and produce media to explore Deaf cultural topics related to family dynamics, language and literacy, and education. Prerequisite SIGN0200 or placement interview.

SIGN 0400. American Sign Language IV.
Intensive use of expressive and receptive skills 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.

SIGN 0500. American Sign Language V.
This courses increases American Sign Language skills by introducing advanced vocabulary and grammar in various registers and settings, including informal and formal discussions, presentations, and storytelling. Through authentic materials from diverse sources, students will explore American Sign Language literature and oral traditions. Prerequisite SIGN0400 or placement interview.

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. Five 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, 195 Angell Street. Enrollment limited to 18.

ARAB 0200. First-Year Arabic.
Builds listening, speaking, reading, and writing skills, at the low intermediate level of Arabic proficiency. Five 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 as an audit, and 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.

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. Five 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.

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. Five 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.

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. Four 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. Four 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. Advanced Arabic Language + Culture.
This advanced content course entitled “Arab Women’s Voices” invites students to delve into the female experience in Arab societies as articulated in stories, poems, films, interviews, and art work by and about women. Their multiple voices speak of old traditions and new realities, love and marriage, work and childbearing, war and freedom. They explore the male-female dynamics, question aged customs, and assert their own aspirations. The investigation of that complex theme promotes advanced linguistic capacity and cross-cultural awareness. Prerequisite: ARAB 0700, or an equivalent. Enrollment limited to 12.

ARAB 1990. 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.

ARAB 2450. Exchange Scholar Program.
Catalan
An open content course, which may be offered each semester. Offered as an Independent Study, this course will be adapted to students' needs that are not currently covered by our curricular offerings.

English for Internationals
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.
Fall EINT2200 S01 15529 MTWTh 12:00-12:50 (M. Leuchak)
Spr EINT2200 S01 24251 MTWTh 12:00-12:50 (M. Leuchak)

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.
Fall EINT2300 S01 15530 MTWTh 12:00-12:50 (B. Gourlay)
Spr EINT2300 S01 24252 MTWTh 12:00-12:50 (B. Gourlay)

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.
Fall EINT2400 S01 15531 MW 9:00-9:50 (M. Leuchak)
Fall EINT2400 S02 15532 Th 9:00-9:50 (M. Leuchak)
Spr EINT2400 S01 24262 MW 9:00-9:50 (M. Leuchak)
Spr EINT2400 S02 24263 Th 9:00-9:50 (M. Leuchak)

EINT 2500. Advanced Articulation Tutorial.
This course is an advanced pronunciation tutorial for international graduate students who have achieved a near-native speaker level of fluency in English, but who require greater precision of English articulations, pronunciation, fluency and/or expression. Instructor permission required.
Fall EINT2500 S01 15533 MTWTh 11:00-11:50 (B. Gourlay)
Fall EINT2500 S02 15534 MTWTh 11:00-11:50 (M. Leuchak)
Spr EINT2500 S01 24264 MTWTh 11:00-11:50 (B. Gourlay)
Spr EINT2500 S02 24265 Arranged (B. Gourlay)

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. Instructor permission required.
Fall HNDI0100 S01 15428 MTWThF 12:00-12:50 (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.
Spr HNDI0200 S01 24856 MTWTh 12:00-12:50 (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 15545 Th 4:00-4:50(06) (A. Koul)
Fall HNDI0300 S01 15545 MWF 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.
Spr HNDI0400 S01 24908 Th 4:00-4:50(06) (A. Koul)
Spr HNDI0400 S01 24908 MWF 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 nonfiction. 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 15429 Arranged (A. Koul)
Spr HNDI1080 S01 24858 Arranged (A. Koul)

Language Studies
LANG 1900. Independent Study in Languages.
This course will meet the needs of students who are not studying one of the languages offered by the CLS faculty. Beginner, Intermediate or Advanced integrated skill course focusing on specific reading and writing topics selected by the faculty advisor and the student. Enrollment limited to 10.

Persian
PRSN 0100. 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 PRSN0100 S01 15426 Th 1:00-2:20(08) (I. Anvar)
Fall PRSN0100 S01 15426 MW 1:00-1:50(08) (I. Anvar)

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.
This is the second half of a year-long course. Students must have taken PRSN 0100 to receive credit for this course. If PRSN 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 PRSN0200 S01 24909 Th 1:00-2:20(08) (I. Anvar)
Spr PRSN0200 S01 24909 MW 1:00-1:50(08) (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 15427 Th 10:30-11:50(13) (I. Anvar)

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 0300.
Spr PRSN0400 S01 24857 Th 10:30-11:50(09) (I. Anvar)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
PRSN 0500. Advanced Persian Language and Culture I.
For students who have completed PRSN 0500 or have acquired language skills above the intermediate level through contact with Persian in other ways. The main goal of the 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 PRSN0500 S01 15425 TTh 2:30-3:50(03) (I. Anvar)

PRSN 0600. 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.
Spr PRSN0600 S01 24917 TTh 2:30-3:50(11) (I. Anvar)

PRSN 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.

Turkish

TKSH 0100. Introduction to Turkish Language and Culture I.
This is a proficiency oriented introductory course to Turkish Language and Culture. It adopts and integrated skills approach and is designed for students with little or no prior knowledge of Turkish. The course combines an emphasis on the development of communicative competences with an understanding of language structures and grammar as well as insights into Modern Turkish society and culture. 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. Enrollment limited to 18.
Fall TKSH0100 S01 15431 Arranged 'To Be Arranged'

TKSH 0200. Introduction to Turkish.
This is the second semester of a proficiency oriented introductory course to Turkish Language and Culture. It adopts an integrated skills approach and is designed for students who have taken Turkish 0100 or have placed into the class after consultation with the instructor or a placement exam. The course combines an emphasis on the development of communicative competences with an understanding of language structures and grammar as well as insights into Modern Turkish society and culture.
Spr TKSH0200 S01 25360 Arranged 'To Be Arranged'

TKSH 0300. Intermediate Turkish.
This course is the continuation of TKSH 0200 designed for students who are interested in learning about other cultures and languages. New students can place into it, after special arrangements with the instructor. The course places equal emphasis on the development of the four language skills: speaking, listening, reading and writing. It combines an emphasis on the development of communication skills with an understanding of language structures and grammar and insights into Modern Turkish society and culture.
Fall TKSH0300 S01 15432 Arranged 'To Be Arranged'

TKSH 0400. Intermediate Turkish II.
TKSH 0400 is designed for students who have taken TKSH 0300 and already studied Turkish language to develop proficiency at an advanced level. New students can place into it, after special arrangements with the instructor. The course places equal emphasis on further developing four skills (reading, listening, speaking, and writing) at an advance proficiency level as well as advanced compound and subordinate structures in grammar. It combines an emphasis on the development of communication skills with an understanding of the language and insights into Modern Turkish society and culture.
Spr TKSH0400 S01 25363 Arranged 'To Be Arranged'

Yoruba

YORU 0100. Introduction to Yoruba I.
The first semester of a two-semester beginner's course in Yoruba Language and Culture. This class aims to offer Yoruba language skills and proficiency in speaking, reading, listening, writing, and translation. Focus is placed on informal and formal contexts, e.g., home, school, work, family, social situations, politics, etc. Course uses Yoruba oral literature, proverbs, rhetoric, songs, popular videos, and theater, as learning tools for class comprehension. First semester focuses on conversation, speaking, and listening. Both semesters are required in order for students to earn credit in the course. This class is offered to Brown students through distance learning. The instructor broadcasts from the Cornell campus to a Brown classroom of no more than 5 students. You must attend class on the first day of the semester to be considered.
Fall YORU0100 S01 15430 Arranged (J. Sokolosky)

YORU 0200. Introduction to Yoruba II.
The second semester of a two-semester beginner's course in Yoruba Language and Culture. This class aims to offer Yoruba language skills and proficiency in speaking, reading, listening, writing, and translation. Focus is placed on informal and formal contexts, e.g., home, school, work, family, social situations, politics, etc. Course uses Yoruba oral literature, proverbs, rhetoric, songs, popular videos, and theater, as learning tools for class comprehension. First semester focuses on conversation, speaking, and listening. Both semesters are required in order for students to earn credit in the course. This class is offered to Brown students through distance learning. The instructor broadcasts from the Cornell campus to a Brown classroom of no more than 5 students. You must attend class on the first day of the semester to be considered.
Spr YORU0200 S01 25364 Arranged 'To Be Arranged'

Latin American and Caribbean Studies

This course will be constructed as a journey throughout the complex and diverse region of Latin America. By exploring the main geographical, historical, cultural and ethnic characteristics of this area of the globe, students will discover some critical junctures, and personalities that in the past centuries have defined Latin America as a unique, transnational and multilingual subcontinent. The course will be structured around three themes (indigeneity and localisms, inequality and violence, borders, diasporas and displacements) that will be explored from an interdisciplinary perspective, combining insights from the fields of archaeology, anthropology, arts, history, literature, and political science. Taught in Spanish. Students must be able to conduct their readings in Spanish, when English translations are not available, although during class discussion they may use the language of their choice.
Fall LACA0500 S01 17146 TTh 1:00-2:20(08) (E. Durante)

LACA 1520. Latin American Horror (GNSS 1520).
Interested students must register for GNSS 1520.
Fall LACA1520 S01 17164 Arranged 'To Be Arranged'

For Latin American + Caribbean Studies concentrators writing senior projects or honors theses.

For Latin American + Caribbean Studies concentrators writing senior projects or honors theses.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
For upper-division students interested in pursuing topics in Latin American and Caribbean Studies not currently taught in the Brown curriculum. Students must have significant prior coursework, language skills, and sufficient background knowledge to put together a comprehensive reading list and to produce a final paper that meets the research requirement in the LACA concentration.

Class requirements include weekly meetings with the instructor, reading responses submitted before each meeting, and a self-assessment at the end of the semester by the student. The independent study will culminate in a research paper of sufficient depth and sophistication to meet the research requirement for the concentration in Latin American and Caribbean Studies.

Registration requires a comprehensive reading list developed by the student in consultation with the faculty member and a written agreement on course requirements. The concentration advisor’s approval is required if the course is to count toward the concentration.

No more than two (2) semesters of LACA 1994/1995 may be used toward concentration requirements in Latin American and Caribbean Studies.

For upper-division students interested in pursuing topics in Latin American and Caribbean Studies not currently taught in the Brown curriculum. Students must have significant prior coursework, language skills, and sufficient background knowledge to put together a comprehensive reading list and to produce a final paper that meets the research requirement in the LACA concentration.

Class requirements include weekly meetings with the instructor, reading responses submitted before each meeting, and a self-assessment at the end of the semester by the student. The independent study will culminate in a research paper of sufficient depth and sophistication to meet the research requirement for the concentration in Latin American and Caribbean Studies.

Registration requires a comprehensive reading list developed by the student in consultation with the faculty member and a written agreement on course requirements. The concentration advisor’s approval is required if the course is to count toward the concentration.

No more than two (2) semesters of LACA 1994/1995 may be used toward concentration requirements in Latin American and Caribbean Studies.

Literary Arts

LITR 0100A. Introduction to Fiction.
A workshop for first year students, introducing them to the art of writing fiction. This course is reading and writing intensive. Enrollment limited to 17. S/NC required.

Fall LITR0100A S01 15662 F 3:00-5:30(11) 'To Be Arranged'
Spr LITR0100A S01 25014 F 3:00-5:30(15) 'To Be Arranged'

LITR 0100B. Introduction to Poetry.
A workshop for first year students, introducing them to the art of writing poetry. This course is reading and writing intensive. Enrollment limited to 17. S/NC required.

Fall LITR0100B S01 15663 F 3:00-5:30(11) 'To Be Arranged'
Spr LITR0100B S01 25015 F 3:00-5:30(15) 'To Be Arranged'

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.

Fall LITR0110A S01 15664 T 6:40-9:10PM 'To Be Arranged'
Fall LITR0110A S02 15665 W 6:00-9:30PM 'To Be Arranged'
Fall LITR0110A S03 15666 Th 6:40-9:10PM 'To Be Arranged'
Spr LITR0110A S01 25016 M 6:00-9:30PM 'To Be Arranged'
Spr LITR0110A S02 25017 T 6:40-9:10PM 'To Be Arranged'
Spr LITR0110A S03 25018 W 6:00-9:30PM '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.

Fall LITR0110B S01 15667 M 6:00-8:30PM 'To Be Arranged'
Fall LITR0110B S02 15668 T 6:40-9:10PM 'To Be Arranged'
Fall LITR0110B S03 15669 Th 6:40-9:10PM 'To Be Arranged'
Spr LITR0110B S01 25019 M 6:00-8:30PM 'To Be Arranged'
Spr LITR0110B S02 25020 T 6:40-9:10PM 'To Be Arranged'
Spr LITR0110B S03 25021 W 6:00-8:30PM '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.

Fall LITR0110D S01 15672 T 4:00-6:30(09) 'To Be Arranged'

LITR 0110E. Screenwriting I.
This workshop introduces the fundamentals of screenwriting through a variety of readings, exercises and assignments. Our main focus will be on students’ writing, with particular emphasis on exploring the cinematic potential of your stories and themes, and on developing structures that best suit your material and intentions. This course is limited to undergraduates. S/NC. Enrollment limited to 17.

Fall LITR0110E S01 16550 M 3:00-5:30(05) 'To Be Arranged'
Spr LITR0110E S01 25022 M 3:00-5:30(13) '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.

Fall LITR0210A S01 15670 T 4:00-6:30(09) 'To Be Arranged'
Fall LITR0210A S02 15671 W 3:00-5:30(17) (L. Hunt)
Spr LITR0210A S01 25023 T 4:00-6:30(16) 'To Be Arranged'
Spr LITR0210A S02 25024 W 6:00-8:30PM 'To Be Arranged'

LITR 0210B. Poetry Writing II.
Emphasis is placed on verse strategies, meter, rhythm, imagery and rhyme. 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.

Fall LITR0210B S01 15674 M 6:00-8:30PM 'To Be Arranged'
Spr LITR0210B S01 25025 M 6:00-8:30PM 'To Be Arranged'

LITR 0510C. The Pleasures of the Text.
Enter the radiance of literature, music and film through devotional readings, viewings and listening experiences that will result in a series of weekly creative writing experiences. Dissolve into a narrative or sound or image the way a writer might and return from these experiences inspired and changed. Be prepared for the awe and wonder that only art can afford. Texts may include stories, poems and/or novels by Adler, Baldwin, the Bible, Coetzee, Cortazar, Gluck, Muller, Munro, Morrison, Pancake, Rankine, Schwartz, Wolf and others. Films by Akerman, Anderson, Kurosawa and Herzog. Music by classical, jazz and hip-hop artists.

Fall LITR0510C S01 16688 T 12:00-2:30 (C. Maso)

LITR 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 19 first year students.

Fall LITR0710 S01 15675 Th 4:00-6:30(04) 'To Be Arranged'
Spr LITR0710 S01 25026 Th 4:00-6:30(17) (M. de la Torre)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
LITR 0999. Graphic Novels and Comic Masterworks. 
Focused on the influence of graphic novels and comic art, this course examines graphic novels and comic art from seminal texts like Art Spiegelman’s Maus through a range of mainstream and independent comics from Marjane Satrapi, Grant Morrison, Alan Moore, David B., Lynda Barry, Daniel Clowes, Frank Miller, and many others, including graphic memoir, reportage, and Indie and DIY zines. The course explores image and language in collaboration, seeking a better understanding of this influential genre. Assignments are critical and creative, both individual and collaborative, and will involve daily reading and writing assignments. Enrollment limited to 20.

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.

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.

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.

LITR 1101N. Workshop for Potential Literature. 
A novel without the letter “E”, 100,000-billion sonnets by permutation and texts that take the shape of a Mobius-Strip—all this time and more, as workshop participants try their hands in writing in response to problems created by and inspired by a group of writers engaged in strange constraints and procedures. Instructor permission required. S/NC.

LITR 1101O. Ideas of Narration Before Don Quixote. 
Including weekly reading assignments (Kenneth Goldsmith, Paul Metcalf, W. G. Sebald, Robert Smithson, Vito Acconci, the Surrealists, Public Enemy/The Bomb Squad, Shelley Jackson, Thalia Field, etc.), weekly workshops working in differing genres will be asked to engage a wide range of materials to ”translate” into their art-making process. Please be prepared to write, dance, sing, mix, draw, ask, reach, and fail, in and out of your comfort zone. Individual and collaborative work expected. For writers, dancers, architects, musicians, painters, digital artists, "non-artists." Written permission required.

LITR 1151A. 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.

LITR 1151B. The Foreign Home: Interdisciplinary Arts. 
A study of various directors’ attempts to transfer masterpieces of fiction into film. Concerning both genres we will ask Gertrude Stein’s question: What are masterpieces, and why are there so few of them? Includes fiction by Austen, Bierce, Carter, Cowley, Doyle, Faulkner, Forster, Fowles, Kesy, Joyce, McCullers, Morrison, Nabokov, O’Connor, Thompson, Walker, Spielberg, Woolf, Yamamoto as directed by Burton, Forman, Fellini, Gilliam, Huston, Jordan, Kurasawa, Lee, Potter, and others. Class and weekly screenings. Enrollment limited to 12. S/NC.

This interdisciplinary wintersession course asks students to research and deeply engage with the current status of wild animals in various states of surveillance (either through conservation and preservation, or for entertainment), trafficked for the pet trade, or living essentially as "refugees" in the human world. Original critical research will result in creative and collaborative projects. Site visits to animal sanctuaries, and lectures from people working with animals in a number of disciplines will be featured, as well as a final curated public exhibit and either an online or print publication. Course runs online from approx. 12/22/17-1/11/18 and continues on campus from 1/2/18-1/19/18. By application due in Nov. (see brown.edu/go/winter). Selection will prioritize seniority and relevant experience (any discipline.)

LITR 1151N. Graphic Novels and Comic Masterworks. 
Focused on the influence of graphic novels and comic art, this course examines graphic novels and comic art from seminal texts like Art Spiegelman’s Maus through a range of mainstream and independent comics from Marjane Satrapi, Grant Morrison, Alan Moore, David B., Lynda Barry, Daniel Clowes, Frank Miller, and many others, including graphic memoir, reportage, and Indie and DIY zines. The course explores image and language in collaboration, seeking a better understanding of this influential genre. Assignments are critical and creative, both individual and collaborative, and will involve daily reading and writing assignments. Enrollment limited to 20.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
LITR 1152B. Ekphrasis in Action.
Ekphrasis, according to its most basic definition, is simply poetry that addresses art; we’ll be stretching that definition, making it into a way of interacting with art and even into a way of looking at things in the world that makes them into art. We’ll be visiting art in action, from painting studios to dance rehearsals to a natural history museum, using these visits as premises for writing that we will then share in a workshop format, giving copious feedback. The whole will be supported by readings of theoretical and creative works that address ekphrasis.

Fall LITR1152B S01 17052 T 10:30-1:00 (C. Swensen)

LITR 1152C. Writers-in-the-Community Training & Residencies.
This course will operate mostly “in the field.” We will spend some weeks discussing pedagogical approaches to teaching creative writing in community settings. We will thereafter train in residence, observing a poetry residency at a local elementary school, with visits to other community settings as well (sites to be determined). We will continue to discuss pedagogy, classroom practices and management, administrator-writer relations, and all other necessary logistical planning throughout the semester. By week 7, students will engage in their own writing residencies in pairs or small teams, working in a community setting of their choosing (K-12 school, shelter, library, etc.).

Spr LITR1152C S01 25668 W 3:00-5:30(10) (E. Sikelianos)

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 limited to 30 students.

Fall LITR1200 S01 16668 Th 4:00-6:30(04) (L. Hunt)
Spr LITR1200 S01 25027 Th 4:00-6:30(17) (K. Mahajan)

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/NC.

Spr LITR1410A S01 25033 Th 10:30-1:00 "To Be Arranged"

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/NC.

Fall LITR2010A S01 16547 M 12:00-2:30 (K. Mahajan)
Spr LITR2010A S01 25029 M 12:00-2:30 (L. Hunt)

LITR 2330. 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/NC.

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/NC.

LITR 2450. Exchange Scholar Program.

Mathematics

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. May not be taken for credit in addition to MATH 0070 or MATH 0090. S/NC only.

Fall MATH0050 S01 16381 MWF 2:00-2:50(07) "To Be Arranged"

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: MATH 0050 or written permission. May not be taken for credit in addition to MATH 0070 or MATH 0090. S/NC only.

Spr MATH0060 S01 25273 Thh 10:30-11:50(09) "To Be Arranged"

MATH 0070. Calculus with Applications to Social Science.
A 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 differentiation and integration; applications such as marginal analysis, growth and decay, optimization, and elementary differential equations. May not be taken for credit in addition to MATH 0050 or MATH 0060 or MATH 0090. S/NC only.

Fall MATH0070 S01 16382 Thh 9:00-10:20(02) (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, trigonometric functions, and exponential functions. Introduction to integration with applications to area and volumes of revolution. MATH 0090 and MATH 0100 or the equivalent are recommended for all students intending to concentrate in the sciences or mathematics. May not be taken for credit in addition to MATH 0050 or MATH 0060 or MATH 0070. S/NC only.

Fall MATH0090 S01 16386 MWF 9:00-9:50(01) "To Be Arranged"
Fall MATH0090 S02 16387 MWF 10:00-10:50(14) "To Be Arranged"
Fall MATH0090 S03 16388 MWF 12:00-12:50(15) "To Be Arranged"
Fall MATH0090 S04 16389 MWF 1:00-1:50(06) "To Be Arranged"
Fall MATH0090 S05 16390 MWF 2:00-2:50(07) "To Be Arranged"
Spr MATH0090 S01 25275 MWF 11:00-11:50(04) (D. Katz)
Spr MATH0090 S02 25277 MWF 2:00-2:50(07) "To Be Arranged"

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
MATH 0100. Introductory Calculus, Part II.
A continuation of the material of MATH 0090 including further development of integration, techniques of integration, and applications. Other topics include infinite series, power series, Taylor's formula, polar and parametric equations, and an introduction to differential equations. MATH 0090 or the equivalent are recommended for all students intending to concentrate in the sciences or mathematics.

An overview of one of the most beautiful areas of mathematics. Ideal for students who want a taste of mathematics outside of, or in addition to, MATH 0090 or MATH 0100. Prerequisite: Advanced placement or written permission.

MATH 0100.
- 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 MATH 0540 is a prerequisite for all 1000-level courses in Mathematics except MATH 1260 or MATH 1610. Recommended prerequisite: MATH 0100 or equivalent. May not be taken in addition to MATH 0540.
- 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 prerequisite: MATH 0100 or equivalent.

MATH 0110. 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.

MATH 0110.
- 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 the Gauss-Bonnet theorem. Of surfaces, Gaussian curvature and mean curvature, geodesics, minimal surfaces, and the topology of Euclidean plane and 3-space. Prerequisite: MATH 0520, or permission of the instructor.

MATH 0120. Intermediate Calculus. Covers roughly the same material as MATH 0100, 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.

MATH 0120.
- 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.

MATH 0130. 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.

MATH 0130.
- 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.

MATH 0200. Intermediate Calculus (Physics/Engineering).
Covers roughly the same material as MATH 0100, 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.

MATH 0200.
- This class discusses geometry from a modern perspective. Topics include hyperbolic, projective, conformal, and affine geometry, and various theorems and structures built out of them. Prerequisite: MA 0520, MA 0540, or permission of the instructor.

MATH 0210. 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.

MATH 0210.
- 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.

MATH 0220. 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.

MATH 0220.
- 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 MATH 0540 is a prerequisite for all 1000-level courses in Mathematics except MATH 1260 or MATH 1610. Recommended prerequisite: MATH 0100 or equivalent. May not be taken in addition to MATH 0540.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
MATH 110. 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 16444 TTh 2:30-3:50(03) (H. Nguyen)

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 25322 TTh 2:30-3:50(11) (N. Kapouleas)

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 16445 MWF 10:00-10:50(14) (J. Holmer)

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 25323 MWF 2:00-2:50(07) (B. Cole)

MATH 1230. Graph Theory.
This course covers important material about graph theory, such as spanning trees, network flow problems, matching problems, coloring problems, planarity, Cayley graphs, spectral theory on graphs, and Ramsey Theory. The emphasis will be on a combination of theory and algorithms. Depending on the instructor, connections to such fields as combinatorics, geometry, or computer science might be emphasized. Prerequisite: MATH 0180, 0200 or 0350 and MATH 0520 or 0540 are recommended. Enrollment limited to 40.
Spr MATH1230 S01 25327 TTh 2:30-3:50(11) (R. Schwartz)

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 complex mappings. Prerequisite: MATH 0180, 0200, or 0350. This course does not require MATH 0520 or 0540.
Fall MATH1260 S01 16446 TTh 1:00-2:20(08) (J. Kahn)

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 16447 TTh 9:00-10:20(02) "To Be Arranged"

MATH 1410. 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 Poincare-Hopf theorem, and introduction to three-dimensional topology. Prerequisites: MATH 0520 or MATH 0540, or instructor permission.
Fall MATH1410 S01 16448 TTh 10:30-11:50(13) "To Be Arranged"

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 16449 MWF 11:00-11:50(16) (J. Silverman)
Spr MATH1530 S01 25324 MWF 11:00-11:50(04) (R. Ramadas)

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 25325 TTh 10:30-11:50(09) (T. Goodwillie)

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 25326 TTh 10:00-2:20(08) "To Be Arranged"

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 16450 MWF 10:00-10:50(14) (R. Ramadas)

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 16451 MWF 1:00-1:50(06) (J. Holmer)

MATH 1620. Mathematical Statistics.
This course covers the basics of mathematical statistics and applications to data analysis, pattern recognition and machine learning. Estimation, hypothesis testing, classification and regression using linear models, tree-based methods, support vector machines, and neural networks, with other subjects as time permits.
Spr MATH1620 S01 25335 MWF 1:00-1:50(06) (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.
Spr MATH2010 S01 25328 TTh 9:00-10:20(01) (G. Daskalopoulos)

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 16452 MWF 2:00-2:50(07) (M. Chan)

MATH 2060. Algebraic Geometry.
See Algebraic Geometry (MATH 2050) for course description.
Spr MATH2060 S01 25329 MWF 10:00-10:50(03) (D. Abramovich)

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.
Fall MATH2110 S01 16453 TTh 1:00-2:20(08) (N. Kapouleas)

MATH 2210. Real Function Theory.
Real numbers, outer measures, measures, Lebesgue measure, integrals of measurable functions, Holder and Minkowski inequalities, modes of convergence, L^p spaces, product measures, Fubini's Theorem, signed measures, Radon-Nikodym theorem, dual space of L^p and of C, Hausdorff measure.
Fall MATH2210 S01 16454 MWF 11:00-11:50(16) (B. Pausader)
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.

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.

MATH 2240. Algebraic Topology.
This is a continuation of MATH 2410. Topics include homology, cup products, Poincaré duality, and other topics chosen by the instructor.

MATH 2450. Exchange Scholar Program.
Fall MATH2450 S01 15312 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.

MATH 2520. Algebra.
See Algebra (MATH 2510) for course description.

MATH 2530. 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.

MATH 2540. Number Theory.
See Number Theory (MATH 2530) for course description.

MATH 2720E. Advanced Topics in Mathematics.
Fall MATH2720E S01 16459 TTh 2:30-3:50(03) 'To Be Arranged'

MATH 2720F. Topics in Geometric Analysis.
No description available.

MATH 2870. Preliminary Exam Preparation.
No description available.

MATH 2890. 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 residency requirement and are continuing research on a full time basis.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Modern Culture and Media

MCM 0150. Text/Media/Culture: Theories of Modern Culture and Media.
This introductory course will explore its three key terms “modern,” “culture,” and “media” through a variety of theories, historical narratives, and media objects. We will ask how different media—including print, photography, cinema, television, digital art, online video, archival practices, and social media—yield distinct modes of seeing, thinking, and feeling, structure the ways we act and engage with the common world, and communicate and collaborate. We will read semiotic theory, critical race studies, feminist, post-colonial, queer and political theory, and examine concepts such as textuality, visibility, and networks. Open to undergraduates only.

S01 MCM0150 15892 MW 1:00-1:50 (A. Azoulay)

MCM 0250. Visuality and Visual Theories.
How do we see the world? Not only through our own eyes but through the eyes of others and with the mediation of technologies, perspectives, and points of view, giving us an embedded language to interpret what we see. In the last centuries, this construction of our visual field has been heavily indebted to imperial and racial capitalist modes of production. We will examine these constructions through a variety of technological devices: the camera obscura, panorama, photography, and cinema, and their use in processes of colonization and decolonization, drawing on the case of Algeria and other cases as well.

S01 MCM0250 15892 MW 1:00-1:50 (A. Azoulay)

MCM 0700A. Introduction to the Production Image.
The course will provide students with a basic introduction to digital sound and image acquisition and post-production, and to consider the particular capabilities of these digital technologies, especially as these relate to the production of meaning. Of particular interest will be the representational limits of these technologies at the intersection of science and art. Classes will be organized as workshop environments where extensive class time will be devoted to hands-on learning with digital film cameras, lighting, and digital sound recorders. There are no prerequisites for this class.

Spr MCM0700A S01 24534 Th 1:00-3:50 (D. Udris)

MCM 0700B. Mediating the Live: Making and Documenting Performance Art.
This course focuses on performance art and how artists use recording technologies to document their acts. We will look at key examples of performance art from the past five decades to understand how artists have explored gesture, movement, conduct, speech, embodiment. Documentation is especially important to performance because of the ephemeral nature of the art form. While the performance document is not the same as the performance, it is central to our understanding of the medium and often intrinsic to the works themselves. Students will experiment with various presentation platforms and recording technologies to understand their relationship to performance art.

Fall MCM0700B S01 15983 Th 12:00-6:00 'To Be Arranged'

MCM 0710A. Introduction to Filmic Practice: 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.

Fall MCM0710A S01 15988 M 2:00-4:50 (J. Montgomery)

Spr MCM0710A S01 24536 M 2:00-4:50 (J. Montgomery)

MCM 0730A. Introduction to Video Production: Critical Strategies and Histories.
Provides the basic principles of independent media production through a cooperative, hands-on approach utilizing digital video. Emphasizes video as a critical intervention in social and visual arts contexts. A major project, three shorter works, and in-class presentations of work-in-progress required. Weekly screenings contextualize student work. No previous experience required.

Fall MCM0730A S01 15979 Th 4:00-6:50 (A. Cokes)

MCM 0750A. 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 culture. The class will engage in contemporary debates on art and new media and will experiment with digital photography, video, and coding. Throughout the semester, students will work on a series of short projects, and a final individual or collaborative work. Artist case studies include Hito Steyerl, David Joselit, and Boris Groys.

Fall MCM0750A S01 15900 T 10:00-12:50 (M. Armstrong)

MCM 0750C. Subtle Machines: Designing for Engagement and Response-Ability.
We will build novel individual and collaborative extensions enabling engagement in dialogues and in structures of communication otherwise difficult due to social, political, technological, habitual, and/or unavowable circumstances. Students will develop individual and collective hypotheses, project plans, built apparatuses and systems, actions and performances. We will read and discuss excerpts from Donna Haraway’s Staying with the Trouble, Maurice Merleau-Ponty’s Phenomenology of Perception, D. W. Winnicott’s Playing and Reality, and Karen Barad’s Meeting the Universe Halfway. We will build with familiar and experimental electronic and other materials. Work may occasion collaboration with multiple departments at Brown as well as more broadly.

Spr MCM0750C S01 25551 M 10:00-12:50 (K. Dobson)

MCM 0902M. The end of politics as we know it? New Media & Political Imagination.
Technical inventions have always spawned utopian visions of total social amelioration, followed closely by dystopian fears and moral panics. Digital information technologies are no different. Producing the full range of reactions—from celebrations of “networked protests” to wild accusations of “fake news”—responses to today’s media environments proclaim the end of politics as we know it. Reading works by political theorists alongside scholars of the digital, this course will question both triumphant digital utopianism and fatalist assumptions of ubiquitous manipulation, and instead engage in more complex readings of the ways media shapes and is shaped by subjects and communities alike.

Fall MCM0902M S01 17165 T 4:00-6:30(09) ‘To Be Arranged’

MCM 1204J. A New Black Gaze.
What is a ‘black gaze’? The title of this course is a provocation that poses the question of whether we can identify the existence of a black gaze, while asserting the transformative potential such a gaze both promises and portends. Starting from a close examination of theories of the gaze, we will engage the relationship between contemporary black visuality and what constitutes a black gaze in the twenty-first century. Focusing on a select group of black contemporary artists, we will explore how their work challenges traditional notions of what constitutes the power/politics of the gaze.

Fall MCM1204J S01 17166 M 3:00-5:30(05) (T. Campt)
MCM 1505B. Hitchcock: The Theory.
The films of Hitchcock bind together compelling narratives and metacinematic reflections by means of a single, distinctive shape or form. This method of construction has piqued the attention not only of cinema theorists, who look to Hitchcock to tell us about the nature of cinema and spectatorship, but also philosophers, who look to him to tell us about the nature of thinking, promising, doubting, and obsession. Examining the films themselves, alongside the philosophical speculations they have inspired, we will try to define the complex pleasure -- cinematic and cerebral -- they elicit.

Fall MCM1505B S01 16972 T 1:20-3:50 (J. Copjec)

MCM 1506B. Decolonizing Museums: Restitution, Repatriation and Reparations.
Museums were part of colonial expeditions of looting and destructive extraction of objects from invaded worlds. Restitution of discrete, "precious" objects, even of dozens of thousands of them, could not be the end of processes of repair of worlds ruined by imperial domination but its beginning. In this seminar, we will ask what would it mean to include repair and reparations in the discourse and practices of decolonising the museum. The publication of the Sarr-Savoy report will be our point of departure, alongside the study of catalogues, films, photographs and museal practices.

Spr MCM1506B S01 24617 M 3:00-5:30(13) (A. Azoulay)

MCM 1506C. The Ethics of Psychoanalysis.
Jacques Lacan's seminar VII: The Ethics of Psychoanalysis examines theories of ethics, from Aristotle through Bentham and Kant, before proposing an ethics proper to psychoanalysis. The seminar concludes with a fascinating analysis of Sophocles' Antigone. We will read the seminar closely alongside texts by Freud, Lacan, Badiou, and other contemporary thinkers. Why does psychoanalysis bother to enter ethical debates rather than reject the category altogether?

Fall MCM1506C S01 16086 W 3:00-5:30(17) (J. Copjec)

MCM 1506E. Rethinking Black Visuality.
As part of the Cogut Humanities Center's Black Visualities Initiative, this course will engage practices and theories of black visuality that refuse traditional definitions of visuality that function to refuse blackness itself. Each year, the seminar will focus on a selected genre of visual texts, artistic works, and/or embodied performances and use them to develop an keen understanding of how black artists/thinkers/writers/practitioners articulate the multi-sensory frequencies of black life. Key to our discussions is a rigorous theorization of the complex practices of black refusal and futurity that structure these works.

Spr MCM1506E S01 24615 W 3:00-5:30(10) (T. Campt)

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 media. A major project (10-20 minutes), three shorter works, and in-class presentations of work-in-progress required. Readings on the theory and practice of the form and weekly 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.

Fall MCM1700D S01 15904 W 10:00-12:50 (A. Cokes)

MCM 1701E. Experimental Narrative.
With film well into its 2nd century, a large body of work has emerged that plays with, around, and against conventions of classical cinema. Specifically, what we understand to be traditional narrative structures, such as drama, documentary, and action films. In fact, experimental narrative now has some of its own genres, which are to be found in both mainstream and fringe media. The goal of this class is to investigate some of these forms of experimental narrative. It is predicated on a basic understanding of narrative conventions, and designed to encourage students to make work that challenges those conventions.

Spr MCM1701E S01 24541 W 2:00-4:50 (J. Montgomery)

MCM 1701G. Text in Time-based Art.
Semiotics has taught us to regard each film as a text. What, then, is the role of written text in film? This advanced production seminar explores the interplay of film's desire to image language and language's desire to produce images, not to mention the temporal constraints placed on reading when it is no longer a private, self-regulated activity. We will consider text as a purely visual character, the impact of subtitles, television's gluttonous use of text, and film's appropriation of literary forms. In addition to screenings and readings, students will create their own instantiations of written language in time-based art.

Fall MCM1701G S01 15907 W 2:00-4:50 (J. Montgomery)

Inspired by Marilyn Strathern's concept of 'worlding,' this production course will speculate on technologies of the future as a way to address the present. We'll work in the game designing platform, Unity, Adobe Premiere, and Photoshop to fabricate and co-create our worlds. Although not a gaming course, tools, theories, and vernaculars of game design may be utilized/subverted. Expect readings, discussions, technical workshops, and weekly assignments leading to a final project. "Art in the biological, ecological, and cyborg modes are all aspects of worlding. We cannot denote the world in the name of an ideal world" - Donna Haraway

Spr MCM1701I S01 24543 W 10:00-12:50 (M. Armstrong)

MCM 1701J. Data Visceralization and Climate Change.
The body - our biological corpus, and its social, environmental, and technological extension - grounds our ability to sense and make sense. In ever-changing ways, the sensing and acting body is extensible. Apparatuses, networks, patterns, and affects are central in sculpting consciousness, addressability, and accountability. In contrast to Data Visualisation, in which perceptual representations of data are arranged and optically received, Data Visceralization foregrounds information via translations that are physically experienced. In this course, students will focus on climate change and will develop individual and collective hypotheses, projects, and actions disrupting habitual procession and enabling active engagement.

Fall MCM1701J S01 16969 M 10:00-12:50 (K. Dobson)

Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Time dedicated to the project should fall within the recommended range for independent studies (10-20 hours per week).

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. Time dedicated to the project should fall within the recommended range for independent studies (10-20 hours per week).

MCM 2100X. What is Reality, Now?.
The question of reality has emerged recently with renewed force and sporting a speculative edge. Philosophers are abandoning their hostility to science without going so far as to embrace vulgar materialism. How are these gyrations of thought held together? What are the stakes of this new line of inquiry for the human subject? For esthetics? For politics?

Spr MCM2100X S01 24618 T 1:20-3:50 (J. Copjec)

MCM 2110T. The Contingency of Critique.
Contemporary debates about the nature and status, affects and effects, of critique resonate across the disciplines and beyond. They raise questions of reading and form, ontology and determination, subjectivity and politics. This course takes the notion of surprise as one of the more consistently cited values of the post-critical turn. On this view, critique is the enemy of surprise. Suspicious, dogmatic, grimly predictable: it is incapable of and hostile towards surprise. We will trace the emergence this account and the work of surprise and its cognates (contingency, indeterminacy, play, discontinuity) in critical and postcritical texts.

Fall MCM2110T S01 16087 Th 4:00-6:30(04) (E. Rooney)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
MCM 2120N. Critical Theories of Mass Media
The rise of mass media from print to social media was accompanied by critical discourses that emphasized both euphoric acclamation for the new media and emphatic warnings about the dangers. We will discuss how these critiques are conceptualized in terms of culture, media and of mass in three blocks, each based on the emergence of a specific medium and its technology. The main focus is the reconstruction of basic notions in the critique of mass media and the analysis of specific works by Adorno, Benjamin, Krauss, Dewey, Lipman and others.
Fall MCM2120N S01 16532 M 3:00-5:30(05) (G. Koch)

MCM 2310O. The Visual Frequency of Black Life
How does one represent black life? Historical and contemporary black photo books offer densely layered accounts of blackness and black sociality that, far from restricted to the visual, are haptic and sonic engagements and improvisations. Placing these works in conversation with sonic scripts, embodied performances, and moving images inspired by and in dialogue with them, we will unpack multiple visual frequencies of black life with an eye toward understanding practices of black refusal and futurity that structure their varied creative practices. This collaborative seminar is taught in parallel by Tina Campt at Brown University and Saitiya Hartman at Columbia University.
Spr MCM2310O S01 24620 Th 4:00-6:30(17) (T. Campt)

MCM 2450. Exchange Scholar Program.
Fall MCM2450 S01 15835 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.
Time dedicated to the project should fall within the recommended range for independent studies (13-20 hours per week).

MCM 2990. Thesis Preparation.
For graduate students who have met the residency requirement and are continuing research on a full time basis.
Fall MCM2990 S01 15836 Arranged "To Be Arranged" Spr MCM2990 S01 24204 Arranged "To Be Arranged"

Music

MUSC 0021B. Reading Jazz.
This course will explore the musical aesthetics of jazz in texts about its world. Students will listen to music and read poetry, fiction, autobiography and criticism to investigate techniques (including improvisation, rhythm, timbre and articulation), which authors such as Langston Hughes, Ralph Ellison, Charles Mingus, Stanley Crouch and Jack Kerouac employed to describe and support a creative community. Enrollment limited to 19 first year students.
Fall MUSC0021B S01 16701 Th 4:00-6:30(04) (M. McGarrell)

MUSC 0021J. Stephen Sondheim and the American Musical.
This seminar considers the theater shows of Stephen Sondheim in relation to the history of the American musical. Through close study of selected scenes and shows, we examine how and why Sondheim and his collaborators “reinvented” the genre. Special emphasis will be given to Sondheim’s critical skepticism concerning the myths, characters, and ethos of social optimism that have been central to the Broadway tradition. We examine links between the shows and post-WWII historical contexts, and consider the political implications of the circumscribed social universe—predominantly white, urban, and affluent—within which most of his shows take place.
Fall MUSC0021J S01 16698 TTh 10:30-11:50(13) (D. Gooley)

MUSC 0030. History of Jazz.
The development of jazz from its roots to the present. Focuses on the study of style types (including New Orleans style, early piano jazz, swing, bebop, and cool jazz) and their major instrumental and vocal exponents. Jazz as a social phenomenon is studied in relation to contextual aspects of folk, popular, and art music traditions in the U.S.
Spr MUSC0030 S01 25213 TTh 9:00-10:20(01) (M. McGarrell)

MUSC 0033. From the Blues to Beyoncé: Rock, A Portrait of America.
This course seeks to view American cultural and social history of the last century through the lens of rock music. We will investigate the history of rock and popular music from its roots in the early twentieth-century to the present. We will examine the social, cultural and political contexts that gave birth to the various genres of rock music by exploring the music through the lenses of race, class, gender, advances in technology, and developments in the music business. No musical background is required. There are conference sections for this course that meet in alternating weeks. At the beginning of the semester, Professor Nathan will communicate with enrolled students with information regarding the process of enrolling in the conferences and will provide the override codes needed to enroll in a conference. (Please note: the course is currently full and is managing a waitlist — if you would like to be added to the waitlist, please write to Professor Nathan directly. To get in off the waitlist you will be given an override code to enroll in the main course).
Spr MUSC0033 S01 25207 TTh 1:00-2:20(08) (E. Nathan)

From the early 20th century until now, war, political movements, ideological and cultural shifts, and later economic booms have dramatically impacted music and musical life in China. This course examines various genres of music in China, both native and imported, including traditional instrumental music, propaganda songs, opera, ballet, standards and contemporary classical music, pop music, and communal activities like amateur choruses and calisthenics. This course will exercise critical listening and thinking and comparative analysis skills, with a mix of source readings, recordings, and historical background. No background in music or Chinese history is required.
Spr MUSC0068 S01 25797 W 3:00-5:30(10) (L. Wang)

Examine the history, literature, production and theory of music technology. Track development of musical inventions and their impact on musical thought, production and culture. Develop theoretical and practical knowledge of computer music based on first-hand experience in the Multimedia Lab, using computer music software and hardware to complete creative assignments. Gain an appreciation for the pioneering work done in previous decades, both in research and composition. Become familiar with the literature of electronic music and learn about the impact of technology on popular and experimental genres. Permission granted based on questionnaire given in first class. Preference given to lower-level students.
Fall MUSC0200 S01 16709 TTh 10:30-11:50(13) "To Be Arranged"

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 17006 MWF 11:00-12:00(16) (L. Jiorle-Nagy) Spr MUSC0400 S01 25630 MWF 11:00-12:00(04) (L. Jiorle-Nagy) Spr MUSC0400 S02 25631 MWF 10:00-11:00(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. An entrance exam will be administered in Orwig 315 at the first regular class meeting. Students intending to enroll in MUSC 0550 must pass this test. Experienced instrumentalists or singers who have facility sight reading music normally place into MUSC0550. MUSC0550 is prerequisite to MUSC0560.
Fall MUSC0550 S01 16690 TTh 1:00-2:20(08) (M. Steinbach)
Fall MUSC0550 S02 16693 TTh 10:30-11:50(13) (E. Nathan)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
See Theory Of Tonal Music (MUSC 0550) for course description. Prerequisite: MUSC 0550 or permission of the instructor.
Spr MUSC0560 S01 25510 TTh 1:00-2:20(08) (L. Wang)

MUSC 0570. Jazz and Pop Harmony.
For students with knowledge of rudiments of music, including scales, intervals, key signatures, rhythm and meter. Keyboard skills strongly recommended. Intensive study of chord scales, chord progressions, modulation, voice leading, melody writing, harmonization, reharmonization, chord symbols, and lead sheet construction. Lab sessions will focus on ear training, keyboard exercises, and sight singing. Emphasis will be on the vocabulary of jazz theory and the repertoire will be American popular song.
Spr MUSC0570 S01 25511 TTh 10:30-11:50(09) (E. Tomassi)

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, sectionals, and performance. Enrollment is by audition, based on voice quality, experience, and music-reading ability. Instructor permission required.
Fall MUSC0600 S01 17021 MW 6:30-8:20PM 'To Be Arranged'

MUSC 0601. Chorus.
See Chorus (MUSC 0600) for course description.
Spr MUSC0601 S01 25659 MW 6:30-8:20PM (L. Jodry)

MUSC 0610. Orchestra.
Half credit each semester. A practical study of the orchestra repertory 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 17017 TTh 7:15-9:45PM (M. Seto)

MUSC 0611. Orchestra.
See Orchestra (MUSC 0610) for course description.
Spr MUSC0611 S01 25657 TTh 7:15-9:45PM (M. Seto)

MUSC 0620. Wind Symphony.
Half credit each semester. A practical study of the wind band repertory 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 17075 W 6:00-8:20PM (M. McGarrell)
Fall MUSC0620 S01 17075 M 6:00-7:20 (M. McGarrell)

MUSC 0621. Wind Symphony.
See Wind Symphony (MUSC 0620) for course description.
Spr MUSC0621 S01 25685 W 6:00-8:20PM (M. McGarrell)
Spr MUSC0621 S01 25685 M 6:00-7:20 (M. McGarrell)

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 17079 Th 6:10-7:20 (M. McGarrell)
Fall MUSC0630 S01 17079 M 7:30-8:50PM (M. McGarrell)
Fall MUSC0630 S02 17082 T 8:00PM-9:20PM (M. McGarrell)
Fall MUSC0630 S03 17083 W 2:00-3:20 (M. McGarrell)
Fall MUSC0630 S04 17084 W 4:00-5:20 (M. McGarrell)
Fall MUSC0630 S05 17085 F 4:00-5:20 (M. McGarrell)
Fall MUSC0630 S06 17086 T 12:00-1:30 (M. McGarrell)

MUSC 0631. Jazz Band.
See Jazz Band (MUSC 0630) for course description.
Spr MUSC0631 S01 25686 Th 6:10-7:20 (M. McGarrell)
Spr MUSC0631 S01 25686 M 7:30-8:50PM (M. McGarrell)
Spr MUSC0631 S02 25687 T 8:00PM-9:20PM (M. McGarrell)
Spr MUSC0631 S03 25688 W 2:00-3:20 (M. McGarrell)
Spr MUSC0631 S04 25689 W 4:00-5:20 (M. McGarrell)
Spr MUSC0631 S05 25690 F 4:00-5:20 (M. McGarrell)
Spr MUSC0631 S06 25691 T 12:00-1:30 (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 17076 W 5:00-7:20 (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 25765 W 5:00-7:20 (M. Obeng)

MUSC 0642. World Music Ensemble.
This ensemble focuses on global percussive and song traditions, especially those of the African diaspora (based on instructor's vast musical experiences). Here western instrumentalists fuse with traditional musicians from every culture: bongo, gyil, ukulele, tabla, etc. Students will grow and develop their musical skills by learning new techniques on their own instrument, exploring a range of repertoire representing genres such as highlife, reggae, salsa, afrobeat, Afro-jazz, and global fusions. There will be unique opportunities to work on improvisation taking influence from Steve Reich, Tito Puente, Randy Weston, Hugh Masekela, Paul Simon, Miriam Makeba, Ghanaba, and Milton Nascimento.
Fall MUSC0642 S01 17077 M 7:00-9:00PM (M. Obeng)
Spr MUSC0642 S01 25763 M 7:00-9:00PM (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 17078 T 5:00-7:20 (M. Perlman)

MUSC 0651. Javanese Gamelan.
See Javanese Gamelan, MUSC0650, for course description. Enrollment limited to 18 students.
Spr MUSC0651 S01 25692 T 6:00-8:50PM (M. Perlman)

MUSC 0670. Old-Time String Band.
Half credit 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 17160 T 7:00-8:50PM (S. Astrausky)

MUSC 0671. Old-Time String Band.
See Old-Time String Band (MUSC 0670) for course description. Enrollment limited to 20 students.
Spr MUSC0671 S01 25802 T 7:00-8:50PM (S. Astrausky)

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 17161 Arranged (L. Finkel)
MUSC 0681. Chamber Music Performance.
See Chamber Music Performance (MUSC 0680) for course description. Spr MUSC0681 S01 25803 Arranged (L. Finkel)

Half credit each semester. Restricted to skilled musicians. Openings are limited. Enrollments and re-enrollment are by auditions and jury. Lessons are given by consultants 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.

MUSC 0900. Haydn and Mozart.
This course explores the music of Joseph Haydn (1732-1809) and Wolfgang Amade Mozart (1756-1791); two remarkable composers, who led powerfully contrasting but intertwined lives. Our focus will be Mozart's three operas that he produced with the librettist Lorenzo Da Ponte—Le Nozze di Figaro, Don Giovanni, and Cosi fan tutte, Haydn's twelve London Symphonies, and his grand oratorio, The Creation. Through these works we can access a wealth of issues and themes of the late Enlightenment style: questions of voice, affect, register, eighteenth-century listening, comedy, form, dance, naturalness, mimesis, the sublime, orchestral effect, and musical modernity. Spr MUSC0900 S01 25792 TTh 1:00-2:20(08) (E. Dolan)

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 or MUSC 0570, or permission of the instructor. Fall MUSC1010 S01 16705 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 25216 MWF 2:00-2:50(07) (A. Cole)

MUSC 1040. Analysis of Romantic Musics.
This is an analysis course focusing on music of 19th -century Western concert tradition. The primary goal is to improve and introduce new analysis skills related to chromatic harmony and form. The course proceeds by distinctive genres, including examples of solo piano works, lied, string quartets and other chamber works, symphonies, tone poems, and opera. Though the emphasis is primarily on analyzing purely musical elements, we will also touch on broader issues of Romantic aesthetics and cultural contexts, such as fragmentation, virtuosity, nostalgia, and the debate over absolute and programmatic music. Spr MUSC1040 S02 25794 TTh 1:00-2:20(08) 'To Be Arranged'

MUSC 1100. Introduction to Composition.
Composition students begin by 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 MUSC 0570 or permission of the instructor. Enrollment limited to 20 students. Fall MUSC1100 S01 17004 W 3:00-5:30(17) (K. Warren)

MUSC 1110. Seminar in Composition.
This is a seminar-based course with a creative component focusing on specific compositional techniques such as writing transitions and motivic development, and writing for specific kinds of ensembles. These techniques are applicable to all kinds of music, from concert music to popular genres. The course will also address aesthetic issues, trends and influences and how they affect living composers’ individual voices. Besides studying notated repertoire from the concert tradition, we will also examine approaches to film scoring, improvisation, and environmental sound worlds outside of the traditional concert hall. Spr MUSC1110 S01 25206 W 3:00-5:30(10) (E. Nathan)

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 25218 TTh 2:30-3:50(11) (J. Moses)

MUSC 1240I. Building Musical Instruments.
In Building Musical Instruments, we will study and create expressive musical sound by building electronic instruments. Using sonic goals as inspiration for design features, we will build contact microphones, basic synthesizers, digital controllers, and physical enclosures, and we will consider the ways in which these distinct objects can unite to form a musical performance system. Topics include: musical listening and design, resonance of different materials, soldering, breadboarding, reading a basic schematic diagram, creating an enclosure, and expressive interaction with instruments. Override codes required; interested students must attend first day and complete questionnaire, only after which will override codes be distributed. Fall MUSC1240I S01 17005 TTh 10:30-11:50(13) (K. Warren)

MUSC 1240M. Composing with Ableton.
In Composing with Ableton, we will study and use the well known music-making software Ableton Live and its subsidiary Max for Live (M4L). We will consider sound in Live and M4L from a variety of perspectives, from popular music vocabularies to experimental sound practices. This project-based class teaches production techniques in tandem with critical investigation of genre and development of personal style. Topics include: DAW-style production, control information, interactivity, and digital signal processing. Override codes required; interested students must attend first day and complete questionnaire, only after which will override codes be distributed. Spr MUSC1240M S01 25624 TTh 10:30-11:50(09) (K. Warren)

MUSC 1240N. Analog Practice.
Analog sound is uniquely tactile, expressive, and flexible. Through a series of solo, collaborative, recorded, and live-performed projects, this class explores the practice of creating analog sound. We will use a wide array of modular and semi-modular analog synthesizers, including the rare ARP 2500. Beginning with broad concepts of voltage flow and modulation, we will expand into considering the unique affordances of various synths, addressing questions such as tone color, ease of sound production and variation, and conduciveness to combination with other sound sources. Interested students strongly recommended to attend first day; final class list determined by questionnaire. Spr MUSC1240N S01 25801 TTh 2:30-3:50(11) (K. Warren)

MUSC 1660A. Mahler's Century.
This seminar will explore key works of Gustav Mahler in multiple contexts, including critical/interpretive traditions, conducting and performance practices, and the contexts of political, cultural, intellectual, and aesthetic history. Readings will include works of Sigmund Freud, Theodor Adorno, Carl Schorske, Julia Kristeva, Judith Butler, and others; we will think about problems such modernism, orientalism, Jewishness, montage, noise, shock, and melancholy. Fall MUSC1660A S01 16702 Th 4:00-6:30(04) (M. Steinberg)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Explores the visual and theatrical dimensions of music performance—both recent and historical—through the analysis of live performances, video clips, and historical documents. Using the critical methods of performance studies, we seek to uncover those aspects of musical experience that have become transparent or normalized by their familiarity, and which are eluded by a traditional focus on music as "sound alone." We concentrate on five genres—rock, classical, pop, jazz, and experimental—and consider figures such as Arturo Toscanini, David Bowie, Jimi Hendrix, Louis Armstrong, Miles Davis, Pauline Oliveros, John Zorn, Diamanda Galás, Madonna and Michael Jackson. Enrollment limited to 24. First year students require instructor permission.

MUSC 1690A. Miles Davis: An Evolution in Jazz. 
This seminar examines the life, music, and iconic status of Miles Davis, the most complex and varied figure in the history of jazz. From the mid-40s, when he emerged as a sideman to bebop virtuoso Charlie Parker, to his death in 1991, Davis was often on the cutting edge of jazz's evolution, spurring on the development of cool jazz, hard bop, progressive jazz, modal jazz, post-bop, and various forms of fusion. He was at the same a powerful though elusive personality who continues to inspire critical controversy. We will examine his creative evolution in the context of the history of popular music taste, race relations, gender roles, and social class in America. Readings include biographies, studies of his music, and collections of critical essays. There will be extensive listening assignments and occasional required video screenings.

MUSC 1700. Score Reading and Conducting. 
The art of reading, analyzing, and conducting a musical score. Studies in clef reading, transposition, ear-training, and structural analysis to develop the skills needed for full comprehension of an orchestral score. Introduces the theory and technique of conducting with practice in the art of physical gesture. Selected repertoire from the Baroque through contemporary periods are studied and conducted in class. Prerequisite: MUSC 0550 or permission of the instructor. May be repeated for credit.

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.

This seminar offers a critical and comparative exploration of American roots music, a category comprising folk, traditional, and popular genres that have been labeled "heritage music" or "ethnic music" in the context of American multiculturalism. Major case studies include African American, Mexican American, and Anglo American traditions/repertoires, with geographical emphases in Appalachia, the city of Chicago, and the state of California. Readings draw on both historical and ethnomusicological scholarship. Some background coursework in ethnomusicology, cultural anthropology, American Studies, and/or ethnic studies is required. Prerequisite: MUSC 1900 or ETNH 1000 (formerly ETNH 0500) or instructor permission.

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.
Philosophy

PHIL 0010. The Place of Persons.
We'll concentrate on 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 us to be morally responsible for our actions? What makes you one individual person or self at a particular time? What makes you today the same individual person as that obnoxious 5-year old who went by your name a few years back?
Spr PHIL0010 S01 25345 MWF 10:00-10:50(03) (D. Christensen)

PHIL 0100. Topics in Feminist Philosophy.
This course is designed to introduce students to core issues of feminist philosophy. We will investigate foundational and topical questions of feminist theory, by both classic and contemporary authors. Topics include: the nature of gender, oppression, masculinity and femininity, objectification, and the relationship between social inequality and knowledge. Emphasis will be placed on understanding these issues in relation to social categories such as race, sexuality and (dis)ability.
Fall PHIL0100 S01 25382 MWF 11:00-11:50(04) (A. Bjurman Pautz)

PHIL 0200. Philosophy of Attention.
This course is meant to provide and introductory exploration into the concept of attention, with special focus on methods of phenomenology, conceptual analysis, and interpretation. We will give special consideration to the role of attention in relation to self-understanding, morality, and aesthetic experience. We will consider questions such as: What is attention? How is attending related to consciousness, awareness, and the unconscious? What role does attentiveness play in agency and embodied action? How can attention be cultivated and shaped? Can we attend too much or too little, too narrowly or too widely, or even in the wrong ways?
Fall PHIL0204 S01 17155 TTh 9:00-10:20(02) ‘To Be Arranged’

PHIL 0500. Moral Philosophy.
What is the right thing to do? What should a good person be like? More generally, what determines what is right and wrong, good and bad, virtuous and vicious? In this course, we will consider three greatly influential moral theories — utilitarianism, Kantianism, and Aristotelian virtue ethics — as well as feminist perspectives on morality. Towards the end, we'll also consider more general questions that any moral theory faces. For instance: Does morality depend on God? Is morality relative or subjective (whatever that's supposed to mean)? And why should we care about being moral in the first place?
Spr PHIL0500 S01 25347 MWF 1:00-1:50(06) (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 predication. Argumentation and reasoning may also be addressed at times. No previous experience with logic or philosophy is required.
Fall PHIL0540 S01 16728 MWF 10:00-10:50(14) (R. Heck)
PHIL 0550. Free Speech.
Freedom of speech is a challenging and controversial ideal. Legal questions are central, but the issues range into moral and political philosophy as well. We will study John Stuart Mill's influential 19th century treatment of the idea, and then concentrate mostly on discussions within the last fifty years, including much that is on the cutting edge of current thinking about freedom of speech. Topics will vary, including such things as: political speech, art and offense, pornography, hate speech, protest, copyright, internet and new media, and campaign finance laws.
Spr PHIL0550 S01 25346 MWF 12:00-12:50(05) (D. Estlund)

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.
Spr PHIL0560 S01 25348 MWF 2:00-2:50(07) (D. Estlund)

PHIL 0600. Introduction to Philosophy of Physics.
An introductory survey of topics relevant to the study and practice of physics, with a particular focus on the structure of space and time.
Spr PHIL0600 S01 25516 TTh 10:30-11:50(09) 'To Be Arranged'

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. This course has no prerequisites.
Spr PHIL0880 S01 25356 TTh 2:30-3:50(11) (F. Ackerman)

PHIL 0909F. Perception.
Begin with a reading of some classic works, and then moves on to contemporary work. Topics include: naive realism versus representational theories of sensory experience, the possibility that sensory experience is massively illusory (so that we already occupy a kind of "virtual reality"), the role of the brain in shaping sensory experience, and the alleged foundational role of sensory experience in knowledge. The focus will be on vision but we will also discuss other sense-modalities. Suggested prerequisite: at least one course in philosophy (2 or more preferred).
Fall PHIL0909F S01 16737 MWF 10:00-10:50(14) (A. Pautz)

PHIL 0909T. Paradox and Infinity.
This course will focus on several important paradoxes that arise within philosophy and mathematics. We will use these paradoxes to investigate central issues in metaphysics, the philosophy of language, decision theory, physics, mathematics, and logic. Among the paradoxes we will discuss are Zeno's paradoxes of space, time, and motion; the paradoxes of set theory; the paradoxes of truth and reference; the sorites paradox; and paradoxes of rational action and rational belief. Enrollment limited to 20.
Spr PHIL0909T S01 25355 MWF 2:00-2:50(07) (J. Schechter)

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 16747 W 3:00-5:30(17) (D. Christensen)

PHIL 0990Y. Philosophy of Quantum Mechanics.
An examination of philosophical issues informed by elementary quantum mechanics; topics include the measurement problem, superposition, non-locality, and competing "interpretations" of the textbook formalism.
Spr PHIL0990Y S01 25517 TTh 2:30-3:50(11) 'To Be Arranged'

PHIL 0991M. Mental Representation.
Discussion of contemporary philosophical and scientific work on intentionality and mental representation. Topics will include: types of mental representation (language of thought, spoken language, perceptual states, images, cognitive maps, trees, object files, etc.), relations between mental representations and the world (reference, informational semantics, teleological semantics), the nature of perceptual content, the differences between perceptual representation and conceptually grounded representation, philosophical theories of concepts, psychological theories of concepts, theories of belief, ethological work on animal beliefs and concepts, and the nature of conscious thought (particularly, evidence pro and con the theory that thought consists of auditory imagery and articulatory imagery).
Spr PHIL0991M S01 25351 T Th 2:30-3:50(11) (C. Hill)

PHIL 0991O. The Meaning of Life.
The seminar examines in detail recent philosophical work on the concept of meaningfulness. We will a range of questions including: What is it for a life to be 'meaningful'? What are the prospects of having a meaningful life? What is a 'crisis of meaning' and in what forms does it come? Philosophers to be considered include Susan Wolff, Jay Wallace, Jonathan Lear, Guy Kahane, and others.
Spr PHIL0991O S01 25597 Th 4:00-6:30(17) (B. Reginster)

PHIL 1280. History of Ethics.
The project of British moral philosophers after Hobbes was to rebut what they all perceived as an ethics based solely on enlightened self-interest with one based on disinterested concern for others. We will examine the early responses to Hobbes of Richard Cumberland and the Earl of Shaftesbury; the moral sense theorists Francis Hutcheson, Joseph Butler, David Hume, Lord Kames, and Adam Smith; and the rationalists Ralph Cudworth and Samuel Clarke. This course is recommended preparation for PHIL 1290, Kant's Practical Philosophy.
Spr PHIL1280 S01 25359 M 3:00-5:30(13) (C. Larmore)

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. The course deals with contemporary American novels and also with Malory. No pre-requisites.
Fall PHIL1400 S01 16735 TTh 2:30-3:50(03) (F. Ackerman)

PHIL 1420. Philosophy and Poetry.
An examination of philosophy and poetry as rival avenues to the apprehension of truth, as well as an introduction to the basic problems of aesthetics. Philosophical readings will range from Plato to Hegel to contemporary writers. The focus of the course will be three philosophical poems: Lucretius' On the Nature of Things, Wordsworth's Prelude, and Eliot's Four Quartets. One previous course in philosophy is recommended.
Fall PHIL1420 S01 16733 TTh 10:30-11:50(13) (C. Larmore)

PHIL 1520. Consciousness.
Topics will include: (i) the different features of various types of consciousness; (ii) dualist, physicalist, and representationalist theories of experience; (iii) the nature of pain and other bodily sensations; (iv) the nature of conscious thought; (v) the qualitative dimension of perception; (vi) introspection; (vii) the roles of attention and working memory in perceptual consciousness; (viii) blindsight, inattentional blindness, hemineglect, and related phenomena; (ix) what it is for a state of consciousness to be unified. Fall PHIL1520 S01 16745 TTh 2:30-3:50(03) (C. Hill)

Decision theory is a formal apparatus for analyzing preferences and choices. Students learn the formal theory and then examine its foundations and philosophical implications. Specific topics: the role of causation in decision problems, the status of the axioms of the theory, problems of infinite utility, rudimentary game theory, social choice functions, utilitarianism as a theorem.
Spr PHIL1550 S01 25383 Th 9:00-10:20(01) (J. Dreier)
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 reality, or merely tell us about parts of the world we can measure directly?
Fall PHIL1590 S01 16743 TTh 10:30-11:50(13) (D. Christensen)

PHIL 1605. 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.
Fall PHIL1605 S01 16740 MWF 2:00-2:50(07) (N. Arpaly)

PHIL 1660. Metaphysics.
A survey of some major topics in metaphysics, with a particular focus on radical metaphysical arguments—arguments that call into question our most basic beliefs about the world. Topics covered may include: What is personal identity? Does personal identity matter? Do personal identity and consciousness matter? Is there right and wrong and objective value? Is there free will? Are there any good arguments for God? Prerequisite: at least one course in philosophy (2 or more preferred).
Fall PHIL1660 S01 16731 MWF 1:00-1:50(06) (A. Pautz)

PHIL 1710. 17th Century Continental Rationalism.
The course will focus on the principle of sufficient reason and involve a close reading of Spinoza's Ethics, along with other texts from Leibniz, Schopenhauer, Heidegger, and some contemporary writers.
Fall PHIL1710 S01 16749 M 3:00-5:30(17) (C. Larmore)

We will cover the main topics of Kant's masterpiece, including his third way between rationalism and empiricism, his approach to skepticism and idealism, his foundational approach to science and everyday experience, and his doctrine of knowledge and its application to practical faith. Prerequisites: PHIL 0360, 1700, 1710 or instructor permission.
Fall PHIL1720 S01 16744 TTh 1:00-2:20(08) (P. Guyer)

PHIL 1750. Epistemology.
We'll concentrate on several issues involving knowledge and rational belief: What is knowledge, and how does it relate to rational or justified belief? Does a person's knowing something depend on non-evidential factors such as the practical importance of the person's being correct? Does the justification of a person's belief depend just on facts internal to the person—or might it depend on her environment? And what can we learn from thinking about the skeptical position which claims that we're not justified in believing even the most ordinary things about the world around us? Pre-req: Must have taken one course in Philosophy.
Fall PHIL1750 S01 25350 TTh 1:00-2:20(08) (C. Hill)

PHIL 1770. Philosophy of Mind.
Questions concerning the nature of mentality and its relation to the body. Selections from the following topics: mind and behavior, mind as the brain, mind as a computing machine, thought and language, action and mental causation, intentionality and consciousness. Prerequisite: at least one course in philosophy (2 or more preferred).
Spr PHIL1770 S01 25349 TTh 10:30-11:50(09) (A. Pautz)

PHIL 1820. Philosophy and Psychoanalysis.
The course proposes a philosophical examination of a variety of psychoanalytical theories beginning with classical Freudian theory and including ego psychology, various relational theories (object relations, intersubjectivity, and attachment theories), and self psychology. The course might also consider some of the philosophical sources of psychoanalytic theory, its interaction with recent developmental research, and its applications in literary and cultural studies.
Spr PHIL1820 S01 25358 TTh 1:00-2:20(08) (B. Reginster)

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 major "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 instructor's permission.
Fall PHIL1880 S01 16750 MWF 1:00-1:50(06) (R. Heck)
Spr PHIL1880 S01 25357 MWF 10:00-10:50(03) (R. Heck)

PHIL 1910F. Schopenhauer's Ethical Thought.
The course offers a detailed survey of Schopenhauer's ethical thought, including his views about the character of moral agency (e.g., free will), about practical reason and deliberation, about philosophical psychology (e.g., the nature of egoism, the nature of pleasure), and about substantive ethics (e.g., compassion, resignation, and the ethical significance of artistic contemplation). It is recommended that students have at least one other course in ethics.
Fall PHIL1910F S01 16986 MWF 2:00-2:50(07) (B. Reginster)

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.

An elective for students writing a thesis. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

PHIL 2011A. Reductionism.
Exploration of reductive approaches in contemporary metaphysics and philosophy of science. The question of whether there is a deep sense in which all the complexity of reality reduces to some more limited class of fundamental features.
Fall PHIL2011A S01 16864 Th 4:00-6:30(04) "To Be Arranged"

PHIL 2030A. Moral Psychology.
This seminar will examine in depth some problems associated with morality, rationality, and the human psyche. Possible topics: acting for reasons, moral responsibility, practical reasoning, moral character, love, modesty, being too good, moral luck, desire, weakness of will. Undergraduates require instructor permission to enroll.
Fall PHIL2030A S01 16748 Th 4:00-6:30(04) (N. Arpaly)

PHIL 2080L. Idealism in the Twentieth Century.
After attacks on Bradley and Royce at the beginning of the twentieth century, "idealism" largely became a dirty word. But while both Berkeleian and Hegelian versions of metaphysical idealism indeed passed out of fashion, versions of Kantian epistemological idealism, the view that what we know of reality is inescapably formed by our own perceptual and conceptual frameworks, continued to underlie both analytic and continental philosophy. This course will pursure this thesis through works by Carnap, Cassirer, Collingwood, Blanshard, Sellars, Davidson, McDowell, and Brandon.
Spr PHIL2080L S01 25460 W 3:00-5:30(10) (P. Guyer)

PHIL 2140I. Skepticism about the A Priori and A Posteriori.
Skepticism about the A Priori and A Posteriori. TBD
Spr PHIL2140I S01 25433 Th 4:00-6:30(17) (D. Christensen)

PHIL 2160Q. Ethical and Political Issues in the Writings of James Baldwin and George Orwell.
This seminar will discuss ethical and political issues in a selection of essays and novels by two of the twentieth century's greatest writers: James Baldwin and George Orwell.
Spr PHIL2160Q S01 25430 M 3:00-5:30(13) (F. Ackerman)

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.
Fall PHIL2200 S01 16727 MWF 9:00-9:50(01) (R. Heck)
Spr PHIL2200 S01 25343 MWF 8:00-8:50(14) (N. Arpaly)
PHIL 2450. Exchange Scholar Program.
Fall PHYS02450 S01 15323 Arranged To Be Arranged
Fall PHYS02450 S02 15324 Arranged To Be Arranged
Fall PHYS02450 S03 15325 Arranged To Be Arranged
Spr PHYS02450 S01 24209 Arranged To Be Arranged

PHIL 2700. Third Year Workshop.
Students will receive training and practice in writing papers for publication in philosophy journals. Each student will complete a paper that has significantly greater scope and depth than a normal seminar paper. The paper will normally have some relevance to an envisioned dissertation, but there will be more emphasis on the quality of work than on relevance to future projects.
Spr PHYS02700 S01 25344 MW 9:00-9:50(02) (J. Dreier)

PHIL 2800. Dissertation Workshop.
No description available. Course for graduate students during their 4th year or above.
Fall PHYS02800 S01 16736 MW 9:00-9:50(01) (J. Dreier)
Spr PHYS02800 S01 25352 MW 9:00-9:50(02) (A. Pautz)

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.
Fall PHYS02970 S01 15326 Arranged To Be Arranged
Spr PHYS02970 S01 24210 Arranged To Be Arranged

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 residency requirement and are continuing research on a full time basis.
Fall PHYS02990 S01 15327 Arranged To Be Arranged
Spr PHYS02990 S01 24211 Arranged To Be Arranged

PHIL XLIST. Courses of Interest to Philosophy Concentrators.

PHYS 0030. Basic Physics A.
Survey of elementary physics for concentrators in sciences other than physics-including premedical and life science students. Students with more advanced math training are advised to take PHYS 0050, which covers the same topics in physics. PHYS 0030 employs the concepts of elementary calculus but little of the technique. Lectures, conferences, and laboratory. Six hours of attendance. Prerequisite: MATH 0090 or equivalent.
Fall PHYS0030 S01 16499 MW 11:00-11:50(16) To Be Arranged
Fall PHYS0030 S02 16500 MW 12:00-12:50(15) To Be Arranged
Spr PHYS0030 S01 25076 MW 12:00-12:50(05) To Be Arranged

PHYS 0040. Basic Physics B.
Survey of 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. Employs the concepts of elementary calculus but little of its technique. Lectures, conferences, and laboratory. Recommended: MATH 0090 or MATH 0100.
Spr PHYS0040 S01 25083 MW 11:00-11:50(04) To Be Arranged
Spr PHYS0040 S02 25084 MW 12:00-12:50(05) To Be Arranged

An introduction to Newtonian mechanics that employs elementary calculus. Intended for science concentrators. Recommended: MATH 0090 or MATH 0100.
Fall PHYS0050 S01 16544 MW 8:30-9:50(01) To Be Arranged

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.
Spr PHYS0060 S01 25097 MW 8:30-9:50(02) To Be Arranged

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. S/NC
Fall PHYS0070 S01 16561 MW 9:00-9:50(01) To Be Arranged

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 19 first year students. Instructor permission required.
Fall PHYS0100 S01 16569 TTh 2:30-3:50(03) To Be Arranged

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. Physical concepts to be covered: mechanical energy, thermodynamics, the Carnot cycle, electricity and magnetism, quantum mechanics, and nuclear physics. 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 19.
Spr PHYS0114 S01 25119 TTh 2:30-3:50(11) To Be Arranged

PHYS 0150. The Jazz of Modern Physics.
This course, aimed at both students in the humanities and sciences, will explore the myriad surprising ways that jazz music is connected to modern physics. No background in physics, mathematics or music is required, as all of these foundational concepts and tools will be introduced.
The Jazz of Physics has three interconnected components:
(1) Using concepts and analogies from music and acoustics to explore the key conceptual ideas in modern physics such as quantum mechanics/information, general relativity, particle physics, dark energy and big bang cosmology.
(2) Exploring the parallels between jazz and physics through the lens of 20th century physics and jazz history, as well as key innovations in both fields with an eye towards future innovations.
(3) Students will learn the tools of signification in physics and develop group projects with a final product.
The course will consist of lectures, related homework sets, weekly discussion meetings, and a final study where groups of students will select a topic of interest.
Fall PHYS0150 S01 16570 MW 8:30-9:50(01) To Be Arranged

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
PHYS 0160. Introduction to Relativity, Waves 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. S/NC. Corequisite: PHYS 1170. (Spr)

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. (Fall)

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. (Spr)

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 equivalent equivalents. (Spr)

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. (Spr)

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). Pre-requisites: PHYS 0060 or 0160, MATH 0180, 0200 or 0350, or consent of the instructor. (Fall)

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. (Fall)

PHYS 1170. Introduction to Nuclear and High Energy Physics. A study of modern nuclear and particle physics, with emphasis on the theory and interpretation of experimental results. Prerequisites: PHYS 1410, 1420 (may be taken concurrently), or instructor permission. (Spr)

PHYS 1270. Extragalactic Astronomy and High-Energy Astrophysics. This course provides an introduction to the astrophysics of galaxies, their structure and evolution, with an emphasis on physical introduction of the observations. Underlying physics concepts such as radiative transfer, nuclear reactions and accretion physics will be introduced. Intended for students at the junior level. Prerequisites: PHYS 0270 and PHYS 0470, and either MATH 0190 or MATH 0200, or instructor permission. (Fall)

PHYS 1410. Quantum Mechanics A. 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. (Fall)

PHYS 1420. Quantum Mechanics B. See Quantum Mechanics A. (PHYS 1410) for course description. (Spr)

PHYS 1500. 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. (Fall)

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. (Fall)

PHYS 1560. Modern Physics Laboratory. 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. (Spr)

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++. (Spr)

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 motion; 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. (Fall)

PHYS 1790C. String Theory for Undergraduates. This course will concentrate on String Theory. It will be given at introductory/intermediate level with some review of the background material. Topics covered will include dynamical systems, symmetries and Noether's Theorem; nonrelativistic strings; relativistic systems (particle and string); quantization, gauge fixing, Feynman's sum over paths; electrostatic analogy; string in curved space-time; and supersymmetry. Some advanced topics will also be addressed, i.e., D-Branes and M-Theory. Recommended prerequisites: PHYS 0470 and 0500, or 0160. (Fall)

PHYS 1890. Undergraduate Research in Physics. Designed for undergraduates to participate, individually or in small groups, in research projects mentored by the physics faculty. Students must have taken one year of college level physics. An average of 8 to 10 hours per week of guided research is required as are weekly meetings with the supervising faculty member. Students should consult with faculty to find a mutually agreeable research project and obtain permission to enroll. Section number varies by instructor (students must register for the appropriate section).
PHYS 1990. Senior Conference Course. Preparation of thesis project. Required of candidates for the degree of bachelor of science with a concentration in physics. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Fall PHYS2010 S01 16588 W 3:00-5:30(17) 'To Be Arranged'
Spr PHYS2010 S01 25144 M 3:00-5:30(13) 'To Be Arranged'

PHYS 2030. Classical Theoretical Physics I. No description available.
Fall PHYS2030 S01 16590 TTh 9:00-10:20(02) 'To Be Arranged'

PHYS 2050. Quantum Mechanics. No description available.
Fall PHYS2050 S01 16591 MWF 10:00-10:50(14) 'To Be Arranged'

PHYS 2060. Quantum Mechanics. No description available.
Spr PHYS2060 S01 25146 MWF 10:00-10:50(03) 'To Be Arranged'

Fall PHYS2070 S01 16593 TTh 1:00-2:20(08) 'To Be Arranged'

PHYS 2100. General Relativity and Cosmology. Given every other year.
Spr PHYS2100 S01 25149 TTh 1:00-2:20(08) 'To Be Arranged'

PHYS 2140. Statistical Mechanics. No description available.
Spr PHYS2140 S01 25151 TTh 1:00-2:20(08) 'To Be Arranged'

PHYS 2300. Quantum Theory of Fields I. No description available.
Spr PHYS2300 S01 25152 TTh 9:00-10:20(01) 'To Be Arranged'

PHYS 2320. Quantum Theory of Fields II. No description available. Instructor permission required.
Fall PHYS2320 S01 16594 TTh 10:30-11:50(13) 'To Be Arranged'

Fall PHYS2410 S01 16595 MWF 12:00-12:50(15) 'To Be Arranged'

PHYS 2420. Solid State Physics II. No description available.
Spr PHYS2420 S01 25153 TTh 10:30-11:50(09) 'To Be Arranged'

PHYS 2430. Quantum Many Body Theory. No description available.
Fall PHYS2430 S01 16596 TTh 10:30-11:50(13) 'To Be Arranged'

PHYS 2450. Exchange Scholar Program. Fall PHYS2450 S01 15330 Arranged 'To Be Arranged'
Spr PHYS2450 S01 24213 Arranged 'To Be Arranged'

PHYS 2600. Computational Physics. This course provides students with an introduction to scientific computation at the graduate level, 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 2030, 2050, 2140; the ability to write a simple computer program in Fortran, Matlab, C or C++.
Spr PHYS2600 S01 25154 TTh 2:30-3:50(11) 'To Be Arranged'

PHYS 2630. Biological Physics. The course is the graduate version of Phys 1610, Biological Physics. The topics to be covered include structure of cells and biological molecules; diffusion, dissipation and random motion; flow and friction in fluids; entropy, temperature and energy; chemical reactions and self-assembly; solution electrostatics; action potential and nerve impulses. The graduate level course has additional pre-requisites of Phys 0470 and 1530, or equivalents. It requires homework assignments at the graduate level. The final grades will be assigned separately from those who take the course as Phys 1610, although the two groups may be taught in the same classroom.
Fall PHYS2630 S01 16597 MWF 1:00-1:50(06) '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 preparing for a preliminary examination.
Fall PHYS2970 S01 15331 Arranged 'To Be Arranged'
Spr PHYS2970 S01 24214 Arranged 'To Be Arranged'

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 residency requirement and are continuing research on a full time basis.
Fall PHYS2990 S01 15332 Arranged 'To Be Arranged'
Spr PHYS2990 S01 24215 Arranged 'To Be Arranged'

Political Science

POLS 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.
Fall POLS0010 S01 15724 MWF 12:00-12:50(15) (R. Arenberg)

POLS 0110. 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.
Spr POLS0110 S01 24362 TTh 9:00-10:20(01) (M. Rogers)

POLS 0220. City Politics. Bosses, reformers, states, bureaucrats, politicians, the poor, the homeless, and the citizen. An introduction to the major themes of urban politics.
Spr POLS0220 S01 24359 TTh 1:00-2:20(08) (J. Morone)

POLS 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 POLS0400 S01 15693 MWF 1:00-1:50(06) (R. McDermott)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
POL 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 answer questions 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 POLS0500 S01 15723 MWF 11:00-11:50(14) (R. Weitz-Shapiro)

POL 0820T. Women’s Work and Welfare in Global Perspective. The seminar looks at how welfare systems structure women’s participation in the workplace, family and society, including: women’s roles in domestic economies; migration flows from poor to rich states, gendered divisions of labor; human trafficking; and pro-natalist responses to population decline. Attention is devoted to policies that support women and families, including welfare, work-and-family reconciliation; micro-financing, conditional income support programs; and the growing role of women’s and non-governmental organizations in welfare policy. Cases are drawn from Europe, Latin America, Asia, Russia and the United States.
Fall POLS0820T S01 24341 W 3:00-5:30(10) (L. Cook)

POL 0820V. Land and Conflict. This first-year seminar considers the connection between land and political conflict. Disputes over territory have been a primary cause of war for centuries. Likewise, other types of conflicts over land continue to be a major factor in political struggles worldwide. Why, how, and when does territory become the subject of violent—or non-violent—conflict? The seminar will begin by thinking broadly about how land has factored into political conflict, both historically and today, and then we will move on to a series of case studies of recent or ongoing conflicts, including Israel/Palestine, Kashmir, the South China Sea, the Arctic, and global farmland.
Fall POLS0820V/S01 15576 Th 4:00-6:30(04) (J. Branch)

POL 0920B. Introduction to Indigenous Politics with Pacific Islander Focus. This introductory course in Indigenous political thought engages with critical Indigenous thinkers in order to understand Indigenous political praxis, resurgence and decolonization. Because Indigenous study is place-based and kinship relationships to land and all existents of that land are fundamental to understanding Indigenous political thought, Indigenous politics must be studied in the context of particular Indigenous peoples. To that end this course focuses on political movements of contemporary Kanaka Maoli (Native Hawaiian). In addition to developing a fuller understanding of Indigenous political thought, this class also explores what it means to move beyond colonial relationships with the State.
Spr POLS0920B S01 24381 T 4:00-6:30(16) (M. Baker)

POL 1020. Politics of the Illicit Global Economy. 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 15573 MWF 10:00-10:50(14) (P. Andreas)

POL 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.
Fall POLS1050 S01 15580 TTh 2:30-3:50(07) (R. Cheit)

POL 1075. Ancients and Moderns. Examines the political thought of Plato and Aristotle and three modern thinkers who were especially animated by these ancient views of politics: Machiavelli, Rousseau, and Nietzsche. Topics include the ends of politics and the nature of good government; the meaning of justice; the value of equality and of hierarchy; the nature of freedom; the role of virtue in political life; and the relationship between philosophy and politics. In reading these ancient and modern thinkers together, we gain a richer understanding of both the quarrels and the continuities between ancient and modern political thought – and the dynamic relationship between them.
Fall POLS1075 S01 17061 TTh 9:00-10:20(02) (S. Krause)

POL 1130. The American Presidency. The origins and evolution of the Presidency in the American political and policy-making system. Special emphasis on the impact of presidential policies from Franklin Delano Roosevelt through Barack Obama; the presidential nomination and general election system; and an exploration of the future challenges facing the winner of the 2016 Presidential election.
Spr POLS1130 S01 24377 TTh 10:30-11:50(09) (R. Arenberg)

POL 1140. Public Opinion and American Democracy. Public opinion is an essential component of democracy. Considering the lack of familiarity about current events, how does public opinion affect public policy? Perhaps more importantly, should it? To assess these questions, we will explore how to measure public opinion and what polls tell us. We will then assess the roots of public opinion and analyze the public policy and representational impact of people’s preferences.
Spr POLS1140 S01 24372 TTh 2:30-3:50(11) (P. Testa)

POL 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. Freshmen welcome.
Fall POLS1150 S01 15722 TTh 10:30-11:50(13) (J. Tomasii)

POL 1160. Constitutional Law: Governmental Powers. 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 constitutional interpretation and constitutional change.
Fall POLS1160 S01 15576 TTh 1:00-2:20(08) (C. Brettschneider)

POL 1210. Latin American Politics. Focuses on political and economic transformation in contemporary Latin America. Special attention is given to the processes of market-oriented economic reforms and democratization that have swept the region during the last twenty-five years. Includes in-depth country case studies where key themes can be discussed and elaborated.
Fall POLS1210 S01 15718 MWF 1:00-1:50(06) (R. Snyder)

POL 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 24336 MWF 11:00-11:50(04) (J. Branch)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 24373 TTh 10:30-11:50(09) (A. Varshney)

POLS 1310. African American Politics.
Focuses on the contemporary African American politics in various spheres of the American political environment. Examines also how the concept of an African American community has evolved and shifted historically. We will pay particular attention to the growing diversity within the African American community and discuss what these changes mean for black political participation, representation, and organizing.
Spr POLS1310 S01 24381 MWF 1:00-1:50(08) (M. Ori)

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 24370 TTh 9:00-10:20(01) (K. Tate)

This course grapples with the problem of slavery and its connection to the political and psychological logic of white supremacy. Students will critically interrogate America's attempt to grapple with black pain and white guilt. The course will also explore and critically evaluate the various responses African Americans have offered in their quest to realize freedom. We will see that African American political thought is not exclusively a response to social and political domination, but also contains a rich philosophical vision of human fulfillment, self-governance, and the good life.
Fall POLS1335 S01 17148 MWF 2:00-2:50(07) (M. Rogers)

POLS 1360. U.S. Gender Politics.
This course covers the politics of U.S. women as activists, voters, candidates, and elected officials. What explains the emergence of the modern-day women's movement? How do women win political seats? Do women legislate differently than men? How did women become legislative and party leaders? How does sexuality and gender affect U.S. electoral politics? This course will also consider the ways in which social class, race-ethnicity, marital status, parenthood, femininity, religiosity, political orientation, and cultural beliefs or stereotypes influence women's public policy and social beliefs. To what extent does gender define all women's political and social viewpoints?
Fall POLS1360 S01 15720 MWF 9:00-9:50(01) (K. Tate)

Analyzes the most pressing global security problems today utilizing current theories of international politics. Examines the changing nature of security threats and considers the likely challenges we will face in the future. Issues covered include the causes of war and peace, weapons proliferation, terrorism and insurgencies, the role of technology, pandemics, humanitarian intervention and human security, and alliances and collective security. The course will include a national security simulation exercise. Pre-requisite: POLS 0400.
Spr POLS1410 S01 24380 MW 8:30-9:50(02) "To Be Arranged"

POLS 1440. Security, Governance and Development in Africa.
Some of the fastest-growing economies in the world now lie in sub-Saharan Africa. Yet Africa is also home to some of the world's most corrupt and violent states. This course will provide a variety of lenses through which to view these and other paradoxes on the continent, with a focus on security, governance and economic development. Topics will include the long-term consequences of colonialism and the slave trade; the politics of independence; the causes and effects of crime, violence and civil war; democracy and democratization; the promise and pitfalls of foreign aid; and the challenges of building strong, stable states.
Spr POLS1440 S01 25064 TTh 2:30-3:50(11) (R. Blair)

POLS 1470. International Negotiation and Conflict Resolution.
Analyzes negotiation process in international relations. Emphasizes how the negotiation process impacts the relations among states, non-state actors, and multilateral institutions in international politics. Deals explicitly with the 'art and science' of negotiations as a means to resolve the conflicts and misunderstandings that are a ubiquitous feature of international relations. Includes simulation exercises and case discussions, drawing on issues ranging from formal diplomatic negotiations to the role of non-governmental organizations in promoting the resolution of international conflicts and on issues such as national and international security, as well as economic, environmental, and humanitarian concerns. Primarily for students with some prior background in the field of international politics. Prerequisite: POLS 0400 or instructor permission.
Spr POLS1470 S01 24378 MWF 9:00-9:50(02) "To Be Arranged"

POLS 1600. Political Research Methods.
Introduction to quantitative research methods in political science. Topics include research design, descriptive statistics, statistical hypothesis testing, and bivariate and multivariate regression. By the end of the course, students will have the requisite skills to intelligently consume and produce basic quantitative social science research. Enrollment limited to 24 sophomore, junior, and senior Political Science, International Relations, or Public Policy concentrators.
Fall POLS1600 S01 15721 MWF 11:00-11:50(16) (P. Testa)

This is the ultimate PPE course (Philosophy, Politics, and Economics). Will explain the big changes in world politics and political economy over the last two hundred years. Why did slavery end? Why did European imperialism and colonialism fade away? Why did World Wars happen? Why did the great powers set up a system of international trade and finance and who benefits from that system? What are the politics of migration? How do global oil politics work? Course is designed to provide students with a broad introduction to the field of international political economy to help address questions like these ones.
Spr POLS1730 S01 25075 MWF 10:00-10:50(03) (J. Colgan)

POLS 1770. Education, Inequality, and American Democracy.
How are public schools and the educational programs they offer products of political inequality? How might public schools remedy those inequalities or exacerbate them? This course examines the ways in which education contributes to democratic governance; how the development of American public schools builds on and reproduces political, economic and social privilege and inequality; and the promise and limitations of various types of reforms designed to redress inequality, including the Common Core. This course focuses primarily on the United States, but looks to other democracies, including Canada and Mexico, to understand the intersection of education, inequality and democratic governance.
Spr POLS1770 S01 24358 MWF 2:00-2:50(07) (S. Mofitt)

POLS 1820D. Civil Liberties: Moral, Political and Legal Approaches.
This course will examine major constitutional controversies within the context of wider debates in political and legal theory. Readings from Supreme Court cases and prominent texts in political/legal theory. Topics include free speech, privacy, abortion, takings and capital punishment. Prior course work in political theory or philosophy recommended. Enrollment limited to 20 juniors and seniors concentrating in Political Science.
Spr POLS1820D S01 24338 Th 4:00-6:30(17) (C. Bretschneider)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
POLS 1820E. Pragmatism in Black and White: Race, Domination, and Democratic Faith.
This course interrogates the emergence of the 19th century philosophical movement known as pragmatism, focusing on William James and John Dewey, and investigates its intimations and resonances in African American intellectuals such as Anna Julia Cooper, W. E. B. Du Bois, Alain Locke, and James Baldwin. We explore the crisis of religious certainty, and pragmatism’s attempt to provide an alternative framework for thinking about democratic governance. We also investigate the persistence of racism that politicized a group of thinkers who, in various ways, overlapped with pragmatists as they offered a normative vision of democracy to address domination. Fall POLS1820ES01 15707 M 3:00-5:30(05) (M. Rogers)

POLS 1820H. Contraband Capitalism: States and Illegal Global Markets.
This course explores the clandestine side of the global economy (including flows of drugs, people, weapons, and money) and state policing efforts. We will examine the organization of these activities, how they interact with the state and legal economy, their relationship to armed conflicts, and how they shape (and are shaped by) domestic and international politics. Enrollment limited to 20 juniors and seniors concentrating in Development Studies, Political Science, or International Relations. Course is not open to students who have taken POLS 1020. Spr POLS1820HS01 24332 M 3:00-5:30(13) (P. Andreas)

POLS 1820I. Indigenous Politics in Hawai‘i: Resurgence and Decolonization.
Because kinship relationships to land and all existents of that land are fundamental to Indigenous Peoples, resurgence and decolonization must be studied in the context of specific Indigenous Peoples and the ways they resist colonial violence and build resurgence practices. This course then focuses on these issues with respect to Kanaka Maoli (Native Hawaiians). We will read works from Kanaka Maoli scholar/activists in order to understand the genealogy of Kanaka Maoli resistance and resurgence practices. We also engage with critical Indigenous thinkers in order to understand Indigenous political praxis that is shared across difference and those that are not. Fall POLS1820I S01 15732 T 4:00-6:30(09) (M. Baker)

POLS 1821L. International Relations of Russia, Europe and Asia.
What role does Russia seek to play in the contemporary international system? Can NATO hold together as an effective military alliance willing and able to defend its member states? How is the rise of China affecting Russia, Europe and the international system? The seminar will discuss these and related questions, considering Russia’s evolving relations with the centers of global power West and East, its efforts to retain control in the former Soviet space and to extend its reach into the Arctic; its agendas in trying to influence US and European domestic politics through ‘soft’ power, and related topics. Spr POLS1821LL S01 24342 Th 4:00-6:30(17) (L. Cook)

POLS 1821N. Political Journalism.
Exploration of the development of political reporting and analysis of contemporary public affairs reporting. Will address key elements of the best political journalism, as well as the manner in which political journalism affects public opinion, political attitudes, and campaigns and elections. Enrollment limited to 20 junior and senior Political Science concentrators. Spr POLS1821NS01 24384 T 4:00-6:30(16) (J. Robbins)

POLS 1821P. Political Psychology of International Relations.
This course covers basic methods and theories in the use of political psychology to study topics in international relations. The second part of the course applies these models to particular topics, including leadership, group dynamics, and the role of emotion in decision making. Enrollment limited to 20 juniors and seniors. Fall POLS1821PS01 15694 W 3:00-5:30(17) (R. McDermott)

POLS 1821V. Democracy and Inequality in American Cities.
Explores the relationship between democracy and inequality in contemporary American cities. The seminar considers different kinds of inequality - economic, political and group/horizontal – from the standpoint of national politics in the United States. The focus then shifts to the literature on urban politics in the United States, assessing the major contrasting theoretical perspectives on the causes of local inequalities in American cities. Finally, we focus on unequal access to public safety and justice. Over the course of the semester, students will be expected to carry out “fieldwork” involving first-hand observation of local inequalities in the Greater Providence area. Fall POLS1821V S01 15725 M 3:00-5:30(05) (R. Snyder)

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. Spr POLS1822CS01 24383 T 4:00-6:30(16) (R. Arenberg)

Understanding and promoting economic, social, and political development is one of the primary challenges facing the world in the twenty-first century. This seminar explores key problems of development and globalization from a comparative and interdisciplinary perspective. Prerequisite: discretion of instructor. Enrollment limited to 20 juniors and seniors. Fall POLS1822GS01 15680 M 3:00-5:30(05) (M. Blyth)

POLS 1822I. Geopolitics of Oil and Energy.
Oil is the single most valuable commodity traded on global markets. This course is designed to introduce students to the international political economy and security dimensions of oil and energy. The course explores the industry’s many impacts on politics and economics, including: Dutch disease and the resource curse; the relationship between oil, authoritarianism, and civil wars; the role of the rentier state; the influence of oil on international warfare; global energy governance (e.g., OPEC); political differences within OPEC; US energy policy and energy security. The materials focus primarily on the political economy of oil-exporters, especially those in the Middle East. Spr POLS1822I S01 24346 W 3:00-5:30(10) (J. Colgan)

POLS 1822S. The Politics of Urban Transformation.
This seminar examines political economic change in U.S. cities. The seminar considers various external forces that act upon the city, principally: (a) migration patterns, (b) economic and technological change, and (c) public policy. We will also consider how various groups and political leaders respond to these forces and on what resources they draw. The seminar pays special attention to political and economic change in Providence, Rhode Island. Enrollment limited to 20 juniors and seniors in Political Science, Public Policy, and Urban Studies. Fall POLS1822SS01 16766 Arranged (M. Orr)

POLS 1822W. Congressional Investigations.
This seminar will explore the role that Congressional investigations have historically played at the intersection of politics, public policy, tension between the executive and legislative branches, law and media, focusing on certain of the seminal Congressional investigations that both reflected and re-shaped the politics of the day. These will include the Pecora investigation into the 1929 stock market crash, the Truman Committee investigation into defense contracting during World War II, the House Un-American Activities Committee, the McCarthy hearings, Watergate, the Iran-Contra hearings and the Senate Permanent Subcommittee on Investigations hearings into the financial services industry. Fall POLS1822WS01 15733 T 4:00-6:30(09) (J. Robbins)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
POL 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 (POL 0400) before enrolling in this seminar. Enrollment limited to 20 juniors and seniors.
Spr POLS1822XS01 24337 M 3:00-5:30(13) (J. Branch)

POL 1823E. Global Justice.
Theories of global justice treat "free market capitalism" as a problem that the theory of global justice is meant to redress. What about from the perspective of the world's most poor, a system of free markets may constitute a form of global justice. We consider an interpretation of global justice that is launched from libertarian mantra, "Free Trade, Free Migration, and Peace." What are the attractions, and shortcomings, of such an ideal global? In what sense, if any, might a global system of open markets claim to be fair or just, especially with respect to the poor and disadvantaged?
Spr POLS1823ES01 24376 W 3:00-5:30(10) (J. Tomasi)

POL 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.
Fall POLS1823HS01 15727 F 3:00-5:30(11) (K. Tate)

POL 1823Z. Gender and Public Policy.
This course explores when and how gender matters to U.S. policymaking, and how views about gender affect the development and implementation of different kinds of public policies. The course will examine gender in the context of key parts of the policymaking process including agenda-setting, group mobilization, issue framing, institutional decision-making (in the executive, legislative and judicial branches), and policy implementation. Class readings will cover four different public policy domains including social welfare policy, health policy, abortion rights, and marriage equality. Students will be able to examine other policy domains in the course of classroom discussions and in their written work.
Fall POLS1823ZS01 15696 Th 4:00-6:30(04) (S. Moffitt)

POL 1824G. Farms, Fisheries, and Politics.
This seminar compares and contrasts the politics of agriculture and the politics of fisheries in the United States. The course examines the rise of the farm bloc and the agricultural welfare state, along with the evolving politics of the farm bill. It then turns to the governance of fisheries and the apparent disconnect between fisheries management and "fish as food." The final part of the course is devoted to a synthesis of perspectives on food and fisheries, including case studies developed through student research. Limited to Political Science concentrators.
Spr POLS1824GS01 24339 Th 4:00-6:30(17) (R. Cheit)

POL 1824J. Culture, Identity and Development.
There is a consensus, in scholarly and policy circles, on the importance of cultural processes and identity for a range of development outcomes across the world. There is far less understanding of how culture and identity influence development. The aim of this course is to develop this understanding. We will draw on readings across the social sciences as well as an analysis of development interventions across the globe to gain a comprehensive understanding of the ways in which culture and identity, conceptualized as actively constructed and changing, influence a range of outcomes including health, sanitation, education, inequality and economic development.
Spr POLS1824JS01 24365 Th 4:00-6:30(17) (P. Singh)

POL 1824T. Foreign Policy in the People’s Republic of China.
Will examines the foreign policy of the People’s Republic of China. Will teach students theoretical perspectives on international relations and critically evaluate whether these theories explain past and present Chinese foreign policy. What explains China’s historical use of military force? Why did the alliance between China and the Soviet Union fall apart despite their institutional and ideological similarities? Has China’s leaders or its domestic institutions affected its international behavior? Why is China modernizing its military and how concerned should we be? To what extent has the world changed China and to what extent does it seek to change the world?
Fall POLS1824TS01 17063 M 3:00-5:30(05) (T. Jost)

Concentrators who have given evidence of superior work in political science may be admitted to honors seminar on the basis of an application submitted in the spring of their junior year. Application and guidelines may be obtained on the Department of Political Science website. Prerequisite: Fulfillment of Methods requirement. Enrollment limited to 20 senior Political Science concentrators. Instructor permission required.
Fall POLS1910 S01 15709 W 3:00-5:30(17) (W. Schiller)

POL 1920. Senior Honors Thesis Preparation.
This course is a continuation of POLS 1910. Political Science Honors students who are completing the theses should enroll. Prerequisite: POLS 1910. Instructor permission required.
Spr POLS1920 S01 24363 W 3:00-5:30(10) (W. Schiller)

POL 1970. Individual 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.

POL 1971. Individual 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.

Introduction to research methods common in political science research. Topics include theory development, problems of explanation and causation, problem identification, research design, and other fundamentals of empirical research. FIRST YEAR POLITICAL SCIENCE GRADUATE STUDENTS ONLY. Enrollment limited to 14.
Fall POLS2000 S01 15731 W 1:30-4:00 (R. Weitz-Shapiro)

POL 2050. Preparing the Prospectus I.
This course covers selected topics in research design and methodology and is designed to help students enrolled in the Political Science PhD program to write and defend a prospectus in their third year of study.
Fall POLS2050 S01 15697 M 1:30-4:00 (J. Morone)

POL 2051. Preparing the Prospectus II.
This course covers selected topics in research design and methodology and is designed to help students enrolled in the Political Science PhD program to write and defend a prospectus in their third year of study. Prerequisite: POLS 2050.
Spr POLS2051 S01 24360 Arranged (J. Morone)

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.
Spr POLS2090DS01 24368 Th 4:00-6:30(17) (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, public opinion formation, the process of policy-making, and voting behavior. Enrollment limited to 14. Graduate students only; qualified undergraduates with instructor permission.
Spr POLS2100 S01 24364 W 4:00-6:30 (W. Schiller)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
POLS 2330. 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 15678 Th 1:30-4:00 (J. Colgan)

POLS 2140. Post Cold War Conflict.
Course explores the nature and consequences 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 24333 M 6:30-9:00PM (P. Andreas)

This graduate seminar examines contemporary scholarship on international conflict. The course seeks to familiarize students with salient theoretical perspectives and debates, with an eye to-ward assisting students in conducting original research. Course topics include rationalist and psychological frameworks, domestic institutions, leaders and advisers, international institutions, norms and culture, technology, diplomacy, and power transitions. Course readings include a range of qualitative, quantitative, and experimental methods.
Spr POLS2265 S01 25474 Th 1:30-4:00 (T. Jost)

POLS 2270. Political Economy of Industrial Development.
Will explore the mechanisms by which assets, institutions, and governance interact to shape patterns of industrial development across the world. The seminar has four main objectives: 1) to review competing schools of thought on why some countries have attained the cutting edge of industrial development and upgrading while others have not, 2) to examine the relationship between evolving structures of industrial production and evolving conditions of politics in particular national settings, 3) to consider how conditions of globalization affect the developmental challenge for industrializing nations, and 4) to consider how new concerns surrounding environmental sustainability affect the process of industrialization.
Spr POLS2270 S01 24369 Arranged (E. Steinfeld)

POLS 2330. Politics in India.
This seminar will present Indian politics in a comparative and theoretical framework. It will focus on four themes: British India and Indian Nationalism; India’s democratic experience; politics of ethnic and religious diversity; and political economy, concentrating especially on India’s economic rise. Readings include the classics of the subfield of Indian politics and political economy, but also quite a lot of recent scholarship. Enrollment limited to 14 graduate students.
Fall POLS2330 S01 16661 Arranged (A. Varshey)

POLS 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.
Fall POLS2360 S01 16684 W 8:30-11:00 (S. Krause)

POLS 2450. Exchange Scholar Program.
Fall POLS2450 S01 15336 Arranged "To Be Arranged"
Spr POLS2450 S01 24218 Arranged "To Be Arranged"

POLS 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 techniques of 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 only.
Fall POLS2580 S01 15728 M 6:30-9:00PM(05) (P. Testa)

POLS 2590. Quantitative Research Methods.
An intermediate statistics course for graduate students. Topics include multiple regression, statistical inference, categorical dependent variable models, instrumental variable models, and an introduction to time series. Course readings and applications examine models used in different fields of political science and public policy including American institutions, comparative politics, and international relations. Open to graduate students concentrating in Political Science or Public Policy.
Spr POLS2590 S01 24334 M 3:00-5:30(13) (R. Blair)

POLS 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 15729 M 6:30-9:00PM(05) (J. Colgan)

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.
Spr POLS2976 S01 15730 M 6:30-9:00PM(05) (J. Colgan)

POLS 2981. Individual Reading and Research.
An independent study course directed by a tenure-line faculty member in 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. 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 2990. Thesis Preparation.
For graduate students who have met the residency requirement and are continuing research on a full time basis.
Fall POLS2990 S01 15337 Arranged (R. Cheit)
Spr POLS2990 S01 24219 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.

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 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 POBS0110 S01 16630 TTh 10:30-11:50(13) (P. Sobral)
Fall POBS0110 S01 16630 MWF 12:00-1:50(13) (P. Sobral)
Spr POBS0110 S01 25065 TTh 9:00-10:20(01) (P. Sobral)
Spr POBS0110 S01 25065 MWF 12:00-1:50(01) (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.

Fall POBS0200 S01 25063 MW 2:00-2:50(08) (P. Sobral)
Spr POBS0200 S01 25063 TTh 1:00-2:20(08) (P. Sobral)

This course explores the Lusophone world vis-à-vis the local, regional, and national culinary traditions of Brazil, Portugal, Luso-Africa, and Goa. Through a broad selection of cultural materials (music, film, television series, short stories, poems, visual art, etc) about cuisine in the Lusophone world. Students will gain introductory knowledge of Portuguese through brief instructional lessons. The class meets every 3-4 weeks to prepare and cook a class meal based on regional cuisines. This course focuses on creating: from a class zine to creative projects. The class will be taught in English with elements of Portuguese. No previous Portuguese language experience required.

Fall POBS0280 S01 17149 TTh 10:30-11:50(13) (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 16632 MW 10:00-10:50(13) (N. Parker)
Fall POBS0400 S01 16632 TTh 10:30-11:50(13) (N. Parker)
Spr POBS0400 S01 25066 MW 10:00-10:50(09) (N. Parker)
Spr POBS0400 S01 25066 TTh 10:30-11:50(09) (N. Parker)

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 16633 TTh 1:00-2:20(08) (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 25072 TTh 2:30-3:50(11) (L. Simas-Almeida)

POBS 0810. Belonging and Displacement: Cross-Cultural Identities.
Focusses 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, Lisperctor, Sclair, Rushdie, Salih, Cristina Garcia, V. S. Naipaul and others. Conducted in English. Enrollment limited to 19 first year students.

Fall POBS0810 S01 16634 TTh 9:00-10:20(02) (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 anthropology, as stepping stones to the first scientific revolution. Conducted in English. Enrollment limited to: 19. Reserved for First Year students.

Fall POBS0910 S01 16641 M 3:00-5:30(05) (O. Almeida)

POBS 0990. Mapping Cross-Cultural Identities.
How do we construct our own identity as life becomes a multitude of narrative threads intersecting and overlapping like roadways on a map? How do we reconfigure identities vis-à-vis those who surround us? We will investigate the ever-changing map of cultural identities and its repercussions on human existence via contemporary literature and a series projects that incorporate the arts (visual, digital, literary) and oral history. Some of the writers include Julia Alvarez, Kiran Desai, Junot Díaz, Milton Hatoum, Chang-Rae Lee, Clarice Lispector, Dinaw Mengestu, Nélida Piñon, Salman Rushdie, Taiye Selasi and others. No experience in the arts necessary.

Spr POBS0990 S01 25070 W 3:00-5:30(10) (P. Sobral)

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. In class, students read and comment on each other's writings. Enrollment limited to 20. Conducted in Portuguese.

Fall POBS1030 S01 16637 T 12:00-2:30 (L. Simas-Almeida)

POBS 1080. Performing Brazil: Language, Theater, Culture.
Designed to deepen the students' understanding of Brazilian culture and society through the performing arts. Students will read a series of plays and respond to them in a variety of ways: in writing, verbally, and through performance. The course will include poetry and music as these can also be performed. Throughout the semester students will also be working on creating their own performance pieces. Conducted in Portuguese.

Spr POBS1080 S01 25071 F 9:00-11:50 (P. Sobral)

POBS 1500A. African Literatures of Portuguese Expression.
A survey of representative African narrative literature of Portuguese expression (Cape Verde, Guinea-Bissau, São Tomé e Príncipe, Angola, and Mozambique). The selections will cover the periods before and after the independence of these former Portuguese colonies. Conducted in Portuguese. Enrollment limited to 40.

Spr POBS1500A S01 25073 Th 4:00-6:30(17) (L. Simas-Almeida)

POBS 1601L. Discourses of Democracy in Brazil: Literary and Historical Perspectives.
This course offers an interdisciplinary examination the origins, history, and transformation of the concepts and practices of democracy in Brazil from the twilight of slavery in 1870s until the twenty-first century through historical documents, historians' narratives, and literary and cultural production. We will see how different intellectuals and political actors understood the notions of democracy in theory and reality through an array of historical sources and literary texts.

Fall POBS1601L S01 16901 F 10:30-1:00 (L. Lehnen)

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.

Fall POBS1720 S01 16654 Th 4:00-6:30(04) (S. Smith)
POBS 1750. Language, Culture, and Society.
Investigates the meanings of language, culture, and society and the
interrelationship among them. Examines the functional and dysfunctional
uses they can play in public education, particularly from the public school administrators’ and teachers’ viewpoints. Explores concerns directly
related to the nature, quality, and future of English-as-a-Second-Language
programs. Reflective activities, lectures, simulations, case studies, role
plays, and small group discussions. Conducted in English. Enrollment
limited to 25.
Fall POBS1750 S01 16655 T 4:00-6:30(09) (M. Pacheco)

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.
Spr POBS2010A S01 25162 T 4:00-6:30(16) (M. Pacheco)

POBS 2020A. Applied Linguistics for ESL.
Focuses on the linguistic development of bilingual children. Addresses
three major dimensions of language acquisition—linguistic, cognitive
and sociocultural—within educational contexts for students of all ages.
Conducted in English. Enrollment limited to 15 graduate students.
Spr POBS2020A S01 25163 Th 4:00-6:30(17) (S. Smith)

POBS 2500G. Nation and Narration.
The invention and transformation of the idea of Brazil as a nation narrative
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.
Fall POBS2500G S01 16640 M 3:00-5:30(05) (J. Valente)

POBS 2600B. Saramago and His Contemporaries.
Focuses mainly on the “œuvre” of José Saramago, the recently deceased
Portuguese Nobel Prize winner. Four other well-known Portuguese
writers (Vergílio Ferreira, Agustina Bessa-Luís, António Lobo Antunes,
Lídia 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.
Fall POBS2600B S01 16639 Th 4:00-6:30(04) (L. Simas-Almeida)

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 15334 Arranged "To Be Arranged"
Spr POBS2970 S01 24216 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.

POBS 2990. Thesis Preparation.
For graduate students who have met the residency requirement and are
continuing research on a full time basis.
Fall POBS2990 S01 15335 Arranged "To Be Arranged"
Spr POBS2990 S01 24217 Arranged "To Be Arranged"

Public Affairs

MPA 2981. Independent Graduate Study.
This is an independent study course for the MPA program.

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 19 first year students.
Instructor permission required.
Spr PHP0030 S01 24914 TTh 6:40-8:00PM(18) (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 19 first year students.
Fall PHP0050 S01 17009 TTh 9:00-10:20(02) (N. Trivedi)

PHP 0100. First year seminar: Statistics is everywhere.
Statistics is the universal language behind data-enabled decision
making. Examples include Google’s page ranking, Amazon’s customer
recommendations, weather prediction, medical care and political campaign
strategy. This seminar will expose students to a variety of problems
encountered in the media, in science and in life for which solutions
require analysis of and drawing inferences from data. We will introduce
basic concepts such as randomness, probability, variation, statistical
significance, accuracy, bias and precision. The course will discuss
statistical problems from reading assignments and material identified by
the students. We will use simulation to illustrate basic concepts, though
previous programming experience is not required.
Fall PHP0100 S01 16097 TTh 1:00-2:20(08) (Z. Wu)

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 24956 MWF 12:00-12:50(05) (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 16098 MWF 11:00-11:50(16) (M. Clark)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
**PHP 0850. Fundamentals of Epidemiology**

As the cornerstone of public health, a strong foundation in epidemiology provides students with the ability to investigate, clarify and criticize claims of disease causation. This course provides students with a foundation in basic epidemiologic concepts and methods. Key measures of disease occurrence and effects used in epidemiology will be discussed; strengths and weaknesses of alternative epidemiologic study designs will be examined. Interpreting epidemiologic evidence to inform public health policy and practice will be emphasized throughout the course.

Open to Public Health concentrators and others by permission; Class limit 80.

Fall  PHP0850  S01  16099  TTh  2:30-3:50(03)  (S. Buka)

**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.

Fall  PHP1070  S01  16101  MW  8:30-9:50(01)  (S. McGarvey)

**PHP 1160. The Global Burden of Mental Illness: A Public Health Approach.**

Provides an introduction to the classification, epidemiology, etiology, treatment and potential prevention of psychiatric disorders from a global perspective. Reviews the magnitude and social burden associated with mental disorders worldwide and opportunities to enhance prevention and treatment. Covers concepts and methods used to study mental illness at the population level, including definitions of “normality” and “pathology”, current classification systems and measurement approaches to assess psychopathology and severity and cross-cultural issues. Covers the prevalence, risk factors, and etiology of major disorders of children, adolescents and adults, including autism spectrum disorders, attention deficit disorders, mood and anxiety disorders, schizophrenia and substance use disorders. PHP 0850 OR prior coursework in psychology, epidemiology, sociology or related fields.

Spr  PHP1160  S01  25643  Th  12:00-2:30  (S. Buka)

**PHP 1501. Essentials of Data Analysis.**

This course covers the basic concepts of statistics and the statistical methods commonly used in the social sciences and public health with an emphasis on applications to real data. The first half of the course introduces descriptive statistics and the inferential statistical methods of confidence intervals and significance tests. The second half introduces bivariate and multivariate methods, emphasizing contingency table analysis, regression, and analysis of variance. This is designed to be a first course in Statistics. The course is intended for Public Health or Statistics concentrators. Others can register with instructor's permission. There are no prerequisites.

Fall  PHP1501  S01  16103  TTh  1:00-2:20(08)  (R. Gutman)

**PHP 1510. Principles of Biostatistics and Data Analysis.**

This course is intended to provide a basic foundation in the methods and applications of biostatistics, and is geared towards the students whose fields of study include a substantial statistical or quantitative component. Ideally, this course is the first in a two-part sequence (the sequel being PHP 1511/2511: Applied Regression ), designed to provide students in the public health, biological and life sciences with broad-based exposure to modern methods of biostatistical inference, in addition to an understanding of underlying mathematical principles and motivations.

Fall  PHP1510  S01  16108  TTh  9:00-10:20(02)  "To Be Arranged"

**PHP 1511. Applied Regression Analysis.**

This course provides a survey of regression techniques for outcomes common in public health data including continuous, binary, count and survival data. Emphasis is on developing a conceptual understanding of the application of these techniques to solving problems, rather than to the numerical details. Extensive use of the computer will be made for analysis of datasets.

Spr  PHP1511  S01  25646  MW  10:30-11:50  (A. Sullivan)

**PHP 1520. Emergency Medical Services: An Anatomy of Critical Performance.**

Examines problems and issues surrounding delivery of emergency medical services in U.S. Topics: cost of illness; rationing health care; living wills; malpractice and its effects; effects of alcohol and other risk behavior. Priority to public health concentrators and PLME students pursuing MPH degree. Enrollment limited to 60.

Spr  PHP1520  S01  24958  W  3:00-5:30(10)  (B. Becker)

**PHP 1530. Case Studies in Public Health: The Role of Governments, Communities and Professions.**

This course provides an integrated knowledge of the public health development, policy, practice and infrastructure and its relationship to medical 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  24960  T  4:30-6:30(16)  (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 public health is recommended. Recommended prerequisites: PHP 0320 and CLPS 0010. Enrollment limited to 20 juniors, seniors, and graduate students.

Fall  PHP1540  S01  16921  TTh  9:00-10:20(02)  (K. Carey)

**PHP 1550. Statistical Programming in R.**

Statistical computing is an essential part of analysis. Statisticians need not only be able to run existing computer software but understand how that software functions. Students will learn fundamental concepts - Data Management, Data types, Data cleaning and manipulation, databases, graphics, functions, loops, simulation and Markov Chain Monte Carlo through working with various statistical analysis. Students will learn to work within an organized fashion with comments. This course will be taught in a "flipped" format. Students will watch a series of videos and work through some simple coding examples before coming to class.

Fall  PHP1550  S01  16109  T  10:00-12:30  (J. Nazareno)

**PHP 1680U. Intersectionality and Health Inequities.**

This course examines health inequities in the U.S from an intersectionality perspective. Intersectionality is both a theory and methodology focused on the power dynamics between oppression and privilege and how various axes of social categories and systems interrelate on various and simultaneous levels. This framework critically examines how systemic injustice and social inequality transpires on a multidimensional basis. This course provides a broad overview of health disparities in the U.S., specifically, examining them through intersecting structural and social factors (e.g., race and ethnicity; gender; immigration status; socioeconomic position; age; sexual orientation; and the promise and limitations of public policy).

Spr  PHP1680U  S01  25693  Th  10:00-12:30  (J. Nazareno)
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 65.
Fall PHP1700 S01 16111 F 1:00-3:30 (K. Kelsey)

PHP 1710. Climate Change and Human Health.
Global climate change is occurring and these changes have the potential to profoundly influence human health. This course provides students with a broad overview of the diverse impacts of projected climate change on human health, including effects of changing temperatures, extreme weather events, infectious and non-infectious waterborne threats, vector-borne disease, air pollution, the physical and built environment and policies to promote mitigation and adaptation. Students will explore multiple sides of controversial issues through lively and informed class discussions, writing exercises, and participation in a series of end-of-term debates. Enrollment is limited to 20 students.
Fall PHP1710 S01 16112 MW 1:30-2:50 (G. Wellenius)

Disasters, natural and anthropogenic, pose significant threats to human security. Effective humanitarian action is important for both short and long-term responses to complex emergencies. The array of factors contributing to the economic and human losses experienced in both natural disasters and complex humanitarian emergencies are vast and complicated, and the strategies employed to mitigate and heal the damage caused by these disturbances must be equal to the task. This course covers diverse topics including the role of NGOs, UN agencies, local governments, peacekeepers and military in humanitarian response; economic impact of humanitarian aid; the evidence base for humanitarian interventions.
Spr PHP1802S S01 25694 Th 4:00-6:30(17) (A. Levine)

PHP 1820. Designing Education for Better Prisoner and Community Health.
This course will provide the needed background and context for understanding the multiple issues and challenges facing prisoners and the national justice and health systems that impact their fate. In addition to contextual background, students in this course will attain the knowledge and skills needed to develop a final practical, real world health communication/ intervention project that addresses one or more health literacy challenges facing people who are incarcerated. Students interested in taking the course must contact the professor directly for information about obtaining an override.
Spr PHP1820 S01 25795 MW 3:00-4:20(10) (B. Brockmann)

PHP 1854. The Epidemiology and Control of Infectious Diseases.
Course objectives are to introduce students to methods and concepts in the study and control of infectious diseases. By the end of this course, students will have a solid foundation in the distribution, transmission, and pathogenesis of major infectious diseases that affect human populations. We will investigate methods to design and evaluate public health strategies to prevent or eliminate infectious diseases, including: outbreak investigation, disease surveillance, infection control, screening, and vaccination. The course is open to undergraduate students who have completed PHP 0320 or PHP 0850, and to graduate students who have completed or are concurrently enrolled in either PHP 2120 or PHP 2150.
Spr PHP1854 S01 25695 MW 9:00-10:20 "To Be Arranged"

PHP 1880. Meditation, Mindfulness and Health.
This course provides an overview on the relation of meditation and mindfulness (the ability to attend in a nonjudgmental way to one’s own physical and mental processes during ordinary, everyday tasks) with various health outcomes and disease risk factors such as depression, anxiety, diet, substance use, and cardiovascular disease. Mechanisms by which mindfulness may influence health will be addressed. The course will assess studies in the field for methodological rigor, and students will be taught strengths and weaknesses of current research. Students will be taught various mindfulness practices including direct experience with mindfulness meditation.
Fall PHP1880 S01 17012 W 3:00-5:30(17) (E. Loucks)

PHP 1890. Epidemiology of Disorders and Diseases of Childhood and Young Adulthood.
Students will learn about diseases and disorders of childhood and young adulthood, including allergies, autism, eating disorders, obesity, endometriosis, and migraines. Students will learn how these disorders are defined, how many youth are impacted, and the age-appropriate epidemiologic methods to study disorders and diseases during childhood, adolescence, and young adulthood, respectively. For the final project, students will pick a disease or disorder of interest that occurs during childhood, adolescence, or young adulthood, synthesize the results from multiple epidemiological studies, and concisely present this information in both a written report and an oral presentation.
Spr PHP1890 S01 25654 T 9:00-11:30 (A. Field)

This dynamic course will provide an overarching public health capstone experience. Students will gain an in-depth knowledge by utilizing and strengthening oratory skills, written skills, and skills needed to work in teams. The instructor is formally trained in Internal Medicine, public health, health policy and clinical epidemiology, with experience which will be brought to the classroom. Topics will span public health successes, things that didn’t work, and things that need more work and effort. This seminar course will emphasize class discussion, interaction and debate regarding differing perspectives on each topic area, as well as in-depth discussion of the assigned readings.
Fall PHP1910 S01 16114 W 3:00-5:30(17) (J. Ahluwalia)

The course provides an overview of social determinants of health. Examples of topics include health effects of educational attainment, social integration, neighborhood socioeconomic characteristics, racial discrimination, gender, income inequality, childhood socioeconomic circumstances, parental neglect, and job strain. Mixed teaching methods are used, including small group discussions, problem-based learning and guest lectures. Open to graduate students and advanced undergraduates.
Spr PHP1920 S01 25655 W 3:00-5:30(10) (E. Loucks)

This course is aimed at enhancing the knowledge and skills central to the application of epidemiologic methods to cancer screening, prevention, and control. We will examine cancer incidence and trends in the U.S. and globally, interpret their implication for cancer etiology, and critically analyze current evidence regarding the role of various major risk factors on human cancer risks. The class will focus on the impact of major environmental, occupational, and lifestyle risk factors on cancers of high public health significance.
Spr PHP1964 S01 25656 F 1:00-3:30 (T. Zheng)

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.

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 Public Health Concentration.
**PHP 2018. Epidemiology of Cardio-Metabolic Health.**
This course surveys the entire landscape of the nutritional, biochemical, and genetic aspects of cardiometabolic health addressing issues of obesity, diabetes, metabolic syndrome, and their micro- and macro-vascular complications. Students will learn about both the descriptive and analytical epidemiology of these seemingly distinct but clearly clustered disorders including the so-called metabolic syndrome comprehensively and in-depth. International comparison of prevalent data in different social contexts will also be reviewed, so that strategies for prevention by either changing our cultures or natures can be appreciated and debated with a better understanding of the related issues confronted by public health and medical professionals.

Fall PHP2018 S01 16150 T 9:30-12:00 (S. Liu)
Fall PHP2018 S01 25780 T 9:30-12:00 (S. Liu)

**PHP 2023. Maternal and Child Health in the United States.**
This is a graduate level course focused on maternal and child health in the United States. While some reference will be made to the experience in other countries, the focus of the course will be on the United States. A broad range of health conditions will be covered, with an emphasis on leading causes of mortality and morbidity. In addition, we will examine the range of programs designed to prevent or address important health threats.

Fall PHP2023 S01 16724 T 2:30-4:50 (P. Vivier)
Fall PHP2023 S01 16724 W 1:00-2:20 (P. Vivier)

**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 or PHP 2150) and either PHP 2508, 2510, or 2520. Open to graduate students only.

Fall PHP2030 S01 16154 M 1:00-3:30 (I. Gareen)

**PHP 2040. Survey 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 PHP 2508 or 2510. Open to graduate students only.

Spr PHP2040 S01 24961 MW 4:00-5:30 (M. Lurie)

**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-obtrusive 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.

Spr PHP2060 S01 24962 F 9:00-11:30 "To Be Arranged"

**PHP 2071. Applied Public Health: Systems and Practice.**
Applied Public Health is a two-semester sequence of courses designed to give students the skills and experiences they need to master understanding public health and health care systems, policy in public health, leadership, communication, interprofessional practice, and systems thinking. This will be achieved through a combination of lectures, in class exercises, homework assignments, and practical experience in a public health setting. The first course in the sequence (PHP 2071) is taken in the Spring of your first year.

Spr PHP2071 S01 24963 T 1:00-2:20 (A. Gjelsvik)

**PHP 2072. Applied Public Health: Policy, leadership and communication.**
Applied Public Health is a two-semester sequence of courses designed to give students the skills and experiences they need to master understanding public health and health care systems, policy in public health, leadership, communication, interprofessional practice, and systems thinking. This will be achieved through a combination of lectures, in class exercises, homework assignments, and practical experience in a public health setting. The second course (PHP 2072) is taken in the Fall of your second year.

Fall PHP2072 S01 16157 F 2:30-3:50 (A. Gjelsvik)

**PHP 2090. Research Grant Writing for Public Health.**
This course focuses on providing knowledge and experience in creating high quality public health research grant applications. Course objectives include developing significant and innovative scientific hypotheses, learning principles of effective written communication, and developing a research grant application suitable to submit for funding. Designed for Public Health School PhD students, post-doctoral fellows, and Masters students with advanced degrees (e.g. MD, PhD). Prerequisite: PHP 2120 or PHP 2150 or instructor permission.

Fall PHP2090 S01 16158 W 9:30-12:00 (M. Lurie)

**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 masters and PhD students. The course is not open to first year students or sophomores but may be available for advanced undergraduates with the instructor's permission.

Fall PHP2120 S01 16160 TH 10:30-11:50(13) (M. Lurie)

**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 25696 F 9:30-12:00 (K. Kelsey)

**PHP 2150. Foundations in Epidemiologic Research Methods.**
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 16161 TH 10:30-11:50(13) (B. Marshall)
Provides an introduction to the classification, epidemiology, etiology, treatment and potential prevention of psychiatric disorders from a population perspective. Reviews the magnitude and social burden associated with mental disorders worldwide and opportunities to enhance prevention and treatment.
Covers concepts and methods used to study mental illness at the population level, including definitions of “normality” and “pathology”, current classification systems, and measurement approaches. The course will also cover psychopathology and severity and cross-cultural issues.
Covers the prevalence, risk factors, and etiology of major disorders of children, adolescents and adults, including autism spectrum disorders, attention deficit disorders, mood and anxiety disorders, schizophrenia, and substance use disorders.

Prerequisites: PHP 0850. (S. Buka)

PHP 2180. Interpretation and Application of Epidemiology.  
This course builds upon the foundation of introductory epidemiology and a basic understanding of quantitative and conceptual methods, with a focus on the interpretation of the strength and meaning of epidemiologic findings. The goal is to help students develop critical thinking skills in order to become more sophisticated interpreters of epidemiologic evidence for guiding policy, clinical practice, and individual decisions, combining subject matter knowledge and epidemiologic methods to wisely evaluate the available research findings. We will focus on judging causality and identifying gaps that future research would need to fill to strengthen our understanding. Prerequisite required or permission of instructor.

This 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 25698 MW 1:30-2:50 (G. Wellingenius)

PHP 2220C. Perinatal Epidemiology: Women and Infants’ Health during Pregnancy in a Global Context.  
This course introduces students to major topics that affect the health of women and their infants during pregnancy and the perinatal period. We will address issues relevant to both high and low-resource settings, but will pay particular attention to low-resource settings. The course covers pregnancy loss and pregnancy outcomes, chronic and infectious diseases during pregnancy, and key methodological issues when studying health outcomes during the perinatal period. The course will include course lectures, informal discussions with experts, and student-led discussions and journal clubs. Student will complete a course paper and brief presentation on a selected research topic. This course is open to masters and PhD students in any concentration or program who have taken an introductory epidemiology course such as PHP 2120 or PHP 2150, and, with instructor permission, to undergraduate students who have taken PHP 0850.

Spr PHP2220C S01 25699 W 3:00-5:30(10) (A. Bengston)

PHP 2220H. The Epidemiology, Treatment and Prevention of HIV.  
The purpose of this seminar is to use HIV as an example to introduce students to a variety of methodological issues in the epidemiologic study of infectious diseases. While we will study the treatment and prevention of HIV in detail, emphasizing the current state of knowledge and critiquing the most recent literature, this course aims to use HIV as an example to better understand the variety of methodological issues in global and domestic infectious disease epidemiology today. Enrollment limited to 25 students. Prerequisites: PHP 0850 or PHP 1854 (undergraduates); PHP 2120 or 2150 and PHP 2508 or 2511 (graduate students).

Fall PHP2220H S01 16725 Th 2:30-5:00 (M. Lurie)

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 16164 TTh 1:00-2:20(08) (C. Howe)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
PHP 2380. Health Communication
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 Public Health may enroll with instructor's permission. Enrollment limited to 20 graduate and medical students.
Spr PHP2380 S01 25703 M 2:30-5:00 (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 Health Sciences the requisite skills to conduct analyses of behavioral data as part of their Master's Thesis. Enrollment limited to 15 graduate students in the BSHS Master's program and the MPH program.
Fall PHP2390 S01 16485 MTh 2:00-3:20 (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.
Spr PHP2400 S01 24967 F 1:00-3:30 (C. Koller)

PHP 2415. Introduction to Evidence-based Medicine.
Unbiased assessments of the scientific literature by means of research synthesis methods are critical for formulating public health policy, counseling patients or prioritizing future research. We focus on the methods and uses of systematic reviews and meta-analyses and their applications in medicine and health policy. After course completion, and with some direction, students will be able to undertake a basic systematic review or meta-analysis. Enrollment limited to 15. Prerequisites: PHP 2120, 2150, or 2460; and PHP 2507/08 or 2510/11 (2508 and 2511 may be taken concurrently); and clinical background or training in basic concepts in medicine (must discuss with instructor).
Spr PHP2415 S01 24969 W 9:00-11:30 (T. Trikalinos)

PHP 2440. Introduction to Pharmacoepidemiology.
The course will focus on substantive topics in pharmacoepidemiology, including relevant principles of pharmacology, inference from spontaneous case reports, study design considerations, premarketing pharmacoepidemiology, common data sources for pharmacoepidemiologic studies, drug utilization review, adherence, and the development, implementation, and assessment of therapeutic risk management policies. The course will also focus on issues in pharmacovigilance, including the legal and historical basis of pharmacovigilance, evaluation of individual adverse drug events, signal detection, active safety surveillance, and medication errors. A clinical background is not required. Prerequisites are PHP 2507, PHP 2508, PHP 2510, or PHP 2511, AND PHP 2120 or PHP 2150, or permission.
Spr PHP2440 S01 24970 T 9:30-12:00 (T. Shireman)

PHP 2451. Exchange Scholar Program.
Fall PHP2451 S01 15328 Arranged "To Be Arranged"

PHP 2455B. Health Services Research Methods II.
This course covers commonly used statistical (regression) models for health services research, including survival analysis; examines the problem of missing data and strategies for addressing it; and provides a basic introduction to causal inference methods for time-varying exposures (including non-adherence). The goal is to familiarize students with important methods in applied work, so they can critically review the published literature and use the methods in their own research. The topics covered should be of interest to students in Health Services, Policy + Practice, Epidemiology, Economics, and beyond. Pre Requisites: Successful completion of PHP 2455A or instructor permission. Interested students who have not taken PHP 2455A should contact issa_dahabreh@brown.edu to make arrangements. Those with adequate background in basic health services research or epidemiologic methods and regression analysis will be able to gain from this course, even if they have not taken PHP 2455A.
Spr PHP2455B S01 24973 M 1:00-3:30 (I. Dahabreh)

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 25409 F 3:00-5:30(15) (O. Galarraga)

PHP 2507. Biostatistics and Applied Data Analysis I.
The objective of the year-long, two-course sequence is for students to develop knowledge, skills and perspectives necessary to analyze data to answer public health questions. The year-long sequence focuses 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. Using lectures, labs and small group discussions, we focus on evaluating data sources, refining research questions, univariate and bivariate analyses, and presentation of initial results. Prerequisite: understanding of basic math concepts and terms. Enrollment limited to 50 students. Instructor permission required.
Fall PHP2507 S01 16166 W 6:30-8:00PM (A. Gjelsvik)
Fall PHP2507 S01 16166 Th 1:00-2:20 (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 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. This spring semester course focuses on regression, interpretation of results, and communication of results. Prerequisite: PHP 2507. Enrollment limited to 50. Instructor permission required.
Spr PHP2508 S01 25410 W 6:30-8:00PM (A. Gjelsvik)
Spr PHP2508 S01 25410 Th 1:00-2:20 (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 17016 Th 9:00-10:20(02) "To Be Arranged"
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. Fall PHP2511 S01 25791 MW 10:30-11:50 (A. Sullivan)

This course will provide an introduction to probability theory, mathematical statistics and their application to biostatistics. The emphasis of the course will be on basic mathematical and probabilistic concepts that form the basis for statistical inference. The course will cover fundamental ideas of probability, some simple statistical models (normal, binomial, exponential and Poisson), sample and population moments, nite and approximate sampling distributions, point and interval estimation, and hypothesis testing. Examples of their use in modeling will also be discussed. Fall PHP2515 S01 16922 MW 9:00-10:20 (A. Sullivan)

PHP 2516. Applied Longitudinal Data Analysis.
This course provides a survey of longitudinal data analysis. Topics will range from exploratory analysis, study design considerations, GLM for longitudinal data, covariance structures, generalized linear models for longitudinal data, marginal models and mixed effects. Data and examples will come from medical/pharmaceutical applications, public health and social sciences. This course is designed for graduate and advanced undergraduate students who will be analyzing data and want to develop a practical hands on toolkit as well as understanding of the theoretical underpinnings of regression. Students in this class will need an understanding of how to work with Stata. Prereq: PHP 2511 or PHP 2514; PHP 2508 with Permission from Instructor. Fall PHP2516 S01 16923 WF 1:00-2:20 (S. Chrysanthropoulou)

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 sufficient, 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 16964 MW 9:00-10:20 (Z. Wu)

PHP 2550. Practical Data Analysis.
Covers practical skills required for successful analysis of scientific data including statistical programming, data management, exploratory data analysis, simulation and model building and checking. Tools will be developed through a series of case studies based on different types of data requiring a variety of statistical methods. Modern regression techniques such as cross-validation, bootstrapping, splines and bias-variance tradeoff will be emphasized. Students should be familiar with statistical inference as well as regression analysis. The course will use the R programming language. Fall PHP2550 S01 16965 MW 10:30-11:50 (C. Schmid)

PHP 2560. Statistical Programming with R.
Statistical computing is an essential part of analysis. Statisticians need not only be able to run existing computer software but understand how that software functions. Students will learn fundamental concepts – Data Management, Data types, Data cleaning and manipulation, databases, graphics, functions, loops, simulation and Markov Chain Monte Carlo through working with various statistical analysis. Students will learn to write code in an organized fashion with comments. This course will be taught using both R and Julia languages in a flipped format. Fall PHP2560 S01 16171 W 1:00-4:00 (A. Sullivan)

PHP 2601. Linear Models.
This course will focus on the theory and applications of linear models for continuous responses. Linear models deal with continuously distributed outcomes and assume that the outcomes are linear combinations of observed predictor variables and unknown parameters, to which independently distributed errors are added. Topics include matrix algebra, multivariate normal theory, estimation and inference for linear models, and model diagnostics. Prerequisites: APMA 1650 or 1660, or taking PHP 2520 concurrently. Note: The course will cover fundamental and advanced topics in linear models, and concepts related to the generalized linear models will not be covered during the course. Fall PHP2601 S01 16173 TTh 1:00-2:20(08) 'To Be Arranged'

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. Fall PHP2602 S01 17014 TTh 2:30-3:50(03) (J. Steingrimsson)

PHP 2610. Causal Inference and Missing Data.
Systematic overview of modern statistical methods for handling incomplete data and for drawing causal inferences from "broken experiments" and observational studies. Topics include modeling approaches, propensity score adjustment, instrumental variables, inverse weighting methods and sensitivity analysis. Case studies used throughout to illustrate ideas and concepts. Prerequisite: MATH 1610 or PHP 2511 or PHP 2580. Fall PHP2610 S01 16174 TTh 9:00-10:20(02) 'To Be Arranged'

PHP 2720. Implementing Public Health Programs and Interventions in the Global South.
This course will focus on the theory and methods related to increasing the impact of evidence-based public health interventions and the effectiveness of healthcare delivery in diverse resource-limited settings across the globe. This course will focus on the influence of social, structural, political, and organizational processes on the development, adaptation, implementation, and evaluation of public health interventions in the Global South. We will review the emerging field of implementation science and critically analyze approaches for the evaluation of ongoing global public health programs. This course is required for students in the Global Public Health ScM program. Prerequisites include: 1) Previous completion with a B grade of above in PHP 2710: Interdisciplinary Perspectives on Disability and Death in the Global South AND 2) Previous completion with a B grade or above in PHP 2120: Introduction to Methods in Epidemiologic Research or PHP 2150: Foundations in Epidemiologic Research Methods, AND 3) Previous completion with a B grade or above in PHP 2730: Including the Excluded: Global Health Ethics AND Written permission of the instructor is required for students not in the Global Public Health master's program. Spr PHP2720 S01 25790 T 10:00-12:30 (J. Pellowski)

PHP 2727. Including the Excluded: Global Health Ethics.
This course explores the ethics of global public health engagement. Global health implementation is fraught with ethical conundrums. These ethical conundrums include the process of generating rigorous evidence, championing health as a human right, engaging global partners in meaningful collaborations, and implementing complex programs in low-resource settings. These ethical challenges are driven by North-South inequities and by differences in socioeconomic backgrounds, culture, language, and other intersectional identities. This course introduces scholars to global health ethics as a framework for tackling health disparities, grappling in a scholarly and practical way with the complex fabric of global health research, policy, and practice. Fall PHP2727 S01 17015 F 9:00-11:30 (C. Kuo)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

PLCY 1910. Social Entrepreneurship.
This course introduces students to social innovation and social entrepreneurship and engages them in identifying significant issues, problems, tools, strategies and models that drive bold solutions to complex contemporary problems. Enrollment limit is 40. Submit by 5pm on Friday, September 9, 2016 a required application here: http://goo.gl/forms/tjUK5twXc4 You must attend the first class on Thursday, September 8, 2016. Accepted students will be notified on September 12. Students who do not attend the second class on Tuesday, September 13th will forfeit their spot in class.

PLCY 1600. Economics for Public Policy.
This course examines the role of the public sector in the economy. We begin by exploring when and how the government intervenes in the economy. We also consider the impact of government intervention. We then use this theoretical foundation to examine current issues in expenditure, education, health, retirement, business competition, environment, cybersecurity, crime, financial, and tax policy. The student will acquire analytical skills to better evaluate existing and alternative public policy alternatives. Qualitative and quantitative methods will be used throughout the course. Class sessions require a significant degree of student participation.

PLCY 1703C. Policy Making and Policy Makers in Domestic and International Contexts.
The objective of the class is to encourage a new understanding of the players, approaches, and potential in domestic and international policy making, and to provide students with a "real-world" perspective on how things get done in a variety of public policy contexts. The course will take two broader perspectives on these issues, inviting students to investigate policy making from the "inside out" -- i.e., from the perspective of key stakeholders within the legislative and executive branches -- and from the "outside in" -- i.e., from the perspective of key stakeholders in the media, lobbying organizations, non-governmental organizations, and business interests.

This seminar is for students in the Brown in Washington, DC program and is designed to complement the other required seminar and the 25 hour/week internship that each student will complete during the semester. The course will examine domestic politics and policy, and the relationship of scholarship to public engagement and governance, by focusing on enduring questions of social justice and their expression in contemporary social policy. Issues to explore include poverty, inequality, freedom, rights, race, gender, community, class, citizenship, paternalism, punishment, and the appropriate roles of government (federal, state and local), markets, capital, labor, and voluntary organizations.

PLCY 1701. Social Entrepreneurship.
This course introduces students to social innovation and social entrepreneurship and engages them in identifying significant issues, problems, tools, strategies and models that drive bold solutions to complex contemporary problems. Enrollment limit is 40. Submit by 5pm on Friday, September 9, 2016 a required application here: http://goo.gl/forms/tjUK5twXc4 You must attend the first class on Thursday, September 8, 2016. Accepted students will be notified on September 12. Students who do not attend the second class on Tuesday, September 13th will forfeit their spot in class.

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For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Religious Studies

Contemplative Studies

COST 0032. Music and Meditation.
Music and Meditation explores the contemplative nature of sonic experience from humanistic, artistic and scientific perspectives. By drawing from various traditions across both time and space, and by engaging with a variety of disciplinary methodologies from Contemplative Studies, Ethnomusicology, Religious Studies and Cognitive Science, we will seek to better understand how diverse religious communities have used music as a meditative tool, a mystical philosophy, a communal exercise, a ritual performance, and more. We will examine the philosophies of thinkers, scientists and musicians to investigate music making as both an instrument, and a goal, of contemplative practice.

Spr COST0032 S01 24975 TTh 9:00-10:20(01) (S. Reddy)

COST 0036. Love and War in India.
Love and War in India explores two fundamental cultural tropes that have significantly shaped the religious, literary, social and political life of South Asia. Building on the ancient Tamil conceptions of ahaim (love/interiority) and puram (war/exteriority), and the Sanskrit ideas of kama (desire), dharma (duty) and ahimsa (non-violence) we will investigate a variety of texts on religious devotion, ethical behavior and political theory in order to contextualize the concepts of love and war within multiple arenas of Indian social and cultural life.

Fall COST0036 S01 16489 TTh 9:00-10:20(02) (S. Reddy)

COST 0100. Introduction to Contemplative Studies.
Introduction to the new field of Contemplative Studies focusing on identifying methods human beings have found, across cultures and across time, to concentrate, broaden and deepen conscious awareness. We will study what these methods and experiences entail, how to critically appraise them, how to experience them ourselves, and how they influence the development of empathy, health, and well-being. Prerequisites: None. Enrollment limited to Semester 01-04 students, others by permission of instructor. Enrollment limit is 40.

Spr COST0100 S01 25208 W 3:00-5:30(10) (H. Roth)

Why study food? What can food tell us about religion, politics, and culture? Food in South Asia often shapes identity, social status, ritual purity, religious belonging, and political activism—the notion that you are what you eat has wide currency. Whatever form it takes, food embodies histories of migration, trade, empire, colonialism, and ethics. Through reading primary texts and ethnographic articles, watching films, and (of course) eating delicious food, we will explore the rich foodways of South Asia and their social, religious, and political ramifications.

Fall COST0140 S01 16497 T 4:00-6:30(09) (F. Moore-Gerety)

COST 0500. The Theory and Practice of Buddhist Meditation.
Examines the theory and practice of Buddhist meditation in historical and modern contexts. Traces this practice from its origins in 6th-century B.C.E. India to its transmission through Sri Lanka, Myanmar, Thailand and on to modern insight meditation movements in the West. Students will examine selected textual sources and explore how Buddhist meditation is practiced today, both as an individual practice and as part of broader social institutions. Additional weekly meditation lab section.

Fall COST0500 S01 16771 TTh 1:00-2:00(08) (H. Roth)

COST 0525. The History and Practice of Yoga in India and Beyond.
From its roots in premodern India to its current popularity worldwide, yoga has a rich a complex history. As a practice of the mind, body, and spirit, yoga has taken many forms—meditation, chanting, breath control, postures—in order to achieve a range of goals: liberation from rebirth, supernatural powers, strength, pleasure, peace, wellness. As its reputation and commodification have increased, yoga has attracted deep interest, debate, and even controversy. In this course we will study yoga from its earliest texts to its status in the modern world, addressing its historical, religious, social, and political ramifications in many different contexts.

Spr COST0525 S01 25378 T 4:00-6:30(16) (F. Moore-Gerety)

COST 1420. The Contemplative Foundations of Classical Daoism.
Introduction to classical Daoism, one of the two indigenous religions of China, through the history, philosophy, and contemplative practices found in its foundational works the Dao de jing and the Zhuangzi. Through careful study of these texts, we will attempt to reconstruct the intellectual and experiential elements on which this tradition was based. Pre-requisites: ANY prior coursework in Contemplative Studies or Religious Studies. Otherwise: Permission of Instructor.

Fall COST1420 S01 16776 T 3:00-5:30(11) (H. Roth)

COST Individual Study Project Semester 1, 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.

COST 1920. Individual Study Project - Semester 2.
COST Individual Study Project Semester 2, 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, (second semester of two-semester sequence that includes COST 1950 in first semester). Open to others only by permission of the Director. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Religious Studies

RELS 0032. Music and Meditation.
Music and Meditation explores the contemplative nature of sonic experience from humanistic, artistic and scientific perspectives. By drawing from various traditions across both time and space, and by engaging with a variety of disciplinary methodologies from Contemplative Studies, Ethnomusicology, Religious Studies and Cognitive Science, we will seek to better understand how diverse religious communities have used music as a meditative tool, a mystical philosophy, a communal exercise, a ritual performance, and more. We will examine the philosophies of thinkers, scientists and musicians to investigate music making as both an instrument, and a goal, of contemplative practice.

RELS 0036. Love and War in India.
Love and War in India explores two fundamental cultural tropes that have significantly shaped the religious, literary, social and political life of South Asia. Building on the ancient Tamil conceptions of ahaim (love/interiority) and puram (war/exteriority), and the Sanskrit ideas of kama (desire), dharma (duty) and ahimsa (non-violence) we will investigate a variety of texts on religious devotion, ethical behavior and political theory in order to contextualize the concepts of love and war within multiple arenas of Indian social and cultural life.

Why study food? What can food tell us about religion, politics, and culture? Food in South Asia often shapes identity, social status, ritual purity, religious belonging, and political activism—the notion that you are what you eat has wide currency. Whatever form it takes, food embodies histories of migration, trade, empire, colonialism, and ethics. Through reading primary texts and ethnographic articles, watching films, and (of course) eating delicious food, we will explore the rich foodways of South Asia and their social, religious, and political ramifications.

This course offers the opportunity to explore the social, cultural, and political contexts in which spirituality is practiced in contemporary American religious life. We will examine the rich culture of spirituality in America as it is practiced in a variety of religious communities and the cultural contexts in which it flourishes. We will explore the role of spirituality in contemporary religious and social life in America. Required of seniors in the honors program, (second semester of two-semester sequence that includes COST 1950 in first semester). Open to others only by permission of the Director. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

When someone calls themselves “spiritual,” what does that mean? This course answers that question by exploring the wide range of ideas, practices, and desires that have come to make up the concept of spirituality. Inviting students to consider why spirituality seems “not religious,” this course examines such phenomena as yoga, faith healing, hip hop, shopping, self-help books, psychology, surveys, and protest movements. Through such phenomena, this course will enable students to recognize how Americans have made sense of their own lives and institutional attachments through continually changing technologies of race, pluralism, science, capitalism, and secularism.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
This course is an introduction to Japanese cultural and aesthetic traditions as represented in literature, the fine arts, gardening, tea practice, and selected martial arts. Readings include translations of classic Japanese works of literature and aesthetic theory, as well as modern interpretive and historical scholarship. Audiovisual materials are used to supplement the readings whenever feasible. Students who have no previous exposure to Japanese studies are welcome; there are no prerequisites. The format of the course is a combination of lecture and discussion.
Fall RELS0080 S01 16493 TTh 2:30-3:50(03) (J. Sawada)

RELS 0090K. Christmas in America.
This course explores how Christmas became a religious, consumer, and social extravaganza. Every year, many Americans devote several months to preparing for and recovering from Christmas. Most partake as Christians, but others participate despite other religious identities. Yet Christmas has not always loomed so large. Through encounters with such phenomena as sacred stories, consumer practices, and legal controversies, this course invites students to ask how and why Christmas became an important event. By the end of the course, students not only will recognize how religion and culture take shape together but also will appreciate how popular practices develop.
Fall RELS0090K S01 16494 Th 4:00-6:30(04) (D. Vacca)

RELS 0090M. Islam, Violence and Media.
One of the most controversial issues in contemporary political discourse is the question of Islamist violence and its relationship to Islamic religion and practice. In this course, we will explore the phenomenon and media representation of radicalization, and their relationship to a number of institutions and issues, including but not limited to: religious texts, global politics, colonialism, war, and nationalism. The goals of this course are to familiarize students with the historical and discursive issues pertaining to radicalism and religious violence in Islamic and non-Islamic contexts, and to posit questions about what constitutes “radicalism” in a given tradition or cultural context.
Fall RELS0090M/S01 16495 TTh 1:00-2:20(08) (N. Khalek)

RELS 0095A. Islam from the Ground Up.
Current events and popular culture alike direct our attention to the centrality of discourse on the Islamic world. In this course, we examine the historical origins and development of Islamic religion and practice in light of the sources and communities that shaped them in a variety of contexts. The goals of this course are to learn the fundamentals of: how people have studied the Qur’an, the concept and development of “Shariah”, sectarianism, approaches to gender and sexuality, and Muslim theology, philosophy, and mysticism in pre-modern and contemporary Muslim life. Spr RELS0095AS01 24978 MWF 10:00-10:50(03) (N. Khalek)

RELS 0110. Christians.
A historical survey of Christianity from its foundations to the present, tracing its development into three main branches: Orthodox, Catholic, and Protestant. Readings from a variety of Christian “classics” accompany the survey, pursuing the theme of how-in different times, places, and circumstances Christians have understood their relations to the divine and to the world.
Fall RELS0110 S01 16496 MWF 12:00-12:50(15) (S. Harvey)

Why study food? What can food tell us about religion, politics, and culture? Food in South Asia often shapes identity, social status, ritual purity, religious belonging, and political activism—the notion that you are what you eat has wide currency. Whatever form it takes, food embodies histories of migration, trade, empire, colonialism, and ethics. Through reading primary texts and ethnographic articles, watching films, and (of course) eating delicious food, we will explore the rich foodways of South Asia and their social, religious, and political ramifications.
Fall RELS0140 S01 16488 T 4:00-6:30(09) (F. Moore-Gerety)

RELS 0258. Art, Morality, and Religion.
Art is supposed to please us with its beauty or provoke us with its message. Can it also affect our moral life? If so, how? This course examines influential attempts to explain the relationship between art, including literature, and morality. Religion and mysticism play a role in the theory of art for some authors, and we will study this theme as well, asking questions such as whether aesthetic experiences are analogous to religious ones. We will read theorists such as Bataille, Murdoch, Nehamas, and Nussbaum. We will also read literary works that illustrate the theories.
Fall RELS0258 S01 16533 TTh 1:00-2:20(08) (S. Bush)

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 24979 TTh 1:00-2:20(08) (M. Cladis)

RELS 0420. Sacred Bodies.
How did ancient Christians understand physical holiness? What did the bodies of saints demonstrate or reveal? How was bodily sanctity represented in actual practices, and in literary, artistic, or ritual expressions? We will consider three broad categories of saints: desert heroes, holy women, and virtuosos (pillar saints, holy fools).
Spr RELS0420 S01 24980 M 3:00-5:30(13) (S. Harvey)

RELS 0500. The Theory and Practice of Buddhist Meditation.
Examines the theory and practice of Buddhist meditation in historical and modern contexts. Traces this practice from its origins in 6th-century B.C.E. India to its transmission through Sri Lanka, Myanmar, Thailand, and on to modern insight meditation movements in the West. Students will examine selected textual sources and explore how Buddhist meditation is practiced today, both as an individual practice and as part of broader social institutions. Additional weekly meditation lab section.
Fall RELS0500 S01 16536 TTh 1:00-2:20(08) (H. Roth)

RELS 0525. The History and Practice of Yoga in India and Beyond.
From its roots in premodern India to its current popularity worldwide, yoga has a rich and complex history. As a practice of the mind, body, and spirit, yoga has taken many forms—meditation, chanting, breath control, postures—in order to achieve a range of goals: liberation from rebirth, supernatural powers, strength, pleasure, peace, wellness. As its reputation and commodification have increased, yoga has attracted deep interest, debate, and even controversy. In this course we will study yoga from its earliest texts to its status in the modern world, addressing its historical, religious, social, and political ramifications in different contexts.
Spr RELS0525 S01 24981 T 4:00-6:30(16) (F. Moore-Gerety)

What do we mean when we talk about ‘Islamic’ Southeast Asia? This course treats Islam as part of the intensively multi-religious and multicultural societies of Southeast Asia. Our investigation of local Islamic sites will reveal histories and genealogies of religious practice that have connected Southeast Asia to other parts of the world. It will uncover the open-endedness of Islam, and how it acquires its characteristics in relation to local landscapes and cultures, as well as other religions. Tracing multiple Islamic contexts through issues of socio-historical formation and continual change, this course explores complexities pertaining to religion, indigeneity and migration.
Fall RELS0625 S01 16670 TTh 9:00-10:20(02) (S. Bashir)

RELS 0700C. Race, Religion, and the Secular (JUDS 0603).
Interested students must register for JUDS 0603.
Fall RELS0700C S01 17065 Arranged "To Be Arranged"

RELS 0700D. How the Bible became Holy (JUDS 0682).
Interested students must register for JUDS 0682.
Fall RELS0700D S01 17067 Arranged "To Be Arranged"

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 and 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.
Spr RELS0820 S01 24982 MWF 1:00-1:50(06) (A. Willis)

This course explores Black and Brown religious experience in American life, mainly from the perspectives of Christianity and Islam. We will explore topics such as secularism, White supremacy, Orientalism, imperialism, immigration, the history of segregation, and democratic political thought. The course goals are to: understand the histories of Islam and African American religion vis a vis race, religion, and theory in historical, cultural, and political context. We will also explore connections between solidarity movements and politics such as Black Lives Matter and the Palestinian/Israeli conflict.
Religious leadership. Their profoundly influential ideas about justice, MLK, Jr. and Malcolm X are two iconic figures in the pantheon of black religious experience in American life, Mainly from the perspectives of Christianity and Islam. We will explore topics such as secularism, White supremacy, Orientalism, imperialism, immigration, the history of segregation, and democratic political thought. The course goals are to: understand the histories of Islam and African American religion vis a vis race, religion, and theory in historical, cultural, and political context. We will also explore connections between solidarity movements and politics such as Black Lives Matter and the Palestinian/Israeli conflict. Fall RELS0835 S01 16773 TTh 10:30-11:50(13) (N. Khalek)

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.
Spr RELS1000 S01 24983 M 3:00-5:30(13) (S. Bush)

RELS 1050A. Problems in Israelite Religion and Ancient Judaism (JUDS 1625).
Interested students must register for JUDS 1625.
Fall RELS1050A S01 17064 Arranged (N. Khalek)

RELS 1050E. Jewish and Christian Identity in the Ancient Period (JUDS 1601).
Interested students must register for JUDS 1601.
Fall RELS1050E S01 17068 Arranged (J. Sawada)

RELS 1252A. Educating Bodies in Ancient Christianity.
Education in the ancient Mediterranean world served multiple purposes. It formed citizens, moral and ethical agency, and religious identities. It took place in a variety of settings and through diverse disciplinary methods, physical, intellectual, and social. This course will examine the primary modes of instruction through which ancient Christians undertook self-formation: the family, the civic community, monasteries, and liturgical communities. Seminar. Prior coursework in early Christianity (RELS 0400 or 0410) or Classics recommended.
Spr RELS1252A S01 25196 F 3:00-5:30(15) (J. Han)

RELS 1252C. The Virgin Mary in Christian Tradition.
Who was the Virgin Mary? How did she become important, when and to whom? What was inherited? What was new? How were Mary’s meanings demonstrated? A study in the developing theological and devotional traditions regarding Mary the Mother of Jesus, focused on the first thousand years of Christian history. Major theological positions; relationship to pre-existing religious practices and goddess traditions; the role of popular violence; Marian piety; Marian relics; Mary as cultural metaphor. Seminar format.
Spr RELS1252C S01 25235 TTh 2:30-3:50(11) (S. Harvey)

RELS 1380A. Money, Media, and Religion.
This course explores the relationship between religious life, forms of capitalism, and media technologies in the history of the United States. From constructing buildings and printing texts to disseminating teachings and communicating with members: essential aspects of religious life require both money and media. Yet forms of money and media continually have changed, and those changes have taken shape in dialogue with religious beliefs, practices, and sensibilities. This seminar examines this dialogue by visiting such varied sites as Puritan marketplaces, Santa Claus displays, Bible factories, television talk shows, and Occupy protests.
Spr RELS1380A S01 25198 W 3:00-5:30(10) (D. Vaca)

RELS 1385. Religion and Postmodernism.
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.
Fall RELS1385 S01 16539 M 3:00-5:30(05) (A. Willis)

RELS 1420. The Contemplative Foundations of Classical Daoism.
Introduction to classical Daoism, one of the two indigenous religions of China, through the history, philosophy, and contemplative practices found in its foundational works the Daodejing and the Zhuangzi. Through careful study of these texts, we will attempt to reconstruct the intellectual and experiential elements on which this tradition was based. Pre-requisites: ANY prior coursework in Contemplative Studies or Religious Studies. Otherwise: Permission of Instructor.
Fall RELS1420 S01 16775 F 3:00-5:30(11) (H. Roth)

RELS 1430. Buddhist Classics.
An opportunity to read and understand the canonical texts of East Asian Buddhism. Through close reading, written analysis, and discussion, participants will become conversant with the major Mahayana Buddhist teachings in their original scriptural or literary articulations. Selected later interpretations may also be considered. All readings are in English translation. Previous study of Buddhism is recommended, but not required. Enrollment limited to 20 students.
Spr RELS1430 S01 25199 W 3:00-5:30(10) (J. Sawada)

RELS 1500. From Moses to Muhammad: Prophets of the Ancient World.
The figure of "the Prophet" forms the backbone to many of history's major religions. From well-known prophets like Moses and Muhammad to more obscure figures like Mani, ancient prophets claimed to have unique access to God(s). Yet the concept of prophethood, and its twin, "prophecy," was as diverse as those who claimed its mantle. This seminar will explore ancient discourses of prophethood and prophecy from the Ancient Near East up to the early medieval era. Our reading selection will include the Hebrew Bible, apocalypses, Greek theories of divination, the Manichaean corpus, the Qur'an, and other "non-canonical" texts.
Spr RELS1500 S01 25200 MWF 9:00-9:50(02) (J. Han)

RELS 1530F. The History of Emotions and Medieval Islamic Tradition.
In this advanced course (open to graduate students) we will explore the history of emotions in conjunction with medieval Islamic tradition literature and medieval biographical and hagiographical texts. The goals of the course are to understand how emotions have been studied by historians and scholars of religion and to apply a history of emotions approach to our readings of medieval Islamic texts. Prior courses in Islamic studies required, knowledge of Arabic or other primary-text language strongly preferred.
Spr RELS1530F S01 25201 T 10:30-1:00 (N. Khalek)
RELS 1610. Sacred Sites: Law, Politics, Religion.
Sacred sites have long been flashpoints for inter-communal conflict the world over, as well as posing challenges to sovereign State authority. Such sites range from natural landscapes to architectural masterpieces. They often come to symbolize the perennial clash between the religious and the secular, the sacred and the political, tradition and modernity. We will discuss a diverse array of specific disputes and ask whether one may ever speak of "sacred sites" cross-culturally. Can legal frameworks embrace different notions of the sacred? We will also examine the historical contexts that provoke such disputes, particularly the aftermath of colonialism.
Spr RELS1610 S01 25202 T 4:00-6:30(16) (N. Berman)

RELS 1620. Disability in Antiquity.
An investigation into the ways in which physical deformities and mutilations are represented in texts from ancient Israel, Mesopotamia, Greece, and other Mediterranean cultures. Primary focus: texts of the Hebrew Bible.
Spr RELS1620 S01 25203 W 3:00-5:30(10) (S. Olyan)

RELS 1990. Individual Study Project.
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 permission 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.

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.
Fall RELS2000 S01 16541 W 9:30-11:50 (T. Lewis)

RELS 2100E. Literature of the Early Second Temple Period.
A close reading of selections from surviving literary texts of the late sixth century (e.g., Isaiah 56-66, Zechariah 1-8, HaggaI) and the fifth century (Ezra-Nehemiah, Malachi). Prerequisite: An advanced knowledge of biblical Hebrew and permission of the instructor.
Fall RELS2100E S01 16546 Arranged (S. Olyan)

RELS 2350D. Studies in Japanese Religions.
Intensive study of the history of Japanese religions with attention to major scholarly issues in the field.
Fall RELS2350DS01 16962 W 3:00-5:30(17) (J. Sawada)

RELS 2450. Exchange Scholar Program.
Fall RELS2450 S01 15338 Arranged 'To Be Arranged'

RELS 2600L. Seminar: Afro-Theism.
This graduate seminar places a theological lens on Black life in North America. Its premise is that Afro-Theisms, not the institutional "Black Church" or Black prophetic religion, have been seminal to the self-conception of Black people and their way of constituting racial "others". Different theistic emphasis at different historical moments demonstrates both the importance and fluidity of Afro-Theisms and sheds unique light on quest for equity and self aktualization. Starting with the conventional Christian theologies into which New World Africans under slave conditions were indoctrinated, this course will explore the role and impact of Afro-Theisms.
Spr RELS2600L S01 25205 T 6:30-9:00PM (A. Willis)

RELS 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 preliminary examinations.
Fall RELS2890 S01 15339 Arranged 'To Be Arranged'
Spr RELS2890 S01 24220 Arranged 'To Be Arranged'

RELS 2910. Independent Research.
The staff is willing to offer independent reading courses in selected areas. See the Instructor for more information. Please check Banner for the correct section number and CRN to use when registering.

RELS 2990. Thesis Preparation.
For graduate students who have met the residency requirement and are continuing research on a full time basis.
Fall RELS2990 S01 15340 Arranged 'To Be Arranged'
Spr RELS2990 S01 24221 Arranged 'To Be Arranged'

Center for the Study of the Early Modern World

Interested students must register for POBS 0910.
Fall EMOW0910 S01 16920 Arranged 'To Be Arranged'

EMOW 1410L. Sorcellerie et Renaissance: le sort de la sorcière (FREN 1410L).
Interested students must register for FREN 1410L.
Spr EMOW1410L S01 25515 Arranged 'To Be Arranged'

EMOW 1580. Word, Image and Power in Renaissance Italy (ITAL 1580).
Interested students must register for ITAL 1580.
Fall EMOW1580 S01 17177 Arranged 'To Be Arranged'

Interested students must register for HIST 1825F.
Fall EMOW1825S S01 16919 Arranged 'To Be Arranged'

EMOW 1880. Independent Study in EMOW.
Tutorial instruction on a topic in the Renaissance or early modern period, supervised by a member of the core faculty. This number may be used by concentrators for the required Independent Project undertaken in the junior or senior year. Section numbers vary by professor; instructor permission required.

South Asian Studies

SAST 0525. The History and Practice of Yoga in India and Beyond.
From its roots in premodern India to its current popularity worldwide, yoga has a rich a complex history. As a practice of the mind, body, and spirit, yoga has taken many forms—meditation, chanting, breath control, postures—in order to achieve a range of goals: liberation from rebirth, supernatural powers, strength, pleasure, peace, wellness. As its reputation and commodification have increased, yoga has attracted deep interest, debate, and even controversy. In this course we will study yoga from its earliest texts to its status in the modern world, addressing its historical, religious, social, and political ramifications in many different contexts.
Spr SAST0525 S01 25770 T 4:00-6:30(16) (F. Moore-Gerety)

SAST 0700. Introduction to Modern South Asia.
The seminar aims to introduce South Asia in terms of a plurality in ways of being. It shall study themes beginning with colonialism and ranging from the colonial mapping of tradition; anticolonial ethics; partition and the creation of a separate state; communalism; democracy; secularism; nationalism; welfare; and the global war on terror. The seminar will be an intensive reading and writing experience that transgresses academic disciplines. Writings include important tracts and speeches of intellectuals and thinkers of South Asia; writings of scholars and activists; and literary and artistic works. There are no prerequisites for taking this course.
Fall SAST0700 S01 17150 Th 4:00-6:30(04) 'To Be Arranged'

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

SAST XLIST. Courses of Interest to Concentrators.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Science, Technology and Society

STS 0700B. Science and Social Controversy.
In this course we examine the institution of science and its relations to the social context in which it is embedded. Scientific objectivity, scientific consensus, scientific authority, and the social and moral accountability of scientists will be considered in the context of discussing such controversies as: the AIDS epidemic, climate change, science and religion, the Manhattan Project, the Tuskegee Syphilis Experiment, genetic and pharmacological enhancement, the role of drug companies in science and medicine, psychiatric diagnosis and medication, robotics, and the implications of neuroscience for free will and moral responsibility.
Enrollment limited to 20 first year students and sophomores.
Fall STS0700B S01 16259 Th 4:00-6:30(04) (J. Poland)

STS 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 neurophilosophical models of religious belief and moral judgement.
Enrollment limited to 20. Instructor permission required.
Fall STS1700P S01 24724 T 4:00-6:30(16) (J. Poland)

STS 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 in STS. 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 STS1900 S01 16258 T 4:00-6:30(09) (J. Poland)

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: STS 1400. Open to junior and senior concentrators in Science and Society; instructor permission required.
Fall STS1970 S01 16258 Th 4:00-6:30(09) (L. deBenedette)

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: STS 1400. Open to junior and senior concentrators in Science and Society; instructor permission required.

Slavic Languages

Czech

CZCH 0320A. Czech Animation: Cross-cultural Dialogs.
Czech animation has a long tradition and international reputation. Jiří Trnka beat Walt Disney at the post-war Cannes Film Festival. Karel Zeman is a pioneer in creating fantasy films with animation. Surrealist films by Jan Švankmajer continue to shock the audience. Younger animators such as Barta, Klmit, and Pospíšilová have been developing new modes of expression after the fall of socialism. This course explores a variety of Czech animated films from the 1960’s to the 21st century and its cross-cultural dialog, especially with the Japanese anime. Readings in English and films with English subtitles.
Spr CZCH0320A S01 24285 W 3:00-5:30(10) (M. Fidler)

CZCH 0410B. Coming of Age in Postwar Czechoslovakia.
Examines political and cultural changes in the post-WWII Czechoslovakia through the eyes of a child. Centerpiece of the course is a film on elementary school in post-war Prague as a symbolic representation of the society that is about to emerge. Other materials such as literary and journalistic texts are used. Places equal emphasis on the acquisition of language, including exposure to colloquial Czech. Separate language tasks are given to students of two proficiency levels (2nd and 3rd year). Conducted in Czech. For students who completed CZCH 0200 or equivalent. Four meetings per week and use of audio/visual materials.
Enrollment limited to 18.
Fall CZCH0410B S01 15560 Arranged (M. Fidler)

CZCH 0610C. Czech Cultural Icons, Emblems, and National Identity.
The "most famous Czech" Jára Cimrman and his most active period, namely the late 19th to early 20th-century Bohemia. Highlights of Czech cultural icons and emblems, and discussions on what constitutes Czech national identity reflected in the Cimrman phenomenon. Readings on several Czech cultural icons. Two different sets of requirements for students of two language proficiency levels. The course is for students who have completed CZCH 0410 or the equivalent. Enrollment limited to 18.
Spr CZCH0610C S01 25377 Arranged (M. Fidler)

Polish

PLSH 0200. 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.
Fall PLSH0200 S01 16465 Arranged (M. Oklot)

PLSH 0400. Intermediate Polish.
This course is designed for students who have completed the Introductory Polish language sequence (PLSH 0150/0100, 0200 and 0300) or have otherwise acquired basic proficiency required for the second year sequence. In this course you will continue to develop and refine your speaking skills and will be able to carry on conversation on many topics from your daily life. You will continue developing reading and writing skills by reading increasingly more elaborate authentic texts and writing essays, and your listening skills will be cultivated by in-class interactions and listening to authentic Polish audio and video recordings.
Fall PLSH0400 S01 16466 Arranged (M. Oklot)

PLSH 0600. Advanced Polish.
In this course students will further develop their skills in speaking, reading, writing and understanding Polish. They will continue developing reading and writing skills by reading increasingly more elaborate authentic texts, writing essays, and learning about Polish stylistics, syntax, and grammar at the advanced level. Their listening skills will be cultivated by in-class interactions and listening to authentic Polish audio and video recordings. Emphasis in this course will be on mastering oral expression and vocabulary building, as well as comprehension of fiction and non-fiction texts of a moderate level of difficulty. The course will be conducted almost exclusively in Polish.
Fall PLSH0600 S01 16467 Arranged (M. Oklot)

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 16662 MWF 10:00-10:50(14) (L. deBenedette)
Fall RUSS0100 S01 16662 TTh 12:00-12:50(14) (L. deBenedette)
Fall RUSS0100 S02 16663 MWF 11:00-11:50(16) (L. deBenedette)
Fall RUSS0100 S02 16663 TTh 11:00-11:50(16) (L. deBenedette)
Fall RUSS0100 S03 17018 MWF 12:00-12:50(15) (L. deBenedette)
Fall RUSS0100 S03 17018 TTh 12:00-12:50(15) (L. deBenedette)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
RUSS 0110. Intensive Russian.
Intensively-paced introduction to Russian culture and language; 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 25184 MWF 10:00-10:50(01) (L. deBenedette)
Spr RUSS0110 S01 25184 T 9:00-10:20(01) (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 25185 MWF 11:00-11:50(04) (L. deBenedette)
Spr RUSS0200 S02 25185 TTh 12:00-12:50(04) (L. deBenedette)
Spr RUSS0200 S02 25186 MWF 12:00-12:50(05) (L. deBenedette)
Spr RUSS0200 S02 25186 TTh 12:00-12:50(05) (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 16664 MWF 11:00-11:50(16) (L. deBenedette)
Fall RUSS0300 S01 16664 TTh 12:00-12:50(16) (L. deBenedette)
Fall RUSS0300 S02 17019 MWF 11:00-11:50(16) (L. deBenedette)
Fall RUSS0300 S02 17019 TTh 12:00-12:50(16) (L. deBenedette)

RUSS 0320 A. Dostoevsky's "The Brothers Karamazov" - The Art of the Novel.
An in depth analysis of Dostoevsky's last novel as the culmination of his art and thought. Central religious and philosophical themes of the novel, such as the relations of faith to morality, modes of transgression, retribution, and epiphany, the question of theodicy, and the nature of authority. Discussion of Dostoevsky's poetics and of his contribution to the genre of the novel. Readings from literary criticism and from other pertinent literary texts, such as the Bible, Schiller, and Voltaire will also be discussed. In English. Enrollment limited to 19 first year students.
Spr RUSS0320AS01 24289 M 3:00-5:30(13) (S. Evdokimova)

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 19 first-year students.
Fall RUSS0320E S01 15583 W 3:00-5:30(17) (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 25189 MWF 10:00-10:50(03) (L. deBenedette)
Spr RUSS0400 S01 25189 TTh 12:00-12:50(03) (L. deBenedette)
Spr RUSS0400 S02 25647 MWF 11:00-11:50(04) (L. deBenedette)
Spr RUSS0400 S02 25647 TTh 12:00-12:50(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 0350 or RUSS 0400 or placement. Enrollment limited to 18.
Fall RUSS0500 S01 16655 MWF 1:00-1:50(06) (L. deBenedette)
Fall RUSS0500 S01 16655 T 12:00-12:50(06) (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 25191 MWF 1:00-1:50(06) (L. deBenedette)
Spr RUSS0600 S01 25191 TTh 12:00-12:50(06) (L. deBenedette)

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 of the instructor. Enrollment limited to 18.
Fall RUSS1110 S01 16666 MWF 12:00-12:50(15) "To Be Arranged"

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 25192 MWF 12:00-12:50(05) (L. deBenedette)

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, Turgenev, Leskov, and Dostoevsky. Lectures and discussion. No knowledge of Russian required. Discussion sections to be arranged.
Fall RUSS1290 S01 16926 TTh 10:30-11:50(13) (A. Levitsky)

RUSS 1300. Russian Literature in Translation II: Tolstoy to Solzhenitsyn.
Survey of major works of Russian literature of the late 19th and 20th centuries. Traces the development of Russian literature from realism to symbolism and decadence, from revolutionary experiments to socialist realism and dissent. Authors to be studied include Tolstoy, Chekhov, Solzogen, Blok, Mayakovsky, Babel, Olesha, Zamiatin, Bulgakov, and Solzhenitsyn. Lectures and discussion. No knowledge of Russian required.
Spr RUSS1300 S01 24282 TTh 10:30-11:50(09) (V. Golstein)

After the October Revolution of 1917, Soviet society became gradually split into official culture, dissidence, and the underground. Authors who did not conform to the limitations imposed by Soviet institutions often circulated their works illegally or published them abroad. Some of them were forced to emigrate. This course explores the complex intersections of propaganda, dissidence, and underground in Soviet literature, art, and film.
Spr RUSS1330 S01 24291 TTh 1:00-2:20(08) (F. Fenghi)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
RUSS 1340. The Russian Novel.
When one considers the impact of Russian literature on world literature, one thinks first of all of the novel. And indeed, since the late nineteenth century its readers all over the world could not resist its artistic powers.
The course explores selected Russian novels form the nineteenth- to the twenty-first century. Our in-depth (slow) reading and discussions will be guided by the questions concerning the stylistic peculiarities of the novel, and its development in changing historical and cultural contexts. The course includes: Gogol’s Dead Souls, Goncharov’s Oblomov, Dostoevsky’s Idiot, Bely’s Petersburg, Nabokov’s Mary, Platonov’s Chevengur, among others.

Fall RUSS1340 S01 15582 TTh 1:00-2:20(08) (M. Oklot)

RUSS 1440. Imagining Moscow: Utopia and Urban Spaces in 20th-Century Russian Culture.
The course explores the role of Moscow in the Russian collective imagination throughout the 20th century. We will study how different utopian visions of the city in art, literature, film, and architecture affected the radical transformations of its urban landscape from the October Revolution to the present. We will start with the 1920s and 1930s, when the image of a new Moscow became closely associated with the creation of new socialist ways of life, and conclude with the neoliberal facelift of the city in the post-Soviet period, retracing a history of 20th-century Russian culture through its urban imagination.

Spr RUSS1440 S01 24292 TTh 2:30-3:50(06) (F. Fenghi)

RUSS 1550. Beyond the Kremlin: Russian Culture and Politics in the Twenty-First Century.
This course explores the radical transformations of Russian cultural and political life after the end of the Soviet Union, with a specific focus on the Putin era. By combining the approaches of literary analysis and cultural anthropology, the course studies representations of social change, and attempts at producing social change, in Russian everyday life and language, as well as in contemporary art and literature. All readings and discussions in English, with Russian originals available for interested students.

Fall RUSS1550 S01 15585 MWF 1:00-1:50(06) (F. Fenghi)

RUSS 1660. Sexuality and Revolution in 20th-Century Russian Culture.
The course explores the role of the body and sexuality in 20th-century Russian literature, art, film, and everyday life, covering the sexual revolution of the 1920s, the mass spectacles of the Stalinist period, and the prominent role of sexuality and the body in post-Soviet literature, film, and mass culture. We will focus in particular on the question of how artistic representations of, and reflections on, the body and sexuality, affected social and political revolutions throughout contemporary Russian history.

Fall RUSS1660 S01 16751 MWF 2:00-2:50(07) (F. Fenghi)

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 theater, 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. One of the tasks is to improve students’ writing skills.

Fall RUSS1860 S01 15586 TTh 2:30-3:50(03) (S. Evdokimova)

RUSS 1885. Literature and Art of the Russian Avant-Garde.
Examines the Russian avant-garde between 1912, the year of the first Russian futurist manifesto, and early 1930s when Social Realism became this only sanctioned style of art. This, arguably the most vibrant period in Russian art, permeated with unprecedented sense of creative and political urgency, coincided with the WWI and the Russian Revolution, which provide historical contexts for the analyzed works. Also stresses aesthetic and historic interconnections between the Russian and western avant-gardes. Includes the works of poetry, prose, literary manifestos, book design, painting, and film by such artists as Pasternak, Mayakovsky, Khlebnikov, Mandelshtam, Meyerhold, Malevich, Rodchenko, Eisenstein, among others.

Fall RUSS1885 S01 16811 Th 4:00-6:30(04) (M. Oklot)

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 2610C. Russian Romanticism.
This course will examine the works of Zhukovsky, Batiushkov, Pushkin, Lermontov, Tchaikovsky, Bestuzhev-Martsynsky, Odoevsky, and Gogol in the context of Romanticist literary culture. Students will also read works by other European authors associated with Romanticism to elucidate the extent of the adherence of Russian writers to Romanticist aesthetics and philosophy.

Fall RUSS2610C S01 16463 M 3:00-5:30(05) (S. Evdokimova)

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.

Fall RUSS2970 S01 15341 Arranged ‘To Be Arranged’
Spr RUSS2970 S01 24222 Arranged ‘To Be Arranged’

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 residency requirement and are continuing research on a full time basis.

Fall RUSS2990 S01 15342 Arranged ‘To Be Arranged’
Spr RUSS2990 S01 24223 Arranged ‘To Be Arranged’

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.

Independent research project on topics in Slavic Studies. 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.
SLAV 1970G. Polish for Reading and Research.  
An intensive course designed for students who wish to receive concise and systematic language instruction to read Polish for their research projects and/or to prepare for advanced language study in the study abroad context. The course does not require any previous knowledge of Polish. Students will develop functional reading and comprehension strategy in Polish through extensive activities focusing on grammar and reading of selected texts.  
Fall SLAV1970G S01 16464 Arranged (M. Oklot)  

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.  

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 15344 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 15345 Arranged 'To Be Arranged'  
Spr SLAV2970 S01 24225 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 residency requirement and are continuing research on a full time basis.  
Fall SLAV2990 S01 15346 Arranged 'To Be Arranged'  
Spr SLAV2990 S01 24226 Arranged 'To Be Arranged'  

SLAV XLIST. Courses of Interest to Concentrators in Slavic Languages.  

Sociology  
SOC 0010. Perspectives on Society: An Introduction to Sociology.  
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.  
Spr SOC0010 S01 25572 MWF 10:00-10:50(03) (G. Elliott)  

Emphasis on understanding the interrelations among economic, political, and cultural aspects of change in developing countries. The experience of currently developing nations is contrasted to that of nations which industrialized in the 19th century. Compares the different development strategies which have been adopted by currently developing nations and their consequences for social change.  
Spr SOC0150 S01 25575 TTh 9:00-10:20(01) (P. Henry)  

SOC 0200. Sex, Gender, and Society.  
An introduction to the sociological study of sex and gender. More specifically, this course explores how sexuality is perceived, defined, and experienced in the context of society. How sexuality influences our lives, is reflected in social norms, attitudes and beliefs, through public and private policies and practices, and the social institutions is also investigated. This class also focuses on how prevalent gender differences really are in our society and examines the social construction of gender.  
Spr SOC0200 S01 25574 MWF 11:00-11:50(04) (C. Spearin)  

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 19 first year students. Instructor permission required.  
Fall SOC0300D S01 16873 Th 4:00-6:30(04) (G. Elliott)  

SOC 0300F. Unequal From Birth: Child Health From a Social Perspective.  
Why are the children of immigrants so healthy? How do experiences in families, schools, neighborhoods and the health care system produce unequal health? What are the consequences of health for the economic and social welfare of individuals and populations? We will read, discuss and evaluate social science evidence to understand how social and economic inequalities produce and result from health inequalities among youth. Attention will be given to both industrialized and developing societies, and to potential ways that social policies can equalize children's health. This course is designed for first-year students and should appeal to a variety of interests, including social justice, medicine, research and law. Enrollment limited to 19 first year students.  
Fall SOC0300F S01 16874 M 3:00-5:30(05) (M. Jackson)  

SOC 0310. Theory and Practice of Engaged Scholarship (ESP Seminar).  
Efforts are underway across university and college campuses -- in the United States and globally -- to increase opportunities for engaged learning and research. What is engaged scholarship and how does it challenge (and/or complement) more traditional concepts of scholarship and disciplinary knowledge? What are the ethical, practical, and other challenges associated with community-engaged scholarship? The course will use case studies, field work, team projects, and guest speakers from diverse disciplines and sectors to investigate these and other questions. Enrollment limited to Engaged Scholars Program participants. Limited to 40 students per section.  
Fall SOC0310 S01 16872 W 3:00-5:30(17) (A. Hance)  
Spr SOC0310 S01 25561 W 3:00-5:30(10) (A. Hance)
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, Émile 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.

Fall SOC1010 S01 16875 MWF 1:00-1:50(06) (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 phenomenon. 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 25570 MW 3:00-4:20(10) (J. Owens)

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 16892 TTh 10:30-11:50(13) (B. Ozkazanc-Pan)

SOC 1100. Introductory Statistics for Social Research
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 16876 TTh 9:00-10:20(02) (E. Rauscher)
Spr SOC1100 S01 25562 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 16883 TTh 6:30-7:50 (L. DeCarlo)

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.

Spr SOC1120 S02 25629 MWF 10:00-10:50(03) (C. Spearin)

SOC 1260. Market Research in Public and Private Sectors
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.

Fall SOC1260 S01 16884 MWF 10:00-10:50(14) (C. Spearin)

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.

Fall SOC1270 S01 16894 MWF 12:00-12:50(15) (J. Itzigsohn)

SOC 1281. Migration in the Americas
Examines historical trends and determinants of migration from Latin America to the United States. Each stage of the migration process is examined: the decision to migrate, getting across international borders, settlement and integration in destinations, and return to places of origin. The course integrates theories and empirical studies of international migration with hands-on analysis of survey data from the Mexican and Latin American Migration Projects, the two largest survey databases for studying migration in the Americas. Students will learn how to formulate and operationalize research hypotheses, read, process, and analyze survey data files, and present and interpret research results.

Fall SOC1281 S01 17003 MWF 10:00-10:50(14) (D. Lindstrom)

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 16885 TTh 1:00-2:20(08) (M. Suchman)

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 25576 MWF 1:00-1:50(06) (J. Logan)

SOC 1340. Principles and Methods of Geographic Information Systems
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 21 juniors and seniors.

Fall SOC1340 S01 16896 MWF 1:00-1:50(06) (K. Mwenda)
SOC 1440. Intimate Violence. 
Explores sociological perspectives of violence in intimate relationships. Begins with theories of violence, including social learning theory, the frustration-aggression hypothesis, and violence as catharsis. Examines the contributions of gender, race status, media violence, and pornography to the issue. Investigates specific forms of intimate violence: sexual aggression (including "acquaintance rape"), partner abuse, elderly abuse, and child abuse. Not open to first-year students. 
Fall SOC1440 S01 16883 MWF 12:00-12:50(15) (G. Elliott)

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 social movements. 
Fall SOC1620 S01 16895 TTh 10:30-11:50(13) (P. Heller)

SOC 1871B. Sociological Perspectives on Poverty. 
Examines the personal experiences of socioeconomic status, with focus on the lower tiers of the hierarchy. We distinguish three levels of poverty: the working poor, marginal workers, and the underclass. Analysis will make use of issues of gender and family, race and ethnicity, and urban and rural settings. We investigate sociological perspectives on the problem of homelessness. Enrollment limited to 20. 
Spr SOC1871B S01 25579 Th 4:00-6:30(17) (G. Elliott)

SOC 1871O. Law, Innovation and Entrepreneurship. 
This seminar explores the relationship between legal institutions and the contemporary organizational and socio-legal literatures. The course develops 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 or SOC 1315 required (waivable by permission of instructor). Enrollment limited to 20 juniors, seniors, and graduate students. 
Fall SOC2010 S01 16902 W 1:00-4:00 (M. Jackson)

SOC 1871Z. Martial Arts, Culture, and Society. 
Examines the contributions of gender, race status, media violence, and pornography to the issue. Investigates specific forms of intimate violence: sexual aggression (including "acquaintance rape"), partner abuse, elderly abuse, and child abuse. Not open to first-year students. 
Fall SOC1871Z S01 16883 MWF 12:00-12:50(15) (G. Elliott)

SOC 1872E. Global Sociology: Capitalism, Colonialism and the Making of the Modern World. 
This course focuses on Providence and Rhode Island to look at the embeddedness of local lives in global social processes. Sociology often takes the nation as a bounded unit of analysis. Yet, the history of the modern world is one of empires, colonialism and transnational connections. These global racial and colonial histories are frequently ignored or silenced. This course seeks to question our sense of place in the world. If we acknowledge that the world has always been global, how does that change our understanding of contemporary issues? How should we rethink sociology to break with its colonial origins? 
Spr SOC1872E S01 25580 Th 4:00-6:30(17) (J. Itzigsohn)

SOC 1875O. Law, Innovation and Entrepreneurship. 
This seminar explores the relationship between legal institutions and the contemporary organizational and socio-legal literatures. The course develops 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 or SOC 1315 required (waivable by permission of instructor). Enrollment limited to 20 juniors, seniors, and graduate students. 
Fall SOC2010 S01 16902 W 1:00-4:00 (M. Jackson)

SOC 1900. Senior 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 1950. Senior Seminar. 
Advanced seminar for sociology and social analysis and research (SAR) concentrators. Participants examine methods for analyzing, writing, and presenting capstone and thesis material and apply peer review techniques in assessing each other's work. Culminates in presentation of capstone or thesis to the department. Required for all sociology and social analysis and research (SAR) concentrators. 
Fall SOC1950 S01 16898 MWF 11:00-11:50(16) (C. Spearin)

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. 

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. 

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. 

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 SOC2020 S01 25583 T 1:00-4:00 (D. Lindstrom)

SOC 2030. Social Stratification, Inequality and Mobility. 
This course provides an introduction to contemporary literature on social stratification, social mobility, inequality in the United States, abroad, based on research articles and books. We focus on theories, data, methods, facts about categorical dimensions of inequality (race, ethnicity, gender, sexual orientation); core dimensions of stratification systems (income, earnings and wealth distributions; poverty; education; the intergenerational transmission of socioeconomic status; social mobility); social institutions that govern social stratification (families, schools, labor markets, and the justice system); key inequalities that stem from stratification systems (e.g., health). This is a reading course, not a research seminar. Prerequisites include Sociology 2010 or equivalent. 
Spr SOC2030 S01 25588 M 9:00-12:00 (M. Jackson)

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 SOC2040 S01 16903 W 9:00-12:00 (J. Itzigsohn)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 SOC2050 S01 25584 W 1:00-4:00 (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 SOC2080 S01 16909 F 9:00-12:00 (S. Short)

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 SOC2210 S01 25585 Th 1:00-4:00 (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 SOC2230 S01 25595 F 9:00-12:00 (Z. Qian)

SOC 2260D. Race, Ethnicity, and Nation: Boundaries, Identities, Inequalities.
This seminar aims to provide students a solid base in the analysis of racial and ethnic boundaries, identities, and inequalities. The seminar addresses a number of central topics in the field and acquaints the students with some key works. The course is divided in three parts. The first part focuses on how race constituted the modern world and on contemporary forms of racialization. The second part focuses on the construction of nations and challenges to their ethnic and racial boundaries. The third part of the course looks at contemporary boundaries of race and ethnicity in the United States. Open to upper level undergraduates with permission of instructor.
Spr SOC2260D S01 25596 M 1:00-4:00 (L. Lopez Sanders)

SOC 2320. Migration.
Examination of migration in its several manifestations: internal, international, and patterns of settlement and segregation. Consideration is given to both determinants of population movement and the socioeconomic adjustment of migrants in their destination. Includes comparative study across migrant groups and geographic settings.
Fall SOC2320 S01 16912 W 1:00-4:00 (M. White)

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.
Fall SOC2430 S01 16905 T 9:00-12:00 (M. Suchman)
Spr SOC2430 S01 24227 Arranged "To Be Arranged"

SOC 2450. Exchange Scholar Program.
Fall SOC2450 S01 15347 Arranged "To Be Arranged"
Spr SOC2450 S01 24227 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 SOC2460 S01 16908 Th 1:00-4:00 (E. Rauscher)

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.
Spr SOC2600 S01 25586 F 1:00-4:00 (A. Schrank)

SOC 2610. Spatial Thinking in Social Science.
This course reviews ways in which social scientists have incorporated concepts about space, place, and distance into their theories and research. Examples are drawn from many substantive areas, including the spatial organization of communities, spatial inequalities, and mobility. Separate laboratory meetings introduce methods of spatial analysis encountered in the course readings, including an introduction to GIS and related mapping tools.
Fall SOC2610 S01 16907 M 9:00-12:00 (J. Logan)

This course is intended for graduate students seeking to learn the basics of Geographic Information Systems (GIS) and how to incorporate spatial questions into social science research. The course is primarily a methods course and through required independent project work, students will learn how GIS and spatial analysis are typically employed across the social sciences. By the end students will be proficient in independent use of ArcGIS, most frequently used GIS software package, and will be able to apply the more common tools of spatial analysis. They will also know basics of cartography.
Fall SOC2612 S01 25587 Th 1:00-4:00 (K. Mwenda)

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.
Spring SOC2960C S01 25594 W 9:00-12:00 (J. Logan)

SOC 2960K. Comparative Political Sociology.
This course explores both classic and contemporary debates in political sociology. The central thematic is the relationship between democracy and power and includes theories of the state, markets, social class and civil society. The debates are explored through historical and comparative lenses, covering both old and new democracies. Some background in political or sociological theory is recommended.
Fall SOC2960K S01 16911 T 1:00-4:00 (J. Pacewicz)

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 15348 Arranged "To Be Arranged"
Spr SOC2970 S01 24228 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.
For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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. Dissertation Preparation. For Sociology PhD graduate students who have met the residency requirement and are continuing research on a full time basis.

Fall SOC2990 S01 15349 Arranged "To Be Arranged"
Spr SOC2990 S01 24229 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. There is a mandatory tech requirement and some evening hours are required. Please go to the TAPS website for specifics on admission and the technical requirement (http://brown.edu/go/TAPS0030). Enrollment limited to 16 first year students. Instructor permission required. No permission will be given during pre-registration.

Fall TAPS0030 S01 15889 TTh 9:30-11:50 "To Be Arranged"
Fall TAPS0030 S02 15890 TTh 3:00-5:20 "To Be Arranged"
Spr TAPS0030 S01 25252 TTh 9:30-11:50 (C. Crawford)
Spr TAPS0030 S02 25253 TTh 3:00-5:20 (S. d'Angelo)

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/NC.

Fall TAPS0100 S01 16225 F 1:00-3:50 "To Be Arranged"
Fall TAPS0100 S02 16243 TTh 1:00-2:20(08) (E. Terry-Morgan)
Spr TAPS0100 S01 25265 T 1:00-3:50 "To Be Arranged"

TAPS 0200. Playwriting II - Role Play. In this intermediate course, we will focus on bolstering our writerly voices while defining ongoing artistic practices. In this hybrid workshop and seminar, we will work toward writing one-act plays of our own, while investigating other writer’s worlds. In the plays we will encounter this semester, characters engage in some form of role play. We end up asking: what does it mean to play? How does a play play? Through this study, we will ask what it means for characters to be active, how to write plot as an offering of contrasts and tensions, and where exactly character is composed. S/NC.

Fall TAPS0200 S01 16226 T 1:00-3:50 "To Be Arranged"
Spr TAPS0200 S01 25248 M 3:00-5:50 "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 should sign up well in advance on the TAPS 0220 waitlist (application form is at http://brown.edu/go/TAPS0220) and attend the first class. Attendance is mandatory. The application/waitlist process does not apply to students registering for the Summer term through the School of Professional Studies.

Fall TAPS0220 S01 15880 MW 9:00-11:50 (B. Tannenbaum)
Fall TAPS0220 S02 15881 MW 1:00-3:50 (B. Tannenbaum)
Fall TAPS0220 S03 15882 MW 9:00-11:50 (B. Tannenbaum)
Fall TAPS0220 S04 15883 MW 1:00-3:50 (B. Tannenbaum)
Fall TAPS0220 S05 15884 MW 9:00-11:50 (B. Tannenbaum)
Spr TAPS0220 S01 25260 MW 9:00-11:50 (B. Tannenbaum)
Spr TAPS0220 S02 25261 MW 1:00-3:50 (B. Tannenbaum)
Spr TAPS0220 S03 25262 MW 9:00-11:50 (B. Tannenbaum)
Spr TAPS0220 S04 25263 MW 1:00-3:50 (B. Tannenbaum)
Spr TAPS0220 S05 25264 M 9:00-11:50 (B. Tannenbaum)

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. Open to first-year students. Enrollment limited to 20. Instructor permission required. No permission will be given during pre-registration. S/NC.

Fall TAPS0230 S01 15876 MW 11:00-1:50 (K. Moore)
Fall TAPS0230 S02 16238 TTh 1:00-3:50 (S. d'Angelo)
Spr TAPS0230 S01 25250 MW 1:00-3:50 (S. d'Angelo)

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 15885 MWF 10:00-11:50 (A. Haynes)
Spr TAPS0250 S01 25256 MWF 10:00-11:50 (A. Haynes)

TAPS 0260. Stage Lighting. This course is an introduction to stage lighting. Enrollment limited to 20.

Fall TAPS0260 S01 16242 TTh 10:00-12:50 (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 15874 MTWTh 1:00-2:20 (J. Strandberg)

TAPS 0330. Mande Dance, Music and Culture. Mande, Dance, Music and Culture explores three distinct life-cycle and celebratory dances from the Bambara, Malinke, Wasalu, and Khassone peoples of Mali, West Africa. Each dance is taught in relationship to relevant oral histories, folklore and contemporary expressions. Emphasis is placed upon building a mindful community of committed thinkers and doers. Attendance at the first class is required. There is an application process for enrollment. Enrollment limited to 100. S/NC.

Spr TAPS0330 S01 25243 MWF 1:00-2:50 (M. Bach-Coulibaly)

TAPS 0350. Black Performance Theory. This interdisciplinary, reading/writing-intensive course examines the notion of blackness through theorizations of performance. It pursues the following questions: What is black authenticity? What are the rubrics with which 'authentic' blackness is measured? How is black performance political? Discussions and written work will interrogate the slipperiness of, desire for, and policing of blackness in order to trouble conceptions of race as a biological essence.

Fall TAPS0350 S01 16241 TTh 2:30-3:50(03) (J. Johnson)
TAPS 0400. A Critical History of the American Musical. Musical theatre is having a "moment" in contemporary culture: but how did the "American musical" as we know it come to be? How can we use the critical tools provided by theatre and performance studies to unpack the complicated history of this most American of theatrical forms? How has musical theatre explored the complexities of social difference across race, gender, class, sexuality, disability? In this course, specifically designed for First- and Second-Year students who may be considering the TAPS concentration, students will read, watch, listen, and even perform their way toward some ways of answering these questions. Fall TAPS0400 S01 16203 TTh 1:00-2:20(08) (L. Hilton)

TAPS 0700. Introduction to Theatre, Dance and Performance. An introduction to the breadth of topics covered in the TAPS Department, this class is a gateway to the concentration open to all students interested in live arts. We will explore how, where, and why theatre, dance and performance are made and investigate their relationship to broader culture and society. Students will learn basics: how to read a play, how to appreciate dance, and how to approach the variety of venues, histories, and methods involved in production. Overlaps with other media will be explored. Visits from TAPS faculty will dovetail with the season of offerings on the TAPS main stage. Spr TAPS0700 S01 25323 MWF 12:00-12:50(05) (J. Johnson)

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 25251 MWF 4:00-5:50 (T. Jones)

TAPS 0930C. The Actor’s Instrument: Stage Movement for Actors and Directors. Students engage in a process of exploration that centers on the physical relationship of the actor to the physical reality of live performance on stage. The class is structured as a survey introduction to a variety of methods and targets beginning movers with a range of interests and performance applications. Students investigate a broad spectrum of contemporary, classic and non-western movement theories/approaches to better enhance the ability to be 3-dimensionally present in time and space and to develop skills in the art of non-verbally based storytelling and performance. Spr TAPS0930C S01 25245 TTh 1:00-3:30 (S. d’Angelo)

TAPS 1000. Intermediate Dance. This is an intermediate-level modern dance class that extends and expands movement coursework for students who have taken TAPS 0310 or equivalent dance study. It is intended to challenge students’ memory, capacity for rhythmic complexity, and improvisational competence, as well as foster a professional work ethic that can withstand abundant physical, emotional and organizational challenges. Spr TAPS1000 S01 25365 MWF 10:30-11:50 (S. Skybetter)

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 16254 F 10:00-12:50 (B. Reo)

TAPS 1230. Global Theatre and Performance: Paleolithic to the Threshold of Modernity. This course explores performance practices that predate the European Renaissance across disparate parts of the globe. Considered will be Paleolithic rock art and other evidence of ritual practices in Europe, Africa, and the Americas; ritual dramas of Egypt, Greece, and the Roman Empire; Sub-Saharan African traditions and theatre/dance forms in ancient India, medieval Japan and the indigenous Americas. In short, we will explore a wealth of differing ancestral theatrical modes and methods that continue to leave their mark in contemporary diaporic expressions. Fall TAPS1230 S01 16240 TTh 10:30-11:50(13) (R. Schneider)

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, colorization, incipient nationalism(s), urbanization, cultural negotiation, and the representational practices the enacted. Enrollment limited to 35. Spr TAPS1240 S01 25266 TTh 10:30-11:50(09) (L. Hilton)

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." Spr TAPS1250 S01 25267 TTh 1:00-2:20(08) (R. Schneider)

TAPS 1280C. Stage Lighting II. This class is a continuation of Stage Lighting. The major portion of this class is to give the student opportunity to create an actual design on stage for the Theatre Arts & Performance Studies (TAPS). Each individual student's main project will be to create a light design and be part of the production team of a Sock and Buskin produced show. The class will be an open forum for students to share ideas about their perspective designs. The class is also set up for the continuation of expanding their Vectorworks Spotlight and Lightweight skills, as well as light console programming. Fall TAPS1280C S01 16252 W 3:00-4:30 (T. Hett) Spr TAPS1280C S01 25272 W 3:00-4:30 (T. Hett)

TAPS 1280F. Introduction to Set Design. Students will explore set/scenic design for live performance in a studio format. The main objective is to introduce the language, tools, and technical skills involved in the discipline of scenic design and to lay the foundation for further study while empowering students to actively engage as set designers in productions on campus after taking the course. A special feature of the course is guest visits which will give students the opportunity to engage in dialogue with a professional director and playwright in order to situate set design as a conceptual artistic discipline which utilizes technical tools. Enrollment limited to 10. Spr TAPS1280F S01 25258 M 3:00-6:50 (R. Fitzgerald)

TAPS 1280Y. Issues in Performance Studies. Explores myriad ways of thinking, doing and talking about performance in the broad spectrum -- from social media to theatre, dance, film, and everyday life including identifications and disidentifications of gender, race, sex, and class. We may study museum installations, surgery, tourism, carnival, history reenactments, performance-based art, sports, and even dinner parties among other actions and sites. The objective is not to pin down a genre or category of performance but to understand performance variously as an analytic and practice, a form of lived history and way of being, including but not limited to traditional theater and dance practices. Fall TAPS1280Y S01 16086 M 2:00-5:00 (R. Schneider)

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. Fall TAPS1281A S01 15878 M 3:00-7:00 (K. Moore)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
TAPS 1281E. Directing Theory and Practice.
Directing Theory and Practice is a hybrid academic and studio class designed to introduce students to the history, theory, and practice of the director’s craft. Readings on the theoretical/practical methods of direction are examined closely in class discussions and directing projects. All students must serve as actors and directors throughout.
Spr TAPS1281E S01 25270 W 1:00-5:00 (K. Moore)

TAPS 1281F. Choreography ONE: Dancemaking Pre-Classic to Post-Modern.
“Choreography ONE” is a studio dance class emphasizing historical compositional methods and asking students to create dances in a similar style. All methods, dances and vocabularies for making and critiquing dances will be examined in historical, cultural and performative context. Students work towards mastery of key compositional techniques while becoming practiced in writing and speaking about dances. Students receive dedicated lab and class time to respond to solo and group choreographic assignments, and collaboratively practice critical response, facilitation skills and dramaturgy. At semester conclusion, students will have choreographed and extensively workshopped a short solo performed in an informal class showing.
Fall TAPS1281F S01 16083 TTh 2:30-4:00 (S. Skybetter)

TAPS 1281M. Introduction to Costume Construction.
An introduction to the study and practice of costume construction skills. Topics include basic machine, hand sewing and patterning techniques.
Fall TAPS1281M S01 16246 W 3:00-6:50 (R. Cesario)

TAPS 1281O. Acting Outside the Box: Race, Class, Gender and Sexuality in Performance.
Examines the relationship between social and cultural identities and their representations in dramatic literature and performance. Students will be expected to read critical essays and plays, conduct research, and prepare to act in scenes that challenge the actor to confront the specifics of character and situation beyond the Eurocentric ideal. The goal is to strengthen the actor’s ability to construct truly meaningful characters by removing any reliance of “type” and/or immediate “identification” with the characters they will portray. Open to Any Brown/RISD graduate/undergraduate student that has taken TAPS 0230/Acting or the equivalent. Students should be aware that this is a hybrid Research and Performance class which may be counted as either a Performance Studies/Theatre Arts course for credit. Instructor Permission is Required. Interested students should attend the first class meeting in order to apply.
Fall TAPS1281O S01 25254 TTh 1:00-3:50 (K. Moore)

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.
Fall TAPS1281W S01 16244 TTh 2:30-3:50(03) (J. Strandberg)

TAPS 1281Z. Artists and Scientists as Partners: Theory to Practice.
This course focuses on the application of current research in neuroscience, education, narrative medicine, and best practices in the arts for persons with neurological disorders. Through site placements, students provide arts experiences (primarily dance and music) for persons with Parkinson’s Disease (PD) and Autism Spectrum Disorders (ASD). The course also includes guest lecturers, readings, curriculum development, analyzing and developing research methodology, ethnographic research, and planning of and participation in a convening of artists, scientists and educators in an intergenerational exploration. Completion of TAPS 1281W highly recommended, but course may be taken with no prior experience in science, dance or music.
Spr TAPS1281Z S01 25268 TTh 2:30-3:50(11) (J. Strandberg)

TAPS 1310. Advanced Modern Dance.
This course is designed for students with several years of dance experience in any genre. The purpose of this class is to endow students with technical mastery of current contemporary movement vocabularies, with emphasis on Release Technique and Bartenieff Fundamentals. Enrollment limited to 40. S/NC.
Fall TAPS1310 S01 16213 MWF 3:00-4:50 (S. Baryshnikov)

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 Americanists, art historians, dancers, and theatre majors.
Fall TAPS1330 S01 16233 TTh 10:30-11:50(13) (J. Strandberg)

TAPS 1346. Affective Machinery: Hybrid Seminar On Technologies Of Choreographic Practice.
This course examines the relationship of technological innovation and Western choreographic practice from the 17th century to present. By tracing the creative application of specific technologies (beginning with the prosenium stage, gas light, photograph, television, and film, and concluding with emergent media phenomena such as motion capture, virtual reality, kinesthetic algorithms and gestural interfaces) by such artists as Loie Fuller, George Balanchine, Anne Teresa De Keersmaeker, and Beyoncé, and we will explore the contrapuntal interplay between artistic practice, performative technology and contemporary culture.
Fall TAPS1346 S01 16085 Th 3:00-5:20 (S. Skybetter)

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/NC.
Fall TAPS1350 S01 15875 Th 8:00PM-10:00PM (J. Strandberg)
Fall TAPS1350 S01 15875 MW 6:30-9:30PM (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/NC.
Spr TAPS1360 S01 25244 Th 8:00PM-10:00PM (J. Strandberg)
Spr TAPS1360 S01 25244 MW 6:30-9:30PM (J. Strandberg)

TAPS 1370. New Works/World Traditions.
As an Engaged Scholarship course, New Works develops new dance theater pieces that are rooted in research in Mindfulness, Somatic Studies, Mande Dance, Contact Improvisation, Butoh and Contemporary Vernacular dance forms. Guest artists from Japan, China, West Africa, the USA, and local community partners co-create new theatrical pieces for the concert stage. May be repeated for credit. S/NC.
Spr TAPS1370 S01 25246 Su 3:00-7:00 (M. Bach-Coulibaly)
Spr TAPS1370 S01 25246 Th 6:00-9:00PM (M. Bach-Coulibaly)
Spr TAPS1370 S01 25246 T 6:00-10:00PM (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.
Fall TAPS1380 S01 15886 M 3:00-5:30(05) (S. Golub)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
TAPS 1500H. Advanced Playwriting.
This unique course combines Brown undergraduate/graduate students with Brown/Trinity M.F.A. Acting and Directing students to explore bodies on stage, in specific time and space. Students create original short, theatrical works as they examine and experiment with multiple narrative techniques. Classes include craft exercises and close readings of a diverse range of texts—all to look deeper at how works are built. Through energetic workshop-style classes, this rare and significant collaboration allows students of different backgrounds to experience the full process of drafting, hearing the words aloud, and revising original works. Open to graduate/undergraduate students. Prerequisite: TAPS 0100 and 0200. Enrollment limited.

TAPS 1510. Inventing Directing.
"Inventing Directing" is a course that deals with how a director gets thought into stage space via: different emphases communicated to actors; attention to the life of objects; exploration of the languages of stage space; accessing personal experience to deepen point of view; drawing upon film, the practical application of theory, and literature; vertical thinking; and spatializing time. The course will involve practical exercises and work on both scenes from plays and on material drawn from other sources.

TAPS 1610. Political Theatre of the Americas.
This course explores political theatre and performance in Latin America, the US and Canada. The primary concern will be the use of performance in indigenous rights, queer rights, and gender equity campaigns as well as general critiques of socioeconomic inequity. The course examines the strategies used by actors in theatrical performances, performance art, and political protests that use the tools of performance. Exploration is of the rich relationship between politics and performance. There are no prerequisites, but one course in either Latin American Studies or Theatre and Performance Studies is recommended.

TAPS 1690. Performance, Art, and Everyday Life
Provides an introduction to performance-based art. Some knowledge of the historical avant-garde is required. The class will explore site-specific work, time-based work, life art, body art, instruction art and a variety of intermedial artwork. Theories of "theatricality" and "performativity" will be explored as will expressive properties of repetition, excess, mimesis, banality, mobility, framing, failure and shock. Enrollment limited to 16.

TAPS 1900K. Reading Sex (ENGL 1900K).
Interested students must register for ENGL 1900K.

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 2300H. Graduate Seminar in Theatre and Performance Studies: Body Politics.
This graduate-level seminar for students working in performance studies and related areas will consider new directions in the field’s longstanding investment in theorizing the politics of embodiment. Reading one academic book per week, we will explore a range of theoretical frameworks and methodological approaches in for asking what the body "is", what the body "does"—with particular interest in how performance studies interfaces with emerging fields such as queer of color critique, trans studies, disability studies, and science and technology studies. Students will write a culminating seminar paper connected to the course theme that expands upon their own research interests.

TAPS 2310. Graduate Playwriting.
With Word as the bodily 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. S/NC

TAPS 2450. Exchange Scholar Program.
This course 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.

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.

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. S/NC

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. S/NC

For up-to-date course information please visit Courses@Brown.edu (https://courses.brown.edu).
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 on 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 20162 Arranged (B. McElney)

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 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 20163 Arranged (T. Jones)

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 physically 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 20164 Arranged "To Be Arranged"

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 20165 Arranged (B. Mertes)

TAPS 2590. 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 TAPS2590 S01 11276 Arranged (B. Mertes)

TAPS 2610. Acting Technique III: Poetic Expression.
Vocal and physical work designed to support the exploration of classical verse acting, with an emphasis on expanding a range of performance beyond realism. Rhythm, fluidity, presence, power, clarity of thought and the expression of emotional depth through language and movement is the focus of studio practice. Also included is introduction to singing technique. This course includes separate classes in Movement Technique, Alexander Technique and Singing.
Fall TAPS2610 S01 18171 Arranged (S. Baryshnikov)

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 12777 Arranged (S. Baryshnikov)

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 11278 Arranged (B. Mertes)

TAPS 2635. Directing III: The Director's Vision.
This course is for Brown/Trinity MFA Actors and Directors and focuses on the vision of the director. Deep investigation in complicated language, verse, period. Continued development in collaboration with actors as well as personal mission, and vision. Seminar discussion of current work in process and production, exploration of contemporary dramatic forms and practitioners, issues in the art and craft of directing, diagnostic and exchange around the breaking of boundaries and best practices. Seminar runs concurrently with Directors Lab, Director projects, including thesis, and verse.
Fall TAPS2635 S01 16115 Arranged (B. Mertes)

TAPS 2645. Fall Directing Practicum.
This credit is designed to build the director's skills in preparation, script analysis, and rehearsal processes in the making of a Shakespeare production which tours into the Providence School System, a kind of "mobile unit" production. This project has very clear parameters and minimal design to center the work on the embodiment of the text by the actors. It is intended to center the actor in the making of work, requires a deep understanding of the text through analysis, and an edit to get it to a length that will support the tour.
Fall TAPS2645 S01 16116 Arranged (B. Mertes)

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 20167 Arranged (T. Jones)

TAPS 2685. Acting Technique IV: Creativity and Virtuosity.
A culmination of the technical practice of the previous three semesters, with the goal of achieving a professional level of technical expertise. Through mastery of the vocal and physical instrument, the actor is prepared to fulfill creative, imaginative and athletic choices in physical and vocal performance. This course includes separate classes in Alexander Technique, Singing and Movement/Devising.
Spr TAPS2685 S01 25240 Arranged (S. Baryshnikov)

TAPS 2670. Movement: Stage Combat, Clowning, and Other Physical Form.
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.
Spr TAPS2670 S01 20168 Arranged (S. Baryshnikov)

This course is open only to students of the MFA Consortium program. It will include issues of directing, as well as the concerns of an Artistic Director and Associate Artistic Director. Each student will be expected to assist director a professional production at Trinity Rep Company.
Spr TAPS2680 S01 20169 Arranged (B. Mertes)

TAPS 2685. Directing IV: Special Topics.
This course is focused on the development of advanced and augmented research and the deepening of communication with designers and production team. Directors will explore a variety of methodologies and approaches to theater-making.
Spr TAPS2685 S01 25239 Arranged (B. Mertes)

TAPS 2695. Spring Directing Practicum.
Spring Directing Practicum is the spring repertory production in the end of the fourth semester directed by each MFA Directing Student. This production is fully designed with a professional design team and presented to the public at the Pell Chafee Performance Center in cooperation with Trinity Rep.
Spr TAPS2695 S01 25241 Arranged (B. Mertes)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
TAPS 2705. Third Year Practicum: The Actor as Creator.
Based upon a foundation of mastery in realistic and classical acting styles, actors engage in an exploration of historical, modern and contemporary dramatic literature and theatre practice with a goal of developing a personal aesthetic voice that pushes the boundaries of convention and tradition in their mature theatre practice. This course includes separate classes in Scene Study, Voice, Movement and Alexander Technique, as well as participation in Director's Lab. S/NC
Fall TAPS2705 S01 25222 Arranged (B. McElaney)

This course is open only to students of the Brown University/Trinity Rep MFA Consortium program. This course will teach actors various American regional dialects and international accents including British, Irish, Italian and Russian. Students will examine the language with the use of the International Phonetic Alphabet, and will be expected to perform using the regionalisms and dialect and then teach it to the rest of the class.
Fall TAPS2710 S01 11280 Arranged (B. Mertes)

TAPS 2720. Physical Theatre.
This course is open only to students of the Brown University/Trinity Rep MFA Consortium program. This course will explore various kinds of physical theatre, and ways in which the actor can be free, spontaneous and open in rehearsal and performance. Areas of exploration will include Commedia, mask and yoga.
Fall TAPS2720 S01 11281 Arranged (S. Baryshnikov)

This is a two-credit course and is open only to students of the Brown/Trinity Rep MFA Consortium program. Directing students will study theatrical design including stage settings, costumes, lights and sound. Particular focus will be given to ways in which a director works with a designer to establish his or her vision of the play. Areas of study will include blueprints, floor plans, renderings and focus.
Fall TAPS2730 S01 11282 Arranged (B. Mertes)

TAPS 2760. Professional Performance.
This is a two-credit course and is open only to students of the Brown University/Trinity Rep MFA Consortium program. It will include performance work in a variety of venues including, but not limited to, Trinity Rep's mainstage. Work might include major and/or minor roles at Trinity, as well as understudy responsibilities for the professional company. Based on their participation in this course, students will be awarded their union cards so that they are able to enter the professional area upon graduating.
Spr TAPS2760 S01 20171 Arranged (S. Berenson)

This is a two-credit course and is open only to students of the Brown University/Trinity Rep MFA Consortium program. Each student will direct a professional full-scale production in one of Trinity Rep's theatres. In addition to directorial duties, students will assist in casting and designing the play, and will be fully involved in areas of budget, publicity, press relations, marketing and development.
Spr TAPS2770 S01 20172 Arranged (B. Mertes)

TAPS 2981. Master's Thesis Research.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.
Fall TAPS2981 S01 15352 Arranged 'To Be Arranged'
Spr TAPS2981 S01 24231 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 others both at community level and at the macro-state level will be explored.
Spr UNIV0400 S01 25709 W 3:00-5:30(10) (T. Flanigan)
Spr UNIV0400 S02 25710 F 3:00-5:30(15) (T. Flanigan)
Spr UNIV0400 S03 25711 T 4:00-6:30(16) (T. Flanigan)

UNIV 1110. The Theory and Practice of Problem Solving and Research.
This course is designed for STEM students who are teaching or will be teaching in any capacity, who are interested in improving their teaching, problem-solving, and research skills. Course readings, assignments, and activities focus on improving student learning; how to engage a diverse group of students; and how to reflect, evaluate, and improve their practices as educators, scientists/engineers, and problem solvers. Students will gain skills that will aid them in their own learning, promote learning in others, improve communication and problem-solving capabilities, and prepare them to engage more deeply in diverse learning spaces. S/NC
Fall UNIV1110 S01 15528 TTh 9:00-10:20(02) (C. Smith)

UNIV 1520. The Shaping of World Views.
To many students, an exclusive emphasis on specialized studies fragments the "world" in which they live. A widespread feeling of loss pervades the minds of students who often come to universities to learn right from wrong, to distinguish what is true from what is false, but who realize at the end of four years that they have deconstructed their freshman beliefs, values, and ideologies, but have created nothing to replace them. This course examines the diversity of worldviews both synchronically and diachronically and surveys various explanations for such diversity. Enrollment limited to 30. Conducted in English.
Spr UNIV1520 S01 25074 MW 2:00-2:50(07) (O. Almeida)

Urban Studies

URBN 0210. The City: An Introduction to Urban Studies.
This introductory course to Urban Studies is taught in an entirely new format. Led by Prof. Neumann, it will include lectures by Urban Studies faculty who will present their views of the field. It offers an interdisciplinary approach to the history, physical design, spatial form, economy, governance, cultures, and social life of cities worldwide. Which are the most urgent issues facing cities today? How will continued urban growth affect the environment? How can we learn from historic approaches to urban planning? Which are the most promising solutions to relieve urban inequality? What can be learned from ‘informal housing’ developments?
Fall URBN0210 S01 15661 TTh 1:00-2:20(08) (S. Zipp)
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 19 first year students.
Fall URBN0230 S01 15504 TTh 10:30-11:50(13) (R. Carter)

URBN 1000. Fieldwork in the Urban Community.
Each student undertakes a fieldwork project in close collaboration with a government agency, a nonprofit association, or a planning firm, thereby simultaneously engaging with community and learning qualitative research methods. Skills. In weekly seminar meetings, the class examines a series of urban issues and discusses fieldwork methodology. Students also schedule regular appointments with the instructor.
Spr URBN1000 S01 24237 TTh 10:30-11:50(09) (J. Pacewicz)

URBN 1250. The Political Foundations of the City.
This course examines the history of urban and social welfare policy in the United States and abroad. It reviews major theories accounting for the origins and subsequent development of welfare states, explains the “exceptional” nature of American public policy, and employs a combination of historical texts and case studies to analyze the connections between politics and the urban environment.
Fall URBN1250 S01 15459 TTh 10:30-11:50(13) (J. Pacewicz)

URBN 1260. Housing in America.
An examination of why housing matters to individuals, communities, and the nation. This course examines the unique qualities of housing and associated American cultural ideals and norms. The changing role of the government in housing is considered, along with other factors shaping the provision of housing, and the success and failure of housing programs. While housing is a necessity, for many in America housing choices are constrained as costs are unaffordable, discriminatory practices remain, and physical features do not align with needs. This course deliberates how well America meets the challenge of providing decent shelter for all residents.
Fall URBN1260 S01 15596 TTh 2:30-3:50(03) (M. Bull)

A central theme of the course is that urban politics in the United States arises from the interplay of governmental power and private resources. The course describes the emergence of urban America; the modern city and the theories that have evolved to explain urban politics; and the nature of the urban condition with particular emphasis on the challenges faced by residents and government in the post-industrial city.
Spr URBN1270 S01 24860 TTh 2:30-3:50(11) (M. Orr)

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.
Fall URBN1870S01 15460 W 3:00-5:30(17) (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.
Fall URBN1870D S01 15461 Th 4:00-6:30(04) (R. Azar)

URBN 1870J. The Politics of Community Organizing.
Introduces key issues concerning community organizing. Focuses on the life, skills, and tactics of Saul Alinsky and the national organization he founded, the Industrial Areas Foundation (IAF). Analyzes the work of the IAF in a number of urban settings. Seeks to develop theories and models for studying community mobilization in urban America. Priority given to Political Science and Urban Studies concentrators.
Fall URBN1870J S01 15469 M 3:00-5:30(05) (M. Orr)

This seminar surveys the history of archaeological exploration, discovery, and interpretation in the contexts of social, political, and religious debates from the mid-nineteenth century to the present, with an emphasis on the post-1967 period. It examines the legal settings and ethical precepts of archaeological activity and the developing discourse of cultural heritage. It analyzes the ongoing struggle to discover and define the city’s past, to expose its physical legacy, and to advance claims of scientific validity and objectivity against the challenges of religious zeal and political partisanship, the latter both intimately related though not necessarily limited to the ongoing Israeli-Palestinian conflict.
Fall URBN1870K S01 15637 Th 4:00-6:30(04) (K. Galor)

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 human-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.
Spr URBN1870N S01 24240 W 3:00-5:30(10) (S. Zipp)

This seminar explores how urban planners in the U.S. plan for and around various transportation networks. We will examine how these networks are designed and funded, which modes get priority over others, and ultimately how transportation shapes the built environment. Real-world examples of plans and projects from Providence and Rhode Island are used throughout the course. Important concepts are illustrated through field trips and guest speakers.
Spr URBN1870T S01 24238 Th 4:00-6:30(17) (R. Azar)

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.

A program of intensive reading, research, and writing under the direction of a faculty member. Permission should be obtained from the Thesis Advisor in Urban Studies. Mandatory attendance at periodic meetings during the semester is required. Open to Senior Urban Studies concentrators pursuing Honors in Urban Studies. Instructor permission required.

A program of intensive reading, research, and writing under the direction of a faculty member. Permission should be obtained from the Thesis Advisor in Urban Studies. Mandatory attendance at periodic meetings during the semester is required. Open to Senior Urban Studies concentrators pursuing Honors in Urban Studies. Instructor permission required.

URBN XLIST. Courses of Interest to Concentrators in Urban Studies.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Visual Art

VISA 0100. Studio Foundation.
Required for all VA and RISD courses (with the exception of VISA0120, VISA0130, VISA0140, VISA0150 and VISA0160). Covers the basics of drawing and 2D design while cultivating the capacity for visual thinking. The Registrar’s Office manages an online lottery for registration for this popular course. Students not enrolled through the lottery should attend the first class meeting.

VISA 0120. Foundation Media.
Foundation media focuses on the production and theory of time-based digital media and introduces the computer as a medium and a tool for art. Students will experiment with the production of video, sound, and interactive media. Topics include new media technologies and the history of photography. This course will prepare students for upper level media courses and is required for all Visual Art concentrations.

VISA 0140. Photography Foundation.
This class is a wide ranging technical and conceptual introduction to photography. Through weekly projects, students will be exposed to 19th-21st century photo processes. Topics covered include cameras, lenses, software, darkroom overview, scanning, digital and artificial lighting, alternative processes as well as concepts such as selective focus, color temperature, composition. Short readings and in-class slide presentations on a diverse range of photographers will introduce students to the history of photography. This course will prepare students for upper level Photography courses at Brown and RISD.

VISA 0150. Digital 2D Foundation.
This foundation studio course introduces the basic practices and concepts of two-dimensional digital media production including image acquisition, editing and manipulation, vector illustration, and preparation for online and offline viewing. Through studio exercises, readings, and assignments we will experiment with the production of electronic images. We will be looking at and producing work that is conscious and critical in nature, and which combines aspects of contemporary art, media, and technology. Collaboration and group work will be encouraged to share learning techniques and skill resources.

VISA 0160. Foundation Painting.
Painting in acrylics for a variety of interests and aptitudes - basic instruction in media and painting procedure, emphasis on development of the image as a visual statement. Will cover basic color principles, painting techniques and concepts. Assignments cover a wide range of approaches including painting from observation, the model, individual research, and imagination. Images, related books, and articles are discussed. Individual criticism is given; participation in group discussion is required. Students not admitted during pre-registration should attend the first class meeting.

VISA 1210D. Lithography.
Lithography is the most versatile printmaking process. Working on limestone and aluminum plates, students will learn to produce, process and print their work in black and white. Class participation is vital, as students will be aiding each other in this complicated process. This course requires considerable time outside of class. Prerequisite: VISA 0100 or VISA 0110.

This course is restricted to 17 VA or Art Semiotic Concentrators, and others by permission of the instructor. 10 seats will be available during pre-registration.

Students who are unable to pre-register should attend the first class.

Fall VISA1210D S01 16821 TTh 1:00-4:50

L. Bostrom

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. Students who are not admitted during pre-registration or were unable to pre-register should attend the first meeting.

Fall VISA1240 S01 16813 MW 1:00-4:50

E. Mena-Landry

VISA 1310. Beginning Painting.
This painting course explores ideas and concepts in contemporary painting and emphasizes individual projects based on prompts. Students will experiment with materials, color and scale strengthening ideas through individual investigations into content and context. Critiques, readings, writing assignments and final projects will be supplemented by research into artists and movements that have developed within the last several decades. Enrollment limited to 14 Visual Art concentrators and others by permission of the instructor. Prerequisites: VISA0100.

Fall VISA1310 S01 16825 MW 1:00-4:50

W. Edwards

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 16814 TTh 1:00-4:50

L. Tarentino

VISA 1410. Sculpture: Material Investigations.
This studio course addresses basic sculptural methods, i.e., additive + subtractive modeling, casting, and assemblage, and common sculptural materials, i.e., wood, metal, plaster, and found objects. Demos + 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 who are not admitted during pre-registration or were unable to pre-register should attend the first meeting of the class.

Fall VISA1410 S01 16839 TTh 12:00-3:50

P. Myoda

VISA 1510. Black and White Photography.
This course offers introduction to traditional black and white 35mm darkroom techniques, including processing film, silver gelatin printing and related techniques. While the class is primarily a studio course, it will be supplemented by weekly slide presentations and discussions of assigned readings. Slide presentations will focus on individual photographers in the history of the medium. Topics of discussion will include photographic genres, the photo essay, editing and sequencing a body of work, personal visions, social and political context, documentary versus art photography. Students may check out 35 mm film camera from the Dept.

Fall VISA1510 S01 16832 TTh 9:00-12:50

T. Ganz

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
VISA 1520. Digital Photography.
Over 1.8 billion photographs are uploaded to the Internet each day. Since everyone’s a ‘photographer’, what type are you? While we constantly produce images for ourselves and others in private and public, this course will ask students to critically rethink this tool. Image-making, from “capture” to “color-correction” and beyond will be consciously addressed, as we approach photography from the perspective of contemporary art practice and produce a final portfolio of prints. Class will be discussion, slideshow, studio and critique. Prior experience in photography preferred not required. A digital SLR type camera may be checked out from the Department.

VISA 1740. Time Deformations.
This studio course explores modes of electronic media by focusing on time as a primary material. Students will develop projects for specific sites and situations in response to assigned topics individually and in groups. Selected works in video, sound, performance, and online media that make innovative use of temporal strategies will be examined. Production work will be complimented by technical lectures, readings and discussions, and screenings.

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. Must be accepted into Honors Program.

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 up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Undergraduate Concentrations

Africana Studies

Africana Studies presents a different conceptual paradigm that connects the global black experience. Africana Studies engages issues about historical and contemporary responses to local and global crises. It engages with how people of color create their own knowledge culturally and politically. It is oftentimes a critique of how forms of knowledge are produced. Concentrators acquire a host of interdisciplinary skills that allow them to ask questions about the world around them, and forms of knowledge production while developing critical analytical skills. Our concentrators deploy these skills in other classes, enriching their own general intellectual development.

In order to develop requisite competency in the discipline of Africana Studies, concentrators must complete eight (8) semester-long courses offered by or cross-listed with the Department. Six (6) courses must have an AFRI prefix or be offered by Africana Studies core faculty. Two (2) courses can be cross-listed. In some cases, Concentrators may petition the Department to accept other appropriate courses. Of these 8 courses, the following Africana Studies courses are required:

- AFRI 0090 An Introduction to Africana Studies
- AFRI 1360 Africana Studies: Knowledge, Texts and Methodology—Senior Capstone Seminar (Spring ONLY)

Please note: Beginning with the class of 2021, the concentration will be comprised of a total of 9 courses, which will include a required junior seminar to be offered during the second semester. Students studying abroad during the second semester of their junior year will be required to take the seminar during their senior year. If there is a documented conflict with another concentration’s senior seminar, students should consult with the DUS.

The Department strongly encourages foreign study in Africa, the Caribbean, and Latin America, during the student’s junior year of concentration. Although the Africana Studies Department actively supports programs in South Africa, Tanzania, Ethiopia, Brazil, and the English-Speaking Caribbean, at least six (6) courses must be completed in the department and taught by core faculty.

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.

For more information about the concentration, please contact Professor Lundy Braun (lundy_braun@brown.edu), Director of Undergraduate Studies.

Honors in Africana Studies

Africana Studies’ concentrators with outstanding academic records (demonstration of excellent research and writing skills from course selections to grades) may be admitted to the department’s Honors Program.

Students interested in pursuing honors should identify a faculty sponsor in Africana Studies (chosen from Core Faculty or affiliated faculty after Chair agreement) in their 6th semester and begin working on their thesis project during the summer before their senior year. By the end of the sixth semester, while working in consultation with a faculty advisor, the student must submit a rough draft of the project proposal. Please visit the department website for proposal guidelines. This preliminary plan should include a timeline for completion of the thesis and is not to exceed one (1) typewritten page. This plan should also include a bibliography that students have developed with their thesis advisor to guide their summer reading.

By the end of the summer, the Honor’s candidate should be familiar with the secondary works in the field. (Secondary readings should be extensive and be incorporated into the final proposal, due Monday September 16, 2019.) The student should also identify a second reader at this point. The final work plan/proposal, not to exceed three (3) typewritten pages, should incorporate the summer research findings and updates to the completion deadline. The final proposal must be approved and signed by a committee, comprised of the faculty advisor who is to direct the Honor’s thesis, the second reader, and the concentration advisor. By the end of week three of the first senior semester, the thesis advisor should inform the Director of Undergraduate Studies by email that the proposal has been approved.

The Honor’s candidate should complete at least one chapter of distinguished quality while enrolled in an independent study with their faculty advisor during the first semester of the senior year. Students must enroll in at least one, preferably two, semesters of independent study to work on their thesis.

For students completing graduation requirements by the end of Semester I (Fall), a first complete draft of the thesis should be completed by Friday, November 8, 2019. Final drafts must be submitted by Friday, November 29, 2019. For students completing graduation requirements by Semester II (Spring), a first complete draft of the thesis should be submitted by Friday, March 13, 2020. The final draft of the thesis should be submitted by Friday, April 17, 2020. Students must submit bound copies of the final thesis to the department and to each of their readers, along with an electronic copy of the completed thesis to the Academic Department Manager. All students are expected to formally present their thesis projects in the Department of Africana Studies on Monday, April 27, 2020 at a time to be determined. After this presentation, a department committee will make recommendations for honors to the Director of Undergraduate Studies and students will receive notification of the recommendation.

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.

Interested students may contact the director of undergraduate studies.

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.

Requirements:

Each concentrator will take 10 upper-level courses, four of which must be seminars, including a Junior Seminar and a Senior Seminar. In addition, students who wish to graduate with honors are required to take two semesters of AMST 1970 for a total of 12 credits.

Each concentrator will create an individual FOCUS consisting of at least three courses 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.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 and are encouraged to take AMST 1800, the Honors Seminar, in the Spring of their Junior year. Students pursuing honors are required to take two independent study courses in their senior year, in addition to the regular concentration requirements, in order to write their honors thesis.

**Requirements for the American Studies Concentration**

**Junior Seminar:** A course from the AMST 1700 Series, for example:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>AMST 1700B</td>
<td>Death and Dying in America</td>
</tr>
<tr>
<td>AMST 1700C</td>
<td>Slavery in American History, Culture and Memory</td>
</tr>
<tr>
<td>AMST 1700D</td>
<td>Race and Remembering</td>
</tr>
<tr>
<td>AMST 1700F</td>
<td>American Publics</td>
</tr>
<tr>
<td>AMST 1700I</td>
<td>Community Engagement with Health and the Environment</td>
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**Senior Seminar:** A course from the AMST 1900 series taken during the senior year, for example:

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>AMST 1900A</td>
<td>The Problem of Class in America</td>
</tr>
<tr>
<td>AMST 1900B</td>
<td>America and the Asian Pacific: A Cultural History</td>
</tr>
<tr>
<td>AMST 1900C</td>
<td>Narratives of Slavery</td>
</tr>
<tr>
<td>AMST 1900D</td>
<td>America as a Trans-Pacific Culture</td>
</tr>
<tr>
<td>AMST 1900F</td>
<td>Transnational Popular Culture</td>
</tr>
<tr>
<td>AMST 1900G</td>
<td>Movements, Morals, and Markets</td>
</tr>
<tr>
<td>AMST 1900I</td>
<td>Latino/a Cultural Theory</td>
</tr>
<tr>
<td>AMST 1900J</td>
<td>Race, Immigration and Citizenship</td>
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<tr>
<td>AMST 1900K</td>
<td>China in the American Imagination</td>
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<tr>
<td>AMST 1900L</td>
<td>Cold War Culture The American Culture in the Cold War</td>
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<tr>
<td>AMST 1900N</td>
<td>Ethnicity, Identity and Culture in 20th Century New York City</td>
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<tr>
<td>AMST 1900O</td>
<td>Filipino American Cultures</td>
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<tr>
<td>AMST 1900P</td>
<td>Essaying Culture</td>
</tr>
<tr>
<td>AMST 1900Q</td>
<td>From Perry to Pokemon: Japan in the United States, the United States in Japan</td>
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<tr>
<td>AMST 1900R</td>
<td>Gender, Race, and Class in the United States</td>
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<tr>
<td>AMST 1900S</td>
<td>Green Cities: Parks and Designed Landscapes in Urban America</td>
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<tr>
<td>AMST 1900U</td>
<td>Immigrant Radicals: Asian Political Movements in the Americas 1850-1970</td>
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<tr>
<td>AMST 1900V</td>
<td>Immigrants, Exiles, Refugees, and Citizens in the Americas</td>
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<tr>
<td>AMST 1900W</td>
<td>Latina Literature: The Shifting Boundaries of Identity</td>
</tr>
<tr>
<td>AMST 1900X</td>
<td>Latino/a Religions: Encounters of Contestations and Transformations</td>
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<tr>
<td>AMST 1900Y</td>
<td>Latino New York</td>
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<tr>
<td>AMST 1900Z</td>
<td>Latinos and Film</td>
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Two additional upper-level seminar taken from the AMST 1700, AMST 1800, or AMST 1900 series 2
Six upper-level lectures or seminars numbered between AMST 1900 and AMST 1900, including those AMST 1900s listed above 6

**Ungraded Capstone ePortfolio**

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>AMST 1596</td>
<td>Education Beyond the Classroom Walls: Teaching and Learning in Cultural Institutions</td>
</tr>
<tr>
<td>AMST 1600D</td>
<td>Sports in American Society</td>
</tr>
<tr>
<td>AMST 1601</td>
<td>Health and Healing in American History</td>
</tr>
<tr>
<td>AMST 1611M</td>
<td>Trauma and the Shame of the Unspeachable: The Holocaust, American Slavery, and Childhood Sexual Abuse</td>
</tr>
<tr>
<td>AMST 1901D</td>
<td>Motherhood in Black and White</td>
</tr>
<tr>
<td>AMST 1902Z</td>
<td>Radio: From Hams to Podcasts</td>
</tr>
<tr>
<td>AMST 1904V</td>
<td>Decolonizing Minds: A People’s History of the World</td>
</tr>
<tr>
<td>AMST 1905N</td>
<td>War and the Mind in Modern America</td>
</tr>
<tr>
<td>AMST 1905Q</td>
<td>Laboring Women: Work, Reproduction, and Leisure since Reconstruction</td>
</tr>
<tr>
<td>AMST 1906H</td>
<td>Beauty Pageants in American Society</td>
</tr>
<tr>
<td>AMST 1906I</td>
<td>Decolonizing Museums: Collecting Indigeneous Culture in Taiwan and North America</td>
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**Total Credits** 10

1 Additional criteria concerning the FOCUS:
- Three of the ten (10) required upper-level courses must fit into the FOCUS
- Up to four (4) courses from other departments can be counted toward the concentration IF and ONLY IF they fit into the FOCUS

**Honors**

AMST 1970 Independent Reading and Research (Students pursuing honors in the concentration are required to take two semesters of Independent Study to produce the Honors Thesis)

**WHAT we study**

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.
with the concentration advisor. At least nine courses in anthropology are
Concentrators should select their courses in anthropology in consultation
forms of community involvement.
engaged activities such as internships, public service, humanitarian and
engaged-scholars-program)
also allows students to pursue the Engaged Scholars Program
major subdisciplines of the field: sociocultural anthropology, archaeology,
Department of Anthropology at Brown is a vibrant, award-winning group
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,
archaeological linguistics, and biological anthropology. The department
also allows students to pursue the Engaged Scholars Program (https://www.brown.edu/academics/college/special-programs/public-service/engaged-scholars-program). ESP is for students with an interest in making
deeper connections between their concentration curriculum and long-term
generated activities such as internships, public service, humanitarian and
development work, archaeological excavations, and many other possible
forms of community involvement.

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:

| ANTH 0100 | Introduction to Cultural Anthropology |
| ANTH 0110 | Anthropology and Global Social Problems: Environment, Development, and Governance |
| 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:

| ANTH 0310 | Human Evolution |
| ANTH 0500 | Past Forward: Discovering Anthropological Archaeology |

Select one of the following, normally taken in junior or
sophomore year:

| ANTH 1621 | Material Culture Practicum |
| ANTH 1900 | History of Anthropology: Anthropological Theories |
| ANTH 1940 | Ethnographic Research Methods |
| ANTH 1950 | Archaeological Field Work |

A course from the ANTH 1910 Series (Normally taken in senior
year) 1

Five additional Anthropology courses. 5

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.

Anthropology

Anthropology is the study of human beings from all times and all places,
offering holistic, comparative, international, and humanistic 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,
archaeological linguistics, and biological anthropology. The department
also allows students to pursue the Engaged Scholars Program (https://www.brown.edu/academics/college/special-programs/public-service/engaged-scholars-program). ESP is for students with an interest in making
deeper connections between their concentration curriculum and long-term
generated activities such as internships, public service, humanitarian and
development work, archaeological excavations, and many other possible
forms of community involvement.

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:

| ANTH 0100 | Introduction to Cultural Anthropology |
| ANTH 0110 | Anthropology and Global Social Problems: Environment, Development, and Governance |
| 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:

| ANTH 0310 | Human Evolution |
| ANTH 0500 | Past Forward: Discovering Anthropological Archaeology |

Select one of the following, normally taken in junior or
sophomore year:

| ANTH 1621 | Material Culture Practicum |
| ANTH 1900 | History of Anthropology: Anthropological Theories |
| ANTH 1940 | Ethnographic Research Methods |
| ANTH 1950 | Archaeological Field Work |

A course from the ANTH 1910 Series (Normally taken in senior
year) 1

Five additional Anthropology courses. 5

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
time, 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 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.brown.edu/academics/
applied-mathematics/undergraduate).

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 | and Introductory Calculus, Part II |

Or their equivalent

Program

Ten additional semester courses approved by the Division of
Applied Mathematics. These classes must include:

| MATH 0180 | Intermediate Calculus |
| MATH 0520 | Linear Algebra |
| APMA 0350 | Applied Ordinary Differential Equations |
| APMA 0360 | and Applied Partial Differential Equations |

Select one course on programming from the following:

| 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 |

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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.**

**Program**

Eighteen approved semester courses in mathematics, applied mathematics, engineering, the natural or social sciences. These classes must include:

1. MATH 0090 & MATH 0100 Introductory Calculus, Part I and Part II
2. MATH 0180 Intermediate Calculus
3. MATH 0520 Linear Algebra
4. APMA 0350 Applied Ordinary Differential Equations I
5. APMA 0360 Applied Partial Differential Equations I

Select one senior seminar from the APMA 1930 or APMA 1940 series, or an approved equivalent.

Select one course on programming from the following:

1. APMA 0090 Introduction to Mathematical Modeling
2. APMA 0160 Introduction to Scientific Computing
3. CSCI 0040 Introduction to Scientific Computing and Problem Solving
4. CSCI 0150 Introduction to Object-Oriented Programming and Computer Science
5. CSCI 0170 Computer Science: An Integrated Introduction

Ten additional courses, of which six should be chosen from the 1000-level or higher level courses taught by the Division of Applied Mathematics. APMA 1910 cannot be used as an elective.

**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. APMA 1910 cannot be used as an elective.
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.

**Required Courses:**

*Students are required to take all of the following courses.*

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0090 Introductory Calculus, Part I</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0100 Introductory Calculus, Part II</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 0170 Advanced Placement Calculus</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0180 Intermediate Calculus (or equivalent placement)</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>CHEM 0330 Equilibrium, Rate, and Structure</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 0030 Basic Physics A</td>
<td>1</td>
</tr>
<tr>
<td>or PHYS 0050 Foundations of Mechanics</td>
<td>1</td>
</tr>
</tbody>
</table>

Select one of the following sequences:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>APMA 0350 &amp; APMA 0360 Applied Ordinary Differential Equations I &amp; II</td>
<td>2</td>
</tr>
<tr>
<td>APMA 0330 &amp; APMA 0340 Methods of Applied Mathematics I, II</td>
<td>2</td>
</tr>
<tr>
<td>APMA 1650 Statistical Inference I</td>
<td>1</td>
</tr>
<tr>
<td>or APMA 1655 Statistical Inference I</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 0200 The Foundation of Living Systems (or equivalent)</td>
<td>1</td>
</tr>
</tbody>
</table>

**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.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Four classes in the biological sciences agreed upon by the student and advisor. These four courses should form a cohesive grouping in a specific area of emphasis, at least two of which should be at the 1000-level. Some example groupings are below:

**Areas of Emphasis and Suggested Courses:**
Some areas of possible emphasis for focusing of elective courses are listed below. Given the large number of course offerings in the biosciences and neuroscience, students are free to explore courses in these areas that are not listed below. However, all classes must be approved by the concentration advisor. APMA 1910 cannot be used as an elective.

### Biology

- **Biochemistry**
  - BIOL 0280  Biochemistry
  - BIOL 1270  Advanced Biochemistry
  - CHEM 0350/0360  Organic Chemistry
  - CHEM 1230  Chemical Biology

- **Biotechnology and Physiology**
  - BIOL 0800  Principles of Physiology
  - BIOL 1100  Cell Physiology and Biophysics
  - and/or appropriate bioengineering courses, such as:
    - BIOL 1090  Polymer Science for Biomaterials
    - BIOL 1120  Biomaterials
    - BIOL 1140  Tissue Engineering
    - BIOL 1150  Stem Cell Engineering
    - BIOL 1210  Synthetic Biological Systems

- **Ecology, Evolution, and Genetics**
  - BIOL 0410  Invertebrate Zoology
  - & BIOL 0480  and Evolutionary Biology
  - BIOL 0420  Principles of Ecology
  - & BIOL 0430  and The Evolution of Plant Diversity
  - BIOL 0470  Genetics
  - BIOL 1420  Experimental Design in Ecology
  - BIOL 1430  Population Genetics
  - BIOL 1465  Human Population Genomics
  - BIOL 1540  Molecular Genetics

- **Neuroscience**
  - APMA 0410  Mathematical Methods in the Brain Sciences
  - Neurosciences courses: See [https://www.brown.edu/academics/neuroscience/undergraduate/neuroscience-concentration-requirements](https://www.brown.edu/academics/neuroscience/undergraduate/neuroscience-concentration-requirements)
  - BIOL 1100  Cell Physiology and Biophysics
  - BIOL 1110  Topics in Signal Transduction
  - BIOL 1190  Synaptic Transmission and Plasticity

<table>
<thead>
<tr>
<th>Core-Math:</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0180</td>
<td>Intermediate Calculus</td>
</tr>
<tr>
<td>or MATH 0350</td>
<td>Honors Calculus</td>
</tr>
<tr>
<td>MATH 0520</td>
<td>Linear Algebra</td>
</tr>
<tr>
<td>or MATH 0540</td>
<td>Honors Linear Algebra</td>
</tr>
<tr>
<td>or CSCI 0530</td>
<td>Coding the Matrix: An Introduction to Linear Algebra for Computer Science</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Core-Advanced Mathematics:</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>APMA 0350</td>
<td>Applied Ordinary Differential Equations</td>
</tr>
<tr>
<td>APMA 0360</td>
<td>Applied Partial Differential Equations</td>
</tr>
<tr>
<td>APMA 1170</td>
<td>Introduction to Computational Linear Algebra</td>
</tr>
<tr>
<td>or APMA 1180</td>
<td>Introduction to Numerical Solution of Differential Equations</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Core-Computer Science:</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select one of the following Series:</td>
<td></td>
</tr>
<tr>
<td><strong>Series A</strong></td>
<td></td>
</tr>
<tr>
<td>CSCI 0150  Introduction to Object-Oriented Programming and Computer Science and Introduction to Algorithms and Data Structures</td>
<td></td>
</tr>
<tr>
<td><strong>Series B</strong></td>
<td></td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 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. The intermediate courses must cover the requirements of the pathway chosen under additional requirements for CS:

CSCI 0220 | Introduction to Discrete Structures and Probability (math)
CSCI 0320 | Introduction to Software Engineering (systems)
CSCI 0330 | Introduction to Computer Systems (systems)
CSCI 1010 | Theory of Computation (math)
CSCI 1450 | Probability for Computing and Data Analysis (math)
or APMA 1650 | Statistical Inference I

Three 1000-level Computer Science courses. Two of these courses and the intermediate courses must satisfy one of the CS pathways.

Three 1000-level Applied Mathematics courses approved by the concentration advisor, of which two should constitute a standard sequence or address a common theme. Typical sequences include: APMA 1200/1210 and APMA 1650 or 1655/1660. APMA 1910 cannot be used as an elective.

A capstone course: a one-semester course, 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. The title and abstract of the artifact, along with the student's and faculty-sponsor's names, will be placed in the CS website. The inclusion of a relevant image or system diagram is strongly encouraged. The complete text of the best artifacts of each class will be featured on the CS website. A senior thesis, which involves two semesters of work, may count as a capstone.

Note: CSCI 1010 and 1450 may be used either as a math-oriented intermediate courses or as advanced courses. CSCI 1010 was formerly known as CSCI 510: they are the same course and hence only one may be taken for credit. CSCI 1450 was formerly known as CSCI 450: they are the same course and hence only one may be taken for credit. Applied Math 1650 or 1655 may be used in place of CSCI 1450. However, concentration credit will be given for only one of Applied Math 1650, 1655, and CSCI 1450.

Total Credits: 17

1 APMA 1650 may only be used if not being used as an Applied Math course.
2 Pathways may be viewed here: https://cs.brown.edu/degrees/undergrad/new-concentration-requirements/pathways-scb-and-ab-concentrations/
3 Capstone Options may be found here: http://cs.brown.edu/degrees/undergrad/concentrations/capstone/

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. degree versions and Sc.B. degree versions, as well as a Professional track option.

Standard Program for the A.B. degree (Advanced Economics track):

**Prerequisites:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0100</td>
<td>Introductory Calculus, Part II</td>
</tr>
<tr>
<td>MATH 0520</td>
<td>Linear Algebra</td>
</tr>
</tbody>
</table>

**Course Requirements:**

**Applied Mathematics Requirements**

(a) | 1
---|---
APMA 0350 | Applied Ordinary Differential Equations
& APMA 0360 | and Applied Partial Differential Equations

Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>APMA 1600</td>
<td>Introduction to Scientific Computing (preferred)</td>
</tr>
<tr>
<td>CSCI 0040</td>
<td>Introduction to Scientific Computing and Problem Solving (preferred)</td>
</tr>
<tr>
<td>CSCI 0150</td>
<td>Introduction to Object-Oriented Programming and Computer Science</td>
</tr>
<tr>
<td>CSCI 0170</td>
<td>Computer Science: An Integrated Introduction</td>
</tr>
</tbody>
</table>

Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>APMA 1200</td>
<td>Operations Research: Probabilistic Models</td>
</tr>
<tr>
<td>APMA 1210</td>
<td>Operations Research: Deterministic Models</td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
One 1000-level course from the "data methods" group:  
ECON 1630  
ECON 1210  
ECON 1130  
ECON 1660  
ECON 1690  
APMA 1720  
APMA 1740  
MATH 1010  

Select one of the following:  
APMA 1200  
APMA 1210  
APMA 1330  
APMA 1360  
APMA 1660  
APMA 1690  
APMA 1720  
APMA 1740  

Economics Requirements:  
ECON 1130  
ECON 1210  
ECON 1630  

Two 1000-level courses from the "mathematical-economics" group:  
ECON 1170  
ECON 1220  
ECON 1225  
ECON 1460  
ECON 1465  
ECON 1470  
ECON 1490  
ECON 1640  
ECON 1650  
ECON 1660  
ECON 1670  
ECON 1740  
ECON 1750  
ECON 1759  
ECON 1810  
ECON 1820  
ECON 1850  
ECON 1860  
ECON 1870  

One 1000-level course from the "data methods" group:  
ECON 1301  
ECON 1305  
ECON 1310  
ECON 1355  
ECON 1360  
ECON 1375  
ECON 1400  
ECON 1410  
ECON 1480  
ECON 1510  
ECON 1520  
ECON 1530  

APMA 1650  
or APMA 1655  

(Advanced Economics track):  

ECON 1629  
ECON 1640  
ECON 1650  
ECON 1660  
ECON 1759  
ECON 1765  

Select one 1000-level economics course.  

Total Credits  
13  

1 No course may be used to simultaneously satisfy (a) and (b).  
2 APMA 0330 and APMA 0340 may be substituted with advisor approval. APMA 1910 cannot be used as an elective.  
3 Or ECON 1110 with permission.  
4 No course may be used to simultaneously satisfy the "mathematical economics" and the "data methods" requirements.  

Standard program for the Sc.B. degree  

Prerequisites:  
MATH 0100  
MATH 0520  

Course Requirements:  
Applied Mathematics Requirements  
(a)  
APMA 0350  
& APMA 0360  

Select one of the following:  
APMA 0160  
CSCI 0040  
CSCI 0150  
CSCI 0170  

Select one of the following:  
APMA 1200  
APMA 1210  
APMA 1330  
APMA 1360  
APMA 1650  
APMA 1655  

(b)  
Select two of the following:  
APMA 1200  
APMA 1210  
APMA 1330  
APMA 1360  
APMA 1650  
APMA 1655  

Economics Requirements:  
ECON 1130  

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Three 1000-level courses from the "mathematical-economics" group: 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1630</td>
<td>Econometrics I</td>
</tr>
<tr>
<td>ECON 1640</td>
<td>Econometrics II</td>
</tr>
<tr>
<td>ECON 1650</td>
<td>Financial Econometrics</td>
</tr>
<tr>
<td>ECON 1660</td>
<td>Big Data</td>
</tr>
<tr>
<td>ECON 1670</td>
<td>Advanced Topics in Econometrics</td>
</tr>
<tr>
<td>ECON 1740</td>
<td>Mathematical Finance</td>
</tr>
<tr>
<td>ECON 1750</td>
<td>Investments II</td>
</tr>
<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 1820</td>
<td>Theory of 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>

One 1000-level course from the "data methods" group: 4

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1130</td>
<td>Economics of Education I</td>
</tr>
<tr>
<td>ECON 1305</td>
<td>Economics of Education: Research</td>
</tr>
<tr>
<td>ECON 1310</td>
<td>Labor Economics</td>
</tr>
<tr>
<td>ECON 1355</td>
<td>Environmental Issues in Development Economics</td>
</tr>
<tr>
<td>ECON 1360</td>
<td>Health Economics</td>
</tr>
<tr>
<td>ECON 1375</td>
<td>Inequality of Opportunity in the US</td>
</tr>
<tr>
<td>ECON 1400</td>
<td>The Economics of Mass Media</td>
</tr>
<tr>
<td>ECON 1410</td>
<td>Urban Economics</td>
</tr>
<tr>
<td>ECON 1480</td>
<td>Public Economics</td>
</tr>
<tr>
<td>ECON 1510</td>
<td>Economic Development</td>
</tr>
<tr>
<td>ECON 1520</td>
<td>The Economic Analysis of Institutions</td>
</tr>
<tr>
<td>ECON 1530</td>
<td>Health, Hunger and the Household in Developing Countries</td>
</tr>
<tr>
<td>ECON 1600</td>
<td>Big Data</td>
</tr>
<tr>
<td>ECON 1650</td>
<td>Data, Statistics, Finance</td>
</tr>
<tr>
<td>ECON 1660</td>
<td>Data, Statistics, Finance</td>
</tr>
<tr>
<td>ECON 1675</td>
<td>Finance, Regulation, and the Economy: Research</td>
</tr>
</tbody>
</table>

Two additional 1000-level economics courses 2

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1210</td>
<td>Intermediate Microeconomics (Mathematical)</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>
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<tr>
<td>ECON 1720</td>
<td>Corporate Finance</td>
</tr>
<tr>
<td>ECON 1730</td>
<td>Venture Capital, Private Equity, and Entrepreneurship</td>
</tr>
<tr>
<td>ECON 1740</td>
<td>Mathematical Finance</td>
</tr>
<tr>
<td>ECON 1750</td>
<td>Investments II</td>
</tr>
<tr>
<td>ECON 1759</td>
<td>Data, Statistics, Finance</td>
</tr>
</tbody>
</table>

**Total Credits:** 16

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1. No course may be used to simultaneously satisfy (a) and (b).
2. APMA 0330 and APMA 0340 may be substituted with advisor approval. APMA 1910 cannot be used as an elective.
3. Or ECON 1110 with permission.
4. No course may be used to simultaneously satisfy the "mathematical economics" and the "data methods" requirements.

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Note that Econ 1620, 1960, and 1970 (independent study) cannot be used for concentration credit. However, 1620 and 1960 can be used for university credit and up to two 1970s may be used for university credit.

### Standard program for the A.B. degree

#### (Mathematical Finance track):

**Prerequisites:**
- MATH 0100 Introductory Calculus, Part II
- MATH 0520 Linear Algebra

**Course Requirements:** 13 Courses: 6 Applied Math and 7 Economics

**Applied Mathematics Requirements**

- (a)
  - APMA 0350 Applied Ordinary Differential Equations 2
  - APMA 0360 Applied Partial Differential Equations 1

  Select one of the following:
  - APMA 0360 Applied Partial Differential Equations I
  - 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

- (b)
  - APMA 1200 Operations Research: Probabilistic Models 1
  - APMA 1650 Statistical Inference I or APMA 1655 Statistical Inference I

  Select one of the following:
  - APMA 1180 Introduction to Numerical Solution of Differential Equations
  - APMA 1210 Operations Research: Deterministic Models
  - APMA 1330 Methods of Applied Mathematics
  - APMA 1360 Applied Dynamical Systems
  - APMA 1660 Statistical Inference II
  - APMA 1655 Statistical Inference I
  - APMA 1690 Computational Probability and Statistics
  - APMA 1720 Monte Carlo Simulation with Applications to Finance (preferred)
  - APMA 1740 Recent Applications of Probability and Statistics

**Economics Requirements**:

- ECON 1130 Intermediate Microeconomics 1
- ECON 1210 Intermediate Macroeconomics 1
- ECON 1630 Econometrics I 1

Select two 1000-level courses from the "financial economics" group: 2

- ECON 1650 Financial Econometrics
- ECON 1710 Investments I
- ECON 1720 Corporate Finance
- ECON 1730 Venture Capital, Private Equity, and Entrepreneurship
- ECON 1740 Mathematical Finance
- ECON 1750 Investments II
- ECON 1759 Data, Statistics, Finance

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For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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: 1

ECON 1170  Welfare Economics and Social Choice Theory
ECON 1220  Monetary and Fiscal Policy
ECON 1225  Advanced Macroeconomics: Monetary, Fiscal, and Stabilization Policies
ECON 1460  Industrial Organization
ECON 1465  Market Design: Theory and Applications
ECON 1470  Bargaining Theory and Applications
ECON 1490  Designing Internet Marketplaces
ECON 1640  Econometrics II
ECON 1650  Financial Econometrics
ECON 1660  Big Data
ECON 1670  Advanced Topics in Econometrics
ECON 1740  Mathematical Finance
ECON 1750  Investments II
ECON 1759  Data, Statistics, Finance
ECON 1810  Economics and Psychology
ECON 1820  Theory of Behavioral Economics
ECON 1850  Theory of Economic Growth
ECON 1860  The Theory of General Equilibrium
ECON 1870  Game Theory and Applications to Economics

Select one 1000-level course from the "data methods" group: 2

ECON 1301  Economics of Education I
ECON 1305  Economics of Education: Research
ECON 1310  Labor Economics
ECON 1335  Environmental Issues in Development Economics
ECON 1360  Health Economics
ECON 1375  Inequality of Opportunity in the US
ECON 1400  The Economics of Mass Media
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 1629  Applied Research Methods for Economists
ECON 1640  Econometrics II
ECON 1650  Financial Econometrics
ECON 1660  Big Data
ECON 1759  Data, Statistics, Finance
ECON 1765  Finance, Regulation, and the Economy: Research

Total Credits 13

1 APMA 0330 and APMA 0340 may be substituted with advisor approval. APMA 1910 cannot be used as an elective.
2 No course may be used to simultaneously satisfy the "financial economics," the "mathematical economics," or the "data methods" requirements.
3 Or ECON 1110 with permission.

Note that Econ 1620, 1960, and 1970 (independent study) cannot be used for concentration credit. However, 1620 and 1960 can be used for university credit and up to two 1970s may be used for university credit.

Standard program for the Sc.B. degree (Mathematical Finance track):

Prerequisites:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0100</td>
<td>Introductory Calculus, Part II</td>
</tr>
<tr>
<td>MATH 0520</td>
<td>Linear Algebra</td>
</tr>
</tbody>
</table>

Course Requirements: 16 courses: 7 Applied Math and 9 Economics

Applied Mathematics requirements:

(a) APMA 0350  Applied Ordinary Differential Equations 2 & APMA 0360  Applied Partial Differential Equations

Select one of the following: 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>APMA 0160</td>
<td>Introduction to Scientific Computing</td>
</tr>
<tr>
<td>APRS 0170</td>
<td>Computer Science: An Integrated Introduction</td>
</tr>
</tbody>
</table>

Select two of the following: 2

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>APMA 1180</td>
<td>Introduction to Numerical Solution of</td>
</tr>
<tr>
<td></td>
<td>Differential Equations</td>
</tr>
<tr>
<td>APMA 1210</td>
<td>Operations Research: Deterministic Models</td>
</tr>
<tr>
<td>APMA 1330</td>
<td>Methods of Applied Mathematics</td>
</tr>
<tr>
<td>APMA 1360</td>
<td>Applied Dynamical Systems</td>
</tr>
<tr>
<td>APMA 1660</td>
<td>Statistical Inference II</td>
</tr>
<tr>
<td>APMA 1690</td>
<td>Computational Probability and Statistics</td>
</tr>
<tr>
<td>APMA 1720</td>
<td>Monte Carlo Simulation with Applications</td>
</tr>
<tr>
<td></td>
<td>to Finance (preferred)</td>
</tr>
<tr>
<td>APMA 1740</td>
<td>Recent Applications of Probability and</td>
</tr>
<tr>
<td></td>
<td>Statistics</td>
</tr>
<tr>
<td>MATH 1010</td>
<td>Analysis: Functions of One Variable</td>
</tr>
</tbody>
</table>

Economics Requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1130</td>
<td>Intermediate Microeconomics</td>
</tr>
<tr>
<td>ECON 1140</td>
<td>Econometrics I</td>
</tr>
<tr>
<td>ECON 1210</td>
<td>Intermediate Macroeconomics</td>
</tr>
<tr>
<td>ECON 1630</td>
<td>Econometrics I</td>
</tr>
</tbody>
</table>

Select three 1000-level courses from the "financial economics" group: 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<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>
</tr>
<tr>
<td>ECON 1730</td>
<td>Venture Capital, Private Equity, and</td>
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<tr>
<td></td>
<td>Entrepreneurship</td>
</tr>
<tr>
<td>ECON 1740</td>
<td>Mathematical Finance</td>
</tr>
<tr>
<td>ECON 1750</td>
<td>Investments II</td>
</tr>
<tr>
<td>ECON 1759</td>
<td>Data, Statistics, Finance</td>
</tr>
<tr>
<td>ECON 1760</td>
<td>Financial Institutions</td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Select two 1000-level courses from the "mathematical economics" group:\(^1\)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1170</td>
<td>Welfare Economics and Social Choice Theory</td>
</tr>
<tr>
<td>ECON 1220</td>
<td>Monetary and Fiscal Policy</td>
</tr>
<tr>
<td>ECON 1225</td>
<td>Advanced Macroeconomics: Monetary, Fiscal, and Stabilization Policies</td>
</tr>
<tr>
<td>ECON 1460</td>
<td>Industrial Organization</td>
</tr>
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<td>ECON 1465</td>
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<td>Big Data</td>
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<tr>
<td>ECON 1670</td>
<td>Advanced Topics in Econometrics</td>
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<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 "data methods" group:\(^2\)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1360</td>
<td>Health Economics</td>
</tr>
<tr>
<td>ECON 1400</td>
<td>The Economics of Mass Media</td>
</tr>
<tr>
<td>ECON 1410</td>
<td>Urban Economics</td>
</tr>
<tr>
<td>ECON 1510</td>
<td>Economic Development</td>
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<td>ECON 1765</td>
<td>Finance, Regulation, and the Economy: Research</td>
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</table>

Total Credits: 16

1. APMA 0330 and APMA 0340 may be substituted with advisor approval. APMA 1910 cannot be used as an elective.
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### 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).

### 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 undergraduate concentration in Archaeology and the Ancient World provides students with an opportunity to explore the multi-faceted discipline of archaeology, and encourages an interdisciplinary approach to engaging with the ancient world. While the core focus of Archaeology and the Ancient World at Brown University is archaeology and art of the ancient Mediterranean, Egypt, and the Near East, this concentration encourages students to reach beyond this geographic area, to engage with Brown's many strengths in history, epigraphy, art, ethics, engineering, religious studies, and the sciences – to name just a few. 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. All three tracks begin with the same foundation. Students are then expected to experiment with and define their own areas of specialty, establishing expertise in topics such as cultural heritage, archaeological...
theory, or materials analysis, or in particular regions or time periods. The concentration is also designed to allow students to build progressively upon what they have learned, moving from introductory courses to upper-level seminars.

It is expected that, in completing the requirements for this concentration, students will incorporate courses that offer new perspectives on the complex dynamics of social inequality, exclusion, and difference, and which encourage engagement with the community – both by enrolling in classes designated as Diverse Perspectives in Liberal Learning (DPPLL) and through non-DPLL classes that explore similar themes. Research opportunities, through summer fieldwork, internships, museum experience, or independent study projects, are strongly encouraged.

Within this concentration, the three tracks are:

- **Archaeology and the Ancient World**: the most flexible of the concentration tracks, allowing students to explore any region or time period, and to develop their own areas of focus, such as museum studies, ethics and politics of the past, engineering and materials analysis, cultural heritage, or environmental studies.

- **Classical Archaeology**: for those interested chiefly in the ‘classic’ civilizations of the Mediterranean (especially Greece and Rome), as well as for those interested in both earlier (prehistoric) and later (medieval) periods in that geographic region.

- **Egyptian and Near Eastern Archaeology**: for those interested chiefly in the cultures of Egypt and the ancient ‘Near East’ – Anatolia, the Levant, Mesopotamia – from prehistoric through Islamic times.

### Required Courses:

The student must take a total of 10 courses, including:

#### CORE REQUIREMENTS:

| All three tracks share four Core Requirements: two introductory courses providing an overview of archaeology’s two central aspects (field methodologies, and art history); and two introductory courses in the core geographical focus of the Jukowsky Institute (Classical/Mediterranean archaeology and Egyptian/Near Eastern archaeology). | 
|---|---|
| **One introductory course in archaeological methodology and/or scientific approaches, preferably:** | 4 |
| ARCH 0100 Field Archaeology in the Ancient World | 1 |
| or a course that addresses similar methodological/scientific topics, which must be approved by the concentration advisor. Appropriate courses could include, for example: | |
| ARCH 1900 The Archaeology of College Hill | |
| ANTH 0500 Past Forward: Discovering Anthropological Archaeology | |
| **One introductory course in ancient art history, preferably:** | 
| ARCH 0303 Art in Antiquity: An Introduction | 1 |
| or an ancient art history course approved by the concentration advisor. Appropriate courses could include, for example: | |
| ARCH 0520 Roman Archaeology and Art | |
| **One introductory ARCH course in Egyptian or Near Eastern archaeology, art, and/or architecture, for example:** | 1 |
| ARCH 0152 Egyptomania: Mystery of the Sphinx and Other Secrets of Ancient Egypt | |
| ARCH 0360 East Meets West: Archaeology of Anatolia | |
| **One introductory ARCH course in Classical or Mediterranean-archaeology, art, and/or architecture, for example:** | 1 |
| ARCH 0270 Troy Rocks! Archaeology of an Epic | |
| ARCH 0420 Archaeologies of the Greek Past | |

#### TRACK REQUIREMENTS:

In addition to the Core Requirements above, each of the three tracks requires six additional courses, which allow students to define their own areas of geographic and/or topical specialty.

- **Archaeology and the Ancient World:**

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
HIAA 0001 Architectural Design
HIAA 0002 Advanced Design Studio
Six Core Requirements: 6
Select Four (4) courses from RISD: Students will take the courses at the Rhode Island School of Design but will register at Brown.
HIAA 0003 Architectural Projection (alternative IntAR Intro to Drawing)
HIAA 0004 Architectural Analysis
HIAA 0005 Structural Analysis
HIAA 0006 Wood Structures
HIAA 0007 Environmental Design II
Select Two (2) Courses from Brown:
HIAA 0010 A Global History of Art and Architecture
HIAA 0042 Islamic Art and Architecture

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
HIAA 0081 Architecture of the House Through Space and Time
HIAA 0770 Architecture and Urbanism of the African Diaspora
HIAA 0850 Modern Architecture
or HIAA 0860 Contemporary Architecture
HIAA 0860 Contemporary Architecture
HIAA 1181 Prefabrication and Architecture
Six Additional Electives: 6

Two courses from History and Theory:
HIAA 0070 Introduction to American Art: The 19th Century
HIAA 0081 Architecture of the House Through Space and Time
HIAA 0560 Popes and Pilgrims in Renaissance Rome
HIAA 0770 Architecture and Urbanism of the African Diaspora
HIAA 0860 Contemporary Architecture
HIAA 1181 Prefabrication and Architecture
HIAA 1440B Architecture of Solitude: The Medieval Monastery
HIAA 1910A Providence Architecture
HIAA 1910D Water and Architecture

Two Classes from Engineering and Design:
ENGN 0030 Introduction to Engineering
ENGN 0040 Dynamics and Vibrations
ENGN 0310 Mechanics of Solids and Structures
ENGN 0930A Appropriate Technology
ENGN 0930C DesignStudio
ENGN 1000 Projects in Engineering Design I
ENGN 1300 Structural Analysis
ENGN 1380 Design of Civil Engineering Structures
ENGN 1930U Renewable Energy Technologies

Four Additional Electives from the following:
ARCH 1900 The Archaeology of College Hill
COLT 1810H Tales of Two Cities: Havana - Miami, San Juan - New York
ECON 1420 Urbanization in China
ENGL 1760K Reading New York
ENVS 0410 Environmental Stewardship
JAPN 0910B Japanese Cities: Tokyo and Kyoto
LACA 1510I Urban Latin America
PLCY 1701Q Leading Social Ventures - Social Entrepreneurship in Action
PLCY 1910 Social Entrepreneurship
POLS 0220 City Politics
POLS 1730 Politics of Globalization
SOC 1340 Principles and Methods of Geographic Information Systems
TAPS 0260 Stage Lighting
TAPS 1240 Performance Historiography and Theatre History
TAPS 1280F Introduction to Set Design
TAPS 1300 Advanced Set Design
URBN 0210 The City: An Introduction to Urban Studies
URBN 1000 Fieldwork in the Urban Community

URBN 1870C The Environment Built: Urban Environmental History and Urban Environmentalism for the 21st Century
VISA 0100 Studio Foundation
VISA 1210K Digital Printmaking
VISA 1420 Sculpture II: Conceptual Propositions

Total Credits: 16

Honors
For students in the concentration who intend to go to architecture school afterwards, typically their design project in their double credit second RISD studio will be ideal for a capstone or honors project. For others, who might tend towards theory or history of architecture, an honors thesis is still a valid option.

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).

Prerequisites
PHYS 0070 Analytical Mechanics 1
PHYS 0160 Introduction to Relativity, Waves and Quantum Physics 1
PHYS 0270 Introduction to Astronomy 1
Select one of the following Series: 1-2
MATH 0170 Advanced Placement Calculus and Intermediate Calculus
MATH 0190 Advanced Placement Calculus (Physics/Engineering) and Intermediate Calculus (Physics/Engineering)
MATH 0350 Honors Calculus (or equivalent)

PHYS 0470 Electricity and Magnetism 1

Program
Select one of the following mathematics courses: 1
MATH 0520 Linear Algebra
MATH 0540 Honors Linear Algebra
PHYS 0720 Methods of Mathematical Physics
APMA 0330 Methods of Applied Mathematics I, II
APMA 0340 Methods of Applied Mathematics I, II
Select two of the following astrophysics courses: 2
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: 3
APMA 1670 Statistical Analysis of Time Series
ENGN 1860 Advanced Fluid Mechanics
GEOL 0810 Planetary Geology

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Behavioral Decision Sciences

Leading to a Bachelor of Arts, the study of decision making at Brown covers descriptive questions like how people, institutions, and nations make judgments and decisions; normative questions about rationality, such as what constitutes the best judgments and decisions; and prescriptive questions, such as how the process of decision making can be improved to make actual decisions closer to optimal ones. By virtue of its broad interdisciplinary nature, the study of decision making covers descriptive questions like how people, institutions, and nations might include, but are not limited to: psychology, cognitive science, economics, philosophy, computer science, and neuroscience. Professor Steven Sloman (steven_sloman@brown.edu?subject=Behavioral Decision Sciences) is the concentration advisor. Upon declaring, concentrations are also encouraged to speak with the appropriate area specialist from among those listed here (https://www.brown.edu/academics/cognitive-linguistic-psychological-sciences/behavioral-decision-sciences).

Standard Program for the AB Degree

CLPS Classes:
- CLPS 0220 Making Decisions 1
- Choose one of the following: 1
  - CLPS 0400 Cognitive Neuroscience
  - CLPS 0200 Human Cognition
  - CLPS 0700 Social Psychology
- Choose two of the following: 2
  - CLPS 1470 Mechanisms of Motivated Decision Making
  - CLPS 1495 Affective Neuroscience
  - CLPS 1730 Psychology in Business and Economics
  - CLPS 1760 The Moral Brain

Distribution Requirements:
- Select one Introductory Course from the following: 1
  - ECON 0110 Principles of Economics
  - 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
  - CSCI 0180 Computer Science: An Integrated Introduction
  - CSCI 0190 Accelerated Introduction to Computer Science
- Select Two Advanced Courses From: 2
  - CSCI 1410 Artificial Intelligence
  - CSCI 1420 Machine Learning
  - ECON 1110 Intermediate Microeconomics
  - ECON 1130 Intermediate Microeconomics (Mathematical)
  - ECON 1660 Big Data
  - ECON 1820 Theory of Behavioral Economics

ECON 1870 Game Theory and Applications to Economics
PHIL 0580 Philosophy of Economics
PHIL 1550 Decision Theory: Foundations and Applications

Methods Classes:
Choose One From the Following: 1
- APMA 0650 Essential Statistics
- APMA 1650 Statistical Inference I
- CLPS 0900 Statistical Methods
- CSCI 0100 Data Fluency for All
- CSCI 1450 Probability for Computing and Data Analysis

ECON 1620 Introduction to Econometrics
Plus One of the Following: 1
- CLPS 1791 Laboratory in Social Cognition
- CSCI 0150 Introduction to Object-Oriented Programming and Computer Science
- CSCI 0170 Computer Science: An Integrated Introduction
- ECON 1629 Applied Research Methods for Economists
- ECON 1630 Econometrics I
- PHIL 0540 Logic

Electives: 3
Students will choose three additional courses in consultation with a concentration advisor that will constitute an integrated specialization in some area of decision science. Such courses might include, but are not limited to:

Psychology and Cognitive Science:
- CLPS 0950 Introduction to programming
- CLPS 1292 Introduction to Programming for the Mind, Brain and Behavior
- CLPS 1370 Introduction to Pragmatics
- CLPS 1970 Directed Reading in Cognitive, Linguistic and Psychological Sciences

Economics:
- ECON 1820 Theory of Behavioral Economics
- ECON 1870 Game Theory and Applications to Economics

Applied Mathematics:
- APMA 0200 Introduction to Modelling
- APMA 1690 Computational Probability and Statistics
- APMA 2640 Theory of Probability II
- APMA 2821V Neural Dynamics: Theory and Modeling

Philosophy:
- PHIL 0500 Moral Philosophy
- PHIL 1650 Moral Theories
- PHIL 1750 Epistemology

Computer Science:
- CSCI 1430 Computer Vision
- CSCI 1460 Computational Linguistics
- CSCI 1951A Data Science

Political Science:
- POLS 1090 Polarized Politics
- POLS 1150 Prosperity: The Ethics and Economics of Wealth Creation
- POLS 1470 International Negotiation and Conflict Resolution

Public Health:
- PHP 1740 Principles of Health Behavior and Health Promotion Interventions

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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.

Standard program for the Sc.B. degree

Students must take twenty courses in biology, chemistry, mathematics, and physics, including the following core requirements, some of these may be fulfilled with AP credits. Students are expected to take courses that will count toward the concentration ABC/NC. Students should discuss the S/NC option with their concentration advisor if circumstances warrant consideration. Students should not register S/NC for a concentration course without advisor pre-approval.

Three courses in mathematics, statistics and/or computer science, typically including MATH 0090, MATH 0100, or equivalent) 1

Two courses in physics, typically: 2

- PHYS 0030 Basic Physics A
- or PHYS 0050 Foundations of Mechanics
- or ENGN 0030 Introduction to Engineering

- PHYS 0040 Basic Physics B
- or PHYS 0060 Foundations of Electromagnetism and Modern Physics
- or ENGN 0040 Dynamics and Vibrations

Total credits: 13

1 Students may not use the same course to satisfy both the Introductory and Methods course requirements.

Election courses: 3

Four courses in biochemistry:

- BIOL 0280 Biochemistry
- BIOL 0285 Inquiry in Biochemistry: From Gene to Protein Function
- BIOL 1270 Advanced Biochemistry
- or CHEM 1230 Chemical Biology
- or CHEM 1240 Biochemistry

Four courses in physical and organic chemistry:

- CHEM 0500 Inorganic Chemistry
- CHEM 1140 Physical Chemistry: Quantum Chemistry
- CHEM 1150 Physical Chemistry: Thermodynamics and Statistical Mechanics
- CHEM 0350/0360 Organic Chemistry

Two courses in biology:

- BIOL 1010 Development of Vaccines to Infectious Diseases
- BIOL 1020 Innate Immunity
- BIOL 1040 Introduction to Neurogenetics
- BIOL 1170 Principles of Neurobiology
- BIOL 1200 Protein Biophysics and Structure
- BIOL 1220 Synthetic Biological Systems
- BIOL 1260 Physiological Pharmacology
- BIOL 1290 Cancer Biology
- BIOL 1310 Developmental Biology
- BIOL 1330 Biology of Reproduction
- BIOL 1520 Innate Immunity
- BIOL 1540 Molecular Genetics
- BIOL 1560 Virology
- BIOL 1600 Development of Vaccines to Infectious Diseases
- BIOL 2110 Drug and Gene Delivery

Neuroscience electives: 2

- NEUR 0010 The Brain: An Introduction to Neuroscience
- NEUR 0650 Biology of Hearing
- NEUR 1020 Principles of Neurobiology
- NEUR 1040 Introduction to Neurogenetics
- NEUR 1670 Neuropharmacology and Synaptic Transmission

Chemistry electives:

- CHEM 0500 Inorganic Chemistry
- CHEM 1140 Physical Chemistry: Quantum Chemistry
- CHEM 1150 Physical Chemistry: Thermodynamics and Statistical Mechanics

Honors

Students interested in honors should identify a faculty honor’s 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 honors program is limited to students who have accumulated a strong academic record, and show evidence that they will meet the program’s requirements. It is expected that honors candidates will conduct a year-long research project under the direction of a faculty sponsor culminating in a written thesis at the end of Semester 8. Honors theses can serve to satisfy the capstone requirement, although honors students are expected to attend the capstone seminar in the fall of their senior year.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
The Biology concentration invites students to study, in depth and in breadth, the science of life and living matter. Whether pursuing the Bachelor of Arts (A.B.) or Science (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 Sc.B. complete a thematic track through which they gain an in-depth understanding of a particular subfield (such as, Immunopathology; Ecology and Evolutionary Biology; Physiology/Biotechnology; Cell and Molecular Biology; Physical Sciences. The concentration also emphasizes practical skills and experimental design. Concentrators are required to take at least 3 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, chemistry, and a statistics course as well as ten courses in biological sciences, including at least one course in each of the following three areas: Area 1: Cell/Molecular Biology, Area 2: Structure/Function, and Area 3: Organismal Biology.

**Prerequisites:**

- CHEM 0330: Equilibrium, Rate, and Structure
- CHEM 0350: Organic Chemistry
- MATH 0090: Introductory Calculus, Part I (or placement, MATH 0050/MATH 0060 may be substituted for MATH 0090.)

One of the following:

- MATH 0100: Introductory Calculus, Part II (or placement)
- MATH 0170: Advanced Placement Calculus (or equivalent placement)

*A Thesis in a form approved by the research advisor, and recommended by the research advisor. Additional information about thesis guidelines will be provided by the Concentration Advisor in the first half of the fall semester.

**Honors Requirements for Biochemistry**

All ScB Biochemistry concentrators are candidates for Honors; no separate application is necessary.

The requirements for Honors in Biochemistry are:

- A strong grade record in concentration courses. This means a grade point average for the concentration that is higher than 3.25.
- Two semesters of Independent Study (CHEM 0970, CHEM 0980 or equivalent. Guidelines and requirements associated with Independent Study are in the Undergraduate Concentration Handbook which can be found at the department website (http://www.brown.edu/academic/chemistry/undergraduate).
- A Thesis in a form approved by the research advisor, and recommended by the research advisor. Additional information about thesis guidelines will be provided by the Concentration Advisor in the first half of the fall semester.

**Area 1 (Cell/Molecular Biology)**

- BIOL 0280: Biochemistry
- BIOL 0470: Genetics
- BIOL 0500: Cell and Molecular Biology
- BIOL 0510: Introductory Microbiology
- BIOL 0530: Principles of Immunology
- BIOL 0810: Applied Cell and Molecular Biology
- BIOL 1050: Biology of the Eukaryotic Cell
- BIOL 1310: Developmental Biology
- BIOL 1515: Conservation in the Genomics Age
- NEUR 1020: Principles of Neurobiology

**Area 2 (Structure/Function)**

- BIOL 0400: Biological Design: Structural Architecture of Organisms
- BIOL 0410: Invertebrate Zoology
- BIOL 0440: Inquiry in Plant Biology: Analysis of Plant Growth, Reproduction and Adaptive Responses
- BIOL 0800: Principles of Physiology
- BIOL 1120: Biomaterials
- BIOL 1310: Developmental Biology
- BIOL 1330: Biology of Reproduction
- BIOL 1800: Animal Locomotion
- BIOL 1880: Comparative Biology of the Vertebrates
- NEUR 0010: The Brain: An Introduction to Neuroscience

**Area 3 (Organismal Biology)**

- BIOL 0210: Diversity of Life
- BIOL 0350: The Fossil Record: Life through Time on Earth
- BIOL 0380: The Ecology and Evolution of Infectious Disease
- BIOL 0410: Invertebrate Zoology
- BIOL 0420: Principles of Ecology
- BIOL 0430: The Evolution of Plant Diversity
- BIOL 0480: Evolutionary Biology
- BIOL 1480: Terrestrial Biogeochemistry and the Functioning of Ecosystems
- BIOL 1515: Conservation in the Genomics Age
- BIOL 1800: Animal Locomotion
- BIOL 1880: Comparative Biology of the Vertebrates
- ENVIS 0490: Environmental Science in a Changing World

Six additional courses chosen from BIOL and/or NEUR offerings for concentrators. The Core may include up to two related sciences, with advisor approval. The Core must also include a Senior Capstone.

**SENIOR CAPSTONE:** Only applies to students who have declared in Fall 2019 or later. To be fulfilled via ONE of the following:

1. One of the following approved courses: BIOL 1100, 1250, 1515, 1555, 1565, 1575, 1600, 1820, 1970.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
2. One semester of independent research/independent study (BIOL 1950 or BIOL 1960).

3. A senior Honors thesis in Biology: Students can register for BIOL 1950 or BIOL 1960 or both. Please visit the BUE webpage for more information.

### Total Credits

<table>
<thead>
<tr>
<th></th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP scores of 4 or 5 may substitute Math courses.</td>
<td></td>
</tr>
<tr>
<td>Biology courses for concentration credit include those numbered between 0100 - 2999. Exclusions: BIOL 1920 series courses can only be used as related sciences and do not fulfill advanced course requirements.</td>
<td></td>
</tr>
<tr>
<td>At least two biology and/or neuroscience courses must be at the advanced level (between 1000-2999). Senior Capstone can be used towards one advanced requirement. At least three of the Biology and/or Neuroscience courses must include laboratory or fieldwork. BIOL 1950/BIOL 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.</td>
<td></td>
</tr>
<tr>
<td>No substitutions per above Area list. If a course is listed in more than one area, it may be used to fulfill one area only; the other area must be fulfilled by a different course.</td>
<td></td>
</tr>
</tbody>
</table>

### 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 and information on faculty research are available in the Office of Biology Undergraduate Education or found at http://www.brown.edu/academics/biology/undergraduate-education/.

### Standard Program for the Sc.B. Biology

The concentration program for the Sc.B. in Biology consists of seven prerequisite courses in math, chemistry, and physics as well as thirteen to fourteen 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, and the three-course Track. The biological sciences requirement also requires research (BIOL 1950/BIOL 1960), which should reflect the advanced cluster.

Students pursuing a ScB in Biology have the option to substitute a course for CHEM 0360 (Organic Chemistry) in their background core. For students pursuing the Marine Biology track, an upper level course in Geological Sciences may replace CHEM 0360. For students pursuing all other tracks, BIOL 0280 (Introductory Biochemistry) may serve as the replacement course. Please note that approval from the concentration advisor is required for these background course substitutions. If the student has already declared, then a revised concentration plan must be submitted and approved via the ASK system. If BIOL 0280 is used as a substitute for CHEM 0360, it cannot be counted as a core course, as a laboratory course, or as an Area 1 course. Students planning to apply to medical or graduate school should seek additional advising (such as from the Health Careers Office) in crafting their course plan.

### Prerequisites: ¹

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0090</td>
<td>Introductory Calculus, Part I (or placement. MATH 0050/MATH 0060 may be substituted for MATH 0090)</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 (or placement)</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.

<table>
<thead>
<tr>
<th>Course Code</th>
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</thead>
<tbody>
<tr>
<td>CHEM 0330</td>
<td>Equilibrium, Rate, and Structure (or IB credit)</td>
</tr>
<tr>
<td>CHEM 0350</td>
<td>Organic Chemistry</td>
</tr>
<tr>
<td>CHEM 0360</td>
<td>Organic Chemistry</td>
</tr>
<tr>
<td>or BIOL 0280</td>
<td>Biochemistry</td>
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</table>

### Core Courses: ²,³,⁴

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>BIOL 0200</td>
<td>The Foundation of Living Systems (or placement)</td>
</tr>
</tbody>
</table>

The Area requirement must be fulfilled by taking at least one course in each of these groups:

#### Area 1 (Cell/Molecular Biology)

<table>
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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>BIOL 0280</td>
<td>Biochemistry</td>
</tr>
<tr>
<td>BIOL 0470</td>
<td>Genetics</td>
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<tr>
<td>BIOL 0500</td>
<td>Cell and Molecular Biology</td>
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<td>BIOL 0510</td>
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<td>Principles of Immunology</td>
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<td>BIOL 0810</td>
<td>Applied Cell and Molecular Biology</td>
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<td>BIOL 1050</td>
<td>Biology of the Eukaryotic Cell</td>
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<td>BIOL 1310</td>
<td>Developmental Biology</td>
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<td>BIOL 1515</td>
<td>Conservation in the Genomics Age</td>
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<td>NEUR 1020</td>
<td>Principles of Neurobiology</td>
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#### Area 2 (Structure/Function)

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<td>BIOL 0400</td>
<td>Biological Design: Structural Architecture of Organisms</td>
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<td>BIOL 1880</td>
<td>Comparative Biology of the Vertebrates</td>
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<td>NEUR 0010</td>
<td>The Brain: An Introduction to Neuroscience</td>
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#### Area 3 (Organismal Biology)

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>BIOL 0140K</td>
<td>Conservation Medicine</td>
</tr>
<tr>
<td>BIOL 0210</td>
<td>Diversity of Life</td>
</tr>
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<td>BIOL 0350</td>
<td>The Fossil Record: Life through Time on Earth</td>
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<td>BIOL 0380</td>
<td>The Ecology and Evolution of Infectious Disease</td>
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<td>BIOL 1880</td>
<td>Comparative Biology of the Vertebrates</td>
</tr>
<tr>
<td>ENV 0490</td>
<td>Environmental Science in a Changing World</td>
</tr>
</tbody>
</table>

Six additional courses chosen from BIOL and/or NEUR offerings for concentrators. The Core may include up to two related sciences, with advisor approval. The Core must also include research. ⁵

### Research: ⁵

Typically, two courses in Core are advanced level research (BIOL 1950,1960).

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
TRACK:
The Track consists of three additional biological sciences courses (not including BIOL 1950/1960 research) that form a Track. Tracks include: Immunology/Pathobiology; Ecology and Evolutionary Biology; Physiology and Biotechnology; Neurobiology; Physical Sciences; Marine Biology; Cell and Molecular Biology. At least two track courses, and preferably all three, must be above 1000-level. Track courses should form a cohesive grouping approved by an advisor and/or Associate Dean of Biology, Katherine Smith.

Total Credits 13
1. AP scores of 4 or 5 may substitute Math courses.
2. Biology courses for concentration credit include those numbered between 0100-2999. Exclusions: BIOL 1920 series courses can only be used as related sciences and do not fulfill advanced course requirements.
3. At least two biology and/or neuroscience courses must be at the advanced level (between 1000-2999). At least three of the biology and/or neuroscience courses must include laboratory or fieldwork. BIOL 1950/1960 can count for one of the three lab course requirements and one advanced course.
4. No substitutions per above Area list. If a course is listed in more than one area, it may be used to fulfill one area only; the other area must be fulfilled by a different course.
5. 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.

Honors: Honors in biology requires a thesis and presentation based on a research project (usually conducted via BIOL 1950/1960), and quality grades in the concentration. Guidelines and information on faculty research are available in the Office of Biology Undergraduate Education or at http://www.brown.edu/academics/biology/undergraduate-education/.

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).
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. A limited number of transfer or study abroad courses may be used within the program, subject to approval of advisor, and Associate Dean of Biology, Katherine Smith.

Biomedical Engineering
The Sc.B. program in Biomedical Engineering is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org/. It is jointly offered by the School of Engineering and the Division of Biology and Medicine as 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. The education objectives of the Biomedical Engineering program are to prepare graduates: (1) to be employed in careers of useful service to society, including scientific and technical areas within medicine, industry, and health care delivery; (2) to demonstrate the ability to apply the basic principles of engineering and science, as well as problem solving skills and critical thinking, to a broad spectrum of biomedical engineering problems; (3) to demonstrate their ability to work in teams, and to effectively communicate and understand the broad social, ethical, economic and environmental consequences of their lifelong education. The student outcomes of this program are the (a) - (k) Student Outcomes as defined by the "ABET Criteria for Accrediting Engineering Programs (available online at http://www.abet.org/accreditation-criteria-policies-documents/)." The Biomedical Engineering concentration shares much of the core with the other engineering programs, but is structured to include more courses in biology and chemistry, and a somewhat different emphasis in mathematics.

The requirements regarding Mathematics, Advanced Placement, Transfer Credit, Substitutions for Required Courses, and Humanities and Social Science Courses are identical to those of the Sc.B. degree programs in Engineering. Please refer to the Engineering section of the University Bulletin for explicit guidelines.

The Biomedical Engineering concentration shares much of the core with the other engineering programs, but is structured to include more courses in biology and chemistry, and a somewhat different emphasis in mathematics.

Standard program for the Sc.B. degree

1. Core Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 0030 or ENGN 0031</td>
<td>Introduction to Engineering</td>
</tr>
<tr>
<td>ENGN 0040</td>
<td>Dynamics and Vibrations</td>
</tr>
<tr>
<td>ENGN 0510</td>
<td>Electricity and Magnetism</td>
</tr>
<tr>
<td>ENGN 0520</td>
<td>Electrical Circuits and Signals</td>
</tr>
<tr>
<td>ENGN 0720</td>
<td>Thermodynamics</td>
</tr>
<tr>
<td>ENGN 0810</td>
<td>Fluid Mechanics</td>
</tr>
<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 0190 or MATH 0170</td>
<td>Advanced Placement Calculus (Physics/Engineering)</td>
</tr>
<tr>
<td>MATH 0100</td>
<td>Introductory Calculus, Part II</td>
</tr>
<tr>
<td>MATH 0200</td>
<td>Intermediate Calculus (Physics/Engineering)</td>
</tr>
<tr>
<td>MATH 0180</td>
<td>Intermediate Calculus</td>
</tr>
<tr>
<td>MATH 0350</td>
<td>Honors Calculus</td>
</tr>
<tr>
<td>APMA 0330 or APMA 0350</td>
<td>Methods of Applied Mathematics I, II</td>
</tr>
<tr>
<td>APMA 1650</td>
<td>Applied Ordinary Differential Equations</td>
</tr>
<tr>
<td>APMA 0650</td>
<td>Statistical Inference I</td>
</tr>
<tr>
<td>BIOL 0200</td>
<td>The Foundation of Living Systems</td>
</tr>
</tbody>
</table>

2. Upper Level Biomedical Engineering Curriculum

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 1110</td>
<td>Transport and Bioransport Processes</td>
</tr>
<tr>
<td>ENGN 1210</td>
<td>Biomechanics</td>
</tr>
<tr>
<td>ENGN 1230</td>
<td>Instrumentation Design</td>
</tr>
<tr>
<td>ENGN 1490</td>
<td>Biomaterials</td>
</tr>
<tr>
<td>BIOL 0800</td>
<td>Principles of Physiology</td>
</tr>
</tbody>
</table>

3. Additional Biomedical Engineering Electives (Complete at least 3 courses from the following groups):

Select one or two of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 1220</td>
<td>Neuroengineering</td>
</tr>
<tr>
<td>ENGN 1510</td>
<td>Nanoengineering and Nanomedicine</td>
</tr>
<tr>
<td>ENGN 1520</td>
<td>Cardiovascular Engineering</td>
</tr>
<tr>
<td>ENGN 1930B</td>
<td>Biomedical Optics</td>
</tr>
<tr>
<td>ENGN 1940K</td>
<td>Cell-Material Interactions in Tissue Engineering</td>
</tr>
<tr>
<td>BIOL 1140</td>
<td>Tissue Engineering</td>
</tr>
<tr>
<td>ENGN 2910S</td>
<td>Cancer Nanotechnology</td>
</tr>
<tr>
<td>ENGN 2912R</td>
<td>Implantable Devices</td>
</tr>
<tr>
<td>CSCI 1820</td>
<td>Algorithmic Foundations of Computational Biology</td>
</tr>
<tr>
<td>ENGN 2991</td>
<td>Characterizing Nanomaterial Structure</td>
</tr>
</tbody>
</table>

At least one or two more courses from:

<table>
<thead>
<tr>
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<th>Title</th>
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<tbody>
<tr>
<td>CHEM 0360</td>
<td>Organic Chemistry</td>
</tr>
<tr>
<td>BIOL 0280</td>
<td>Biochemistry</td>
</tr>
<tr>
<td>BIOL 0470</td>
<td>Genetics</td>
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<tr>
<td>BIOL 0500</td>
<td>Cell and Molecular Biology</td>
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<td>BIOL 0510</td>
<td>Introductory Microbiology</td>
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<td>Principles of Immunology</td>
</tr>
<tr>
<td>BIOL 1090</td>
<td>Polymer Science for Biomaterials</td>
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</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Biophysics

Biophysics 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 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 example. 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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1100</td>
<td>Cell Physiology and Biophysics</td>
</tr>
<tr>
<td>BIOL 1150</td>
<td>Stem Cell Engineering</td>
</tr>
<tr>
<td>BIOL 1555</td>
<td>Methods in Informatics and Data Science</td>
</tr>
<tr>
<td>for Health</td>
<td></td>
</tr>
<tr>
<td>APMA 1070</td>
<td>Quantitative Models of Biological Systems</td>
</tr>
<tr>
<td>CLPS 1520</td>
<td>Computational Vision</td>
</tr>
<tr>
<td>or CLPS 1590</td>
<td>Visualizing Vision</td>
</tr>
<tr>
<td>NEUR 1020</td>
<td>Principles of Neurobiology</td>
</tr>
<tr>
<td>NEUR 1440</td>
<td>Mechanisms and Meaning of Neural Dynamics</td>
</tr>
<tr>
<td>PHYS 1610</td>
<td>Biological Physics</td>
</tr>
<tr>
<td>ENGN 2920D</td>
<td>Environmental Technologies and Human Health</td>
</tr>
<tr>
<td>BIOL 2010</td>
<td>Quantitative Approaches to Biology</td>
</tr>
<tr>
<td>BIOL 2110</td>
<td>Drug and Gene Delivery</td>
</tr>
<tr>
<td>PHP 2510</td>
<td>Principles of Biostatistics and Data Analysis</td>
</tr>
</tbody>
</table>

4. Capstone Design

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 1930L</td>
<td>Biomedical Engineering Design and Innovation</td>
</tr>
<tr>
<td>ENGN 1931L</td>
<td>Biomedical Engineering Design and Innovation II</td>
</tr>
</tbody>
</table>

5. General Education Requirement: At least four approved courses must be taken in the humanities and social sciences.

Total Credits: 21

1. If BIOL 0200 is counted, a statistics module must be completed in ENGN 1930L or other courses
2. At most one of these two courses may be counted.
3. In some cases, Independent Study may be substituted subject to Concentration Advisor approval.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Business, Entrepreneurship and Organizations

Business, Entrepreneurship and Organizations (BEO) 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. BEO students interested in the theory and practice of addressing social challenges might consider the Engaged Scholars Program (https://www.brown.edu/academics/business-entrepreneurship-organizations/beo-engaged-scholar-program-esp).

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

(Effective beginning with the graduating class of 2021)

Foundation Requirements (foundation requirements must be completed before taking the capstone in fall of senior year)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 0110</td>
<td>Principles of Economics</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1110</td>
<td>Intermediate Microeconomics</td>
<td>1</td>
</tr>
<tr>
<td>SOC 1311</td>
<td>Micro-Organizational Theory: Social Behavior in Organizations</td>
<td>1</td>
</tr>
<tr>
<td>SOC 1315</td>
<td>Macro-Organizational Theory: Organizations in Social Context</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 0020</td>
<td>Transforming Society-Technology and Choices for the Future</td>
<td>1</td>
</tr>
<tr>
<td>or ENGN 0030</td>
<td>Introduction to Engineering</td>
<td></td>
</tr>
<tr>
<td>ENGN 1010</td>
<td>The Entrepreneurial Process: Innovation in Practice</td>
<td>1</td>
</tr>
</tbody>
</table>

Math and Statistics Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0090</td>
<td>Essential Mathematics for Economics</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 0170</td>
<td>Advanced Placement Calculus</td>
<td>1</td>
</tr>
<tr>
<td>or ECON 0170</td>
<td>Essential Mathematics for Economics</td>
<td></td>
</tr>
<tr>
<td>Or AP BC Calculus score of 4 or higher</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Or IB High-level Math minimum score of 5 (IB Standard-level not accepted)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECON 1620</td>
<td>Introduction to Econometrics</td>
<td>1</td>
</tr>
</tbody>
</table>

Track Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 0710</td>
<td>Financial Accounting</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1210</td>
<td>Intermediate Macroeconomics</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1629</td>
<td>Applied Research Methods for Economists</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>1</td>
</tr>
<tr>
<td>One 1000-level economics course.</td>
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<td></td>
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Capstone: one-semester required (must be taken fall of senior year) 1

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEO 1930C</td>
<td>BEO Capstone I: Business Economics Track</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Credits 15

(Effective for graduating classes through 2020)

Foundation Requirements (foundation requirements must be completed before taking the capstone in fall of senior year)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 0110</td>
<td>Principles of Economics</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1110</td>
<td>Intermediate Microeconomics</td>
<td>1</td>
</tr>
<tr>
<td>SOC 1311</td>
<td>Micro-Organizational Theory: Social Behavior in Organizations</td>
<td>1</td>
</tr>
<tr>
<td>SOC 1315</td>
<td>Macro-Organizational Theory: Organizations in Social Context</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 0020</td>
<td>Transforming Society-Technology and Choices for the Future</td>
<td>1</td>
</tr>
<tr>
<td>or ENGN 0030</td>
<td>Introduction to Engineering</td>
<td></td>
</tr>
<tr>
<td>ENGN 1010</td>
<td>The Entrepreneurial Process: Innovation in Practice</td>
<td>1</td>
</tr>
</tbody>
</table>

Math and Statistics Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0090</td>
<td>Essential Mathematics for Economics</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 0170</td>
<td>Advanced Placement Calculus</td>
<td>1</td>
</tr>
<tr>
<td>or ECON 0170</td>
<td>Essential Mathematics for Economics</td>
<td></td>
</tr>
<tr>
<td>Or AP BC Calculus score of 4 or higher</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Or IB High-level Math minimum score of 5 (IB Standard-level not accepted)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECON 1620</td>
<td>Introduction to Econometrics</td>
<td>1</td>
</tr>
</tbody>
</table>

One Data Methods-intensive course from the following list: 1

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1301</td>
<td>Economics of Education I</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1305</td>
<td>Economics of Education: Research</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1310</td>
<td>Labor Economics</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1355</td>
<td>Environmental Issues in Development Economics</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1360</td>
<td>Health Economics</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1375</td>
<td>Inequality of Opportunity in the US</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1400</td>
<td>The Economics of Mass Media</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1420</td>
<td>Urbanization in China</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1480</td>
<td>Public Economics</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1510</td>
<td>Economic Development</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1520</td>
<td>The Economic Analysis of Institutions</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1530</td>
<td>Health, Hunger and the Household in Developing Countries</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1629</td>
<td>Applied Research Methods for Economists</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1630</td>
<td>Econometrics I</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>
<td>1</td>
</tr>
<tr>
<td>ECON 1660</td>
<td>Big Data</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1759</td>
<td>Data, Statistics, Finance</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1765</td>
<td>Finance, Regulation, and the Economy: Research</td>
<td>1</td>
</tr>
<tr>
<td>One 1000-level economics course, including a second data methods intensive course from the list above</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Capstone: one-semester required (must be taken fall of senior year) 1

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEO 1930C</td>
<td>BEO Capstone I: Business Economics Track</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Credits 15

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Organizational Studies Track
(Effective beginning with the graduating class of 2021)

Foundation Requirements (foundation requirements must be completed before taking the capstone in fall of senior year)

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 0100 Introductory Calculus, Part II 1
or MATH 0170 Advanced Placement Calculus 1
or ECON 0170 Essential Mathematics for Economics 1
* or AP BC Calculus with a score of 4 or higher
* or IB High-level Math with a minimum score of 5 (IB Standard-level is not accepted)
SOC 1100 Introductory Statistics for Social Research 1
or APMA 0650 Essential Statistics 1
or ENGN 1620 Introduction to Econometrics 1

Track Requirements
One Introduction to Research Methods course (selected from the following): 1
SOC 1020 Methods of Social Research
SOC 1050 Methods of Research in Organizations
Two Organization-Relevant Electives (OREs) (the following are approved examples-please consult with Courses@Brown/BEO website for current offerings): 2
ORE courses allow students to deepen and/or broaden their exposure to topics and settings that are either strongly determined by, or strongly determining of, organizational activities and outcomes. To qualify for this list, a course should have a clear linkage to commerce, organizations and/or entrepreneurship, and it should incorporate organizational phenomena and perspectives into a significant portion of its coursework.

Any from the Advanced Research Methods or Advanced Organization-Studies lists; or
ECON 1760 Financial Institutions
EDUC 1020 The History of American Education
EDUC 1040 Sociology of Education
EDUC 1060 Politics and Public 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

or

One Advanced Research Methods course (ARM) (the following are approved EXAMPLES-please consult with the Courses@Brown/BEO website for current offerings): 1

- PHP 2400 The U.S. Health Care System: Case Studies in Financing, Delivery, Regulation and Public Health
- PLCY 1701Q Leading Social Ventures - Social Entrepreneurship in Action
- PLCY 1800 Investigating Modes of Social Change
- PLCY 1910 Social Entrepreneurship
- PLCY 2150 Strategic Communication
- PLCY 2655 Regulation and Compliance
- POLS 1150 Prosperity: The Ethics and Economics of Wealth Creation
- POLS 1240 Politics, Markets and States in Developing Countries
- SOC 1114 Law and Society
- SOC 1115 The Enlightened Entrepreneur: Changemakers, Inspired Protagonists and Unreasonable People
- SOC 1871C Sociology of the Legal Profession

One Advanced Organization Studies course (AOS) (the following are approved EXAMPLES-please consult with the Courses@Brown/BEO website for current offerings):

AOS courses directly employ and extend the theories and perspectives introduced by the foundational Organizational Studies courses. They are either taught by core Organization Studies faculty or vetted on a regular basis by the Organization Studies track advisor, to ensure that they thoroughly incorporate Organization Studies perspectives and focus primarily on organizational processes and phenomena.

- CLPS 1730 Psychology in Business and Economics
- ECON 1790 Corporate Governance and Management
- MPA 2020 Public Budgeting and Management
- PLCY 1700V Nonprofit Organizations
- PLCY 1700Y Crisis Management
- PLCY 2350 Thinking, Planning and Acting Strategically
- SOC 1060 Leadership in Organizations
- SOC 1870A Investing in Social Change
- SOC 1870L The Economic Foundations of Everyday Life
- SOC 1871O Law, Innovation and Entrepreneurship
- SOC 1872H Sociology of FIRE: Finance, Insurance, + Real Estate

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
### Organizational Studies Track

(Effective for graduating classes through 2020)

#### Foundation Requirements (foundation requirements must be completed before taking the capstone in fall of senior year)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 0110</td>
<td>Principles of Economics</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1110</td>
<td>Intermediate Microeconomics</td>
<td>1</td>
</tr>
<tr>
<td>SOC 1311</td>
<td>Micro-Organizational Theory: Social Behavior in Organizations</td>
<td>1</td>
</tr>
<tr>
<td>SOC 1315</td>
<td>Macro-Organizational Theory: Organizations in Social Context</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 0020</td>
<td>Transforming Society-Technology and Choices for the Future</td>
<td>1</td>
</tr>
<tr>
<td>or ENGN 0030</td>
<td>Introduction to Engineering</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 1010</td>
<td>The Entrepreneurial Process: Innovation in Practice</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Math and Statistics Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</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>1</td>
</tr>
<tr>
<td>or ECON 1620</td>
<td>Introduction to Econometrics</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Track Requirements

- One Introduction to Research Methods course (selected from the following): 1
  - SOC 1020 Methods of Social Research
  - SOC 1050 Methods of Research in Organizations
- Two Organization-Relevant Electives (OREs) (the following are approved examples-please consult with Courses@Brown/BEO website for current offerings): 2
  - Any from the Advanced Research Methods or Advanced Organization-Studies lists; or
  - AMST 1610A American Advertising: History and Consequences
  - ECON 1760 Financial Institutions
  - EDUC 1020 The History of American Education
  - EDUC 1040 Sociology of Education
  - EDUC 1060 Politics and Public Education
  - EDUC 1150 Education, the Economy and School Reform
  - EDUC 1200 History of American School Reform
  - EDUC 1650 Policy Implementation in Education

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEO 1930A</td>
<td>BEO Capstone I: Organizational Studies Track</td>
<td>2</td>
</tr>
<tr>
<td>&amp; BEO 1940A</td>
<td>BEO Capstone II: Organizational Studies Track</td>
<td></td>
</tr>
</tbody>
</table>

**Total Credits**: 15

1. If a student in the Organizational Studies track completes only the fall semester of the capstone course (BEO 1930A), she/he must take one additional ARM or AOS course.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
ARM courses allow students to deepen and/or broaden their expertise in one or more methods of empirical inquiry.

ANTH 1940 Ethnographic Research Methods
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
PLCY 1200 Program Evaluation
MPA 2035 Statistics II for Public Policy Analysis
MPA 2040 Policy Analysis and Program Evaluation
SOC 2050 Program Evaluation
SOC 1117 Focus Groups for Market and Social Research
SOC 1118 Context Research for Innovation
SOC 1120 Market and Social Surveys
SOC 1127 EPIC: Ethnographic Praxis in Industry
SOC 1260 Market Research in Public and Private Sectors
SOC 1340 Principles and Methods of Geographic Information Systems

Capstone: 1-2

For the class graduating 2018: one-semester required (must be taken fall of senior year) 1
BEO 1930A BEO Capstone I: Organizational Studies Track

For the classes graduating 2019 and 2020: two semesters required
BEO 1930A & BEO 1940A BEO Capstone I: Organizational Studies Track and BEO Capstone II: Organizational Studies Track

Total Credits 14-15

1 Or an optional two-semester capstone from the BEO 1930 and 1940 series

Entrepreneurship and Technology Management Track

Foundation Requirements (foundation requirements must be completed before taking the capstone in fall of senior year)
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 0030 Introduction to Engineering 1
ENGN 1010 The Entrepreneurial Process: Innovation in Practice 1
Math and Statistics Requirements
MATH 0200 Intermediate Calculus (Physics/Engineering) 1
or APMA 0330 Methods of Applied Mathematics I, II
SOC 1100 Introductory Statistics for Social Research 1
or APMA 0650 Essential Statistics
or ECON 1620 Introduction to Econometrics

Track Requirements
One gateway course in Engineering or another physical science 1

Five courses that develop expertise in a technical subfield 1, 2 5
Capstone: two-semesters required (must be taken in fall and spring of senior year)
BEO 1930B BEO Capstone I: Entrepreneurship and Technology Management Track
BEO 1940B BEO Capstone II: Entrepreneurship and Technology Management Track

Total Credits 16

1 For specific gateway and subfield courses, refer to the BEO website.
2 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 1 in chemistry, physics, and mathematics, with a minimum of four semester courses in mathematics. The expectation is that courses required for a concentration in Chemical Physics will be taken for a letter grade. Core courses are:

CHEM 0330 Equilibrium, Rate, and Structure 1
CHEM 0350 Organic Chemistry 1
CHEM 0500 Inorganic Chemistry 1
CHEM 1140 Physical Chemistry: Quantum Chemistry 1
PHYS 0070 Analytical Mechanics 1
PHYS 0160 Introduction to Relativity, Waves and Quantum Physics 1
PHYS 0470 Electricity and Magnetism 1

Select one of the following laboratory courses:
CHEM 1160 Physical Chemistry Laboratory 1
PHYS 0560 Experiments in Modern Physics 1
PHYS 1560 Modern Physics Laboratory 1

Select one course in statistical mechanics:
CHEM 1150 Physical Chemistry: Thermodynamics and Statistical Mechanics 1
PHYS 1530 Thermodynamics and Statistical Mechanics 1

MATH 0190 Advanced Placement Calculus (Physics/Engineering) 1
MATH 0200 Intermediate Calculus (Physics/Engineering) 1
MATH 0520 Linear Algebra 1

Seven courses, primarily at the 1000 or 2000 level, in chemistry or physics.

Select two semesters of independent study:
CHEM 0970/0980 Undergraduate Research 2
PHYS 1990 Senior Conference Course 2

Total Credits 21

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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.

**Honors Requirements for Chemical Physics**

All ScB Chemical Physics concentrators who completes the following requirements are candidates for Honors; no separate application is necessary.

The requirements for Honors in Chemical Physics are:

* A strong grade record in concentration courses. This means a grade point average for the concentration that is higher than 3.50.

* Two semesters of Independent Study (CHEM 0970, CHEM 0980, PHYS 1990 or equivalent). Guidelines and requirements associated with Independent Study are in the Undergraduate Concentration Handbook which can be found at the department website (http://www.brown.edu/academics/chemistry/undergraduate).

* A Thesis in a form approved by the research advisor, and recommended by the research advisor. Additional information about thesis guidelines will be provided by the Concentration Advisor in the first half of the fall semester.

* A Poster presentation at the chemistry department's spring undergraduate poster session.

**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 Code</th>
<th>Course 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>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 a chemistry elective for chemistry concentration purposes. Non CHEM electives are upper level science/math courses with a significant molecular focus or those that cover tools/techniques that are of utility to a chemist. You should discuss your elective choices with the Concentration Advisor to craft a course of study that is appropriate for your interests.

**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. The expectation is that courses required for the concentration will be taken for a letter grade.

**Concentrating in Chemistry – Three tracks**

The required/recommended courses for the three tracks are given below.

**Chemistry Track:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course 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>
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<tr>
<td>CHEM 0500</td>
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</tr>
<tr>
<td>CHEM 0970</td>
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<tr>
<td>CHEM 0980</td>
<td>Undergraduate Research</td>
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<tr>
<td>CHEM 1140</td>
<td>Physical Chemistry: Quantum Chemistry</td>
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</tr>
<tr>
<td>CHEM 1150</td>
<td>Physical Chemistry: Thermodynamics and Statistical Mechanics</td>
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<tr>
<td>CHEM 1160</td>
<td>Physical Chemistry Laboratory</td>
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</tr>
<tr>
<td>MATH 0180</td>
<td>or equivalent</td>
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</tr>
<tr>
<td>Two Physics courses</td>
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<td>2</td>
</tr>
<tr>
<td>Seven electives (at least three must be in Chemistry)</td>
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<td>Total Credits</td>
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<td>19</td>
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**Chemical Biology Track:**

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<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
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<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 0970</td>
<td>Undergraduate Research</td>
<td>1</td>
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<tr>
<td>CHEM 0980</td>
<td>Undergraduate Research</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 1140</td>
<td>Physical Chemistry: Quantum Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 1230</td>
<td>Chemical Biology</td>
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<tr>
<td>CHEM 1240</td>
<td>Biochemistry</td>
<td>1</td>
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<tr>
<td>BIOL 0280</td>
<td>Biochemistry</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0180</td>
<td>or equivalent</td>
<td>3</td>
</tr>
<tr>
<td>Two Physics courses</td>
<td></td>
<td>2</td>
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<tr>
<td>Select three of the following:</td>
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<tr>
<td>BIOL 0470</td>
<td>Genetics</td>
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<tr>
<td>BIOL 0500</td>
<td>Cell and Molecular Biology</td>
<td></td>
</tr>
<tr>
<td>BIOL 0510</td>
<td>Introductory Microbiology</td>
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<tr>
<td>BIOL 0530</td>
<td>Principles of Immunology</td>
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<tr>
<td>BIOL 0800</td>
<td>Principles of Physiology</td>
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<td>NEUR 1020</td>
<td>Principles of Neurobiology</td>
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<td>Three other electives</td>
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<tr>
<td>Total Credits</td>
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</tr>
</tbody>
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**Materials Chemistry Track:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course 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 0970</td>
<td>Undergraduate Research</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 0980</td>
<td>Undergraduate Research</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 1060</td>
<td>Advanced Inorganic Chemistry</td>
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</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 1700</td>
<td>Nanoscale Materials: Synthesis and Applications</td>
<td>1</td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Consult with the Director of Undergraduate Studies regarding their path concentration requirement in some of the tracks. Students should always
consider consulting with the Director of Undergraduate Studies regarding their path toward fulfilling requirements and choosing electives.

Classics

The study of Classics focuses on the languages, literature, history, culture, and legacy of Greco-Roman antiquity. An undergraduate concentration in Classics furnishes students with a broad liberal education, and provides specialized training for those students intending to enter graduate school. Students may choose to study Ancient Greek, Latin, Sanskrit, and/or Modern Greek, and to explore courses in literature, mythology, history, philosophy, and religion. Students may either pursue the standard Classics concentration—the most popular choice—or one of several optional specialized training for those students intending to enter graduate school.

With the satisfactory completion of nine courses as described below, the introductory courses in Greek and Latin may not usually be counted toward a concentration, but those in Sanskrit may be counted toward the concentration requirement in some of the tracks. Students should always consult with the Director of Undergraduate Studies regarding their path toward fulfilling requirements and choosing electives.

MATH 0180 or equivalent 3 1
Two Physics courses 2 2
BIOL 1090 Polymer Science for Biomaterials 1
Five electives, at least two must be chemistry courses. 1 5
Total Credits 19

1 BIOL 0280 is credited as a chemistry elective for the chemistry concentration. Non CHEM electives are upper level science/math courses with a significant molecular focus or those that cover tools/techniques that are of utility to a chemist. You should discuss your elective choices with the Concentration Advisor to craft a course of study that is appropriate for your interests.
2 For students with a more Engineering bent, the following substitutions can be made - ENGN 0030/ENGN 0040 can be substituted for PHYS; ENGN 0410 can be substituted for CHEM 1060; ENGN 0720 for CHEM 1150.
3 NOTE: MATH 0180 has additional prerequisites.
4 NOTE: Many of the BIOL courses have BIOL 0200 as a prerequisite.

In each of these cases, CHEM 0970/CHEM 0980 should be carried out with a faculty member with an appointment in the Chemistry Department. Research with faculty advisors outside Chemistry may be allowed in some special cases. In this event, the student should a) prepare a proposal for the research to be carried out and b) identify a faculty member in the Chemistry Department who will serve as a second advisor and the second reader for the thesis.

Honors Requirements for Chemistry

All ScB Chemistry concentrators, and any AB concentrator who completes the following requirements, are candidates for Honors; no separate application is necessary.

The requirements for Honors in Chemistry are:

* A strong grade record in concentration courses. This means a grade point average for the concentration that is higher than 3.50.
* Two semesters of Independent Study (CHEM 0970, CHEM 0980 or equivalent. Guidelines and requirements associated with Independent Study are in the Undergraduate Concentration Handbook which can be found at the department website (http://www.brown.edu/academics/chemistry/undergraduate).
* A Thesis in a form approved by the research advisor, and recommended by the research advisor. Additional information about thesis guidelines will be provided by the Concentration Advisor in the first half of the fall semester.
* A Poster presentation at the chemistry department’s spring undergraduate poster session.

Classics

One course in Greek or Latin on the 1000-level or above. 1 1
Select one of the following series: 2

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLAS 1210</td>
<td>Mediterranean Culture Wars: Archaic Greek History, c. 1200 to 479 BC</td>
</tr>
<tr>
<td>CLAS 1220</td>
<td>The Fall of Empires and Rise of Kings: Greek History 478 to 323 BC</td>
</tr>
<tr>
<td>or HIST 1200B</td>
<td>The Fall of Empires and Rise of Kings: Greek History to 478 to 323 BCE</td>
</tr>
</tbody>
</table>

OR

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLAS 1310</td>
<td>Roman History I: The Rise and Fall of an Imperial Republic</td>
</tr>
</tbody>
</table>

And

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLAS 1320</td>
<td>Roman History II: The Roman Empire and Its Impact</td>
</tr>
</tbody>
</table>

Five other courses in classics, including classical archaeology, Greek, Latin, Sanskrit, or related areas to be approved by the concentration advisor. At least three of these five courses must be offered through the Department of Classics. 3

One further course offered by the Department of Classics and designated “Classics and Beyond,” OR a DIAP course offered by the Department of Classics. 3

Total Credits 9

1 Options offered in 2018/2019 include, but are not limited to:
   - GREEK 1100B, GREEK 1110S, GREEK 1111B, GREEK 1150, GREEK 1810, LATN 1020D, LATN 1040B, LATN 1060G, LATN 1100F, LATN 1110H, LATN 1110P, LATN 1820, LATN 1930B, and with instructor permission for those who are very advanced in Greek or Latin: GREEK 2020E, GREEK 2110K, and LATN 2080F/LATN 2090I.
2 Options offered by the Department of Classics in 2018/2019 include, but are not limited to:
3 Options offered by the Department of Classics in 2018/2019 include, but are not limited to:
   - CLAS 0765, CLAS 0780, CLAS 0855, CLAS 1120G, CLAS 1120Q, CLAS 1145, CLAS 1750H, LATN 1110H, and with instructor permission for those who are very advanced in Latin: LATN 2080F and LATN 2090I.

Greek

Four Greek courses on the 1000-level or above, at least one of which is to be: 1 4

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GREEK 1810</td>
<td>Greek Literature Survey to 450 BCE</td>
</tr>
<tr>
<td>or GREEK 1820</td>
<td>Greek Literature Survey after 450 BCE</td>
</tr>
</tbody>
</table>

CLAS 1210 Mediterranean Culture Wars: Archaic Greek History, c. 1200 to 479 BC 1

CLAS 1220 The Fall of Empires and Rise of Kings: Greek History 478 to 323 BC 1

Two additional courses in classics, including classical archaeology, Greek, Latin, or related areas to be approved by the concentration advisor. At least one of these two courses must be offered through the Department of Classics. 2

One further course offered by the Department of Classics and designated “Classics and Beyond,” OR a DIAP course offered by the Department of Classics. 1

Total Credits 9

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Latin

Four Latin courses on the 1000-level or above, at least one of which is to be:

1. **LATN 1810** Survey of Republican Literature
2. **LATN 1820** Survey of Roman Literature II: Empire
3. **CLAS 1310** Roman History I: The Rise and Fall of an Imperial Republic
4. **CLAS 1320** Roman History II: The Roman Empire and Its Impact
5. **or HIST 1201B** Roman History II: The Empire

Two additional courses in classics, including classical archaeology, Greek, Latin, or related areas to be approved by the concentration advisor. At least one of these two courses must be offered through the Department of Classics. 

One further course offered by the Department of Classics and designated "Classics and Beyond," OR a DIAP course offered by the Department of Classics.

Total Credits: 9

Greek and Latin

Four Latin courses on the 1000-level or above, at least one of which is to be:

1. **LATN 1810** Survey of Republican Literature
2. **LATN 1820** Survey of Roman Literature II: Empire
3. **LATN 1930B** Roman History II: The Fall of Empires and Rise of Kings: Greek History 478 to 323 BCE
4. Options offered in 2018/2019 include, but are not limited to: **CLAS 1300, CLAS 1310, CLAS 1320, CLAS 1330**

Two additional courses in classics, including classical archaeology, Greek, Latin, or related areas to be approved by the concentration advisor. At least one of these two courses must be offered through the Department of Classics. 

One further course offered by the Department of Classics and designated "Classics and Beyond," OR a DIAP course offered by the Department of Classics.

Total Credits: 9

South Asian Classics

At least one Sanskrit course above Sanskrit 0300

Three of the Sanskrit Classics Courses in Translation


Total Credits: 12

Sanskrit

Two Sanskrit courses at the 1000-level or above

Two of the Sanskrit Classics Courses in Translation

Four other courses in Classics or related areas (such as Comparative Literature, Religious Studies, South Asian Studies, Early Cultures, etc.) to be approved by the concentration advisor

One further course offered by the Department of Classics and designated "Classics and Beyond," OR a DIAP course offered by the Department of Classics.

Total Credits: 9

Brown University
Greek and Sanskrit

Four Sanskrit courses at any level 1
Four Greek courses on the 1000-level or above, at least one of which is to be:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GREK 1810</td>
<td>Greek Literature Survey to 450 BCE</td>
</tr>
<tr>
<td>GREK 1820</td>
<td>Greek Literature Survey after 450 BCE</td>
</tr>
<tr>
<td>CLAS 1020</td>
<td>Mediterranean Culture Wars: Archaic</td>
</tr>
<tr>
<td>CLAS 1020</td>
<td>Greek History c. 1200 to 479 BC</td>
</tr>
<tr>
<td>CLAS 1020</td>
<td>The Fall of Empires and Rise of Kings:</td>
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<tr>
<td></td>
<td>Greek History 478 to 323 BC</td>
</tr>
<tr>
<td>CLAS 1200A</td>
<td>The Fall of Empires and Rise of Kings: Greek</td>
</tr>
<tr>
<td></td>
<td>History to 478 to 323 BCE</td>
</tr>
</tbody>
</table>

Two additional courses in Classics or related areas (such as Comparative Literature, Religious Studies, South Asian Studies, Early Cultures, etc.) to be approved by the concentration advisor

Total Credits 12

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 1990 courses; these courses may not be used to satisfy the standard requirements for a concentration. In order to qualify, a candidate for honors in the Department of Classics ordinarily will be entering his/her seventh semester of study and must have an “A” average (3.50 or higher on a 4.00 scale) in the concentration.

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, perception, language development or computational/modeling. 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 AB degree (Effective Class of 2019)

The A.B. concentration requires 12 courses. The Sc.B concentration additionally requires 1 laboratory course and 4 approved science courses, totaling to a total of 17 required courses.

Common Core

The introductory course, "CLPS 0010 Mind, Brain, and Behavior," surveys the broad territory of the scientific study of the mind, as uniquely represented by our department. The course maps the breadth of the science of the mind, focusing on fascinating questions, garnered insights, common commitments, and successful techniques and approaches. The course could be taken by students interested in the CLPS concentrations or as an introduction at the beginning of one’s college career or as an integration after having completed a number of specialized courses in a particular concentration.

Careers in Cognitive Neuroscience and related fields requires familiarity with statistics. Therefore, the Cognitive Neuroscience concentration requires a course in Quantitative Methods (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 of AP Statistics, regardless of score. Students who feel that CLPS 0900 is too elementary can complete an approved alternative course (e.g., APMA 1650, CLPS 2906).
Foundation
To provide students with a solid foundation of knowledge in their area of concentration and to minimize redundancy, the Cognitive Neuroscience concentration requires four foundation courses in Neuroscience, Cognitive Neuroscience, Cognitive Neuropsychology, and Computational Methods.

Electives
Each concentrator will take four additional courses that allow the student to go into depth in some of the relevant topics. These electives must include at least two courses at the cognitive neuroscience systems level. The courses designed to count as electives will often have foundation courses as prerequisites and may include laboratory courses, content courses, or seminars.

Research Methods and Capstone
Another element in the Cognitive Neuroscience concentration is a research methods course that builds on the introductory statistics course (which will be a prerequisite) but exposes students to a variety of topics in research of the mind: to empirical methods (e.g., surveys, chronometry, eye tracking, brain imaging); to common designs (e.g., factorial experimental, correlational, longitudinal); to research ethics, and to best practices of literature review. Concentrators will additionally take either a seminar course or an independent research course to serve as their capstone experience.

Additional requirements for Sc.B.
In line with university expectations, the Sc.B. requirements include a greater number of courses and especially science courses. The definition of “science” is flexible. A good number of these courses will be outside of CLPS, but several CLPS courses might fit into a coherent package as well. In addition, the Sc.B. degree also requires a lab course to provide these students with in-depth exposure to research methods in a particular area of the science of the mind.

Honors Requirement
The Research Methods course will serve as a requirement for admission to the Honors program in Cognitive Science, Cognitive Neuroscience, and Psychology. Previously, any lab course served as this requirement. This practice not only demanded a large number of lab courses as part of the CLPS curriculum but also suffered from frequent mismatches between the type of research the student wished to pursue and the type of lab course available in the relevant semesters. A more general research methods course is likely to prepare students better and more broadly than any single lab course can.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
The Cognitive Science concentration requires a total of 17 required courses. The A.B. concentration requires 12 courses. The Sc.B. concentration additionally requires 1 laboratory course and 4 approved science courses, totaling to a total of 17 required courses.

Concentration Requirements (Effective, Class of 2019)

The A.B. concentration requires 12 courses. The Sc.B concentration additionally requires 1 laboratory course and 4 approved science courses, totaling to a total of 17 required courses.

Common Core

The introductory course, "CLPS 0010 Mind, Brain, and Behavior," surveys the broad territory of the scientific study of the mind, as uniquely represented by our department. The course maps the breadth of the science of the mind, focusing on fascinating questions, garnered insights, common commitments, and successful techniques and approaches. The course could be taken by students interested in the CLPS concentrations or as an introduction at the beginning of one's college career or as an integration after having completed a number of specialized courses in a particular concentration.

Careers in Cognitive Science and related fields require familiarity with statistics. Therefore, the Cognitive Science concentration requires a course in Quantitative Methods (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 of AP Statistics, regardless of score. Students who feel that CLPS 0900 is too elementary can complete an approved alternative course (e.g., APMA 1650, CLPS 2906).

Foundation

To provide students with a solid foundation of knowledge in their area of concentration and to minimize redundancy, the Cognitive Science concentration requires four foundation courses in Human Cognition, Perception, Language, and Computational Methods.

Electives

Each concentrator will take four additional courses that allow the student to go into depth in some of the relevant topics. These electives must include at least two courses in one of the four foundation topics (i.e., Human Cognition, Perception, Language, and Computational Methods). The courses designed to count as electives will often have foundation courses as prerequisites and may include laboratory courses, content courses, or seminars.

Research Methods and Capstone

Another element in the Cognitive Science concentration is a research methods course that builds on the introductory statistics course (which will be a prerequisite) but exposes students to a variety of topics in research of the mind: to empirical methods (e.g., surveys, chronometry, eye tracking, brain imaging), to common designs (e.g., factorial experimental, correlational, longitudinal), to research ethics, and to best practices of literature review. Concentrators will additionally take either a seminar course or an independent research course to serve as their capstone experience.

Additional requirements for Sc.B.

In line with university expectations, the Sc.B. requirements include a greater number of courses and especially science courses. The definition of "science" is flexible. A good number of these courses will be outside of CLPS, but several CLPS courses might fit into a coherent package as well. In addition, the Sc.B. degree also requires a lab course to provide these students with in-depth exposure to research methods in a particular area of the science of the mind.

Honors Requirement

The Research Methods course will serve as a requirement for admission to the Honors program in Cognitive Science, Cognitive Neuroscience, and Psychology. Previously, any lab course served as this requirement. This practice not only demanded a large number of lab courses as part of the CLPS curriculum but also suffered from frequent mismatches between the type of research the student wished to pursue and the type of lab course available in the relevant semesters. A more general research methods course is likely to prepare students better and more broadly than any single lab course can.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
### Requirements for the Sc.B. degree

**STANDARD PROGRAM FOR THE Sc.B. DEGREE**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLPS 0900</td>
<td>Statistical Methods</td>
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</tr>
<tr>
<td>CLPS 1400</td>
<td>The Neural Bases of Cognition</td>
<td>1</td>
</tr>
<tr>
<td>CLPS 1408B</td>
<td>Cognitive Aging and Dementia</td>
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<tr>
<td>CLPS 1470C</td>
<td>Cognitive Control Functions of the Prefrontal Cortex</td>
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<tr>
<td>CLPS 1495</td>
<td>Affective Neuroscience</td>
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<tr>
<td>CLPS 1500</td>
<td>Perception and Action</td>
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<td>CLPS 1560</td>
<td>Visually-Guided Action and Cognitive Processes</td>
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<tr>
<td>CLPS 1900</td>
<td>Research Methods And Design</td>
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<tr>
<td>PHIL 1770</td>
<td>Philosophy of Mind</td>
<td></td>
</tr>
</tbody>
</table>

**One Independent Study or Approved Seminar, such as:**

- CLPS 1400 The Neural Bases of Cognition
- CLPS 1480 The Neural Bases of Cognition
- CLPS 1480B Cognitive Aging and Dementia
- CLPS 1495 Cognitive Control Functions of the Prefrontal Cortex
- CLPS 1500 Perception and Action
- CLPS 1560 Visually-Guided Action and Cognitive Processes
- CLPS 1900 Research Methods And Design
- PHIL 1770 Philosophy of Mind

**Four Approved Electives related to Cognitive Science, such as:**

- APMA 1690 Computational Probability and Statistics
- BIOL 0480 Evolutionary Biology
- CLPS 1100 Animal Cognition
- CLPS 1470 Mechanisms of Motivated Decision Making
- CLPS 1500 Perception and Action
- CLPS 1610 Cognitive Development
- CLPS 1800 Language Processing
- CSCI 1010 Theory of Computation
- CSCI 1480 Building Intelligent Robots
- EDUC 1260 Emotion, Cognition, Education
- ENGN 1580 Communication Systems
- PHIL 1770 Philosophy of Mind

**One Independent Study or Approved Seminar, such as:**

- CLPS 1400 The Neural Bases of Cognition

Total Credits 17

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### 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 literature 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.

Please contact Professor D (stephanie_merrim@brown.edu) or Levy (dore_levy@brown.edu) (subject=comp lit concentration), the Director of Undergraduate Studies, with questions.

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 (COLT 1210), Introduction to the Theory of Literature.
• TEN 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.

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 (COLT 1210), Introduction to the Theory of Literature.
• TEN 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.

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 (COLT 1210), Introduction to the Theory of Literature.
• Comparative Literature 1710 (COLT 1710A, COLT 1710C, COLT 1710D), 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.

For additional information, please visit the Comparative Literature website (http://www.brown.edu/Departments/Comparative_Literature/) or see the Director of Undergraduate Studies, Professor Dore Levy.

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.

Students may pursue a Bachelor of Arts or a Bachelor of Science. Students pursuing the ScB have the option of electing a concentration in Computational Biology with one of three focus areas: Computer Sciences, Biological Sciences, or Applied Mathematics & Statistics. Both programs require a senior capstone experience that pairs students and faculty in creative research collaborations.

Standard program for the A.B. degree

<table>
<thead>
<tr>
<th>Prerequisites:</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0100 Introductory Calculus, Part II</td>
<td>2</td>
</tr>
<tr>
<td>or MATH 0170 Advanced Placement Calculus</td>
<td>2</td>
</tr>
<tr>
<td>BIOL 0200 The Foundation of Living Systems</td>
<td>2</td>
</tr>
</tbody>
</table>

General Core Requirements: Biology

<table>
<thead>
<tr>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 0470 Genetics</td>
</tr>
<tr>
<td>BIOL 0280 Biochemistry</td>
</tr>
<tr>
<td>or BIOL 0500 Cell and Molecular Biology</td>
</tr>
</tbody>
</table>

General Core Requirements: Chemistry

<table>
<thead>
<tr>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 0330 Equilibrium, Rate, and Structure</td>
</tr>
<tr>
<td>or CHEM 0350 Organic Chemistry</td>
</tr>
</tbody>
</table>

General Core Requirements: Computer Science

<table>
<thead>
<tr>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 0150 &amp; CSCI 0160 Introduction to Object-Oriented Programming and Computer Science and Introduction to Algorithms and Data Structures</td>
</tr>
<tr>
<td>OR</td>
</tr>
<tr>
<td>CSCI 0170 &amp; CSCI 0180 Computer Science: An Integrated Introduction and Computer Science: An Integrated Introduction</td>
</tr>
<tr>
<td>OR</td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
CSCI 0190 & CSCI 0180 & CSCI 0320 & CSCI 1010
Accelerated Introduction to Computer Science and Introduction to Software Engineering and Introduction to Computer Systems and Theory of Computation

General Core Requirements: Probability & Statistics
1
APMA 1650 Statistical Inference I
OR
CSCI 1450 Probability for Computing and Data Analysis
OR
MATH 1610 Probability

Comp Bio Core Course Requirements
4
CSCI 1810 Computational Molecular Biology
APMA 1080 Inference in Genomics and Molecular Biology
AND two of the following:
CSCI 1820 Algorithmic Foundations of Computational Biology
BIOL 1430 Population Genetics
BIOL 1465 Human Population Genomics
CSCI 1420 Machine Learning
APMA 1690 Computational Probability and Statistics
APMA 1660 Statistical Inference II
Additional course with Director approval

Total Credits
12

University Writing Requirement:
As part of Brown’s writing requirement, all students must demonstrate that they have worked on their writing both in their general studies and their concentration. There are a number of ways for Computational Biology concentrators to fulfill these requirements:

- Writing an Honors Thesis
- Taking a “WRIT” course in the final two years

Capstone Experience
Students enrolled in the computational biology concentration will complete a research project in their senior year under faculty supervision. The themes of such projects evolve with the field and the technology, but should represent a synthesis of the various specialties of the program. The requirements are either one semester of reading and research with a CCMB Faculty member or approved advisor, or a 2000-level Computational Biology course.

Standard program for the Sc.B. degree

Prerequisites
MATH 0100 Introductory Calculus, Part II (or equivalent) 1
or MATH 0170 Advanced Placement Calculus
BIOL 0200 The Foundation of Living Systems (or equivalent) 1

General Core Course Requirements: Biology
BIOL 0470 Genetics (prerequisite BIOL 0200 or equivalent) 1
BIOL 0280 Biochemistry 1
or BIOL 0500 Cell and Molecular Biology

General Core Requirements: Chemistry
CHEM 0330 Equilibrium, Rate, and Structure 1
or CHEM 0350 Organic Chemistry

General Core Requirements: Computer Science
2-4

CSCI 0150 & CSCI 0160 Introduction to Object-Oriented Programming and Computer Science and Introduction to Algorithms and Data Structures
OR
CSCI 0170 & CSCI 0180 Computer Science: An Integrated Introduction and Computer Science: An Integrated Introduction
OR
CSCI 0190 & CSCI 0320 & CSCI 0330 Accelerated Introduction to Computer Science and Computer Science: An Integrated Introduction and Introduction to Software Engineering and Introduction to Computer Systems
CSCI 0220 Introduction to Discrete Structures and Probability 1

General Core Requirements: Probability & Statistics
APMA 1650 Statistical Inference I 1
or CSCI 1450 Probability for Computing and Data Analysis
or MATH 1610 Probability

General Core Requirements: Computational Biology
CSCI 1810 Computational Molecular Biology 1
APMA 1080 Inference in Genomics and Molecular Biology 1

Capstone Experience
BIOL 1950/1960 Directed Research/Independent Study 1
CSCI 1970 Individual Independent Study 1

Six courses in one of the following three tracks: 6
Computer Science Track:
Three of the following:
CSCI 1230 Introduction to Computer Graphics
CSCI 1270 Database Management Systems
CSCI 1410 Artificial Intelligence
CSCI 1550 Probabilistic Methods in Computer Science
CSCI 1570 Design and Analysis of Algorithms
or other Computer Science courses approved by the concentration advisor
Three of the following:
CSCI 0330 Introduction to Computer Systems
or CSCI 0320 Introduction to Software Engineering
CSCI 1820 Algorithmic Foundations of Computational Biology

six courses in one of the following three tracks:

APMA 2620 Statistical Methods in Bioinformatics, I 1
APMA 1660 Statistical Inference II 1
BIOL 1430 Population Genetics 1
BIOL 1465 Human Population Genomics 1
APMA 1690 Computational Probability and Statistics 1

Biological Sciences track
At least four courses comprising a coherent theme in one of the following areas: Biochemistry, Ecology, Evolution, or Neurobiology.
AND 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 Population Genetics
BIOL 1465 Human Population Genomics
APMA 1690 Computational Probability and Statistics

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Applied Mathematics & Statistics Track:
At least three courses from the following:
- APMA 1660 Statistical Inference II
- APMA 1690 Computational Probability and Statistics
- CSCI 1410 Artificial Intelligence
- APMA 0340 Methods of Applied Mathematics I, II
  & APMA 0330 Methods of Applied Mathematics I, II

OR
- APMA 0360 Applied Partial Differential Equations I
  & APMA 0350 Applied Partial Differential Equations II

At least three of the following:
- BIOL 1430 Population Genetics
- CSCI 1820 Algorithmic Foundations of Computational Biology
- PHP 2620 Statistical Methods in Bioinformatics, I
- APMA 1070 Quantitative Models of Biological Systems
- BIOL 1465 Human Population Genomics

Total Credits 18-20

Honors:
In order to be considered a candidate for honors, students will be expected to maintain an outstanding record, with no "C"s in concentration courses and with a minimum of an "A-" average in concentration courses. In addition, students should take at least one semester, and are strongly encouraged to take two semesters, of reading and research with a CCMB faculty member or approved advisor. Students must submit to a public defense of their theses to be open to the CCMB community.

- Students seeking honors are advised to choose a Thesis Advisor prior to the end of their Junior year.
- Students must complete the Registration form for Comp Bio and submit it to CCMB@BROWN.EDU

Any deviation from these rules must be approved by the director of undergraduate studies, in consultation with the student's advisor.

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.

Our requirements are built on a collection of pathways, each representing a well defined area within computer science. Concentrators interested in particular areas can choose the courses included in particular pathways. Conversely, concentrators who are unsure of their area of interest but who have particularly enjoyed certain courses can choose pathways that include these concentrations. Students may not use more than two CSCI 1970 courses to complete the requirements for the Sc.B. and one CSCI 1970 course for the A.B. requirements.

Requirements for the Standard Track of the Sc.B. degree

Prerequisites (0-3 courses)
Calculus prerequisite: students must complete or place out of second semester calculus.
- MATH 0100 Introductory Calculus, Part II
- or MATH 0170 Advanced Placement Calculus
- or MATH 0190 Advanced Placement Calculus (Physics/Engineering)

Concentration Requirements
Core-Computer Science:
Select one of the following introductory course Series:

<table>
<thead>
<tr>
<th>Series</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>CSCI 0150 Introduction to Object-Oriented Programming and Computer Science &amp; CSCI 0160 Introduction to Algorithms and Data Structures</td>
</tr>
<tr>
<td>B</td>
<td>CSCI 0170 CSCI 0180 Computer Science: An Integrated Introduction and Computer Science: An Integrated Introduction</td>
</tr>
<tr>
<td>C</td>
<td>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)</td>
</tr>
</tbody>
</table>

Thirteen CS courses numbered 0220 or higher.

- Two complete pathways (at least one core course from each)
- One intermediate course that is not the same as another course in another pathway
- One additional 1000-level course that is neither a core nor a related course for the pathways used above

Intermediate Courses
Students must complete the intermediate courses defined for the pathway they choose. In addition, ScB students must take at least one course from each intermediate course category to ensure they span all areas. Taking additional courses beyond those listed for the pathway may be required.

Foundations
- CSCI 0220 Introduction to Discrete Structures and Probability
- CSCI 1010 Theory of Computation

Mathematics
- CSCI 0530 Coding the Matrix: An Introduction to Linear Algebra for Computer Science
- or MATH 0520 Linear Algebra
- or MATH 0540 Honors Linear Algebra
- CSCI 1450 Probability for Computing and Data Analysis
- or APMA 1650 Statistical Inference I
- or APMA 1655 Statistical Inference I
- MATH 0180 Intermediate Calculus
- or MATH 0200 Intermediate Calculus (Physics/Engineering)
- or MATH 0350 Honors Calculus

Systems
- CSCI 0320 Introduction to Software Engineering
- CSCI 0330 Introduction to Computer Systems

Pathways
Completing a pathway entails taking two courses in the pathway of which at least one is a course course for the pathway. One must also take the intermediate courses specified as part of the pathway.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
SYSTEMS: studies the design, construction, and analysis of modern, multi-faceted computing systems

Core Courses
- CSCI 1380 Distributed Computer Systems
- or CSCI 1670 Operating Systems
- or CSCI 1680 Computer Networks

Related Courses
- CSCI 1270 Database Management Systems
- or CSCI 1320 Creating Modern Web Applications
- or CSCI 1600 Real-Time and Embedded Software
- or CSCI 1650 Software Security and Exploitation
- or CSCI 1660 Introduction to Computer Systems Security
- or CSCI 1730 Design and Implementation of Programming Languages
- or CSCI 1760 Multiprocessor Synchronization
- or CSCI 1950Y Logic for Systems
- or ENGN 1640 Design of Computing Systems

Intermediate Courses
- CSCI 0330 Introduction to Computer Systems
- CSCI 0220 Introduction to Discrete Structures and Probability
- or CSCI 0320 Introduction to Software Engineering

SOFTWARE PRINCIPLES: studies the design, construction, and analysis of modern software systems

Core Courses
- CSCI 1260 Compilers and Program Analysis
- or CSCI 1320 Creating Modern Web Applications
- or CSCI 1600 Real-Time and Embedded Software
- or CSCI 1730 Design and Implementation of Programming Languages
- or CSCI 1950Y Logic for Systems

Related Courses
- CSCI 1270 Database Management Systems
- or CSCI 1380 Distributed Computer Systems
- or CSCI 1650 Software Security and Exploitation

Intermediate Courses
- CSCI 0220 Introduction to Discrete Structures and Probability
- CSCI 0320 Introduction to Software Engineering
- CSCI 0330 Introduction to Computer Systems (Data)

DATA: Studies the management and use of large data collections

Core Courses
- CSCI 1270 Database Management Systems
- or CSCI 1420 Machine Learning
- or CSCI 1951A Data Science

Related Courses
- CSCI 1550 Probabilistic Methods in Computer Science
- or CSCI 1580 Information Retrieval and Web Search
- or CSCI 1951A Data Science
- or CSCI 1951C Designing Humanity Centered Robots
- or CSCI 1951K Algorithmic Game Theory
- or ENGN 1610 Image Understanding

Intermediate Courses
- CSCI 1010 Theory of Computation
- CSCI 1450 Probability for Computing and Data Analysis
- or APMA 1650 Statistical Inference I
- or APMA 1655 Statistical Inference I

ARTIFICIAL INTELLIGENCE / MACHINE LEARNING: studies the theory and application of algorithms for making decisions and inferences from rules and data

Core Courses
- CSCI 1410 Artificial Intelligence
- or CSCI 1420 Machine Learning
- or CSCI 1430 Computer Vision
- or CSCI 1460 Computational Linguistics

Related Courses
- CSCI 1550 Probabilistic Methods in Computer Science
- or CSCI 1580 Information Retrieval and Web Search
- or CSCI 1951A Data Science
- or CSCI 1951C Designing Humanity Centered Robots
- or CSCI 1951K Algorithmic Game Theory
- or ENGN 1610 Image Understanding

Intermediate Courses
- CSCI 1590 Introduction to Computational Complexity
- or CSCI 1810 Computational Molecular Biology
- or CSCI 1820 Algorithmic Foundations of Computational Biology
- or CSCI 1950H Computational Topology
- or CSCI 1950Y Logic for Systems
- or CSCI 1951G Optimization Methods in Finance
- or CSCI 1951K Algorithmic Game Theory

SECURITY: studies the design, construction, analysis, and defense of techniques to protect systems, data, and communications

Core Courses
- CSCI 1510 Introduction to Cryptography and Computer Security
- or CSCI 1660 Introduction to Computer Systems Security
- or CSCI 1650 Software Security and Exploitation
- or APMA 1650 Statistical Inference I
- or APMA 1655 Statistical Inference I

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Related Courses

CSCI 1320 Creating Modern Web Applications
or CSCI 1380 Distributed Computer Systems
or CSCI 1670 Operating Systems
or CSCI 1730 Design and Implementation of Programming Languages
or CSCI 1800 Cybersecurity and International Relations
or CSCI 1950Y Logic for Systems
or CSCI 1951B Virtual Citizens or Subjects? The Global Battle Over Governing Your Internet

Intermediate Courses

CSCI 0330 Introduction to Computer Systems
CSCI 1010 Theory of Computation
CSCI 0220 Introduction to Discrete Structures and Probability

VISUAL COMPUTING: studies the creation, interaction, and analysis of images and visual information, including animation and games

Core Courses

CSCI 1230 Introduction to Computer Graphics
or CSCI 1250 Introduction to Computer Animation
or CSCI 1280 Intermediate 3D Computer Animation
or CSCI 1300 User Interfaces and User Experience
or CSCI 1370 Virtual Reality Design for Science
or CSCI 1430 Computer Vision
or CSCI 1950T Advanced Animation Production
or CSCI 2240 Interactive Computer Graphics

Related Courses

CSCI 1950N 2D Game Engines
or CSCI 1950U Topics in 3D Game Engine Development
or ENGN 1610 Image Understanding
or CLPS 1520 Computational Vision

Intermediate Courses

CSCI 0320 Introduction to Software Engineering
or CSCI 0330 Introduction to Computer Systems
MATH 0520 Linear Algebra
or MATH 0540 Honors Linear Algebra
or CSCI 0530 Coding the Matrix: An Introduction to Linear Algebra for Computer Science

COMPUTER ARCHITECTURE: studies the design, construction, and analysis of computer architecture and hardware

Core Courses

ENGN 1630 Digital Electronics Systems Design
or ENGN 1640 Design of Computing Systems
or ENGN 1650 Embedded Microprocessor Design

Related Courses

CSCI 1600 Real-Time and Embedded Software
or CSCI 1760 Multiprocessor Synchronization
or ENGN 1600 Design and Implementation of VLSI Systems

Intermediate Course

CSCI 0330 Introduction to Computer Systems

COMPUTATIONAL BIOLOGY: studies the foundations and applications of algorithms for analyzing biological data and processes

Core Courses

CSCI 1810 Computational Molecular Biology
CSCI 1820 Algorithmic Foundations of Computational Biology

Related Courses

CSCI 1420 Machine Learning
or CSCI 1951A Data Science
or CLPS 1520 Computational Vision

Intermediate Courses

CSCI 0220 Introduction to Discrete Structures and Probability
CSCI 1010 Theory of Computation
CSCI 1450 Probability for Computing and Data Analysis
or APMA 1650 Statistical Inference I
or APMA 1655 Statistical Inference I

DESIGN: studies the design, construction, and analysis of processes at the interface between humans and systems

Core Courses

CSCI 1300 User Interfaces and User Experience
or CSCI 1370 Virtual Reality Design for Science
or CSCI 1951C Designing Humanity Centered Robots

Related Courses

CSCI 1230 Introduction to Computer Graphics
or CSCI 1320 Creating Modern Web Applications
or CSCI 1600 Real-Time and Embedded Software
or CSCI 1951A Data Science
or CSCI 1900 csciStartup
or VISA 1720 Physical Computing

Intermediate Courses

CSCI 0320 Introduction to Software Engineering
or CSCI 0330 Introduction to Computer Systems
CSCI 1450 Probability for Computing and Data Analysis
or APMA 1650 Statistical Inference I
or APMA 1655 Statistical Inference I

SELF-DESIGNED: This pathway is modeled after the Brown programs for designing one’s own concentration. Students electing this pathway must write a proposal for their pathway and have it approved by an advisor and the director of undergraduate studies. The proposal must meet the breadth and overall course requirements. This must be done by the end of shopping period of the student’s seventh semester.

1 Capstone: a one-semester course, 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.

2 Certain 1000-level courses may be used to fill the additional 1000-level course requirements for both the AB and ScB. No more than one such course may be used for the AB concentration and no more than three for the ScB concentration. A list of approved non-CS courses is on our web page. Unless explicitly stated on our web page, such non-CS courses may not be used as part of pathways.

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:

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
• 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 (0-3 courses)

Students must complete or place out of second semester calculus.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0100</td>
<td>Introductory Calculus, Part II</td>
</tr>
<tr>
<td>or MATH 0170</td>
<td>Advanced Placement Calculus</td>
</tr>
<tr>
<td>or MATH 0190</td>
<td>Advanced Placement Calculus (Physics/Engineering)</td>
</tr>
</tbody>
</table>

Concentration Requirements (9 courses)

Core Computer Science:
Select one of the following series:

Series A

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 0150</td>
<td>Introduction to Object-Oriented Programming and Computer Science and Introduction to Algorithms and Data Structures</td>
</tr>
<tr>
<td>&amp; CSCI 0160</td>
<td></td>
</tr>
</tbody>
</table>

Series B

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 0170</td>
<td>Computer Science: An Integrated Introduction</td>
</tr>
<tr>
<td>&amp; CSCI 0180</td>
<td>and Computer Science: An Integrated Introduction</td>
</tr>
</tbody>
</table>

Series C

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 0190</td>
<td>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)</td>
</tr>
</tbody>
</table>

Seven CS courses numbered 0220 or higher

• One complete pathway (see ScB for pathways)

• Additional intermediate courses so that a total of three are taken with at least one in each of two different intermediate-course categories (see the ScB requirements for a listing of these categories)

• One additional 1000-level course that is neither a core nor a related course for the pathways used above

• Of the remaining two courses, at least one must be at the 1000-level or higher (i.e., one may be an intermediate course not otherwise used as part of the concentration). One course may be an approved 1000-level course from another department. Unless explicitly stated in a pathway, such non-CS courses may not be used as part of pathways.

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):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0100</td>
<td>Introductory Calculus, Part II</td>
</tr>
<tr>
<td>MATH 0520</td>
<td>Linear Algebra</td>
</tr>
<tr>
<td>or MATH 0540</td>
<td>Honors Linear Algebra</td>
</tr>
<tr>
<td>or CSCI 0530</td>
<td>Coding the Matrix: An Introduction to Linear Algebra for Computer Science</td>
</tr>
</tbody>
</table>

ECON 0110 Principles of Economics

Required Courses: 17 courses: 8 Computer Science, 8 Economics, and a Capstone

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 1450</td>
<td>Probability for Computing and Data Analysis</td>
</tr>
<tr>
<td>or APMA 1650</td>
<td>Statistical Inference I</td>
</tr>
<tr>
<td>or APMA 1655</td>
<td>Statistical Inference I</td>
</tr>
</tbody>
</table>

Select one of the following Series:

Series A

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
### Undergraduate Concentrations

#### Series B

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 0170</td>
<td>Computer Science: An Integrated Introduction and Computer Science: An Integrated Introduction</td>
</tr>
</tbody>
</table>

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)
- **CSCI 1010** Theory of Computation (math)

A pair of 1000-level CS courses that, along with the intermediate courses and math courses, satisfy one of the CS Pathways.

An additional CS course that is either at the 1000-level or is an intermediate course not already used to satisfy concentration requirements. CSCI 1450 may not be used to satisfy this requirement.

- **ECON 1130** Intermediate Microeconomics (Mathematical)
- **ECON 1210** Intermediate Macroeconomics
- **ECON 1630** Econometrics I

Three courses from the "mathematical economics" group (CSCI 1951K can be counted as one of them, if it has not been used to satisfy the computer science requirements of the concentration and if the student has taken either CSCI 1470 or ECON 1870):

- **ECON 1170** Welfare Economics and Social Choice Theory
- **ECON 1220** Monetary and Fiscal Policy
- **ECON 1225** Advanced Macroeconomics: Monetary, Fiscal, and Stabilization Policies
- **ECON 1460** Industrial Organization
- **ECON 1465** Market Design: Theory and Applications
- **ECON 1470** Bargaining Theory and Applications
- **ECON 1490** Designing Internet Marketplaces
- **ECON 1640** Econometrics II
- **ECON 1650** Financial Econometrics
- **ECON 1660** Big Data
- **ECON 1670** Advanced Topics in Econometrics
- **ECON 1740** Mathematical Finance
- **ECON 1750** Investments II
- **ECON 1759** Data, Statistics, Finance
- **ECON 1810** Economics and Psychology
- **ECON 1820** Theory of Behavioral Economics
- **ECON 1850** Theory of Economic Growth
- **ECON 1860** The Theory of General Equilibrium
- **ECON 1870** Game Theory and Applications to Economics

Two additional 1000-level Economics courses (excluding 1620, 1960, 1970) may be used either as a math-oriented intermediate course or as an advanced course. CSCI 1010 may be used either as a math-oriented intermediate course or as an advanced course. CSCI 1450 was formerly known as CSCI 0450: they are the same course and hence only one may be taken for credit. APMA 1650 or APMA 1655 may be used in place of CSCI 1450 in CS pathway requirements. However, concentration credit will be given for only one for APMA 1650, APMA 1655, and CSCI 1450. CSCI 1010 may be used either as a math-oriented intermediate course or as an advanced course. CSCI 1010 was formerly known as CSCI 0510: They are the same course and hence only one may be taken for credit.

- **Total Credits:** 17

### Standard Program for the A.B. degree:

#### Prerequisites (3 courses):

<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 0520</td>
<td>Linear Algebra</td>
</tr>
</tbody>
</table>

- **MATH 0540** Honors Linear Algebra
- **or CSCI 0530** Coding the Matrix: An Introduction to Linear Algebra for Computer Science

#### Required Courses: 13 courses: 7 Computer Science and 6 Economics

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 1450</td>
<td>Probability for Computing and Data Analysis</td>
</tr>
</tbody>
</table>

- **or APMA 1650** Statistical Inference I
- **or APMA 1655** Statistical Inference I

Select one of the following series:

#### Series A

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 0150</td>
<td>Introduction to Object-Oriented Programming and Computer Science</td>
</tr>
</tbody>
</table>

- **& CSCI 0160** Introduction to Algorithms and Data Structures

#### Series B

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
ECON 1130 requirement. CSCI 1450 may not be used to satisfy this concentration level. The other must either be at the 1000-level or be an intermediate course not already used to satisfy concentration requirements. Two additional CS courses; at least one must be at the 1000-level course:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1130</td>
<td>Intermediate Microeconomics</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1210</td>
<td>Intermediate Macroeconomics</td>
<td></td>
</tr>
<tr>
<td>ECON 1630</td>
<td>Econometrics I</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1170</td>
<td>Welfare Economics and Social Choice Theory</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1220</td>
<td>Monetary and Fiscal Policy</td>
<td></td>
</tr>
<tr>
<td>ECON 1225</td>
<td>Advanced Macroeconomics: Monetary, Fiscal, and Stabilization Policies</td>
<td></td>
</tr>
<tr>
<td>ECON 1460</td>
<td>Industrial Organization</td>
<td></td>
</tr>
<tr>
<td>ECON 1465</td>
<td>Market Design: Theory and Applications</td>
<td></td>
</tr>
<tr>
<td>ECON 1470</td>
<td>Bargaining Theory and Applications</td>
<td></td>
</tr>
<tr>
<td>ECON 1490</td>
<td>Designing Internet Marketplaces</td>
<td></td>
</tr>
<tr>
<td>ECON 1640</td>
<td>Econometrics II</td>
<td></td>
</tr>
<tr>
<td>ECON 1650</td>
<td>Financial Econometrics</td>
<td></td>
</tr>
<tr>
<td>ECON 1660</td>
<td>Big Data</td>
<td></td>
</tr>
<tr>
<td>ECON 1670</td>
<td>Advanced Topics in Econometrics</td>
<td></td>
</tr>
<tr>
<td>ECON 1740</td>
<td>Mathematical 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 1810</td>
<td>Economics and Psychology</td>
<td></td>
</tr>
<tr>
<td>ECON 1820</td>
<td>Theory of Behavioral Economics</td>
<td></td>
</tr>
<tr>
<td>ECON 1850</td>
<td>Theory of Economic Growth</td>
<td></td>
</tr>
<tr>
<td>ECON 1860</td>
<td>The Theory of General Equilibrium</td>
<td></td>
</tr>
<tr>
<td>ECON 1870</td>
<td>Game Theory and Applications to Economics</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits: 13

1. Or ECON 1110, with permission.
2. CSCI 1951K can be counted as one of them, if it has not been used to satisfy the computer science requirements of the concentration and if the student has taken either ECON 1470 or ECON 1870.
3. Note that ECON 1620, ECON 1960, and ECON 1970 (independent study) cannot be used for concentration credit. However, 1620 and 1960 can be used for university credit and up to two 1970s may be used for university credit.

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?
- 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.

Contemplative Studies

The concentration in Contemplative Studies investigates the underlying philosophical, psychological, and scientific bases of human contemplative experience. Students pursue a "third person" academic approach drawn from the humanities and sciences to analyze the cultural, historical, and scientific underpinnings of contemplative experiences in religion, art, music, and literature. This is developed in combination with a "critical first-person" approach based in practical experience of contemplative techniques and methods to provide an integrated understanding of the role of contemplative thought and experience in societies and on the individuals who constitute them.

Concentration Core (6 courses including the Senior Concentration Seminar)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COST 0100</td>
<td>Introduction to Contemplative Studies</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 0200</td>
<td>The Foundation of Living Systems</td>
<td></td>
</tr>
<tr>
<td>CLPS 0200</td>
<td>Human Cognition</td>
<td></td>
</tr>
<tr>
<td>CLPS 0500</td>
<td>Perception and Mind</td>
<td></td>
</tr>
<tr>
<td>NEUR 0010</td>
<td>The Brain: An Introduction to Neuroscience</td>
<td></td>
</tr>
<tr>
<td>Others with approval</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COST 0200</td>
<td>Meditation and the Brain</td>
<td></td>
</tr>
<tr>
<td>COST 1020</td>
<td>Cognitive Neuroscience of Meditation</td>
<td></td>
</tr>
<tr>
<td>COST 1080</td>
<td>Meditation, Mindfulness and Health</td>
<td></td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Two humanities courses that present important themes that
can emerge from bringing a Contemplative Studies perspective
to the study of contemplative religious traditions and to the
philosophical analysis of the key questions of human existence.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 1240</td>
<td>Religion and Culture</td>
</tr>
<tr>
<td>CLAS 0990</td>
<td>Concepts of the Self in Classical Indian Literature</td>
</tr>
<tr>
<td>CLAS 1120G</td>
<td>The Idea of Self</td>
</tr>
<tr>
<td>COST 0040</td>
<td>Great Contemplative Traditions of Asia</td>
</tr>
<tr>
<td>or RELS 0040</td>
<td>Great Contemplative Traditions of Asia</td>
</tr>
<tr>
<td>COST 0145</td>
<td>Karma, Rebirth and Liberation: Life and Death in South Asian Religions</td>
</tr>
<tr>
<td>or RELS 0145</td>
<td>Karma, Rebirth and Liberation: Life and Death in South Asian Religions</td>
</tr>
<tr>
<td>COST 0410</td>
<td>Engaged Buddhism</td>
</tr>
<tr>
<td>COST 0420</td>
<td>The Theory and Practice of Buddhist Meditation</td>
</tr>
<tr>
<td>COST 0425</td>
<td>The History and Practice of Yoga in India and Beyond</td>
</tr>
<tr>
<td>COST 0450</td>
<td>Stages of the Contemplative Path</td>
</tr>
<tr>
<td>PHIL 0010</td>
<td>The Place of Persons</td>
</tr>
<tr>
<td>PHIL 0220</td>
<td>Introduction to Philosophy</td>
</tr>
<tr>
<td>PHIL 0650</td>
<td>Psychology and Philosophy of Happiness</td>
</tr>
<tr>
<td>PHIL 1520</td>
<td>Consciousness</td>
</tr>
<tr>
<td>PHIL 1770</td>
<td>Philosophy of Mind</td>
</tr>
<tr>
<td>RELS 0056</td>
<td>Spiritual But Not Religious: Making Spirituality in America</td>
</tr>
<tr>
<td>RELS 0065</td>
<td>On Being Human: Religious and Philosophical Conceptions of Self</td>
</tr>
<tr>
<td>RELS 1370B</td>
<td>Philosophy of Mysticism</td>
</tr>
<tr>
<td>Others with approval</td>
<td></td>
</tr>
<tr>
<td>COST 1950</td>
<td>Senior Concentrators' Seminar</td>
</tr>
</tbody>
</table>

Track Requirements (6 additional courses
Including a Capstone Course)

Students must complete either a Science or Humanities track in addition to the concentration core.

Science Track

The Science track in Contemplative Studies gives concentrators a foundational understanding of the scientific methods used to investigate the biological, psychological, and neurological effects of contemplative practice and their potential implications on physical and mental health both for individuals and for the general public. Students will be taught how to critique current research as well as how to develop, operationalize, and test hypotheses related to contemplative practice. Students will become well-versed in how to study first-person reports related to the phenomenology of contemplative experience as a foundation for formulating third-person tests of the effects of practice on brain function and behavior. The Contemplative Studies Science Track trains students to investigate these types of questions not only for academic scholarship, but also to provide a method of self-inquiry that can be used to augment any area of life.

Five thematic science courses, including a Capstone Course, drawn primarily from BIOL, COST, NEUR, CLPS, and PHP, at least one of which must include laboratory work and two of which must be 1000-level; and one Statistics course for a total of six courses.

The Capstone Course is intended to be a culmination of the students' concentration in which they will bring to bear what their interests have been in developing their focused work in the program. The Capstone course can be either:

- a. A one semester Independent Reading and Research course, either COST 1910 or 1920 OR BIOL 1950 or 1960, depending on the semester; OR
- b. A special project done within an existing Contemplative Studies core or related course at the 1000-level in which the student brings to bear the larger concerns of her concentration on a problem or issue within the course. It is expected that such Capstone research papers will be more substantial than a term paper.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
a. A one semester Independent Reading and Research course, either COST 1910 or 1920 OR BIOL 1950 or 1960, depending on the semester; OR
b. A special project done within an existing Contemplative Studies core or related course at the 1000-level in which the student brings to bear the larger concerns of her concentration on a problem or issue within the course. It is expected that such Capstone research papers will be more substantial than a term paper.

Contemplative Religious Traditions

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLAS 0210Y</td>
<td>The Philosophy of Classical Indian Yoga</td>
</tr>
<tr>
<td>CLAS 0820</td>
<td>Epics of India</td>
</tr>
<tr>
<td>CLAS 0850</td>
<td>Mythology of India</td>
</tr>
<tr>
<td>CLAS 0990</td>
<td>Concepts of the Self in Classical Indian Literature</td>
</tr>
<tr>
<td>CLAS 0995</td>
<td>India’s Classical Performing Arts</td>
</tr>
<tr>
<td>CLAS 1140</td>
<td>Classical Philosophy of India</td>
</tr>
<tr>
<td>CLAS 1160</td>
<td>Classics of Indian Literature</td>
</tr>
<tr>
<td>COST 0145</td>
<td>Karma, Rebirth and Liberation: Life and Death in South Asian Religions</td>
</tr>
<tr>
<td>COST 0420</td>
<td>The Theory and Practice of Buddhist Meditation</td>
</tr>
<tr>
<td>COST 0530</td>
<td>Laozi and the Daodejing</td>
</tr>
<tr>
<td>COST 0550</td>
<td>Tibetan Buddhism and the West</td>
</tr>
<tr>
<td>COST 0855</td>
<td>The Bhagavad Gītā (CLAS 0855)</td>
</tr>
<tr>
<td>EAST 0180</td>
<td>Japan: Nature, Ritual, and the Arts</td>
</tr>
<tr>
<td>EAST 1420</td>
<td>The Confucian Mind</td>
</tr>
<tr>
<td>EAST 1880D</td>
<td>Early Daoist Syncretism: Zhuang Zi and Huainan Zi</td>
</tr>
<tr>
<td>RELS 0045</td>
<td>Buddhism and Death</td>
</tr>
<tr>
<td>RELS 0100</td>
<td>Buddhist Thought, Practice, and Society</td>
</tr>
<tr>
<td>RELS 0120</td>
<td>The Classical Chinese Philosophy of Life</td>
</tr>
<tr>
<td>RELS 1441</td>
<td>Zen Meditation in China, Korea, and Japan</td>
</tr>
<tr>
<td>RELS 0570</td>
<td>Science, Religion, and the Search for Happiness in Traditional Asian Thought</td>
</tr>
<tr>
<td>RELS 0580</td>
<td>Experiencing the Sacred: Embodiment and Aesthetics in South Asian Religions</td>
</tr>
<tr>
<td>RELS 1370B</td>
<td>Philosophy of Mysticism</td>
</tr>
<tr>
<td>RELS 1425</td>
<td>Buddhist Poetry</td>
</tr>
<tr>
<td>RELS 1440</td>
<td>Themes in Japanese Buddhism</td>
</tr>
<tr>
<td>RELS 1442</td>
<td>The History, Philosophy, and Practice of Rinzai Zen Buddhism</td>
</tr>
<tr>
<td>RELS 1880C</td>
<td>The Philosophy of Mind</td>
</tr>
<tr>
<td>COST 1520</td>
<td>Consciousness</td>
</tr>
<tr>
<td>PHIL 0350</td>
<td>Ancient Philosophy</td>
</tr>
<tr>
<td>PHIL 0650</td>
<td>Psychology and Philosophy of Happiness</td>
</tr>
<tr>
<td>PHIL 0990L</td>
<td>Valuing Persons</td>
</tr>
<tr>
<td>PHIL 0990M</td>
<td>Descartes Meditations</td>
</tr>
<tr>
<td>PHIL 1290</td>
<td>Kant's Moral Philosophy</td>
</tr>
<tr>
<td>PHIL 1590</td>
<td>Philosophy of Science</td>
</tr>
<tr>
<td>PHIL 1650</td>
<td>Moral Theories</td>
</tr>
<tr>
<td>PHIL 1660</td>
<td>Metaphysics</td>
</tr>
<tr>
<td>PHIL 1720</td>
<td>Kant: The Critique of Pure Reason</td>
</tr>
<tr>
<td>PHIL 1750</td>
<td>Epistemology</td>
</tr>
<tr>
<td>PHIL 1770</td>
<td>Philosophy of Mind</td>
</tr>
<tr>
<td>PHIL 2150G</td>
<td>Aristotle's Metaphysics</td>
</tr>
<tr>
<td>UNIV 1520</td>
<td>The Shaping of World Views</td>
</tr>
</tbody>
</table>

Others with approval

Honors Requirement

Students with a minimum GPA of 3.5 in the concentration may apply for entrance into the Honors program in the middle of their sixth semester. To apply, students submit a proposal for a senior thesis project describing the work to be undertaken and its relevance to the field of Contemplative Studies, along with a copy of their academic transcript. Students accepted into Honors must complete the required Capstone seminar, UNIV 1010, and enroll in an additional semester of independent study in their advisor’s department. Students must complete an Honors Thesis to the satisfaction of their advisor and present the results of their studies in formal talks or poster sessions open to all interested faculty and students.

Development Studies

Development Studies is an interdisciplinary concentration whose mission is to provide students with the knowledge, critical perspectives and skills they need to engage with the issues of economic and social development, especially as they relate to the Global South. The concentration is grounded in the social sciences – anthropology, sociology, political science, and economics – but it also heavily draws from history, art, and other disciplines in the humanities. The requirements are designed with three goals in mind: first, provide concentrators a solid foundation in the question of development; second, allow concentrators to develop expertise in a specific region that is of interest to them; third, give concentrators access to a wide range of courses in a large number of disciplines of interest to them. Concentrators are encouraged to do their own original field research. During the senior year, concentrators complete a capstone experience tailored to their interests (http://brown.edu/academics/development-studies/about/what-ds-capstone) in some aspect of international development. Towards this end, they benefit from extensive faculty and peer support.

Requirements

10 Courses + Language + Capstone

COURSE

All core courses must be taken prior to senior year

Choose TWO from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 1620</td>
<td>Globalization and Social Conflict</td>
</tr>
<tr>
<td>POLS 1240</td>
<td>Politics, Markets and States in Developing Countries</td>
</tr>
<tr>
<td>ANTH 0110</td>
<td>Anthropology and Global Social Problems: Environment, Development, and Governance</td>
</tr>
</tbody>
</table>

Seminar in Sociology of Development

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEVL 1000/</td>
<td>Sophomore Seminar in Development Studies (Pre-requisites: sophomore or junior standing, and completion of SOC 1620, POLS 1240, or ANTH 0110)</td>
</tr>
</tbody>
</table>

Development Economics - Choose ONE of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 0510</td>
<td>Development and the International Economy (Prerequisite: ECON 0110, or AP Microeconomics 4 and AP Macroeconomics 4, or IB HL Economics 6)</td>
</tr>
<tr>
<td>ECON 1510</td>
<td>Economic Development (Prerequisite: ECON 1110 or ECON 1130; and APMA 1650 or ECON 1620 or ECON 1630)</td>
</tr>
</tbody>
</table>

Research Methods and Design

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEVL 1500</td>
<td>Methods in Development Research (junior year)</td>
</tr>
</tbody>
</table>

Regional Courses

Two courses that focus on the same region of the developing world. Should complement the student’s foreign language.

Elective Courses

3

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Three courses chosen from a list of pre-approved electives or by special approval.

**Foreign Language**
Equivalent of three full years of university study or above.

**Senior Capstone**
- a. Thesis option: DEVL 1980 (fall senior year) and DEVL 1990 (spring senior year), or
- b. Capstone seminar option: approved senior seminar in Development Studies, with seminar-length paper requirement.

See the Development Studies website (http://brown.edu/academics/development-studies) for the list of pre-approved elective courses.

**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. Up to three upper level (700-999) may count as electives for concentration credit.

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
- CHIN 0100 Basic Chinese
- & CHIN 0200 Basic Chinese
- CHIN 0300 Intermediate Chinese
- & CHIN 0400 Intermediate Chinese
- CHIN 0350 Elementary to Intermediate Chinese for Advanced Beginners
- & CHIN 0450 Advanced Chinese for Heritage Learners
- CHIN 0500 Advanced Modern Chinese I
- & CHIN 0600 Advanced Modern Chinese I

### Japanese
- JAPN 0100 Basic Japanese
- & JAPN 0200 Basic Japanese
- JAPN 0300 Intermediate Japanese
- & JAPN 0400 Intermediate Japanese

### Korean
- KREA 0100 Korean
- & KREA 0200 Korean
- KREA 0300 Intermediate Korean
- & KREA 0400 Intermediate Korean
- KREA 0500 Advanced Korean
- & KREA 0600 Advanced Korean

**Language Electives (language courses that may be counted for concentration credit)**

### Chinese
- CHIN 0700 Advanced Modern Chinese II
- & CHIN 0800 Advanced Modern Chinese II (either course may be taken for one semester)
- CHIN 0920E Two Sides of the Coin: Advanced Chinese Conversation
- CHIN 1010 Modern Chinese Literature

### Japanese
- JAPN 0700 Advanced Japanese II
- & JAPN 0800 Advanced Japanese II (either course may be taken for one semester)
- JAPN 0910A Classical Japanese
- JAPN 0910C Japanese Linguistics
- JAPN 1310 Japanese Linguistics: Communication and Understanding Utterances

### Korean
- KREA 0910B Media Korean

**Electives**
The concentration requires that students complete a total of eight electives tied to their course of study, which may be defined in linguistic, chronological, thematic, or cultural terms. Students should choose their courses with the following three requirements in mind.

- **East Requirement:** At least three of the eight electives must be East Asian Studies (EAST) courses at any level; Chinese (CHIN), Japanese (JAPN), or Korean (KREA) courses at the 1000-level and above may also count toward this requirement.
- **Breadth 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 Chinese, for example, must choose at least one course that focuses on Korea and/or Japan.
- **Senior Seminar Requirement:** 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 American Studies, Art History, Economics, International Relations, and many others.

**Sample Electives offered by East Asian Studies**
- EAST 0500 Childhood and Culture in Japan
- EAST 0905 Language, Culture, and Society: Korea
- EAST 1030 Words on Things: Literature and Material Culture in Early Modern China
- EAST 1070 China Modern: An Introduction to the Literature of Twentieth-Century China

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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>
</tr>
</thead>
<tbody>
<tr>
<td>EAST 1951B</td>
<td>From Desktop to Stage: Drama and Performance in Late Imperial China</td>
</tr>
<tr>
<td>EAST 1950G</td>
<td>Market Economy, Popular Culture, and Mass Media in Contemporary China</td>
</tr>
</tbody>
</table>

Honors

East Asian Studies offers qualified students, in their senior year, the opportunity to undertake a sustained research and writing project that, ideally, will result not merely in a long term paper, but in a piece of original scholarship. To enroll in the Honors Program, the student must be a senior East Asian Studies concentrator, with at least a high B average in concentration courses. Candidates for Honors are required to have developed a competence in an East Asian language sufficient to allow them to use East Asian language materials in carrying out their research. Students must also successfully obtain the support of at least two faculty members who will agree to serve as primary and secondary advisors for the thesis. Prospective writers submit a thesis prospectus, brief bibliography, and completed application forms (with signatures), ordinarily late in the student's sixth semester, to the Director of Undergraduate Studies, who provides the final permission to proceed. Synopses of successful thesis proposals will be distributed to Department faculty. Thesis writers enroll in advisor-specific sections of the thesis-writing course EAST 1930 (Fall) and EAST 1940 (Spring), meet regularly with their advisors over the course of both semesters, and submit final versions of their theses to the Department in mid-April. Advisors and students are required to provide updates of their progress to the Director of Undergraduate Studies at regular intervals.

The completed thesis is evaluated for Honors by the thesis director and by a second reader. In case of a difference of judgment between the two readers, a third opinion may be sought. The awarding of Honors in East Asian Studies will occur only if the Honors Thesis receives a final grade of A. If an A is not received, the student will still receive academic credit for EAST 1930-1940. Students are notified in mid-May whether the Department has recommended the awarding of Honors. Copies of readers' comments are provided to the student.

All graduating concentrators will present the results of their senior theses in the department's Senior Project Forum. The Forum will usually take place at the end of the spring semester, but may also occur at the end of the fall semester to accommodate mid-year graduates.

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 at any level of Chinese (CHIN), Japanese (JAPN), or Korean (KREA) courses at the 1000-level and above.
  - 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 China, for example, would choose at least one course that focuses on Korea and/or Japan.
  - At least one of the eight must be an advanced research seminar, taken in the senior year.
- EAST 1930 (Senior Thesis, Semester 1) - EAST 1940 (Senior Thesis, Semester 2) 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 1110 or ECON 1130), macroeconomics (ECON 1210), and econometrics (ECON 1620 followed by ECON 1629 (http://bulletin.brown.edu/the-college/concentrations/econ/Inline%20Course) or ECON 1630 (http://bulletin.brown.edu/the-college/concentrations/econ/Inline%20Course)) 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 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**

Mathematics Course Requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0100 or MATH 0170</td>
<td>1 or 1</td>
</tr>
<tr>
<td>or ECON 0170 Essential Mathematics for Economics</td>
<td>1</td>
</tr>
</tbody>
</table>

or a higher-level math course.

Economics Course Requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 0110 Principles of Economics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1110 Intermediate Microeconomics</td>
<td>1</td>
</tr>
<tr>
<td>or ECON 1310 Intermediate Microeconomics (Mathematical)</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1210 Intermediate Macroeconomics</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1620 Introduction to Econometrics</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1629 Applied Research Methods for Economists</td>
<td>1</td>
</tr>
<tr>
<td>or ECON 1630 Econometrics</td>
<td>1</td>
</tr>
</tbody>
</table>

At least five additional 1000-level Economics courses.  

Total Credits: 11

1. Note that certain advanced economics courses may impose additional mathematical prerequisites. The standard mathematics requirement may be met through Advanced Placement tests, but "placing into" a higher level mathematics course than MATH 0100, without actually taking that higher level course, does not satisfy the requirement. The AP mathematics credit must appear on your Brown transcript.

2. Note that ECON 1960 (thesis) and ECON 1970 do not count for concentration credit.

3. If placing out of ECON 0110 with AP or IB test scores, one must take an additional 1000-level course (6 instead of 5).

All concentrators in economics programs are encouraged to consult their concentration advisors regularly. Economics concentrators who wish to study abroad should consult first with the department transfer credit advisor.

**Honors**

Students who wish to enroll in the honors program in economics should consult the department's undergraduate guide (available on its web site) to obtain a complete description of the requirements. See the description of Capstone Projects there, as well. Courses taken to prepare an honors thesis are in addition to the regular concentration requirements.

**Professional Track**

The requirements for the professional track include all those of the standard track, as well as the following:

Students must complete 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.

**Education Studies**

Education questions are central to all societies, and they are complex and consequential, requiring knowledge and deliberation to answer effectively. Most nations provide some form of free public education and, as a result, need to determine goals for their education systems and decide how best to achieve them. In the United States, public schools have long been a preferred (albeit imperfect) lever for equal opportunity, at times contributing to economic competitiveness, innovation, and human capital development, but far too often perpetuating larger social and economic inequalities. The Education Department’s mission is to understand and improve education through research and teaching, with a particular focus on K-12 public education in the United States.

Through multiple analytical lenses and disciplinary perspectives, the Education Studies concentration challenges students to understand human development, the purposes and processes of education, and the public and private institutions that shape educational opportunities and outcomes. The concentration offers students a deep and broad-based grounding in key concepts and theories related to individuals (as developing children, learners, and teachers), contexts (families and communities), organizations (schools, government, and policy arenas), and ecosystems (history, culture) and the ways these levels interact and intersect to influence children's development, their educational opportunities, and their outcomes. A hallmark of our concentration is developing students' understanding of how theory is connected to best practice. Our concentration provides opportunities to delve into some of social science's biggest questions and to connect those questions to real-world consequences and applications.

For more information, please contact John Papay (john_papay@brown.edu?subject=Education concentration), Director of Undergraduate Studies.

**Concentration Requirements**

Concentrators take several Foundation courses in key areas (History, Policy, Human Development, Research Methods) and choose an Area of Emphasis in which to specialize (either Policy & History or Human Development). Policy & History provides the historical underpinnings and intellectual skills for students to think critically about education issues in a number of settings. In the Human Development area, students learn about psychological, social, and cultural processes in a variety of contexts, including schools, families, peer groups, and neighborhoods, particularly in urban settings. The Department's website (https://www.brown.edu/academics/education/undergraduate) includes a list of concentration advisors.

The concentration in Education Studies requires a total of 10 courses, as follows:

- Research Methods Course: EDUC 1100, EDUC 1110 or an approved equivalent in another department.
- Human Development Foundation Course: EDUC 0800, EDUC 1270, or an approved equivalent
- History Foundation Course: EDUC 1020, EDUC 1200, or an approved equivalent
- Policy Foundation Course: EDUC 1060 or EDUC 1030, or an approved equivalent
- Area of Emphasis: Students must take 5 courses total in their Area of Emphasis. Human Development students must take 4 courses in addition to the Foundation class, while Policy & History students must take 3 courses in addition to the Foundation classes.
- 2 or 3 Electives for a total of 10 courses. Electives may be additional Brown University Education courses outside the Area of Emphasis or related courses outside the Education Department. No more than 2 electives can be courses outside the Education Department and only 1 independent study can count towards concentration requirements.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Concentrators may pursue the Engaged Scholars Program, which allows students to connect theory and practice and gain hands-on experience working with community partners. The Department also offers opportunities for students to complete a Capstone project or Honors thesis.

**Foundational courses available in each of the required Core Categories:**

### Foundational Courses

<table>
<thead>
<tr>
<th>Human Development</th>
<th>Foundational Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 0800</td>
<td>Introduction to Human Development and Education</td>
</tr>
<tr>
<td>OR</td>
<td>EDUC 1270</td>
</tr>
<tr>
<td></td>
<td>Adolescence in Social Context</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>History</th>
<th>Foundational Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 1020</td>
<td>The History of American Education</td>
</tr>
<tr>
<td>OR</td>
<td>EDUC 1200</td>
</tr>
<tr>
<td></td>
<td>History of American School Reform</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Policy</th>
<th>Foundational Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 1060</td>
<td>Politics and Public Education</td>
</tr>
<tr>
<td>OR</td>
<td>EDUC 1130</td>
</tr>
<tr>
<td></td>
<td>Economics of Education I</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Research Methods</th>
<th>Foundational Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 1100</td>
<td>Introduction to Qualitative Research Methods</td>
</tr>
<tr>
<td>OR</td>
<td>EDUC 1110</td>
</tr>
<tr>
<td></td>
<td>Introductory Statistics for Education Research and Policy Analysis</td>
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</tbody>
</table>

### Courses in Human Development Area of Emphasis

<table>
<thead>
<tr>
<th>Courses in Human Development (from the list below)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 0410A</td>
</tr>
<tr>
<td>EDUC 0410E</td>
</tr>
<tr>
<td>EDUC 0600</td>
</tr>
<tr>
<td>EDUC 0620</td>
</tr>
<tr>
<td>EDUC 0800</td>
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<tr>
<td>EDUC 1200</td>
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<tr>
<td>EDUC 1430</td>
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<td>EDUC 1450</td>
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<tr>
<td>EDUC 1580</td>
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<tr>
<td>EDUC 1700</td>
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<tr>
<td>EDUC 1710</td>
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<td>EDUC 1750</td>
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<tr>
<td>EDUC 1850</td>
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<tr>
<td>EDUC 1860</td>
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<tr>
<td>EDUC 1870</td>
</tr>
<tr>
<td>EDUC 1880</td>
</tr>
<tr>
<td>EDUC 1890</td>
</tr>
</tbody>
</table>

1 Foundational course in History 1
1 Foundational course in Policy 1
1 Methods course 1
2 Electives 2
Total Credits 10

### Courses in Policy-and-History Area of Emphasis

<table>
<thead>
<tr>
<th>Courses in Policy-and-History Area of Emphasis</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Courses in Policy -and- History (from the list below)</td>
</tr>
<tr>
<td>EDUC 0400</td>
</tr>
<tr>
<td>EDUC 0410B</td>
</tr>
<tr>
<td>EDUC 0410G</td>
</tr>
<tr>
<td>EDUC 0610</td>
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<tr>
<td>EDUC 0850</td>
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<tr>
<td>EDUC 0860</td>
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<tr>
<td>EDUC 1020</td>
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<td>EDUC 1030</td>
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<td>EDUC 1035</td>
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<td>EDUC 1040</td>
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<td>EDUC 1060</td>
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<tr>
<td>EDUC 1130</td>
</tr>
<tr>
<td>EDUC 1150</td>
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<tr>
<td>EDUC 1160</td>
</tr>
<tr>
<td>EDUC 1200</td>
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<tr>
<td>EDUC 1630</td>
</tr>
<tr>
<td>EDUC 1650</td>
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<tr>
<td>EDUC 1720</td>
</tr>
<tr>
<td>EDUC 1730</td>
</tr>
<tr>
<td>EDUC 1740</td>
</tr>
</tbody>
</table>

1 Foundational course in Human Development 1
1 additional Education course outside Policy-and-History 1
1 Methods course 1
2 Electives 2
Total Credits 10

### Additional Education courses available as Electives for either Area of Emphasis

<table>
<thead>
<tr>
<th>Additional Education courses available as Electives for either Area of Emphasis</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 0900</td>
</tr>
<tr>
<td>EDUC 0950</td>
</tr>
<tr>
<td>EDUC 1010</td>
</tr>
<tr>
<td>EDUC 1090</td>
</tr>
<tr>
<td>EDUC 1560</td>
</tr>
<tr>
<td>EDUC 1690</td>
</tr>
</tbody>
</table>

### Honors

Concentrators seeking to graduate with honors must apply for honors candidacy by the end of their sixth semester. Successful candidates must meet all requirements for the concentration; maintain

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
a minimum grade average that includes more A’s than B’s in Education courses (a B must be counterbalanced by two A’s); and successfully complete EDUC 1900 and EDUC 1901, in which they write a senior thesis under the guidance of a thesis advisor. Honors are awarded on the basis of thesis quality. Students whose theses meet or exceed the standards established in the Department Rubric earn honors upon graduation. Students interested in writing an Honors thesis should contact David Rangel, the Honors/Capstone Advisor.

Capstone

Capstones are voluntary, student-initiated projects or experiences outside the classroom that build on and contribute to students’ Education Studies concentration. They can take various forms, including a research project, website design, curriculum design, policy analysis, or scholarly paper. Capstones can be designed and executed in the senior year, or can be based on a previous experience that the student wants to explore further in some way, such as an internship or teaching experience. While capstones do not confer academic credit or departmental honors, students who complete capstones will be recognized at the department graduation ceremony and will have the opportunity to present their work at a conference in the spring of their senior year. Through capstones, students have the opportunity to work closely with a faculty member in an area of their interest and are able to reflect on and extend their learning in the concentration.

Undergraduate Teacher Education Program (regardless of student start date)

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:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 0900</td>
<td>Fieldwork and Seminar in Secondary Education</td>
<td>1</td>
</tr>
<tr>
<td>EDUC 1450</td>
<td>The Psychology of Teaching and Learning</td>
<td>1</td>
</tr>
<tr>
<td>EDUC 1070A</td>
<td>Student Teaching: English</td>
<td>1</td>
</tr>
<tr>
<td>or EDUC 1070B</td>
<td>Student Teaching: History and Social Studies</td>
<td>1</td>
</tr>
<tr>
<td>or EDUC 1070C</td>
<td>Student Teaching: Science</td>
<td>1</td>
</tr>
<tr>
<td>EDUC 1080A</td>
<td>Analysis of Teaching: English</td>
<td>1</td>
</tr>
<tr>
<td>or EDUC 1080B</td>
<td>Analysis of Teaching: History and Social Studies</td>
<td>1</td>
</tr>
<tr>
<td>or EDUC 1080C</td>
<td>Analysis of Teaching: Science</td>
<td>1</td>
</tr>
<tr>
<td>EDUC 2060A</td>
<td>Methods of Teaching: English</td>
<td>1</td>
</tr>
<tr>
<td>or EDUC 2060B</td>
<td>Methods of Teaching: History and Social Studies</td>
<td>1</td>
</tr>
<tr>
<td>or EDUC 2060C</td>
<td>Methods of Teaching: Science</td>
<td>1</td>
</tr>
<tr>
<td>EDUC 2090</td>
<td>Literacy Across the Curriculum</td>
<td>1</td>
</tr>
</tbody>
</table>

Egyptology and Assyriology

The concentration in Egyptology and Assyriology offers students a choice of two tracks: Assyriology 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 Assyriology also collaborates with Brown’s Joukowsky Institute for Archaeology and the Ancient World.

Assyriology 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 Assyriology (ASYR) 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>ASYR 0800</td>
<td>The Cradle of Civilization? An Introduction to the Ancient Near East</td>
</tr>
<tr>
<td>or ARCH 1600</td>
<td>Archaeologies of the Near East</td>
</tr>
<tr>
<td>ASYR 1000</td>
<td>Introduction to Akkadian</td>
</tr>
<tr>
<td>ASYR 1010</td>
<td>Intermediate Akkadian</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>History and Culture of Ancient Western Asia: 1</td>
<td></td>
</tr>
<tr>
<td>ASYR 1100</td>
<td>Imagining the Gods: Myths and Myth-making in Ancient Mesopotamia (WRIT)</td>
</tr>
<tr>
<td>ASYR 1300</td>
<td>The Age of Empires: The Ancient Near East in the First Millennium BC</td>
</tr>
<tr>
<td>ASYR 1500</td>
<td>Ancient Babylonian Magic and Medicine</td>
</tr>
<tr>
<td>ASYR 2310B</td>
<td>Assyriology I (WRIT)</td>
</tr>
<tr>
<td>ASYR 2310C</td>
<td>Assyriology II (WRIT)</td>
</tr>
<tr>
<td>ASYR 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>ASYR 1600</td>
<td>Astronomy Before the Telescope</td>
</tr>
<tr>
<td>ASYR 1650</td>
<td>Time in the Ancient World (WRIT)</td>
</tr>
<tr>
<td>ASYR 1700</td>
<td>Astronomy, Divination and Politics in the Ancient World (WRIT)</td>
</tr>
<tr>
<td>ASYR 1750</td>
<td>Divination in Ancient Mesopotamia (WRIT)</td>
</tr>
<tr>
<td>ASYR 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>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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>EGYT 1420 or ARCH 1625</td>
<td>Ancient Egyptian Religion and Magic Temples and Tombs: Egyptian Religion and Culture</td>
</tr>
</tbody>
</table>

### Depth Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGYT 1330</td>
<td>Selections from Middle Egyptian Hieroglyphic Texts</td>
</tr>
<tr>
<td>EGYT 1410</td>
<td>Ancient Egyptian Literature</td>
</tr>
<tr>
<td>ASYR 0800</td>
<td>The Cradle of Civilization? An Introduction to the Ancient Near East</td>
</tr>
<tr>
<td>or ARCH 1600</td>
<td>Archaeologies of the Near East</td>
</tr>
</tbody>
</table>

Elective Course: Any course germane to ancient Egypt or the Mediterranean world outside Egypt, such as:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGYT 1430</td>
<td>Ancient Egyptian Religion and Magic Temples and Tombs: Egyptian Religion and Culture</td>
</tr>
<tr>
<td>EGYT 1410</td>
<td>Ancient Egyptian Literature</td>
</tr>
<tr>
<td>ASYR 0800</td>
<td>The Cradle of Civilization? An Introduction to the Ancient Near East</td>
</tr>
<tr>
<td>or ARCH 1600</td>
<td>Archaeologies of the Near East</td>
</tr>
</tbody>
</table>

1. Required for all students pursuing the Egyptology track.
2. Or an EGYT or ARCH course in material culture.

### Capstone

All concentrators in Egyptology and Assyriology 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 in Egyptology and Assyriology

1. **Becoming an honors candidate**

   Students who wish to consider pursuing honors should meet with the Undergraduate Concentration Advisor in the first half of their sixth semester. Eligibility is dependent on:

   - Being in good standing
   - Having completed at least two thirds of the concentration requirements by the end of the sixth semester.
   - Having earned two-thirds "quality grades" in courses counted towards the concentration. 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.

   To pursue honors candidacy, eligible students must:

   - Secure a faculty advisor and discuss plans for the proposed thesis project well before the established deadline; this can be done by email when a student is abroad.
   - Prepare a thesis prospectus (see below).
   - Submit the prospectus to the advisor; one other proposed faculty reader (at least one of the readers must be in the department) and the department chair no later than the first week of the seventh semester.

   The structure of a thesis prospectus:

   An honors thesis in Egyptology or Assyriology is a substantial piece of research with some degree of originality that demonstrates the student's ability to frame an appropriate question and deal critically with the range of original and secondary sources. A thesis prospectus is a short analytical document consisting of several parts. It will normally include a concise and focused research question; a justification for that question that demonstrates familiarity with previous research on the topic; a project description that includes a discussion of the types of evidence available and appropriate to answering the proposed question; a discussion of methods of collecting and analyzing that evidence; a conclusion that returns to the research question and assures the reader that the project will add value to our understanding of the topic; and a bibliography. The prospectus will ordinarily be in the range of 5-7 pages in length, exclusive of bibliography. The prospectus will include proper citations throughout.

   Determination of whether or not a student may pursue the proposed project will be made on review of the prospectus by the readers and department chair. Prospectuses will be evaluated on the following scale:

   1. No concerns about the viability of the project.
   2. No concerns about the viability of the project, but minor weaknesses in the execution of the prospectus.
   3. Concerns about the viability of the project, but willingness to reevaluate a revised prospectus submitted within two weeks of receipt of evaluation.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
4. Reservations that the prospectus does not describe an honors-worthy project.
5. Poorly conceived and shoddy work.

Prospectuses will be returned to the student with this numerical evaluation and comments one week after submission of the prospectus. A prospectus must receive an evaluation of 1 or 2 prior to the third week of the seventh semester for a student to be admitted to the honors track. Students who submit an original prospectus that is graded 4 or 5 will not be permitted to rework the prospectus for the second submission.

2. Developing, completing and submitting the honors project

Once accepted as honors candidates, students will pursue a course of study that goes beyond what is expected of a regular concentrator. This includes:

- Enrollment in two semesters of independent study in Egyptology or Assyriology (these do not fulfill course requirements towards the concentration).
- Twice-monthly meetings with the thesis advisor and once-monthly meetings with the second reader. These meetings will be scheduled at the beginning of each term.
- Submission of a comprehensive outline to both readers no later than October 15 (for May graduates)
- Regular submission of drafts. A partial draft including a complete version of at least one chapter or section is due before Reading Period of the seventh semester.
- A complete draft is due to both readers no later than March 15 (for May graduates).
- The revised final thesis is due in both electronic and physical form to both readers and department chair April 5 (for May graduates).

Failure to meet any deadline will result in automatic termination of the honors process. No extensions will be granted. If a thesis is turned in late but before the end of the term, credit and grade for the Independent Study may still be granted.

3. Evaluating the submitted work of honors candidates

In order to receive honors a student must be found to have:

- Remained in good academic standing throughout the academic year.
- Not violated the Academic Code of Conduct during honors candidacy.
- Complete or be about to complete all concentration requirements.
- Produced a thesis that is judged by the readers to meet the department's expectations for honors work (see below), and turned it in by the established deadlines.
- Successfully defended the thesis during a half hour public presentation held during the final exam period of the eighth semester.

Students who submit theses that are deemed to fall short of the expectations will graduate without honors. In that case, the theses will count as a capstone project.

4. Expectations for honors theses:

Originality:
An honors thesis in Egyptology or Assyriology is expected to add to existing scholarship. The thesis must be based on close work with primary sources (usually in publication rather than in person), supplemented by critical engagement with a substantial amount of relevant secondary literature. While the resulting study is not necessarily expected to be ground-breaking original, and may engage with a well-studied topic, it will usually include a new insight into or interpretation of the material considered.

Scope:
An honors thesis is not a book or dissertation. It is, however, a very serious piece of research and writing for which two dedicated study courses have provided substantial time to the honors student. The question upon which the honors thesis is based should be focused enough to allow an in-depth treatment, generally in under 100 pages or 30,000 words (exclusive of bibliography and illustrations). Appropriate length will vary considerably depending on the topic itself and the nature of the primary sources being considered, particularly if substantial translation of ancient textual sources is required.

Argument:

The thesis should present a sustained analytic argument in answer to its structuring question. A thesis should not be primarily descriptive or narrative in nature. Each chapter should contain a sub-argument that is clearly related to the overall argument of the thesis. The significance of the argument and its relationship to prior scholarship should be clearly articulated. Honors theses are not expected to demonstrate comprehensive familiarity with the secondary literature, but they are expected to engage critically and maturely with important works on the defined topic.

Methodology:

Egyptology and Assyriology are very broad fields, and the appropriate methods will be determined in conjunction with the thesis advisor on the basis of the questions and types of evidence - textual, archaeological, art historical - under consideration. With very few exceptions the methodology of the thesis is expected to be conventional rather than innovative, rooted in the accepted practices of the field in question.

Organizations and writing:

An honors thesis must be well organized and written. It should include an introduction and conclusion as well as well-considered chapters that allow the reader to follow the line of reasoning easily. The relationship of any section to the larger whole should be clear, and seques should help the reader move between sections. Writing should be grammatically correct, well copy-edited, professional, and consistent. Citations and bibliography must be in an accepted style as determined in consultation with the advisor.

Engineering

The concentration in Engineering equips students with a solid foundation for 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 Bachelor of Arts (A.B.) program and nine Bachelor of Science (Sc.B.) degree program tracks. Of these, Sc.B. programs in biomedical, chemical and biochemical, computer, electrical, materials, and mechanical engineering are accredited by the Engineering Accreditation Commission of ABET (http://www.abel.org). Sc.B. degree programs in environmental engineering and engineering physics are also offered, but they are not accredited by ABET. (Note: Students interested in structural engineering entering in the class of 2017 and beyond may pursue a Structures track within the Mechanical Engineering program). Other programs leading to the Sc.B. or A.B. degrees in Engineering may be designed in consultation with a faculty advisor. These programs must meet the general requirements for concentration programs in the School of Engineering. Students interested in an individualized program should consult with an Engineering faculty member willing to serve as an advisor and obtain the approval of the Engineering Concentration Committee. Engineering students with a particular interest in using their technical skills for the public benefit might also consider the Engaged Scholars Program (https://www.brown.edu/academics/engineering/engaged-scholars-program).

Please note that all student concentration forms must be approved by the Engineering Concentration Committee, which reviews them for compliance with all relevant program and accreditation requirements.

Mathematics

Mathematics 0190, 0200 is the preferred sequence of courses to be taken in the first year. Students who would prefer a more introductory level calculus course may start in MATH 0100 and take MATH 0200 or MATH 0180 in second semester. Students without one year of secondary school level preparation in calculus should take MATH 0090, MATH 0100 in their first year, and should begin their sequence of engineering courses with ENGN 0030 in sophomore year. The courses APMA 0330 & APMA 0340 (Methods of Applied Math I, II) can be taken in the sophomore year as well.

Advanced Placement

Students who have taken Advanced Placement courses in high school and/or have shown proficiency through advanced placement examinations are often able to start at a higher level than suggested by the standard
programs below. However, please note that Advanced Placement credit cannot be used to satisfy any concentration requirements. For example, our Sc.B. programs specify that students must take 4 semesters of math while enrolled here at Brown, beginning with MATH 0190 or MATH 0170. If a student comes in with advanced placement credit (e.g. placing out of MATH 0190 or MATH 0200), he/she is strongly recommended to take a higher level math course as a replacement. Examples of such courses are MATH 0520 (Linear Algebra), MATH 1260 (Complex Analysis), MATH 1610 (Probability), MATH 1620 (Statistics), APMA 1170 (Numerical Analysis), APMA 1210 (Operations Research), or APMA 1650 (Statistical Inference). However, the student with advanced placement credit for MATH 0190 or MATH 0200 also has the option of replacing the math course with an advanced-level science course, subject to the approval of the concentration advisor.

Transfer Credit

Students who have successfully completed college courses elsewhere may apply to the University for transfer credit. (See the "Study Elsewhere" section of the University Bulletin for procedures, or contact the Dean of the College.) Transfer courses that are used to meet Engineering concentration requirements must be approved by the student's concentration advisor, and must be described briefly on the student's electronic concentration form. Transfer courses that are determined by the concentration advisor to be substantially equivalent to a required Brown course automatically fulfill concentration requirements. In rare cases, students may petition the concentration committee to use courses that do not have an equivalent offered at Brown to meet a concentration requirement. Substitutions of this nature can only be approved if the student’s overall program meets published educational outcomes for the concentration and has sufficient basic science, mathematics, and engineering topics courses to meet relevant accreditation requirements. Students should consult their concentration advisor for assistance with drafting a petition. The decision whether to award concentration credit is made by majority vote of the Engineering Concentration Committee.

Substitutions for Required Courses

A student may petition the Concentration Adviser to substitute a course in place of a requirement. Such substitutions can only be approved if the student's modified program continues to meet the published educational outcomes for the concentration, and has sufficient basic science, mathematics, and engineering topics courses to meet accreditation requirements. If the substitution involves taking an equal or higher level course in substantially the same area, whether at Brown or elsewhere, it can be approved by the Concentration Adviser. (For courses taken elsewhere, the credit must be officially transferred.) Students wishing to make substitutions of a broader nature should consult their Concentration Adviser for assistance with drafting their petition to the Engineering Concentration Committee, which may be approved by a majority vote.

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 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 prerequisites of the 1000-level courses. Please note that this A.B. degree program is not accredited by ABET.

Not all engineering courses may 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. Therefore, the program of study 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 science 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 an Engineering Concentration Advisor and the Chair of the Engineering Concentration Committee.

Standard programs for the Sc.B. degree

All Bachelor of Science (Sc.B.) program tracks build upon a common core of engineering knowledge and skills applicable across all engineering disciplines. The goal of this engineering core curriculum is to prepare to practice engineering in an age of rapidly changing technology. Two-thirds of this four-year program consists of a core of basic mathematics, physical sciences and engineering sciences common to all branches of engineering, including a thorough grounding in programming and technical problem solving. This core provides our graduates with the basis of theory, design, and analysis that will enable them to adapt to whatever may come along during their careers.

At the same time, the core courses assist students in making informed choices in determining their areas of specialization, at the end of their sophomore year. To this end, first-year students are given an introduction to engineering - featuring case studies from different disciplines in engineering as well as guest speakers from industry. This aspect of the program is different from that at many other schools where students are expected to select a specific branch of engineering much earlier in their academic program.

In addition, all Sc.B. programs in Engineering must be complemented by at least four courses in humanities and social sciences. The minimum four-course humanities and social sciences requirement for the Sc.B. in Engineering cannot be met by advanced placement credit.

Special Concentrations

In addition to the standard program described above, students may also petition the Engineering Concentration Committee to pursue a special engineering Sc.B. degree of their own design. Such special Sc.B. programs are not ABET-accredited. Students with a special concentration will receive an Sc.B. degree in engineering, but a specific area of specialization will not be noted on their transcript. A special Sc.B. concentration is intended to prepare graduates for advanced study in engineering or for professional practice, but in an area that is not covered by one of the existing Sc.B. programs. Accordingly, special concentration programs are expected to consist of a coherent set of courses with breadth, depth and rigor comparable to an accredited degree. A total of 21 engineering, mathematics, and basic science courses are required. The program must include at least 3 courses in mathematics, at least 2 courses in physical or life sciences; and at least 12 courses in engineering.

At least five of the engineering courses must be upper level courses, and one must be a capstone design course or independent study, which must be advised or co-advised by a member of the regular engineering faculty. Note that not all engineering courses may be used to meet Sc.B. requirements: for example, the courses not allowed to count toward the A.B., will not qualify. Petitions should be prepared in consultation with an engineering faculty adviser, who will submit the petition to the Engineering Concentration Committee. Petitions must include: (i) a statement of the objectives of the degree program, and an explanation of how the courses in the program meet these objectives; (ii) course descriptions for any courses in the program that are not part of standard ScB engineering concentrations; (iii) a detailed description of any independent study courses used for concentration credit, signed by the faculty adviser for this course; and (iv) an up-to-date internal transcript.

Professional Tracks

While we do not give course credit for internships, we officially recognize their importance via the optional Professional Tracks. The requirements for the professional tracks include all those of the standard tracks, as well as the following: Students must complete two full-time professional experiences, lasting two to four months each (or two part-time experiences of equivalent total effort), doing work that is related to their concentration programs. Such work is normally done within an industrial organization, but may also be done at a university under the supervision of a faculty member. For the work to be considered related to a concentration program, the job responsibilities must make use of the material from one or more courses of the concentration (regardless of whether the student has taken those courses or not at the time of the internship). On
The student outcomes of this program are the ABET (1)- (7) Student Outcomes as defined by the "ABET Criteria for Accrediting Engineering Programs" (available online at http://www.abet.org/accreditation-criteria-policies-documents/).

The education objectives of the Chemical and Biochemical Engineering program are to prepare graduates: (1) to pursue distinctive multidisciplinary scientific and technical careers beginning with either entry-level computer engineering positions in industry or graduate study in computer engineering and related fields; (2) to participate on multidisciplinary teams that cooperate in applying problem-solving skills and critical and independent thinking to a broad range of projects that can produce the technical innovations aimed at satisfying the future needs of society. The student outcomes of this program are the ABET (1)- (7) Student Outcomes as defined by the "ABET Criteria for Accrediting Engineering Programs" (available online at http://www.abet.org/accreditation-criteria-policies-documents/).

The Chemical and Biochemical Engineering program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.

The Computer Engineering program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org. The education objectives of the Computer Engineering program are to prepare graduates: (1) to pursue distinctive multidisciplinary scientific and technical careers beginning with either entry-level computer engineering positions in industry or graduate study in computer engineering and related fields; (2) to participate on multidisciplinary teams that cooperate in applying problem-solving skills and critical and independent thinking to a broad range of projects that can produce the technical innovations aimed at satisfying the future needs of society. The student outcomes of this program are the ABET (1)- (7) Student Outcomes as defined by the "ABET Criteria for Accrediting Engineering Programs" (available online at http://www.abet.org/accreditation-criteria-policies-documents/).

The Computer Engineering 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.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).

1. Core Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 0030</td>
<td>Introduction to Engineering</td>
<td>1</td>
</tr>
<tr>
<td>or ENGN 0031</td>
<td>Honors 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>BIOL 0200</td>
<td>The Foundation of Living Systems</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 0330</td>
<td>Equilibrium, Rate, and Structure</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0190</td>
<td>Advanced Placement Calculus (Physics/ Engineering)</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 0170</td>
<td>Advanced Placement Calculus</td>
<td>1</td>
</tr>
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</table>

2. Advanced Placement Calculus elective course 2

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 0350</td>
<td>Organic Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>or CHEM 0400</td>
<td>Biophysical and Bioinorganic Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>or CHEM 0500</td>
<td>Inorganic Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>or CHEM 1140</td>
<td>Physical Chemistry: Quantum Chemistry</td>
<td>1</td>
</tr>
</tbody>
</table>

3. Capstone Design Course

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 1140</td>
<td>Chemical Process Design</td>
<td>1</td>
</tr>
</tbody>
</table>

*In addition to program requirements above, students must take four courses in the humanities and social sciences.

### Total Credits

21

Note: ENGN 1120 and 1130 are only offered in alternate years.

1. Advanced chemistry course approved by concentration advisor; the following courses are pre-approved for this requirement.

2. An advanced mathematics course approved by concentration advisor.

3. An advanced course in the natural sciences approved by the concentration advisor. For suggestions of acceptable courses that fulfill this requirement, please see the concentration advisor.
MATH 0200 Intermediate Calculus (Physics/Engineering) 1
or MATH 0180 Intermediate Calculus
or MATH 0350 Honors Calculus
APMA 0330 Methods of Applied Mathematics I, II 1
or APMA 0350 Applied Ordinary Differential Equations
or APMA 1170 Introduction to Computational Linear Algebra
or APMA 1710 Information Theory
or CSCI 0220 Introduction to Discrete Structures and Probability
or CSCI 1570 Design and Analysis of Algorithms
or MATH 1260 Complex Analysis
CHEM 0330 Equilibrium, Rate, and Structure 1
or ENGN 0410 Materials Science
or NEUR 0010 The Brain: An Introduction to Neuroscience
Select one of the following series (other CSCI courses subject to approval): 2

- CSCI 0150 & CSCI 0160 Introduction to Object-Oriented Programming and Computer Science and Introduction to Algorithms and Data Structures
- CSCI 0170 & CSCI 0180 Computer Science: An Integrated Introduction and Computer Science: An Integrated Introduction
- CSCI 0190 Accelerated Introduction to Computer Science (and one additional CSCI course subject to approval)

2. Upper-Level Computer Engineering Curriculum:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 1570</td>
<td>Linear System Analysis</td>
</tr>
<tr>
<td>ENGN 1630</td>
<td>Digital Electronics Systems Design</td>
</tr>
<tr>
<td>ENGN 1640</td>
<td>Design of Computing Systems</td>
</tr>
<tr>
<td>MATH 0520</td>
<td>Linear Algebra</td>
</tr>
<tr>
<td>or MATH 0540</td>
<td>Honors Linear Algebra</td>
</tr>
<tr>
<td>One advanced Computer Engineering foundations course:</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 1580</td>
<td>Communication Systems</td>
</tr>
<tr>
<td>ENGN 1600</td>
<td>Design and Implementation of VLSI Systems</td>
</tr>
<tr>
<td>ENGN 1610</td>
<td>Image Understanding</td>
</tr>
<tr>
<td>ENGN 1620</td>
<td>Analysis and Design of Electronic Circuits</td>
</tr>
<tr>
<td>ENGN 2530</td>
<td>Digital Signal Processing</td>
</tr>
<tr>
<td>One advanced Computer Science course with significant systems programming:</td>
<td>1</td>
</tr>
<tr>
<td>CSCI 0330</td>
<td>Introduction to Software Engineering</td>
</tr>
<tr>
<td>or CSCI 0320</td>
<td>Introduction to Software Engineering</td>
</tr>
<tr>
<td>or CSCI 1230</td>
<td>Introduction to Computer Graphics</td>
</tr>
<tr>
<td>or CSCI 1380</td>
<td>Distributed Computer Systems</td>
</tr>
<tr>
<td>or CSCI 1670</td>
<td>Operating Systems</td>
</tr>
<tr>
<td>or CSCI 1680</td>
<td>Computer Networks</td>
</tr>
<tr>
<td>Select at least one Computer Engineering/Electrical Engineering course (other CE/EE courses subject to approval):</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 1220</td>
<td>Neuroengineering</td>
</tr>
<tr>
<td>ENGN 1560</td>
<td>Optics</td>
</tr>
<tr>
<td>ENGN 1580</td>
<td>Communication Systems</td>
</tr>
<tr>
<td>ENGN 1590</td>
<td>Introduction to Semiconductors and Semiconductor Electronics</td>
</tr>
<tr>
<td>ENGN 1600</td>
<td>Design and Implementation of VLSI Systems</td>
</tr>
<tr>
<td>ENGN 1610</td>
<td>Image Understanding</td>
</tr>
<tr>
<td>ENGN 1620</td>
<td>Analysis and Design of Electronic Circuits</td>
</tr>
<tr>
<td>ENGN 1680</td>
<td>Design and Fabrication of Semiconductor Devices</td>
</tr>
<tr>
<td>ENGN 1690</td>
<td>Photonics Devices and Sensors</td>
</tr>
<tr>
<td>ENGN 1930B</td>
<td>Biomedical Optics</td>
</tr>
<tr>
<td>ENGN 1931A</td>
<td>Photovoltaics Engineering</td>
</tr>
<tr>
<td>ENGN 1931F</td>
<td>Introduction to Power Engineering</td>
</tr>
<tr>
<td>ENGN 1931I</td>
<td>Design of Robotic Systems</td>
</tr>
<tr>
<td>ENGN 1931Y</td>
<td>Control Systems Engineering</td>
</tr>
<tr>
<td>ENGN 1931Z</td>
<td>Interfaces, Information and Automation</td>
</tr>
<tr>
<td>ENGN 2520</td>
<td>Pattern Recognition and Machine Learning</td>
</tr>
<tr>
<td>ENGN 2530</td>
<td>Digital Signal Processing</td>
</tr>
<tr>
<td>ENGN 2560</td>
<td>Computer Vision</td>
</tr>
<tr>
<td>ENGN 2610</td>
<td>Physics of Solid State Devices</td>
</tr>
<tr>
<td>ENGN 2620</td>
<td>Solid State Quantum and Optoelectronics</td>
</tr>
<tr>
<td>ENGN 2910A</td>
<td>Advanced Computer Architecture</td>
</tr>
<tr>
<td>ENGN 2911X</td>
<td>Reconfigurable Computing for Machine/Deep Learning</td>
</tr>
<tr>
<td>ENGN 2912B</td>
<td>Scientific Programming in C++</td>
</tr>
<tr>
<td>ENGN 2912E</td>
<td>Low Power VLSI System Design</td>
</tr>
</tbody>
</table>

Select at least one Computer Science Course (Other CSCI courses subject to approval) 1

- CSCI 0320 Introduction to Software Engineering
- CSCI 0330 Introduction to Computer Systems
- CSCI 1230 Introduction to Computer Graphics
- CSCI 1270 Database Management Systems
- CSCI 1300 User Interfaces and User Experience
- CSCI 1320 Creating Modern Web Applications
- CSCI 1380 Distributed Computer Systems
- CSCI 1410 Artificial Intelligence
- CSCI 1480 Building Intelligent Robots
- CSCI 1570 Design and Analysis of Algorithms
- CSCI 1600 Real-Time and Embedded Software
- CSCI 1660 Introduction to Computer Systems Security
- CSCI 1670 Operating Systems
- CSCI 1680 Computer Networks
- CSCI 1730 Design and Implementation of Programming Languages
- CSCI 1760 Multiprocessor Synchronization
- CSCI 1900 csciStartup

Select up to one interdisciplinary science course: 1

- CLPS 1491 Neural Modeling Laboratory
- CLPS 1520 Computational Vision
- ENGN 1450 Properties and Processing of Electronic Materials
- NEUR 2110 Statistical Neuroscience

3. Capstone Design 3

- ENGN 1650 Embedded Microprocessor Design
- or ENGN 1000 Projects in Engineering Design I
- or ENGN 1001 Projects in Engineering Design II

4. General Education Requirement: At least four approved courses must be taken in humanities and social sciences

Total Credits 21

1 Or Biology course beyond BIOL 0200 subject to Concentration Advisor approval
2 Student should consult with concentration advisor for recommendation and approval.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Subject to approval by the concentration advisor, an independent study course (ENGN 1970/ENGN 1971) may be used to fulfill the Engineering Capstone Design requirement. To qualify for such approval, the independent study project must: (1) contain a significant and definable design component; (2) be based on the knowledge and skills acquired in earlier course work, (3) incorporate appropriate engineering standards; and (4) address multiple realistic constraints.

**Electrical Engineering Track:**

The Electrical Engineering program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org. The education objectives of the Electrical Engineering program are to prepare graduates: (1) to pursue distinctive multidisciplinary scientific and technical careers beginning with either entry-level electrical engineering positions in industry or graduate study in electrical engineering and related fields; (2) to participate on multidisciplinary teams that cooperate in applying problem-solving skills and critical and independent thinking to a broad range of projects that can produce the technical innovations aimed at satisfying the future needs of society. The student outcomes of this program are the ABET (1) - (7) Student Outcomes as defined by the "ABET Criteria for Accrediting Engineering Programs" (available online at http://www.abet.org/accreditation-criteria-policies-documents/).

1. **Core Courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 0030</td>
<td>Introduction to Engineering</td>
</tr>
<tr>
<td>ENGN 0040</td>
<td>Dynamics and Vibrations</td>
</tr>
<tr>
<td>ENGN 0410</td>
<td>Materials Science</td>
</tr>
<tr>
<td>ENGN 0510</td>
<td>Electricity and Magnetism</td>
</tr>
<tr>
<td>ENGN 0520</td>
<td>Electrical Circuits and Signals</td>
</tr>
<tr>
<td>ENGN 0720</td>
<td>Thermodynamics</td>
</tr>
<tr>
<td>ENGN 0310</td>
<td>Mechanics of Solids and Structures</td>
</tr>
<tr>
<td>ENGN 0810</td>
<td>Fluid Mechanics</td>
</tr>
<tr>
<td>ENGN 0160</td>
<td>Introduction to Algorithms and Data Structures</td>
</tr>
<tr>
<td>ENGN 0180</td>
<td>Computer Science: An Integrated Introduction</td>
</tr>
<tr>
<td>CHEM 0330</td>
<td>Equilibrium, Rate, and Structure</td>
</tr>
<tr>
<td>MATH 0190</td>
<td>Advanced Placement Calculus (Physics/Engineering)</td>
</tr>
<tr>
<td>MATH 0170</td>
<td>Advanced Placement Calculus (Math/Engineering)</td>
</tr>
</tbody>
</table>

2. **Upper-Level Electrical Engineering Curriculum**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 1650</td>
<td>Embedded Microprocessor Design</td>
</tr>
<tr>
<td>ENGN 1500</td>
<td>Projects in Engineering Design I</td>
</tr>
<tr>
<td>ENGN 1001</td>
<td>Projects in Engineering Design II</td>
</tr>
</tbody>
</table>

5. **General Education Requirement: At least four approved courses must be taken in humanities and social sciences**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>ENGN 1570</td>
<td>Linear System Analysis</td>
</tr>
<tr>
<td>ENGN 1620</td>
<td>Analysis and Design of Electronic Circuits</td>
</tr>
<tr>
<td>ENGN 1630</td>
<td>Digital Electronics Systems Design</td>
</tr>
<tr>
<td>PHYS 0790</td>
<td>Physics of Matter</td>
</tr>
<tr>
<td>or PHYS 1410</td>
<td>Quantum Mechanics A</td>
</tr>
</tbody>
</table>

3. **Electrical Engineering Specialization - Complete at least three courses from the following groups:**

- **At least one advanced Electrical Engineering foundations course:**
  - ENGN 1230 Instrumentation Design
  - ENGN 1580 Communication Systems
  - ENGN 1590 Introduction to Semiconductors and Semiconductor Electronics
  - ENGN 1600 Design and Implementation of VLSI Systems
  - ENGN 1610 Image Understanding
  - ENGN 1640 Design of Computing Systems

- **Up to two other Electrical Engineering Courses:**
  - ENGN 1220 Neuroengineering
  - ENGN 1560 Optics
  - ENGN 1650 Embedded Microprocessor Design
  - ENGN 1680 Design and Fabrication of Semiconductor Devices
  - ENGN 1690 Photonics Devices and Sensors
  - ENGN 1930B Biomedical Optics
  - ENGN 1931A Photovoltaics Engineering
  - ENGN 1931F Introduction to Power Engineering
  - ENGN 1931I Design of Robotic Systems
  - ENGN 1931Y Control Systems Engineering
  - ENGN 1931Z Interfaces, Information and Automation

4. **Capstone Design: At least one course from the following:**

- ENGN 1650 Embedded Microprocessor Design
- or ENGN 1000 Projects in Engineering Design I
- or ENGN 1001 Projects in Engineering Design II

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
to prepare graduates: (1) to apply in practice the knowledge obtained
in school within industry, government, or private practice; (2) to work
toward sustainable solutions in a wide array of technical specialties; (3)
to pursue lifelong learning through continuing education and/or advanced
degrees in environmental engineering. The student outcomes of this
program are the (1) - (7) Student Outcomes as defined by the "ABET
Criteria for Accrediting Engineering Programs" (available online at http://
www.abet.org/accreditation-criteria-policies-documents/).

1. Core Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 0030</td>
<td>Introduction to Engineering</td>
<td>1</td>
</tr>
<tr>
<td>or ENGN 0031</td>
<td>Honors Introduction to Engineering</td>
<td></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 0490</td>
<td>Fundamentals of Environmental Engineering</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 0510</td>
<td>Electricity and Magnetism</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>BIOL 0200</td>
<td>The Foundation of Living Systems</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 0330</td>
<td>Equilibrium, Rate, and Structure</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0190</td>
<td>Advanced Placement Calculus (Physics/ Engineering)</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 0170</td>
<td>Advanced Placement Calculus</td>
<td></td>
</tr>
<tr>
<td>MATH 0200</td>
<td>Intermediate Calculus (Physics/ Engineering)</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 0180</td>
<td>Intermediate Calculus</td>
<td></td>
</tr>
<tr>
<td>or MATH 0350</td>
<td>Honors Calculus</td>
<td></td>
</tr>
<tr>
<td>APMA 0330</td>
<td>Methods of Applied Mathematics I, II</td>
<td></td>
</tr>
<tr>
<td>or APMA 0350</td>
<td>Applied Ordinary Differential Equations</td>
<td></td>
</tr>
<tr>
<td>APMA 0650</td>
<td>Essential Statistics</td>
<td>1</td>
</tr>
<tr>
<td>or APMA 1650</td>
<td>Statistical Inference I</td>
<td></td>
</tr>
</tbody>
</table>

2. Advance Science Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 1370</td>
<td>Environmental Geochemistry</td>
<td>1</td>
</tr>
<tr>
<td>or GEOL 1960B</td>
<td>Special Topics in Geological Sciences: Physical Hydrology</td>
<td></td>
</tr>
<tr>
<td>BIOL 0415</td>
<td>Microbes in the Environment ( or an approved alternative Natural Science Course)</td>
<td>1</td>
</tr>
<tr>
<td>or BIOL 0420</td>
<td>Principles of Ecology</td>
<td></td>
</tr>
</tbody>
</table>

3. Environmental Engineering Specialty Options (Complete one of the following five course sequences)

3a. Chemistry Specialty

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 1110</td>
<td>Transport and Biotransport Processes</td>
<td></td>
</tr>
<tr>
<td>ENGN 1130</td>
<td>Chemical Engineering Thermodynamics</td>
<td></td>
</tr>
<tr>
<td>ENGN 1340</td>
<td>Water Supply and Treatment Systems - Technology and Sustainability</td>
<td></td>
</tr>
<tr>
<td>ENGN 1710</td>
<td>Heat and Mass Transfer</td>
<td></td>
</tr>
<tr>
<td>ENGN 1860</td>
<td>Advanced Fluid Mechanics</td>
<td></td>
</tr>
<tr>
<td>ENGN 1930U</td>
<td>Renewable Energy Technologies</td>
<td></td>
</tr>
</tbody>
</table>

Up to one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 0310</td>
<td>Mechanics of Solids and Structures</td>
<td></td>
</tr>
<tr>
<td>or ENGN 0520</td>
<td>Electrical Circuits and Signals</td>
<td></td>
</tr>
</tbody>
</table>

Up to one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 0040</td>
<td>Introduction to Scientific Computing and Problem Solving (or approved science elective)</td>
<td></td>
</tr>
<tr>
<td>or CSCI 0150</td>
<td>Introduction to Object-Oriented Programming and Computer Science</td>
<td></td>
</tr>
<tr>
<td>or CSCI 0170</td>
<td>Computer Science: An Integrated Introduction</td>
<td></td>
</tr>
</tbody>
</table>

3b. Energy Specialty

At least three of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 1340</td>
<td>Water Supply and Treatment Systems - Technology and Sustainability</td>
<td></td>
</tr>
<tr>
<td>ENGN 1710</td>
<td>Heat and Mass Transfer</td>
<td></td>
</tr>
<tr>
<td>ENGN 1860</td>
<td>Advanced Fluid Mechanics</td>
<td></td>
</tr>
<tr>
<td>ENGN 1930U</td>
<td>Renewable Energy Technologies</td>
<td></td>
</tr>
<tr>
<td>ENGN 1931F</td>
<td>Introduction to Power Engineering</td>
<td></td>
</tr>
<tr>
<td>ENGN 1931A</td>
<td>Photovoltaics Engineering</td>
<td></td>
</tr>
<tr>
<td>ENGN 1931P</td>
<td>Fuels, Energy, and the Environment</td>
<td></td>
</tr>
</tbody>
</table>

Up to one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 0310</td>
<td>Mechanics of Solids and Structures</td>
<td></td>
</tr>
<tr>
<td>or ENGN 0520</td>
<td>Electrical Circuits and Signals</td>
<td></td>
</tr>
</tbody>
</table>

Up to one of the following:

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<tr>
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<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 0040</td>
<td>Introduction to Scientific Computing and Problem Solving (or approved science elective)</td>
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<tr>
<td>or CSCI 0150</td>
<td>Introduction to Object-Oriented Programming and Computer Science</td>
<td></td>
</tr>
<tr>
<td>or CSCI 0170</td>
<td>Computer Science: An Integrated Introduction</td>
<td></td>
</tr>
</tbody>
</table>

4. Capstone Design

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 1000</td>
<td>Projects in Engineering Design I</td>
<td></td>
</tr>
<tr>
<td>or ENGN 1140</td>
<td>Chemical Process Design</td>
<td></td>
</tr>
<tr>
<td>or ENGN 1001</td>
<td>Projects in Engineering Design II</td>
<td></td>
</tr>
</tbody>
</table>

* In addition to program requirements above, students must take four courses in the humanities and social sciences.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
</table>

Total Credits: 21

1 Subject to approval by the concentration advisor, an independent study course (ENGN1970/1971) may be used to fulfill the Engineering Capstone Design requirement. To qualify for such approval, the independent study project must: (1) contain a significant and definable design component; (2) be based on the knowledge and skills acquired in earlier course work, (3) incorporate appropriate engineering standards; and (4) address multiple realistic constraints. To request approval, please complete the online form available at: http://www.brown.edu/academics/engineering/undergraduate-study

Materials Engineering Track:

The Materials Engineering program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org. The education objectives of the Materials Engineering program are to prepare graduates: (1) to pursue multidisciplinary scientific and technical careers beginning with entry-level engineering positions in industry or graduate study in materials science and engineering and related fields; (2) to apply an engineering problem-solving approach combined with a broad appreciation for the liberal arts to inform and develop their understanding of current societal needs and values to achieve leadership positions in their chosen fields of endeavor. The student outcomes of this program are the (1) - (7) Student Outcomes as defined by the "ABET Criteria for Accrediting Engineering Programs" (available online at http://www.abet.org/accreditation-criteria-policies-documents/).

1. Core Courses:

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<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ENGN 0030</td>
<td>Introduction to Engineering</td>
<td>1</td>
</tr>
<tr>
<td>or ENGN 0031</td>
<td>Honors Introduction to Engineering</td>
<td></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 0490</td>
<td>Fundamentals of Environmental Engineering</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 0510</td>
<td>Electricity and Magnetism</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>BIOL 0200</td>
<td>The Foundation of Living Systems</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 0330</td>
<td>Equilibrium, Rate, and Structure</td>
<td>1</td>
</tr>
<tr>
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<td>Advanced Placement Calculus (Physics/ Engineering)</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 0170</td>
<td>Advanced Placement Calculus</td>
<td></td>
</tr>
<tr>
<td>MATH 0200</td>
<td>Intermediate Calculus (Physics/ Engineering)</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 0180</td>
<td>Intermediate Calculus</td>
<td></td>
</tr>
<tr>
<td>or MATH 0350</td>
<td>Honors Calculus</td>
<td></td>
</tr>
<tr>
<td>APMA 0330</td>
<td>Methods of Applied Mathematics I, II</td>
<td></td>
</tr>
<tr>
<td>or APMA 0350</td>
<td>Applied Ordinary Differential Equations</td>
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<tr>
<td>APMA 0650</td>
<td>Essential Statistics</td>
<td>1</td>
</tr>
<tr>
<td>or APMA 1650</td>
<td>Statistical Inference I</td>
<td></td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
objectives of the Mechanical Engineering program are to prepare

The Mechanical Engineering program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org. The education in the final two semesters:

1. Core Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 0030</td>
<td>Introduction to Engineering</td>
</tr>
<tr>
<td>or ENGN 0031</td>
<td>Honors Introduction to Engineering</td>
</tr>
<tr>
<td>ENGN 0040</td>
<td>Dynamics and Vibrations</td>
</tr>
<tr>
<td>ENGN 0310</td>
<td>Mechanics of Solids and Structures</td>
</tr>
<tr>
<td>ENGN 0410</td>
<td>Materials Science</td>
</tr>
<tr>
<td>ENGN 0510</td>
<td>Electricity and Magnetism</td>
</tr>
<tr>
<td>ENGN 0520</td>
<td>Electrical Circuits and Signals</td>
</tr>
<tr>
<td>ENGN 0720</td>
<td>Thermodynamics</td>
</tr>
<tr>
<td>ENGN 0810</td>
<td>Fluid Mechanics</td>
</tr>
<tr>
<td>CHEM 0330</td>
<td>Equilibrium, Rate, and Structure</td>
</tr>
<tr>
<td>MATH 0190</td>
<td>Advanced Placement Calculus (Physics/Engineering)</td>
</tr>
<tr>
<td>or MATH 0170</td>
<td>Advanced Placement Calculus</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0200</td>
<td>Intermediate Calculus (Physics/Engineering)</td>
</tr>
<tr>
<td>or MATH 0180</td>
<td>Intermediate Calculus</td>
</tr>
<tr>
<td>or MATH 0350</td>
<td>Honors Calculus</td>
</tr>
<tr>
<td>APMA 0330</td>
<td>Methods of Applied Mathematics I, II</td>
</tr>
<tr>
<td>or APMA 0350</td>
<td>Applied Ordinary Differential Equations</td>
</tr>
<tr>
<td>APMA 0340</td>
<td>Methods of Applied Mathematics I, II</td>
</tr>
<tr>
<td>or APMA 0360</td>
<td>Applied Partial Differential Equations I</td>
</tr>
<tr>
<td>or MATH 0520</td>
<td>Linear Algebra</td>
</tr>
<tr>
<td>or APMA 1210</td>
<td>Operations Research: Deterministic Models</td>
</tr>
<tr>
<td>or APMA 1650</td>
<td>Statistical Inference I</td>
</tr>
</tbody>
</table>

2. Upper-Level Materials Engineering Curriculum

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ENGN 1410</td>
<td>Physical Chemistry of Solids</td>
</tr>
<tr>
<td>ENGN 1420</td>
<td>Kinetics Processes in Materials Science and Engineering</td>
</tr>
<tr>
<td>ENGN 1440</td>
<td>Mechanical Properties of Materials</td>
</tr>
<tr>
<td>PHYS 0790</td>
<td>Physics of Matter</td>
</tr>
<tr>
<td>or CHEM 0350</td>
<td>Organic Chemistry</td>
</tr>
<tr>
<td>or CHEM 1140</td>
<td>Physical Chemistry: Quantum Chemistry</td>
</tr>
<tr>
<td>Three of the following:</td>
<td>3</td>
</tr>
<tr>
<td>ENGN 1450</td>
<td>Properties of Processing of Electronic Materials</td>
</tr>
<tr>
<td>ENGN 1470</td>
<td>Structure and Properties of Nonmetallic Materials</td>
</tr>
<tr>
<td>ENGN 1480</td>
<td>Metallic Materials</td>
</tr>
<tr>
<td>ENGN 1490</td>
<td>Biomaterials</td>
</tr>
</tbody>
</table>

3. Capstone Design

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 1000</td>
<td>Projects in Engineering Design I</td>
</tr>
<tr>
<td>or ENGN 1001</td>
<td>Projects in Engineering Design II</td>
</tr>
<tr>
<td>or ENGN 1930L</td>
<td>Biomedical Engineering Design and Innovation</td>
</tr>
</tbody>
</table>

* In addition to program requirements above, students must take four courses in the humanities and social sciences.

Total Credits: 21

1 These courses are taken in either the junior or senior year. Note that ENGN 1470 is offered on a rotating basis in the fall semester of alternate years, and ENGN 1480 and ENGN 1450 are offered in the spring semester of alternate years.

2 Subject to approval by the concentration advisor, an independent study course (ENGN1970/1971) may be used to fulfill the Engineering Capstone Design requirement. To qualify for such approval, the independent study project must: (1) contain a significant and definable design component; (2) be based on the knowledge and skills acquired in earlier course work, (3) incorporate appropriate engineering standards; and (4) address multiple realistic constraints. To request approval, please complete the online form available at: http://www.brown.edu/academics/engineering/undergraduate-study

Mechanical Engineering Track:

The Mechanical Engineering program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org. The education objectives of the Mechanical Engineering program are to prepare

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Engineering and Physics

The Sc.B. program in Engineering and Physics is sponsored jointly by the School of Engineering and the Department of Physics. The program is designed to ensure that students take a significant portion of the usual curriculum in Engineering and in Physics, obtain substantial laboratory experience, and take several upper-level elective courses, focusing on applied science. Students may take either the standard Physics or Engineering programs during their freshman and sophomore years and then switch to this combined program. The Sc.B. degree program in Engineering and Physics is not accredited by ABET.

The following standard program assumes that a student begins mathematics courses at Brown with MATH 0170 or its equivalent. Students who begin in MATH 0200 can substitute an additional science, engineering or higher-level mathematics course for the MATH 0170 or MATH 0190 requirement. To accommodate the diverse preparation of individual students, variations of the following sequences and their prerequisites are possible with permission of the appropriate concentration advisor and the instructors involved. We recommend 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 School of Engineering.

Select one of the following two course sequences: 2

ENGN 0030 & ENGN 0040 Introduction to Engineering and Dynamics and Vibrations (ENGN 0031 may be substituted for ENGN 0030) 1

PHYS 0050 & PHYS 0060 Foundations of Mechanics and Foundations of Electromagnetism and Modern Physics

PHYS 0070 & PHYS 0160 Analytical Mechanics and Introduction to Relativity, Waves and Quantum Physics

MATH 0190 Advanced Placement Calculus (Physics/Engineering) 1

or MATH 0170 Advanced Placement Calculus

MATH 0200 Intermediate Calculus (Physics/Engineering) 1

or MATH 0180 Intermediate Calculus

or MATH 0350 Honors Calculus

Select three additional higher-level math, applied math, or mathematical physics (PHYS 0720) courses.

CSCI 0040 Introduction to Scientific Computing and Problem Solving 1

or CSCI 0150 Introduction to Object-Oriented Programming and Computer Science

or CSCI 0170 Computer Science: An Integrated Introduction

or CSCI 0190 Accelerated Introduction to Computer Science

ENGN 0510 Electricity and Magnetism 1

or PHYS 0470 Electricity and Magnetism

ENGN 1560 Optics 1

or PHYS 1510 Advanced Electromagnetic Theory

PHYS 0500 Advanced Classical Mechanics 1

or ENGN 1370 Advanced Engineering Mechanics

PHYS 1410 Quantum Mechanics A 1

PHYS 1420 Quantum Mechanics B 1

PHYS 1530 Thermodynamics and Statistical Mechanics 1

or ENGN 0720 Thermodynamics

ENGN 1620 Analysis and Design of Electronic Circuits 1

CHEM 0300 Equilibrium, Rate, and Structure 1

or CHEM 0310 Mechanics of Solids and Structures

or ENGN 0810 Fluid Mechanics

or PHYS 1600 Computational Physics

ENGN 0410 Materials Science 1

or ENGN 1690 Photonics Devices and Sensors

or PHYS 0560 Experiments in Modern Physics

PHYS 1560 Modern Physics Laboratory 1

or ENGN 1590 Introduction to Semiconductors and Semiconductor Electronics

or an approved 2000-level engineering or physics course.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
A thesis under the supervision of a physics or engineering faculty member: 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1990</td>
<td>Senior Conference Course</td>
</tr>
<tr>
<td>or ENGN 1970</td>
<td>Independent Studies in Engineering</td>
</tr>
<tr>
<td>or ENGN 1971</td>
<td>Independent Study in Engineering</td>
</tr>
</tbody>
</table>

* Students are also encouraged to take courses dealing with the philosophical, ethical, or political aspects of science and technology.

Total Credits 19

**English**

The English Department fosters the study of British, American, and Anglophone literature—old and new—in ways that are both intensive and open. We study how English literature works, how we understand and appreciate it, and how we write about it. We offer a wide array of courses in poetry, drama, fiction, creative nonfiction, film, digital media, and theory. All our courses emphasize the development of student skills in writing, textual analysis, and argument. The department's faculty members are deeply committed to undergraduate teaching and advising. You will find considerable diversity in our critical methods, including cross-disciplinary approaches that relate the study of literature to history, politics, science, as well as to other art forms. We encourage students in our classes likewise to forge their own new ways of understanding literature and culture.

In addition to the standard English concentration, we offer an English concentration track in the practice of Nonfiction Writing. The concentration in English and the English/Nonfiction track follow the same core requirements, and students in the English concentration may elect Nonfiction Writing courses as electives. We invite applications from qualified juniors to the honors programs in both English and Nonfiction.

One of the largest humanities concentrations at Brown, English provides a strong foundation for a liberal education and for employment in many sectors, especially those that centrally involve writing and working with texts (in any form). In addition to authorship, scholarship, and teaching, these include: journalism, publishing, advertising, visual media, consulting, public relations, public service, finance, government, corporate research, and administration. Our 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

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 must fill out an online Concentration form via ASK and enter their plan of study indicating the requirements that each course fulfills.

**Concentration Requirements (10 courses):**

1. **ONE course in "How Literature Matters" (ENGL0100):**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 0100A</td>
<td>How To Read A Poem</td>
</tr>
<tr>
<td>ENGL 0100C</td>
<td>Altered States</td>
</tr>
<tr>
<td>ENGL 0100D</td>
<td>Matters of Romance</td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
The English Honors Program is intended for students who have been highly successful in their English concentration coursework and who want the opportunity to pursue a research project in more depth than is possible in an undergraduate seminar. The program is intended for those students with a strong desire to conduct independent research under the supervision of a thesis advisor and culminates in the writing of a thesis during the senior year.

Admission

Students apply to the Honors Program early in the second semester of their junior year. December or mid-year graduates may apply in their 6th semester, but are encouraged to apply during their 5th semester and write their theses alongside May graduates. Interested concentrators should speak to the Honors Advisor early in their junior year to discuss their plans. Specific deadlines for admission are announced annually and are available on the department website. Students who are studying off campus are expected to meet the application submission deadline. Admission to the English Honors Program depends on evidence of ability and promise in the study of literature. To be eligible for admission, students must have received more As than Bs (and no Cs or below) in concentration courses completed. Students must complete an application; supply a brief writing sample, and request two letters of recommendation from English faculty with whom they have taken courses. If necessary, letters may come from faculty in related departments. Letters from teaching assistants may only serve as supporting recommendations. Candidates must also submit a one-page project proposal signed by the faculty member who has agreed to serve as the thesis advisor. See procedures and application (http://brown.edu/academics/english/english-honors-procedures) for more details.

December or mid-year graduates who wish to apply to honors have two options, but the first is highly encouraged:

Option 1:
In their 5th semester (Spring), students apply to the honors program along with the other juniors. Accepted students will be incorporated into the regular honors cohort and must meet the same deadlines: i.e. they must complete their theses at the same time as the other honors students (though for mid-years this will be at the end of their 7th semester). They register for ENGL 1991 English Honors Seminar in the Fall, and ENGL 1992 Senior Honors Thesis in the Spring.

Option 2:
In the 7th semester (the Spring of their final year), students take an independent study with their thesis advisor, under whose direction they will begin to research and write their theses. This course must be taken S/NC. In the 8th semester (the Fall of their final year), as they complete their theses, students take ENGL 1992 for a grade. Mid-year graduates should consult with the Honors Director for information about deadlines.

Requirements

The course requirements for the English Honors Program are the same as those for the regular concentration, with the following additions:

As part of regular coursework, and counting toward the concentration requirements, honors candidates must complete at least three upper-level seminars or comparable small courses in which students have the opportunity to do independent research, take significant responsibility for discussion, and do extensive scholarly and critical writing. Students are
encouraged to include at least one graduate seminar in their program. (Permission to take a graduate course must be obtained from the instructor.) Honors candidates should discuss their proposed course of study with the Honors Advisor.

During the Fall and Spring of the senior year, honors candidates must complete two additional courses beyond the ten courses required by the regular concentration: ENGL 1991 and ENGL 1992. ENGL 1991 is the Senior Honors Seminar, in which students begin to research and write their theses, as well as to meet to discuss their work. This is a mandatory S/NC course. ENGL 1992, the Senior Honors Thesis is an independent research course that must be taken for a grade.

Honors candidates must continue to receive more As than Bs in courses taken as part of the concentration. Courses completed with a grade of C will not count toward an Honors concentration. A student who receives a C in any course is not eligible for departmental honors. The completed thesis will be evaluated by the student’s advisor and a second reader, each of whom provides written commentary and suggests a grade for ENGL 1992.

Evaluation
The English Department reviews the academic record as well as the thesis evaluations for each senior completing the Honors Program. Following a successful review, the student will be eligible to graduate with Honors in English.

Honors in Nonfiction Writing
The Nonfiction Writing Honors Program is intended for students who have been highly successful in their English concentration work. Specifically, it allows those who have an expressed and proven interest in nonfiction writing to pursue more completely a single project under the supervision of a first reader. The intention is to help students to complete work worthy of publication. The program culminates in the writing of a thesis during the senior year.

Admission
Students apply to the Nonfiction Writing Honors Program in the second semester of their junior year. December or mid-year graduates may apply in their 8th semester, but are encouraged to apply during their 5th semester and write their theses alongside May graduates. Interested concentrators should have already made contact with at least one member of the Nonfiction Writing faculty and should meet with the Honors Advisor early in their junior year to discuss their plans. Specific deadlines for admission are announced annually and are available on the department website. Students who are studying off campus are expected to meet the application submission deadline.

Admission to the Honors Program in Nonfiction Writing depends upon a student’s demonstrated superior ability in nonfiction writing. Students must have taken either one intermediate and one advanced writing course, or two advanced writing courses by the end of their sixth semester and completed each of them with an S. To be eligible for admission, students must have earned more As than Bs (and no Cs or below) in other courses in the concentration plan. Students must submit an application, two letters of recommendation, a writing sample from an advanced writing course, and a project proposal.

See procedures and application (http://brown.edu/academics/english/nonfiction-honors-procedures) for more details. December or mid-year graduates who wish to apply for nonfiction honors have two options, but the first is highly encouraged:

Option 1:
In their 5th semester (Spring), students can apply to the nonfiction honors program along with the other juniors. Accepted students will be incorporated into the regular nonfiction honors cohort and must meet the same deadlines: i.e. they must complete their theses at the same time as the other honors students (though for mid-years this will be at the end of their 7th semester). They register for ENGL 1993 Nonfiction Honors Seminar in the Fall and ENGL 1994 Senior Honors Thesis in Nonfiction in the Spring.

Option 2:
In their 7th semester (the Spring of their final year) students take ENGL 1200 and in their 8th semester (the Fall of their final year) they take ENGL 1994. (Students choosing this option must consult with the Honors Advisor for information on deadlines.)

Requirements
Students in the Nonfiction Writing Honors Program take two additional courses beyond the ten courses required by the Nonfiction Writing Track -- ENGL 1993 Honors Seminar in Nonfiction Writing (with the Honors Advisor) and ENGL 1994 Senior Honors Thesis in Nonfiction Writing; the Honors track will bring to twelve the total number of required courses. The ENGL 1993 grade option must be S/NC; ENGL 1994 must be taken for a grade. Honors candidates should discuss their proposed course of study with the faculty member they choose to direct their thesis.

Honors candidates must continue to receive more As than Bs in courses taken as part of the concentration. Courses completed with a grade of C will not count toward an Honors concentration. A student who receives a “C” after admission to Nonfiction Honors and wishes to continue in the program must complete an additional course in a comparable subject area, with a grade higher than C.

The Honors Thesis
The Nonfiction Writing Honors thesis is an extended project, usually of between 50 and 80 pages, written under the supervision of one of the Nonfiction Writing faculty and a second reader (who can be from literature or another department). The specific topic and approach of the thesis are worked out between the student and the thesis advisor, with assistance from the student’s second reader. This process should begin in the latter part of the student’s junior year. A good way to get an idea of what sorts of projects are possible is to visit the Hay Library, which stores theses from previous years, or to meet with the Honors Advisor. A prospectus describing the project and endorsed by the faculty advisor must be submitted to the Honors Advisor at the beginning of the senior year. At the end of the senior year fall term, a student must submit approximately 25 pages of draft material toward the thesis. Full thesis drafts are due by mid-March; final bound copies of the thesis are due in mid-April. Late theses will not be accepted for honors after the April deadline; students who hand in theses after the deadline but before the end of the term will receive a grade for the thesis course, but they will not be eligible for departmental honors. The completed thesis will be evaluated by the student’s advisor and a second reader, each of whom provides written commentary and suggests a grade for ENGL 1992.

Evaluation
The English Department reviews the academic record as well as the thesis evaluations for each senior completing the Honors Program. Following a successful review, the student will be eligible to graduate with Honors in English.

Environmental Studies
Many of the most pressing challenges of the 21st Century are environmental ones. We must find ways to feed a growing human
population while maintaining the natural life support system provided by the Earth's ecosystems; to make built environments more efficient as urban areas continue to grow dramatically in size; and to meet the challenges posed by rising sea-level and increasing global temperatures. These challenges are complex, multifaceted and can best be solved with expertise from multiple, relevant disciplines. To prepare students to meet these challenges, the Institute at Brown for Environment and Society (IBES) offers two undergraduate degrees: an A.B. in Environmental Studies and a Sc.B. in Environmental Science. The two degrees vary primarily in the number of course requirements; the Sc.B. is a more in-depth treatment of a single field. Both degrees provide interdisciplinary exposure to the natural and social sciences, as well as public policy. Both degrees also develop depth in a primary field by requiring students to select one of five tracks of study. Concentrators might also consider pursuing the Engaged Scholars Program, which allows them to connect theory and practice and gain hands-on experience working with community partners.

Through a rigorous set of core courses, track requirements, and a course or project-based capstone experience, our students are primed to make meaningful contributions to environmental scholarship and outreach at local, national and global scales.

If you have administrative questions regarding theses concentrations or wish to be added to the email directory listing upcoming events, then please contact Jeanne Loewenstein (jeanne_loewenstein@brown.edu), the academic program manager.

### Standard program in Environmental Studies and Environmental Science:

The Institute at Brown for Environment and Society administers two concentrations, one offering an A.B. degree in Environmental Studies (requires 14-15 courses) and the other a Sc.B. degree in Environmental Science (requires 19-20 courses). Below are a set of course offerings arranged into four tracks:

1. Air, Climate & Energy
2. Conservation Science & Policy
3. Environment & Inequality
4. Land, Water & Food Security
5. Sustainability in Development

### Requirements for the A.B. Degree

#### Core Requirements

- **ECON 0110** Principles of Economics 1
- **ENVS 0490** Environmental Science in a Changing World 2
- **ENVS 0495** Introduction to Environmental Social Science
- **BIOL 0210** Diversity of Life
  or **GEOL 0240** Earth: Evolution of a Habitable Planet

#### Methods - one course

- **ENVS 1920** Methods for Interdisciplinary Environmental Research

#### Electives - three courses

You may choose among any ENVS course, any course shown on one or more of the tracks, and any prerequisites listed for a required course.

#### Capstone - one or two courses

1-2

This requirement can be met with a two-semester thesis (ENVS 1970 & ENVS 1971), one-semester research project (ENVS 1970 or ENVS 1971), or an approved capstone course.

### Track Specific Requirements

#### Track 1 - Air, Climate, and Energy

Foundational courses (choose two):

- **CHEM 0330** Equilibrium, Rate, and Structure
- **ENGN 0030** Introduction to Engineering
- **GEOL 0220** Physical Processes in Geology

#### Track 2 - Conservation Science and Policy

##### Ecology:

- **BIOL 0420** Principles of Ecology

##### Conservation:

- **BIOL 1470** Conservation Biology

##### Ecology & Conservation Topics: Select One

- **BIOL 0455** Coastal Ecology and Conservation
- **BIOL 1450** Community Ecology
- **BIOL 1480** Terrestrial Biogeochemistry and the Functioning of Ecosystems

##### Policy: Select One

- **ENVS 1415** Power, Justice, and Climate Change
- **ENVS 1555** Urban Agriculture: The Importance of Localized Food Systems
- **ENVS 1575** Engaged Climate Policy at the UN Climate Change Talks
- **ENVS 1615** Making Connections: The Environmental Policy Process
- **ENVS 1755** Globalization and the Environment
- **ENVS 1925** Energy Policy and Politics

##### Statistics: Select One

- **APMA 0650** Essential Statistics
- **APMA 1650** Statistical Inference I
- **BIOL 0495** Statistical Analysis of Biological Data
- **ECON 1620** Introduction to Econometrics

### Track 3 - Environment and Inequality

#### Track Intro Course:

- **ENVS 0705** Equity and the Environment: Movements, Scholarship, Solutions

#### Race, Class, and Gender Inequality: Select One

- **AFRI 0090** An Introduction to Africana Studies
- **AFRI 0210** Afro Latin Americans and Blackness in the Americas
- **ECON 1370** Race and Inequality in the United States
- **ETHN 1000** Introduction to American/Ethnic Studies
- **GNSS 1600** Embodying Feminisms/Feminist Embodiments
- **HIST 0203** Modern Africa: From Empire to Nation-State
- **HIST 1974J** Decolonizing Minds: A People's History of the World
- **SOC 0230** Sex, Gender, and Society

### Track 4 - Sustainability in Development

#### Track Intro Course:

- **ENVS 1925** Sustainability in the Built Environment

#### Energy Technology and Infrastructure (choose one):

- **ENVS 1400** Sustainable Design in the Built Environment
- **ENVS 1580** Environmental Stewardship and Resilience in Urban Systems
- **ENGN 0720** Thermodynamics
- **ENGN 1930U** Renewable Energy Technologies
- **ENGN 1931P** Fuels, Energy, and the Environment

### For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
SOC 1270  Race, Class, and Ethnicity in the Modern World
SOC 1872C  Race and Ethnic Relations, Identity, and Inequality

Environment and Inequality: Select One

ANTH 0110  Anthropology and Global Social Problems: Environment, Development, and Governance
ENVS 0710  Powering the Past: Environmental Histories of Energy Use and Social Change
ENVS 1415  Power, Justice, and Climate Change
ENVS 1910  The Anthropocene: The Past and Present of Environmental Change
HIST 0270A  From Fire Wielders to Empire Builders: Human Impact on the Global Environment before 1492
HIST 0270B  From the Columbian Exchange to Climate Change: Modern Global Environmental History
PHP 1700  Current Topics in Environmental Health

Tools: Select One

ANTH 1940  Ethnographic Research Methods
ECON 1620  Introduction to Econometrics
EDUC 1100  Introduction to Qualitative Research Methods
ENVS 1105  Introduction to Environmental GIS
GEOL 1320  Introduction to Geographic Information Systems for Environmental Applications
GEOL 1330  Global Environmental Remote Sensing
SOC 1110  Introductory Statistics for Social Research
SOC 1117  Focus Groups for Market and Social Research
SOC 1340  Principles and Methods of Geographic Information Systems
SOC 2610  Spatial Thinking in Social Science

Policy: Select One

ENVS 1415  Power, Justice, and Climate Change
ENVS 1555  Urban Agriculture: The Importance of Localized Food Systems
ENVS 1575  Engaged Climate Policy at the UN Climate Change Talks

Track 4 - Land, Water & Food Security

Climate: Select One

GEOL 0850  Weather and Climate
GEOL 1430  Principles of Planetary Climate

Biology: Select One

BIOL 0160  Plants, Food, and People
BIOL 0210  Diversity of Life
BIOL 0420  Principles of Ecology
BIOL 0430  The Evolution of Plant Diversity
BIOL 0455  Coastal Ecology and Conservation

Environmental History: Select One

ANTH 0680  Anthropology of Food
ENVS 1910  The Anthropocene: The Past and Present of Environmental Change

HIST 0270A  From Fire Wielders to Empire Builders: Human Impact on the Global Environment before 1492
HIST 0270B  From the Columbian Exchange to Climate Change: Modern Global Environmental History

Tools: Select One

ENVS 1105  Introduction to Environmental GIS
GEOL 1320  Introduction to Geographic Information Systems for Environmental Applications
GEOL 1330  Global Environmental Remote Sensing
SOC 1340  Principles and Methods of Geographic Information Systems

Track 5 - Sustainability in Development

Environment and Development: Select Two

ECON 1410  Urban Economics
ECON 1530  Health, Hunger and the Household in Developing Countries
ENVS 1415  Power, Justice, and Climate Change
ENVS 1555  Urban Agriculture: The Importance of Localized Food Systems
ENVS 1580  Environmental Stewardship and Resilience in Urban Systems
ENVS 1755  Globalization and the Environment

Policy: Select Two

ENVS 1350  Environmental Economics and Policy
ENVS 1575  Engaged Climate Policy at the UN Climate Change Talks
ENVS 1615  Making Connections: The Environmental Policy Process
ENVS 1925  Energy Policy and Politics

Analysis Tools: Select One

ECON 1620  Introduction to Econometrics
ANTH 1940  Ethnographic Research Methods
EDUC 1100  Introduction to Qualitative Research Methods
ENVS 1105  Introduction to Environmental GIS
GEOL 1320  Introduction to Geographic Information Systems for Environmental Applications
GEOL 1330  Global Environmental Remote Sensing
SOC 1110  Introductory Statistics for Social Research
SOC 1117  Focus Groups for Market and Social Research
SOC 1340  Principles and Methods of Geographic Information Systems

Total Credits: 14-15

1 The ECON 0110 core requirement can be waived for students with an AP exam score of 4 or 5 in both Microeconomics and Macroeconomics.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Requirements for the Sc.B. Degree

Requires ALL 14-15 course requirements as listed in the A.B. Program

Additional Track specific requirements for the Sc.B.

Track 1 - Air, Climate, and Energy
Math:
MATH 0090  Introductory Calculus, Part I 1

Policy (choose one):
- ENVS 1350  Environmental Economics and Policy
- ENVS 1415  Power, Justice, and Climate Change
- ENVS 1575  Engaged Climate Policy at the UN Climate Change Talks
- ENVS 1615  Making Connections: The Environmental Policy Process
- ENVS 1755  Globalization and the Environment
- ENVS 1925  Energy Policy and Politics
- POLS 1822I  Geopolitics of Oil and Energy

Tools (choose one):
- APMA 0650  Essential Statistics
- ECON 1620  Introduction to Econometrics
- ENVS 1105  Introduction to Environmental GIS
- GEOL 1320  Introduction to Geographic Information Systems for Environmental Applications
- GEOL 1330  Global Environmental Remote Sensing

Climate and Thermal Change (choose two):
- ENGN 0720  Thermodynamics
- ENGN 1720  Design of Thermal Engines
- ENGN 1930M  Industrial Design
- GEOL 1370  Environmental Geochemistry
- GEOL 1510  Introduction to Atmospheric Dynamics
- GEOL 1520  Ocean Circulation and Climate

Track 2 - Conservation Science and Policy
Math: Select One
MATH 0090  Introductory Calculus, Part I 1

Evolution: Select One
- BIOL 0480  Evolutionary Biology

Organismal Diversity: Select One
- BIOL 0410  Vertebrate Zoology
- BIOL 0430  The Evolution of Plant Diversity (BIOL 0460 - Insect Biology)
- BIOL 0940C  Sophomore Seminar: Insect Biology
- BIOL 0940D  Rhode Island Flora: Understanding and Documenting Local Plant Diversity
- BIOL 1880  Comparative Biology of the Vertebrates

Env. Econ: Select One
- ECON 1340  Economics of Global Warming
- ECON 1350  Environmental Economics and Policy

Tools: Select One
- ENVS 1105  Introduction to Environmental GIS
- GEOL 1320  Introduction to Geographic Information Systems for Environmental Applications
- GEOL 1330  Global Environmental Remote Sensing
- SOC 1340  Principles and Methods of Geographic Information Systems

Track 3 – Environment and Inequality
Tools: Select One

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
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<tr>
<td>PHP 1530</td>
<td>Case Studies in Public Health: The Role of Governments, Communities and Professions</td>
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<tr>
<td>PHP 1700</td>
<td>Current Topics in Environmental Health</td>
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<td>PHP 1710</td>
<td>Climate Change and Human Health</td>
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<tr>
<td>PHP 1920</td>
<td>Social Determinants of Health</td>
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**FOCUS THREE - Environmental Inequalities in Food, Water, and Energy: Select Three**

- **AMST 1906P** Food in American Society and Culture
- **DEVL 1803R** Caribbean and Pacific Small States: On the Margins of Development
- **ENVS 0710** Powering the Past: Environmental Histories of Energy Use and Social Change
- **ENVS 1415** Power, Justice, and Climate Change
- **ENVS 1555** Urban Agriculture: The Importance of Localized Food Systems
- **ENVS 1580** Environmental Stewardship and Resilience in Urban Systems
- **ENVS 1925** Energy Policy and Politics
- **ETHN 1750B** Treaty Rights and Food Fights: Eating Local in Indian Country

**Track 4 - Land, Water & Food Security**

**Math: Select One**
- MATH 0090 Introductory Calculus, Part I

**Chemistry: Select One**
- CHEM 0330 Equilibrium, Rate, and Structure

**Earth/Life Systems: Select Three**
- BIOL 1470 Conservation Biology
- BIOL 1475 Biogeography
- BIOL 1480 Terrestrial Biogeochemistry and the Functioning of Ecosystems
- GEOL 0240 Earth: Evolution of a Habitable Planet
- GEOL 1130 Ocean Biogeochemical Cycles
- GEOL 1310 Global Water Cycle
- GEOL 1370 Environmental Geochemistry
- GEOL 1510 Introduction to Atmospheric Dynamics
- GEOL 1660 Instrumental Analysis with Environmental Applications

**Track 5 - Sustainability in Development**

**Sociology and Politics: Select One**
- ENVS 1755 Globalization and the Environment
- POLS 0400 Introduction to International Politics
- SOC 1870K Demographics and Development

**Critical Perspectives on Development: Select One**
- AMST 1700i Community Engagement with Health and the Environment
- ANTH 0110 Anthropology and Global Social Problems: Environment, Development, and Governance
- SOC 1871D Sophomore Seminar in Sociology of Development

**Economic Perspectives: Select Two**
- ECON 1110 Intermediate Microeconomics
- ECON 1340 Economics of Global Warming
- ECON 1355 Environmental Issues in Development Economics
- ECON 1510 Economic Development
- ECON 1530 Health, Hunger and the Household in Developing Countries
- ECON 1560 Economic Growth

**GEOG 0850** Weather and Climate

**Total Credits** 19-20

---

**Honors**

Students interested in graduating with honors in their concentration must complete a thesis determined to be of the highest quality and must have excelled in their coursework required for the concentration, which is defined here as receiving a grade of "A" in the majority of courses taken to fulfill the concentration. You can learn more by visiting the Honors page (https://www.brown.edu/academics/institute-environment-society/education/undergraduate/honors) on the IBES website.

**Ethnic Studies**

Ethnic Studies is an interdisciplinary, comparative concentration that examines the construction of race and ethnicity in social, cultural, historical, political, and economic contexts. Concentrators develop individual programs based on areas of focus in consultation with faculty advisors, drawing from courses in the humanities and social sciences. Typical areas of focus are social issues (such as inequality, education, or health), cultural production and the representation of racial groups, processes of racialization, the historical formation of transnational communities and of diaspora, and the history of particular ethnic or racial groups.

The Ethnic Studies concentration (https://www.brown.edu/academics/american-studies/ethnic-studies) at Brown emphasizes the histories of diverse racial groups within and across the borders of the United States, including examining issues of diaspora, migration, social movements, and the political economies of social inequality and racial formation. Concentrators strive for intellectual fluency in a range of critical approaches to race and ethnicity across disciplines, and demonstrate this fluency through the composition or creation of a significant piece of original research or creative work.

Brown University established an Ethnic Studies concentration in 1996, originally within the Center for the Study of Race and Ethnicity in America (https://www.brown.edu/academics/american-studies/people) and American Studies (https://www.brown.edu/academics/american-studies/graduate-students). Ethnic Studies joined a long established Brown department, American Studies (https://www.brown.edu/academics/american-studies/home). Many American Studies faculty members (https://www.brown.edu/academics/american-studies/people) work in the areas of race and ethnicity and have held joint appointments in Ethnic and American Studies while American Studies PhD students (https://www.brown.edu/academics/american-studies/graduate-students) have done some of the most exciting Ethnic Studies research on campus.

As an academic field, Ethnic Studies is rooted in the protests of the 1960s and 1970s, out which emerged the very first Latino/a Studies, Asian American Studies, African American Studies, and Native American Studies programs. Organized around straightforward political goals – the enrichment through diversification of the curriculum and the systematic, multi-disciplinary, and the often comparative study of racial and ethnic inequality – Ethnic Studies has become an important feature of major research universities.

Faculty, both core and affiliated, create and participate in groundbreaking Ethnic Studies scholarship. Areas of faculty research include borderlands history, Latina/o literary studies and visual culture, indigenous movements, migration and African American cultural studies as well as the intersecting fields of gender and sexuality, queer theory and critical race theory.

Students can focus their study on specific populations (e.g., Latina/os, Asian Americans) and choose a thematic interest including such current examples as: "social issues affecting radicalized groups" (students have looked at health disparities or educational inequality); "the study of cultural production or cultural representations;," "the theory of a particular racial or ethnic group;" and "the study of comparative processes of radicalization."
Requirements (for students starting with the class of 2020)

ETHN 1000 Introduction to American/Ethnic Studies 1
Any two courses from the ETHN 1200 "Topics in Ethnic Studies" 2
or ETHN 1750 "Advanced Topics in Ethnic Studies" sequence, or
similar electives in AMST, as approved by the advisor
ETHN 1200B Contemporary Indigenous Education in North America
ETHN 1200D Latinx Literature
ETHN 1750A Immigrant Social Movements: Bridging Theory and Practice
ETHN 1750B Treaty Rights and Food Fights: Eating Local in Indian Country
ETHN 1750D Transpacific Asian American Studies
ETHN 1750E Transpacific Popular Culture

Four courses (at least two in ETHN) that address the student's focus area and that prepare them for the capstone experience. Courses must be approved by the concentration advisor.
ETHN 1650 Methods and Approaches in Ethnic Studies 1
American Studies seminar in the AMST 1700 series 1
AMST 1700D Race and Remembering
AMST 1700F American Publics
AMST 1700I Community Engagement with Health and the Environment
AMST 1700K Race in the Americas: A Hemispheric Perspective
ETHN 1900 Ethnic Studies Senior Seminar 1

Total Credits 10

Honors:

Admittance to the Honors Program in Ethnic Studies requires:
1. A 3.5 GPA in concentration courses
2. A 3.0 overall GPA
3. Completion of the standard concentration
4. AMST/ETHN 1800 the Honors Seminar in the sixth semester
5. An Honors Thesis Proposal and an application for the Ethnic Studies Honors Program
6. Two independent studies, taken in the seventh and eighth semester, with the Director of your honors thesis
7. A completed project, delivered the third week of April.
8. A recommendation for honors from both readers.

Students must define their honors project by April 1 or near the end of their sixth semester. The proposal is comprised of a two-page, single-paced project description along with a bibliography of relevant sources. This proposal must be submitted for approval to the faculty along with the application for the Ethnic Studies Honors Program form. The proposal should identify the problem, or question the student will focus on, and suggest approaches and possible hypotheses or outcomes. Students need to work with two professors - a director and a reader. At least one should be Ethnic Studies faculty. The proposal should name a confirmed director (who must sign your application form) and likely second reader (who will need to confirm at the beginning of your seventh semester). If a student wants to work with two professors, neither of whom is Ethnic Studies faculty, then they should have a third reader who will read the final draft or consult on the final project and approve it for honors in the field.

In their seventh and eight semesters, students seeking honors will enroll in an independent study class with their director during which they will follow through on the plan devised in the spring of their junior year. Students and thesis directors should plan on at least a monthly meeting to discuss the research, writing, and revision of sections of the thesis. In addition to meeting with their director, student should also plan to meet their second reader during this time.

In their eighth semester, the deadline for a finished full draft of their project is April 21. Students should turn in a completed (proofread, formatted, fully written) draft to their readers by that day. Of course, students will turn chapters to the director and reader before that, according to their recommendations, but April 21 is the absolute deadline to turn in the final draft.

All official readers must recommend the project for honors. When written as formal research papers, honors theses are generally between 50-100 pages. When there is a creative or public component, students should work closely with their faculty team to determine the appropriate length of the written accompaniment.

Students will make a public presentation of their work to the Ethnic Studies faculty during the first week of May.

Requirements (for students through the class of 2019):

ETHN 0500 Introduction to American/Ethnic Studies 1
Any two introductory courses in Latina/o, Africana, Asian-American, or Native American Studies. The courses in the list below are examples of these courses. Other courses may be approved by the Advisor.
AFRI 0090 An Introduction to Africana Studies
A course from the AMST 1610 series, as approved by the concentration advisor
ANTH 1121 From Coyote to Casinos: Native North American Peoples and Cultures
SOC 1270 Race, Class, and Ethnicity in the Modern World
ANTH 1400 Race, Culture, and Ethnic Politics or ANTH 1420 Ethnicity, Race, and Gender in the Americas

Courses taught by core Ethnic Studies faculty may be recognized in consultation with concentration advisor.

Any three courses in Ethnic Studies that address the student's focus area (as approved by the concentration advisor), for example:

ETHN 0090A The Border/La Frontera
ETHN 0090B Critical Mixed Race Studies in the Twenty-First Century
ETHN 0300 Ethnic Writing
ETHN 0790A Latina/o Literature
ETHN 0790B Native Americans and the Media
ETHN 0790C Theory Into Practice: Service Learning at a Dual Language Charter School
ETHN 0790D Race and Remembering
ETHN 0880 Hip Hop Music and Cultures
ETHN 0980 The Research Process: Qualitative and Ethnographic Methods
ETHN 1020 Race and Language in the United States
ETHN 1050 Race in the Americas
ETHN 1750A Immigrant Social Movements: Bridging Theory and Practice
ETHN 1870A Ethnic Los Angeles
ETHN 1870B Latino/a Communities Seminar
ETHN 1870C Native North Americans in the Media: Representations and Self Representations in Film
ETHN 1870D Chicana/o Fiction
ETHN 1870E Queer Latina/o Literature and Theory
ETHN 1870F Eating Cultures
ETHN 1870G Reading Race: Advanced Seminar in Critical Race Theory

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
The concentration in French and Francophone Studies is committed to the pursuit of an interdisciplinary, linguistically rigorous, and textually informed understanding of French and Francophone literatures and cultures. Concentrators engage actively through their coursework with a wide range of texts and critical perspectives, pertaining to multiple literary genres, media, and contexts. They have opportunities to study different periods of French history as well as Francophone cultures beyond France. By the time they graduate, concentrators will have learned to read with knowledge and nuance and produced a varied body of critical work in French.

The concentration in French and Francophone Studies is committed to the study of the language, literature, and cultural and critical traditions of the French-speaking world. Concentrators engage actively through their coursework with a wide range of texts and critical perspectives, and multiple literary genres and media (the novel; theater; poetry; cinema; critical theory; special topics in contemporary politics and culture). They have opportunities to study different periods of French literature and intellectual history (from the Renaissance to the present) as well as Francophone cultures beyond France (West Africa, the Maghreb and the Caribbean). Courses cover a wide diversity of topics, while placing a shared emphasis on language-specific study, critical writing skills, and the vital place of literature and art for intellectual inquiry.

The concentration program is designed to encourage and support language-specific study. Literary texts and cultural documents are read principally in the original. Likewise, in most courses, French is the language of class discussions, presentations, and research/critical papers. Concentrators in French and Francophone Studies are strongly encouraged to spend one or two semesters (usually in their junior year) in France or in a Francophone country to derive the richest benefits of linguistic and cultural immersion. Information on Brown in France and approved alternative programs in French-speaking countries is available from the Office of International Programs (http://www.brown.edu/Office_of_International_Programs) or the OIP website. Other summer programs can be found on the French Embassy website. Students who have an outstanding record in their concentration courses, have completed at least six concentration courses by the first semester of their senior year, and are highly recommended by two professors, are eligible for admission to the Honors program (http://www.brown.edu/academics/french-studies/undergraduate/honors-program).

Concentration Requirements
A minimum of 10 courses is required for the concentration in French and Francophone Studies. Concentrators must observe following guidelines when planning their concentration. It is recommended that course choices for each semester be discussed with the department's concentration advisor.

**Note:** A maximum of four courses taken during a single semester (and a maximum of five courses from an entire year) in France or a Francophone country may count toward the concentration. Our concentrators are strongly encouraged to spend significant time in France or in a Francophone country to derive the richest benefits of linguistic and cultural immersion. Through the Brown-in-France program administered by OIP and departmental faculty, students can enroll directly in French institutions.

**FREN 0600** Writing and Speaking French II (is accepted for concentration credit)

**Required Courses**
One (and no more than two) of the following 0720, 820, 1010 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>FREN 0720A</td>
<td>De l'Amour courtois au désir postmoderne</td>
</tr>
<tr>
<td>FREN 0720B</td>
<td>The French Novel Today</td>
</tr>
<tr>
<td>FREN 0820A</td>
<td>Identité et différence dans le monde francophone</td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://courses.brown.edu).
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 and supplements it with foundational courses in the relevant disciplines. Typical areas of focus include the acculturation of gender, sexuality and race in American politics or activism, the construction of sexual and gendered identities in educational institutions or in various forms of visual media, a contrast between different cultural understandings of sexual identity, a particular national literature and history. Such topics will frequently bring questions of gender and sexuality together; however students may also organize their concentrations to emphasize questions specifically related to gender or to sexuality. Introductory and methodology courses in the disciplines appropriate to students’ focus will help them understand the principles grounding such practices as historical research, literary interpretation, and sociological analysis.

Requirements:

The concentration requires 10 courses, 12 for honors concentrators. No more than two courses may count for multiple concentrations.

1. GNSS 0120. Introductory course on gender and sexuality across the disciplines
2. Four–course focus on some thematic, theoretical, or historical aspect of gender and sexuality
3. Two introductory or methodology courses in disciplines pertinent to the focus
4. One course in gender history, women's history, or history of sexuality
5. One course in feminist theory or theory of sexuality
6. GNSS 1990. A senior seminar which counts as your capstone course. Senior seminar participants are expected to write a research essay. The senior seminar fulfills the second half of Brown's writing requirement.
7. Prior to Commencement, all graduating senior concentrators are required to give a short presentation of either their senior essay or thesis project.

Honors

Candidates for honors must apply to the program’s director at the beginning of their seventh semester. Honors concentrators fulfill the regular requirements plus completing a two–semester thesis as their capstone project.

For up-to-date course information please visit Courses@Brown.edu (https://cabo.brown.edu).
For more information, including current cross-listed courses and sample concentration plans, please consult the GNSS concentration webpage (http://www.brown.edu/research/pembroke-center/gender-and-sexuality-studies/undergraduate-concentration-gender-sexuality-studies) at h (http://www.brown.edu/research/pembroke-center/gender-and-sexuality-studies/undergraduate-concentration-gender-sexuality-studies) at


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>
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<tbody>
<tr>
<td>CHEM 0330</td>
<td>Equilibrium, Rate, and Structure (or advanced placement)</td>
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<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 (or more advanced)</td>
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<tr>
<td>PHYS 0050</td>
<td>Foundations of Mechanics</td>
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<tr>
<td>PHYS 0060</td>
<td>Foundations of Electromagnetism and Modern Physics (or more advanced)</td>
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<td>ENGN 0030</td>
<td>Introduction to Engineering</td>
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<tr>
<td>ENGN 0040</td>
<td>Dynamics and Vibrations (or more advanced)</td>
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</tr>
<tr>
<td>BIOL 0200</td>
<td>The Foundation of Living Systems (or more advanced)</td>
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Concentration courses

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<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td>GEOL 0220</td>
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<tr>
<td>GEOL 0230</td>
<td>Geochemistry: Earth and Planetary Materials and Processes</td>
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<tr>
<td>GEOL 0240</td>
<td>Earth: Evolution of a Habitable Planet</td>
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<td>Select two of the following:</td>
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<tr>
<td>GEOL 1410</td>
<td>Mineralogy</td>
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<td>GEOL 1420</td>
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<tr>
<td>GEOL 0310</td>
<td>Fossil Record</td>
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<tr>
<td>GEOL 1110</td>
<td>Estuarine Oceanography</td>
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</tr>
<tr>
<td>GEOL 1240</td>
<td>Stratigraphy and Sedimentation</td>
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<td>GEOL 1330</td>
<td>Global Environmental Remote Sensing</td>
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<td>GEOL 1370</td>
<td>Environmental Geochemistry</td>
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<td>Select two of the following:</td>
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<td>GEOL 1370</td>
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<td>GEOL 1450</td>
<td>Structural Geology</td>
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<td>Select one of the following Series:</td>
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<tr>
<td>PHYS 0050 &amp; PHYS 0060</td>
<td>Foundations of Mechanics and Modern Physics (or more advanced)</td>
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<tr>
<td>ENGN 0030 &amp; ENGN 0040</td>
<td>Introduction to Engineering and Dynamics and Vibrations (or more advanced)</td>
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</table>

Total Credits 19

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

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<thead>
<tr>
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<th>Credits</th>
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<tr>
<td>MATH 0100</td>
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<td>or another more advanced math or statistics course</td>
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<tr>
<td>CHEM 0330</td>
<td>Equilibrium, Rate, and Structure (or advanced placement)</td>
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Select one of the following Series: 2

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<td>PHYS 0050 &amp; PHYS 0060</td>
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<td>ENGN 0030 &amp; ENGN 0040</td>
<td>Introduction to Engineering and Dynamics and Vibrations (or more advanced)</td>
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Concentration courses

<table>
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<td>GEOL 0240</td>
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<td>GEOL 0310</td>
<td>Fossil Record</td>
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<td>Stratigraphy and Sedimentation</td>
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<tr>
<td>GEOL 1410</td>
<td>Mineralogy</td>
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<tr>
<td>GEOL 1420</td>
<td>Petrology</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 1450</td>
<td>Structural Geology</td>
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</tr>
</tbody>
</table>

A field course, or approved substitute 1

Select four courses from upper level geological sciences, mathematics, or supporting sciences with approval from the departmental concentration advisor. 4

<table>
<thead>
<tr>
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<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>GEOL 1970</td>
<td>Individual Study of Geologic Problems (Senior Research Thesis)</td>
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</table>

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 paleobiology.

**Basic supporting science courses**

- **BIOL 0200** The Foundation of Living Systems (or more advanced)  1
- **CHEM 0330** Equilibrium, Rate, and Structure (or advanced placement)  1

Select two courses in mathematics and/or physics at the level of:

- **MATH 0090** Introductory Calculus, Part I (or more advanced)  2
- **PHYS 0050** Foundations of Mechanics (or more advanced)  1
- **ENGN 0030** Introduction to Engineering (or more advanced, or courses in data analysis and statistics)  1

**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

Select three Biology courses from the following:

- **BIOL 0390** Vertebrate Evolution and Diversity  3
- **BIOL 0410** Vertebrate Zoology  1
- **BIOL 0415** Microbes in the Environment  1
- **BIOL 0420** Principles of Ecology  1
- **BIOL 0430** The Evolution of Plant Diversity  1
- **BIOL 0440** Inquiry in Plant Biology: Analysis of Plant Growth, Reproduction and Adaptive Responses  1
- **BIOL 0480** Evolutionary Biology  1
- **BIOL 1470** Conservation Biology  1
- **BIOL 1480** Terrestrial Biogeochemistry and the Functioning of Ecosystems  1
- **BIOL 1500** Plant Physiological Ecology  1
- **BIOL 1880** Comparative Biology of the Vertebrates  1

Three geological sciences courses from the following:

- **GEOL 0580** Foundations of Physical Hydrology  3
- **GEOL 1110** Estuarine Oceanography  1
- **GEOL 1120** Paleoceanography  1
- **GEOL 1130** Ocean Biogeochemical Cycles  1
- **GEOL 1150** Limnology: The Study of Lakes  1
- **GEOL 1330** Global Environmental Remote Sensing  1
- **GEOL 1370** Environmental Geochemistry  1
- **GEOL 1380** Environmental Stable Isotopes  1
- **GEOL 1510** Introduction to Atmospheric Dynamics  1

**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
- **BIOL 0390** Vertebrate Evolution and Diversity  3
- **BIOL 0410** Vertebrate Zoology  1
- **BIOL 0415** Microbes in the Environment  1
- **BIOL 0420** Principles of Ecology  1
- **BIOL 0430** The Evolution of Plant Diversity  1
- **BIOL 0440** Inquiry in Plant Biology: Analysis of Plant Growth, Reproduction and Adaptive Responses  1
- **BIOL 0480** Evolutionary Biology  1
- **BIOL 1470** Conservation Biology  1
- **BIOL 1480** Terrestrial Biogeochemistry and the Functioning of Ecosystems  1
- **BIOL 1500** Plant Physiological Ecology  1
- **BIOL 1880** Comparative Biology of the Vertebrates  1

Three geological sciences courses from the following:

- **GEOL 0580** Foundations of Physical Hydrology  3
- **GEOL 1110** Estuarine Oceanography  1
- **GEOL 1120** Paleoceanography  1
- **GEOL 1130** Ocean Biogeochemical Cycles  1
- **GEOL 1150** Limnology: The Study of Lakes  1
- **GEOL 1330** Global Environmental Remote Sensing  1
- **GEOL 1370** Environmental Geochemistry  1
- **GEOL 1380** Environmental Stable Isotopes  1
- **GEOL 1510** Introduction to Atmospheric Dynamics  1

Three additional courses from upper level geological sciences, mathematics, or supporting sciences with approval from the concentration advisor

- **GEOL 1970** Individual Study of Geologic Problems (Senior Research Thesis)  3

**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.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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:  

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0090</td>
<td>2</td>
</tr>
<tr>
<td>MATH 0100</td>
<td>2</td>
</tr>
</tbody>
</table>

CHEM 0330  

Equilibrium, Rate, and Structure  

1

PHYS 0050  

Foundations of Mechanics (or a more advanced course, or advanced placement.)  

1

or ENGN 0030  

Introduction to Engineering

**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  

3

Select one of the following Series:  

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 1410</td>
<td>2</td>
</tr>
<tr>
<td>&amp; GEOL 1420</td>
<td></td>
</tr>
</tbody>
</table>

GEOL 1130  

Ocean Biogeochemical Cycles  

2

& GEOL 1370  

and Environmental Geochemistry

Total Credits  

14

**Standard program for the Sc.B. degree**

This program is recommended for students interested in graduate study and careers in geochemistry and related fields.

**Basic Supporting Science Courses:**

Select two courses in mathematics at the level of:  

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>MATH 0100</td>
<td>2</td>
</tr>
</tbody>
</table>

CHEM 0330  

Equilibrium, Rate, and Structure  

1

Select one of the following series:  

<table>
<thead>
<tr>
<th>Course</th>
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</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0050</td>
<td>2</td>
</tr>
<tr>
<td>&amp; PHYS 0060</td>
<td></td>
</tr>
</tbody>
</table>

ENGN 0030  

Introduction to Engineering and Dynamics and Vibrations  

2

or a more advanced course

**Concentration Courses:**

Either the geochemistry/inorganic option or the geochemistry/organic option:  

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 0220</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 0230</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 0240</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 1130</td>
<td>1</td>
</tr>
<tr>
<td>or GEOL 1370</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 1410</td>
<td>1</td>
</tr>
</tbody>
</table>

Plus one from:  

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 1240</td>
<td>1</td>
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<tr>
<td>GEOL 1330</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 1380</td>
<td>1</td>
</tr>
</tbody>
</table>

Three from:  

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 0350</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 0500</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 1060</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 1140</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 1150</td>
<td>1</td>
</tr>
</tbody>
</table>

**Geochemistry/Organic Option:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 1240</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 1330</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 1380</td>
<td>1</td>
</tr>
</tbody>
</table>

Plus one from:  

<table>
<thead>
<tr>
<th>Course</th>
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</tr>
</thead>
<tbody>
<tr>
<td>CHEM 0350</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 0500</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 0560</td>
<td>1</td>
</tr>
</tbody>
</table>

Three additional courses from upper level geological sciences, math, or supporting sciences with approval of the departmental concentration advisor.  

Total Credits  

19

1. Advanced placement may be substituted for the first semester of physics.

**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 3 math and applied courses; students can choose courses from both solid Earth geophysics and climate science themes. 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, modeling the effects of the warming climate in the oceans and atmosphere, and remote sensing of how climate change affects vegetation.

**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 processes affecting planets, Earth, and the environment and how they are modeled. Some course requirements may be flexible based on consultation with concentration advisor.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course 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 0250</td>
<td>Computational Approaches to Modelling and Quantitative Analysis in Natural Sciences: An Introduction</td>
<td>1</td>
</tr>
<tr>
<td>or GEOL 0350</td>
<td>Mathematical Methods of Fluid and Solid Geophysics and Geology</td>
<td></td>
</tr>
</tbody>
</table>

Four theme courses (choose either the Solid Earth Geophysics Theme or the Climate Science Theme):

**Solid Earth Geophysics Theme**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 0230</td>
<td>Geochemistry: Earth and Planetary Materials and Processes (solid Earth geophysics theme)</td>
<td></td>
</tr>
<tr>
<td>GEOL 1610</td>
<td>Solid Earth Geophysics (solid Earth geophysics theme)</td>
<td></td>
</tr>
</tbody>
</table>

And select two of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 1410</td>
<td>Mineralogy (solid Earth geophysics theme)</td>
<td></td>
</tr>
<tr>
<td>GEOL 1420</td>
<td>Petrology</td>
<td></td>
</tr>
<tr>
<td>GEOL 1450</td>
<td>Structural Geology (solid Earth geophysics theme)</td>
<td></td>
</tr>
<tr>
<td>GEOL 1620</td>
<td>Continuum Physics of the Solid Earth (solid Earth geophysics theme)</td>
<td></td>
</tr>
</tbody>
</table>

**Climate Science Theme**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 0240</td>
<td>Earth: Evolution of a Habitable Planet (climate science theme)</td>
<td></td>
</tr>
<tr>
<td>GEOL 1350</td>
<td>Weather and Climate</td>
<td></td>
</tr>
</tbody>
</table>

And select two from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 1130</td>
<td>Ocean Biogeochemical Cycles (climate science theme)</td>
<td></td>
</tr>
<tr>
<td>GEOL 1310</td>
<td>Global Water Cycle (climate science theme)</td>
<td></td>
</tr>
<tr>
<td>GEOL 1430</td>
<td>Principles of Planetary Climate (climate science theme)</td>
<td></td>
</tr>
<tr>
<td>GEOL 1510</td>
<td>Introduction to Atmospheric Dynamics (climate science theme))</td>
<td></td>
</tr>
<tr>
<td>GEOL 1520</td>
<td>Ocean Circulation and Climate</td>
<td></td>
</tr>
</tbody>
</table>

Choose one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0050</td>
<td>Foundations of Mechanics</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 0070</td>
<td>Analytical Mechanics</td>
<td></td>
</tr>
<tr>
<td>ENGN 0040</td>
<td>Dynamics and Vibrations</td>
<td></td>
</tr>
</tbody>
</table>

Choose one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course 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>ENGN 0310</td>
<td>Mechanics of Solids and Structures</td>
<td></td>
</tr>
<tr>
<td>ENGN 0810</td>
<td>Fluid Mechanics</td>
<td></td>
</tr>
</tbody>
</table>

Choose one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0470</td>
<td>Electricity and Magnetism</td>
<td></td>
</tr>
<tr>
<td>PHYS 0500</td>
<td>Advanced Classical Mechanics</td>
<td></td>
</tr>
<tr>
<td>PHYS 1600</td>
<td>Computational Physics</td>
<td></td>
</tr>
<tr>
<td>ENGN 0510</td>
<td>Electricity and Magnetism</td>
<td></td>
</tr>
<tr>
<td>ENGN 0810</td>
<td>Fluid Mechanics</td>
<td></td>
</tr>
</tbody>
</table>

Three courses in Mathematics, including:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>APMA 0330</td>
<td>Methods of Applied Mathematics I, II</td>
<td>3</td>
</tr>
<tr>
<td>or APMA 0340</td>
<td>Methods of Applied Mathematics I, II</td>
<td></td>
</tr>
<tr>
<td>CHEM 0330</td>
<td>Equilibrium, Rate, and Structure (or advanced placement)</td>
<td>1</td>
</tr>
</tbody>
</table>

One additional course from upper level geological sciences, mathematics, or supporting sciences with approval from the departmental concentration advisor. | 1 |

Total Credits: 14

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**Standard program for the Sc.B. degree**

This program is recommended for students interested in graduate study and careers in geophysics, climate science and related fields. Students will be prepared to understand and use models, make measurements, and use theories of the processes studied in these fields. Some course requirements may be flexible based on consultation with concentration advisor.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 0220</td>
<td>Physical Processes in Geology</td>
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<tr>
<td>GEOL 1430</td>
<td>Principles of Planetary Climate</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 1610</td>
<td>Solid Earth Geophysics</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 0250</td>
<td>Computational Approaches to Modelling and Quantitative Analysis in Natural Sciences: An Introduction</td>
<td>1</td>
</tr>
<tr>
<td>or GEOL 0350</td>
<td>Mathematical Methods of Fluid and Solid Geophysics and Geology</td>
<td></td>
</tr>
</tbody>
</table>

Five theme courses (choose either the Solid Earth Geophysics theme or the Climate Science Theme):

**Solid Earth Geophysics Theme**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 0230</td>
<td>Geochemistry: Earth and Planetary Materials and Processes (solid Earth geophysics theme)</td>
<td></td>
</tr>
<tr>
<td>GEOL 0250</td>
<td>Computational Approaches to Modelling and Quantitative Analysis in Natural Sciences: An Introduction</td>
<td></td>
</tr>
</tbody>
</table>

**Climate Science Theme**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 0240</td>
<td>Earth: Evolution of a Habitable Planet (climate science theme)</td>
<td></td>
</tr>
<tr>
<td>GEOL 1510</td>
<td>Introduction to Atmospheric Dynamics (climate science theme))</td>
<td></td>
</tr>
</tbody>
</table>

And choose two of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>GEOL 1410</td>
<td>Mineralogy (solid Earth geophysics theme)</td>
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<td>Petrology</td>
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<tr>
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<tr>
<td>GEOL 1520</td>
<td>Continuum Physics of the Solid Earth (solid Earth geophysics theme)</td>
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</table>

Choose one:

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<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PHYS 0470</td>
<td>Electricity and Magnetism</td>
<td></td>
</tr>
<tr>
<td>PHYS 1600</td>
<td>Computational Physics</td>
<td></td>
</tr>
<tr>
<td>PHYS 1630</td>
<td>General Physics</td>
<td></td>
</tr>
<tr>
<td>PHYS 0510</td>
<td>Advanced Classical Mechanics</td>
<td></td>
</tr>
<tr>
<td>ENGN 0040</td>
<td>Dynamics and Vibrations</td>
<td></td>
</tr>
<tr>
<td>ENGN 0040</td>
<td>Fluid Mechanics</td>
<td></td>
</tr>
</tbody>
</table>

Three courses in Mathematics, including:

<table>
<thead>
<tr>
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<th>Credits</th>
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</thead>
<tbody>
<tr>
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<tr>
<td>CHEM 0330</td>
<td>Equilibrium, Rate, and Structure (or advanced placement)</td>
<td>1</td>
</tr>
</tbody>
</table>

One additional course from upper level geological sciences, mathematics, or supporting sciences with approval from the departmental concentration advisor. | 1 |

Total Credits: 14

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For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
German Studies

German Studies exposes students to the language, literature, and culture of the German speaking areas of Central Europe. Concentrators combine intensive study of the German language with interdisciplinary studies by complementing courses from the German Studies core program with courses from other departments that deal with topics from the German cultural tradition. The quest for national identity that dominated German history in the nineteenth and twentieth centuries has been augmented by contemporary Germany’s efforts to come to terms with its past and create new ways of dealing with diversity. Our curriculum therefore looks back at the German literary, cultural, and historical tradition, examining figures from Goethe or Christa Wolf to Marx, Freud, Nietzsche, and Heidegger, alongside the “texts” of contemporary German media, including television, film, and music. Most concentrators study abroad for one or two semesters. *In spring 2017, Professor Jane Sokolosky will serve as concentration advisor. Professor Kristina Mendicino will return as concentration advisor in fall 2017.*

**Standard program for the A.B. degree**

Many students elect to complete a double concentration, combining German Studies with one of the above areas, or with fields such as International Relations or Economics, Comparative Literature or History of Art and Architecture.

Knowledge of the German language is not required for declaring a concentration in German Studies. However, since language fluency is the basis for sophisticated understanding of German culture, students must meet a language requirement by the time they graduate.

**Concentration Requirements**

- Nine courses beyond GRMN 0400 or GRMN 0450;
- At least six of the nine courses must be at the 1000-level (or higher);
- Two of the 1000-level courses must involve 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 1000-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.

**Health & Human Biology**

Health and Human Biology is an interdisciplinary concentration that provides 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, 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, which is comprised of a flexible menu of intermediate and advanced courses. A required portion of the Biology core is Genetics, a cornerstone of human biology and its interface with other fields. The Biology core underscores the related coursework within the Health and Disease Theme. The Theme courses are social science and humanities courses that form a cohesive, thoughtful grouping. Theme groupings must be approved by the advisor. A required senior capstone course or activity builds on the program’s focus.

**Program Requirements**

**REQUIRED BACKGROUND:**

<table>
<thead>
<tr>
<th>Four (4) courses including:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0090</td>
<td>Introductory Calculus, Part I (or equivalent placement)</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>MATH 0050 &amp; MATH 0060</td>
<td>Analytic Geometry and Calculus &amp; Analytic Geometry and Calculus</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>MATH 0100</td>
<td>Introductory Calculus, Part II or MATH 0170</td>
</tr>
<tr>
<td>CHEM 0330</td>
<td>Equilibrium, Rate, and Structure</td>
</tr>
<tr>
<td>BIOL 0200</td>
<td>The Foundation of Living Systems</td>
</tr>
<tr>
<td>Statistics course chosen with advisor's help.</td>
<td>1</td>
</tr>
</tbody>
</table>

**CORE PROGRAM:**

In addition to the stated background in Chemistry, Math, Biology and Statistics, five (5) Biology plus four (4) coherently-grouped Theme courses, plus a Senior-Year Capstone course or project. (See description of Capstone at link below this table).

**BIOLOGY:**

<table>
<thead>
<tr>
<th>Five (5) courses, including:</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Genetics, which can be fulfilled in the following ways:</td>
<td></td>
</tr>
<tr>
<td>BIOL 0470</td>
<td>Genetics</td>
</tr>
<tr>
<td>-OR-</td>
<td></td>
</tr>
<tr>
<td>BIOL 0480</td>
<td>Evolutionary Biology</td>
</tr>
<tr>
<td>&amp; BIOL 0500</td>
<td>and Cell and Molecular Biology</td>
</tr>
<tr>
<td>-OR-</td>
<td></td>
</tr>
<tr>
<td>BIOL 0480</td>
<td>Evolutionary Biology</td>
</tr>
<tr>
<td>&amp; BIOL 0510</td>
<td>and Introductory Microbiology</td>
</tr>
<tr>
<td>-OR-</td>
<td></td>
</tr>
<tr>
<td>BIOL 0480</td>
<td>Evolutionary Biology</td>
</tr>
<tr>
<td>&amp; BIOL 0280</td>
<td>and Biochemistry</td>
</tr>
<tr>
<td>Select one course in structure/function/development such as:</td>
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<tr>
<td>BIOL 0400</td>
<td>Biological Design: Structural Architecture of Organisms</td>
</tr>
<tr>
<td>BIOL 0800</td>
<td>Principles of Physiology</td>
</tr>
<tr>
<td>BIOL 1310</td>
<td>Developmental Biology</td>
</tr>
<tr>
<td>BIOL 1800</td>
<td>Animal Locomotion</td>
</tr>
<tr>
<td>BIOL 1880</td>
<td>Comparative Biology of the Vertebrates</td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
NEUR 0010 The Brain: An Introduction to Neuroscience

One course in organismal/population biology such as:
BIOL 0380 The Ecology and Evolution of Infectious Disease
BIOL 0410 Invertebrate Zoology
BIOL 0420 Principles of Ecology
BIOL 0480 Evolutionary Biology
BIOL 1470 Conservation Biology
BIOL 1880 Comparative Biology of the Vertebrates
ENVS 0490 Environmental Science in a Changing World

Or a course from the NEUR 1940 series

Two Biology or Neuroscience courses. At least one must be at the advanced level.

THEME: With the advisor's assistance, a theme is chosen and a cohesive set of courses are selected from outside of Biology. See Notes below:

SENIOR CAPSTONE ACTIVITY: Must be conducted during the senior year, fulfilled by one of the following, and related to the student's chosen theme:

1) Advisor approved senior seminar or advanced course related to the theme
2) One semester of independent research/independent study
3) An appropriate internship with a scholarly context can be used if coupled with a semester of independent study mentored by a Brown faculty member.

Total Credits 14

THEME:
• Approved courses must be above the introductory level and at least one must be 1000-level or above.
• No more than TWO courses from a given department may be included in the theme portion.
• NOTE: Beginning with the Class of 2020: Health Systems, Structure and Policy and Women's/Children Health will be eliminated.
• Students will then select from FOUR theme options: 1) Health Behavior, 2) Environmental Health, 3) Global/International Health, 4) Social Context of Health and Disease.


HONORS: See more information about Honors at http://www.brown.edu/academics/biology/undergraduate-education/.

Hispanic Literatures and Culture

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 Spanish language program offers a sequence of courses ranging from basic to advanced. Students at all levels develop proficiency in speaking, listening, reading, and writing while also studying the cultures and societies of the contemporary Spanish-speaking world. The Hispanic Literatures and Culture 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 contact; 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 concentration requires a minimum of ten courses. 700-level courses provide fundamental tools for critical analysis and opportunities for developing advanced skills in the Spanish language. In courses at the 1000 level, students explore particular authors, genres, periods, or special topics and continue to hone their skills in literary and cultural analysis.

Prerequisite
Between one and three 700-level courses in Hispanic Studies, including at least one of:
HISP 0730 Encounters: Latin America in Its Literature and Culture
HISP 0740 Intensive Survey of Spanish Literature
HISP 0760 Transatlantic Crossings: Readings in Hispanic Literatures

Remaining Courses
Select at least three 1000-level courses in Hispanic Studies at Brown. These provide more specialized preparation in major areas of Hispanic Studies, including works and topics from across the centuries and pertaining to both Spain and Latin America. Concentrators must take at least six courses (at either the 0700 or 1000 level, with a maximum of three 0700 level courses) in Hispanic Studies at Brown, including one with the WRIT designation.

Concentrators may apply up to four related courses from Study Abroad, transfer credit, and other departments at Brown (e.g., Comparative Literature, History, Ethnic Studies, Anthropology) toward the concentration in Hispanic Studies as long as they deal with Spanish or Latin American themes and/or Peninsular or Latin American culture. Any courses outside the Department of Hispanic Studies must be approved by the Concentration Advisor on a case by case basis. Please note that a maximum of two courses for the concentration can be taken in English, and one course can be taken S/NC.

Students planning to pursue honors in the concentration must take all courses for a grade.

Total Credits = 10

E-Portfolio: As their capstone work, all Hispanic Studies concentrators must complete an E-Portfolio in ASK in their last year of studies. We encourage you to share your written work, your projects, and your reflections on concentration-related experiences (study abroad, community work, internships, etc.) with the wider public at Brown and beyond, but only as you see fit.

Honors Thesis or Project
Students with an excellent record in their Hispanic Studies courses will be eligible to write an Honors Thesis or write and produce an Honors Project. Typically the Honors Thesis is a major research paper of approximately 40 to 80 pages in Spanish, depending on the topic and treatment necessary. Alternatively, a student may, with prior permission of the Hispanic Studies Concentration Advisor, present a film, gallery exhibition, or other appropriate project, together with a paper that clearly demonstrates the academic foundations and relevance of the project. For additional details regarding Honors Thesis in Hispanic Studies, please refer to our website or consult with the Concentration Advisor.

Concentration Advisor:
Silvia Sobral

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
Concentration Requirements

Basic requirement: A minimum of 10 courses, at least 8 of which must be courses taught by a Brown University History Department faculty member (https://www.brown.edu/academics/history/faculty) (including their cross-listed courses) and/or courses offered by the Brown History Department (such as those taught by Visiting or Adjunct Professors). Transfer students or study-abroad students who have spent a year or more at another institution must have at least 7 of 10 history courses taught by Brown History faculty or otherwise offered through the Brown History Department.

Summary

Courses in the "Premodern" era (P) 2
2 Courses in 3 different geographic regions 6
Field of focus 4
Capstone Seminar 1
Any combination of courses that fulfill the four requirements above for a total number of 10 courses" 3
Honors (optional) 3 additional courses related to writing a thesis (one of which, HIST 1992, can count towards your 10 concentration requirements)

Courses below 1000: Students may count no more than four courses numbered below 1000 toward the concentration requirements. Students considering a concentration in History are encouraged to take First Year and Sophomore seminars, as well as courses in the HIST 0150 and 0200 series, for an introduction to historical reasoning, discussion, and writing.

Field of focus: In History, concentrators choose or create their own "track," rather than having to select an existing track. The field of focus must include a minimum of four courses, and it may be: geographical (such as Latin America; geographical and chronological [such as Modern North America]; or transnational [such as ancient world]; or thematic [such as urban history]). Students who choose North America or Europe must also choose a chronological focus (i.e. Early Modern Europe. Fields in Latin America, Africa, East Asia, or Middle East/South Asia do not require a chronological definition. All students should consult a concentration advisor early in the process about their potential field of focus. All fields are subject to approval by the concentration advisor.

Thematic fields of focus include but are not restricted to:
- Comparative Colonialism
- Gender and Sexuality
- Law and Society
- Race and Ethnicity
- Science, Technology, Environment and Medicine (STEAM)
- Urban History

Examples of transnational foci include:
- The Ancient World
- The Early Modern Atlantic World
- Africa and the Diaspora
- The Mediterranean World from Antiquity to the Middle Ages
- The Pacific World

Geographic Distribution: Concentrators must take at least two courses in three of the following geographic areas:
- Africa
- East Asia
- Europe
- Global
- Latin America and the Caribbean
- Middle East and South Asia
- North America

“Global” courses are defined as those that deal with at least three different regions of the world.

For details on which courses count toward which geographical distribution requirement click here (https://docs.google.com/spreadsheets/d/1NT5fzAqJxDcIVZxTdsdceSnMD5v28ke6550tnBmE/edit?gid=2138711521).

Chronological Distribution: All concentrators must complete at least two courses designated as “P” (for pre-modern). For a listing of which courses count as “P” courses click here

Capstone Seminar: All concentrators must complete at least one capstone seminar (HIST 1960s and HIST 1970s series and select HIST 1980s courses). These seminars are designed to serve as an intellectual culmination of the concentration. They provide students with an opportunity to delve deeply 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.

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 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.

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. History courses taught by trained historians from other institutions (e.g., from study abroad or a previous institution) may be applied toward the chronological distribution requirement so long as at least 2/3 of the course content examine the "premodern" or "early modern" periods.

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 and then get approval from a concentration advisor.

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.

COURSES BELOW 1000

LECTURE COURSES

150’s: Thematic Courses that Cut Across Time and Place

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>HIST 0150A</td>
<td>History of Capitalism</td>
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<tr>
<td>HIST 0150B</td>
<td>The Philosophers’ Stone: Alchemy From Antiquity to Harry Potter</td>
</tr>
<tr>
<td>HIST 0150C</td>
<td>Locked Up: A Global History of Prison and Captivity</td>
</tr>
<tr>
<td>HIST 0150D</td>
<td>Refugees: A Twentieth-Century History</td>
</tr>
<tr>
<td>HIST 0150F</td>
<td>Pirates</td>
</tr>
<tr>
<td>HIST 0150G</td>
<td>History of Law: Great Trials</td>
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</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
## Gateway Lecture Courses

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>HIST 0202</td>
<td>African Experiences of Empire</td>
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<tr>
<td>HIST 0203</td>
<td>Modern Africa: From Empire to Nation-State</td>
</tr>
<tr>
<td>HIST 0212</td>
<td>Histories of East Asia: China</td>
</tr>
<tr>
<td>HIST 0214</td>
<td>Histories of East Asia: Japan</td>
</tr>
<tr>
<td>HIST 0215</td>
<td>Modern Korea: Contending with Modernity</td>
</tr>
<tr>
<td>HIST 0218</td>
<td>The Making of Modern East Asia</td>
</tr>
<tr>
<td>HIST 0228A</td>
<td>War and Peace in Modern Europe</td>
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<tr>
<td>HIST 0232</td>
<td>Clash of Empires in Latin America</td>
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<tr>
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<td>Colonial Latin America</td>
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<tr>
<td>HIST 0234</td>
<td>Modern Latin America</td>
</tr>
<tr>
<td>HIST 0244</td>
<td>Understanding the Middle East: 1800s to the Present</td>
</tr>
<tr>
<td>HIST 0247</td>
<td>Civilization, Empire, Nation: Competing Histories of the Middle East</td>
</tr>
<tr>
<td>HIST 0250</td>
<td>American Exceptionalism: The History of an Idea</td>
</tr>
<tr>
<td>HIST 0252</td>
<td>The American Civil War in Global Perspective: History, Law, and Popular Culture</td>
</tr>
<tr>
<td>HIST 0253</td>
<td>Religion, Politics, and Culture in America, 1865 - Present</td>
</tr>
<tr>
<td>HIST 0257</td>
<td>Modern American History: New and Different Perspectives</td>
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<tr>
<td>HIST 0270A</td>
<td>From Fire Wielders to Empire Builders: Human Impact on the Global Environment before 1492</td>
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<tr>
<td>HIST 0270B</td>
<td>From the Columbian Exchange to Climate Change: Modern Global Environmental History</td>
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<tr>
<td>HIST 0276</td>
<td>A Global History of the Atomic Age</td>
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<td>HIST 0276B</td>
<td>Science and Capitalism</td>
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<td>HIST 0285A</td>
<td>Modern Genocide and Other Crimes against Humanity</td>
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<tr>
<td>HIST 0286A</td>
<td>History of Medicine I: Medical Traditions in the Old World Before 1700</td>
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<tr>
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<td>History of Medicine II: The Development of Scientific Medicine in Europe and the World</td>
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## First-Year Seminars

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<tr>
<td>HIST 0150H</td>
<td>Foods and Drugs in History</td>
</tr>
<tr>
<td>HIST 0202</td>
<td>African Experiences of Empire</td>
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<tr>
<td>HIST 0203</td>
<td>Modern Africa: From Empire to Nation-State</td>
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<td>HIST 0234</td>
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<td>Understanding the Middle East: 1800s to the Present</td>
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## Sophomore Seminars

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<td>HIST 0621B</td>
<td>The Search for King Arthur</td>
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<tr>
<td>HIST 0637B</td>
<td>Fractious Friendships: The United States and Latin America in the Twentieth Century</td>
</tr>
<tr>
<td>HIST 0654A</td>
<td>Welfare States and a History of Modern Life</td>
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<tr>
<td>HIST 0654B</td>
<td>American Patriotism in Black and White</td>
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<tr>
<td>HIST 0655A</td>
<td>Culture Wars in American Schools</td>
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<tr>
<td>HIST 0658D</td>
<td>Walden + Woodstock: The American Lives of Ralph Waldo Emerson and Bob Dylan</td>
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<tr>
<td>HIST 0675A</td>
<td>The Chinese Diaspora: A History of Globalization</td>
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<tr>
<td>HIST 0685A</td>
<td>The Social Lives of Dead Bodies in China and Beyond</td>
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## COURSES WITH NUMBERS 1000-1999

### LECTURE COURSES

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<td>Entangled South Africa</td>
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<tr>
<td>HIST 1060</td>
<td>Africa, c.1850-1946: Colonial Contexts and Everyday Experiences</td>
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<td>HIST 1070</td>
<td>&quot;Modern&quot; Africa</td>
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<td>HIST 1080</td>
<td>Humanitarianism and Conflict in Africa</td>
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<td>HIST 1101</td>
<td>Chinese Political Thought from Confucius to Xi Jinping</td>
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<td>HIST 1110</td>
<td>Imperial China/China: Culture and Legacy</td>
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<td>HIST 1118</td>
<td>China's Late Empires</td>
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<td>The Modern Chinese Nation: An Idea and Its Limits</td>
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<td>HIST 1122</td>
<td>China Pop: The Social History of Chinese Popular Culture</td>
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<td>HIST 1149</td>
<td>Imperial Japan</td>
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<td>HIST 1150</td>
<td>Modern Japan</td>
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<td>HIST 1155</td>
<td>Japan's Pacific War: 1937-1945</td>
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<td>HIST 1156</td>
<td>Postwar Japan</td>
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<td>HIST 1200B</td>
<td>The Fall of Empires and Rise of Kings: Greek History to 478 to 323 BCE</td>
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For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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<td>History of Greece: From Alexander the Great to the Roman Conquest</td>
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<td>HIST 1201A</td>
<td>Roman History I</td>
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<td>HIST 1201B</td>
<td>Roman History II: The Empire</td>
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<td>HIST 1202</td>
<td>Formation of the Classical Heritage: Greeks, Romans, Jews, Christians, and Muslims</td>
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<td>HIST 1205</td>
<td>The Long Fall of the Roman Empire</td>
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<td>HIST 1210A</td>
<td>The Viking Age</td>
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<td>HIST 1211</td>
<td>Crusaders and Cathedrals, Deviants and Dominance: Europe in the High Middle Ages</td>
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<td>HIST 1216</td>
<td>The Paradox of Early Modern Europe</td>
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<td>HIST 1230A</td>
<td>Modern European Intellectual and Cultural History: Revolution and Romanticism, 1760-1860</td>
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<td>HIST 1230B</td>
<td>Modern European Intellectual and Cultural History: The Fin de Sioece, 1880-1914</td>
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<td>HIST 1230C</td>
<td>The Search for Renewal in 20th century Europe</td>
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<td>HIST 1240A</td>
<td>Politics of Violence in 20C Europe</td>
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<tr>
<td>HIST 1260D</td>
<td>Living Together: Muslims, Christians, and Jews in Medieval Iberia</td>
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<td>HIST 1262M</td>
<td>Truth on Trial: Justice in Italy, 1400-1800</td>
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<td>Cultural History of the Netherslands in a Golden Age and a Global Age</td>
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<td>English History, 1529-1660</td>
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<td>HIST 1266D</td>
<td>British History, 1660-1800</td>
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<td>HIST 1268A</td>
<td>The Rise of the Russian Empire</td>
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<td>Russia in the Era of Reforms, Revolutions, and World Wars</td>
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<td>HIST 1268C</td>
<td>The Collapse of Socialism and the Rise of New Russia</td>
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<td>HIST 1270C</td>
<td>German History, 1806-1945</td>
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<td>Death from Medieval Relics to Forensic Science</td>
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<td>History of Brazil</td>
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<td>HIST 1312</td>
<td>Brazil: From Abolition to Emerging Global Power</td>
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<td>Rebel Island: Cuba, 1492-Present</td>
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<td>HIST 1331</td>
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<td>HIST 1332</td>
<td>Reform and Rebellion: Mexico, 1700-1867</td>
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<td>HIST 1333</td>
<td>The Mexican Revolution</td>
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<tr>
<td>HIST 1370</td>
<td>The United States and Brazil: Tangled Relations</td>
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<tr>
<td>HIST 1381</td>
<td>Latin American History and Film: Memory, Narrative and Nation</td>
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<tr>
<td>HIST 1440</td>
<td>The Ottomans: Faith, Law, Empire</td>
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<tr>
<td>HIST 1445</td>
<td>The Making of the Ottoman World, 15th - 20th Centuries</td>
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<tr>
<td>HIST 1455</td>
<td>The Making of the Modern Middle East</td>
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<tr>
<td>HIST 1460</td>
<td>Modern Turkey: Empire, Nation, Republic</td>
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<td>HIST 1470</td>
<td>Legal History in the Middle East</td>
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<td>HIST 1501</td>
<td>The American Revolution</td>
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<tr>
<td>HIST 1503</td>
<td>Antebellum America and the Road to Civil War</td>
</tr>
<tr>
<td>HIST 1505</td>
<td>Making America Modern</td>
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<tr>
<td>HIST 1507</td>
<td>American Politics and Culture Since 1945</td>
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<tr>
<td>HIST 1511</td>
<td>Sinners, Saints, and Heretics: Religion in Early America</td>
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<tr>
<td>HIST 1512</td>
<td>First Nations: The People and Cultures of Native North America to 1800</td>
</tr>
<tr>
<td>HIST 1513</td>
<td>U.S. Cultural History from Revolution to Reconstruction</td>
</tr>
<tr>
<td>HIST 1514</td>
<td>Capitalism, Slavery and the Economy of Early America</td>
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<tr>
<td>HIST 1530</td>
<td>The Intimate State: The Politics of Gender, Sex, and Family in the U.S., 1873-Present</td>
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<tr>
<td>HIST 1531</td>
<td>Political Movements in Twentieth-Century America</td>
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<tr>
<td>HIST 1532</td>
<td>Black Freedom Struggle Since 1945</td>
</tr>
<tr>
<td>HIST 1550</td>
<td>American Urban History, 1600-1870</td>
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<tr>
<td>HIST 1551</td>
<td>American Urban History, 1870-1965</td>
</tr>
<tr>
<td>HIST 1553</td>
<td>Empires in America to 1890</td>
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<tr>
<td>HIST 1554</td>
<td>American Empire Since 1890</td>
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<td>HIST 1570</td>
<td>American Legal and Constitutional History</td>
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<tr>
<td>HIST 1571</td>
<td>The Intellectual History of Black Women</td>
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<tr>
<td>HIST 1620</td>
<td>Gandhi's India: South Asian Before 1947</td>
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<tr>
<td>HIST 1640</td>
<td>Inequality + Change: South Asia after 1947</td>
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<tr>
<td>HIST 1730</td>
<td>&quot;Cannibals&quot;, &quot;Barbarians&quot; and &quot;Noble Savages&quot;: Travel and Ethnography in the Early Modern World</td>
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<tr>
<td>HIST 1735</td>
<td>Slavery in the Early Modern World</td>
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<tr>
<td>HIST 1736</td>
<td>A Global History of the Reformation</td>
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<td>HIST 1820A</td>
<td>Environmental History</td>
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<tr>
<td>HIST 1820G</td>
<td>Nature on Display</td>
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<tr>
<td>HIST 1825F</td>
<td>Nature, Knowledge, Power in Renaissance Europe</td>
</tr>
<tr>
<td>HIST 1825H</td>
<td>Science, Medicine and Technology in the 17th Century</td>
</tr>
<tr>
<td>HIST 1825L</td>
<td>The Roots of Modern Science</td>
</tr>
<tr>
<td>HIST 1825M</td>
<td>Science at the Crossroads</td>
</tr>
<tr>
<td>HIST 1825S</td>
<td>Science and Capitalism</td>
</tr>
<tr>
<td>HIST 1830M</td>
<td>From Medieval Bedlam to Prozac Nation: Intimate Histories of Psychiatry and Self</td>
</tr>
<tr>
<td>HIST 1835A</td>
<td>Unearthing the Body: History, Archaeology, and Biology at the End of Antiquity</td>
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</table>

**SEMINAR COURSES**

**Non-Capstone Seminars**

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>HIST 1952A</td>
<td>World of Walden Pond: Transcendentalism as a Social and Intellectual Movement</td>
</tr>
<tr>
<td>HIST 1956A</td>
<td>Thinking Historically: A History of History Writing</td>
</tr>
<tr>
<td>HIST 1956B</td>
<td>Rites of Power in Modern China</td>
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**Capstone Seminars**

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>HIST 1960G</td>
<td>Southern African Frontiers, c. 1400-1860</td>
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<tr>
<td>HIST 1960Q</td>
<td>Medicine and Public Health in Africa</td>
</tr>
<tr>
<td>HIST 1960R</td>
<td>South Africa Since 1990</td>
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<tr>
<td>HIST 1960S</td>
<td>North African History: 1800 to Present</td>
</tr>
<tr>
<td>HIST 1961B</td>
<td>Cities and Urban Culture in China</td>
</tr>
<tr>
<td>HIST 1961C</td>
<td>Knowledge and Power: China's Examination Hell</td>
</tr>
<tr>
<td>HIST 1962B</td>
<td>Life During Wartime: Theory and Sources from the Twentieth Century</td>
</tr>
<tr>
<td>HIST 1962C</td>
<td>State, Religion and the Public Good in Modern China</td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Honors (OPTIONAL):

History concentrators in the 5th or 6th semester may apply for honors. To be admitted, 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.

Students who wish to enroll in honors are recommended to take HIST 1992, “History Honors Workshop for Prospective Students.” HIST 1992 can count as one of the 10 courses required for graduation in history. HIST 1992 students who prepare a prospectus that receives a grade of A- or above will be admitted to the honors program. Students in their 7th semester who have not taken HIST 1992 (including but not limited to those who are away from Brown during that semester) may apply to the program by submitting a prospectus no later than the first day of that semester. All honors students must complete one semester of HIST 1993 “History Honors Workshop for Thesis Writers, Part I” and one semester of HIST 1994 “History Workshop for Thesis Writers, Part II.” HIST 1993 and HIST 1994 do not count towards the 10 courses required for graduation in history; they are an additional two courses to the minimum of 10 required history courses. Students who contemplate enrolling in the honors program in History should consult the honors program section of the department website. They are also encouraged to meet with the Director of Undergraduate Studies, who serves as the honors advisor.

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.

History of Art and Architecture Requirements

To complete the concentration, you will be expected to take a minimum of ten courses (11 for honors). Our goal in setting out these requirements is to welcome students into a lively and diverse department that also shares a cohesive and strong commitment to the field. We as a faculty want students to cultivate their special interests and also to venture into areas that may not be so familiar but that will open new and exciting possibilities for them. Ten courses are only the minimum requirement. Beyond that students are encouraged to take courses at RISD, participate in study abroad programs, and take courses in other Brown departments. As we are a truly interdisciplinary department, you will also find that our faculty collaborates with members of other departments to teach courses that bring together the strengths of different disciplines. We encourage both experimentation and concentration. Because foreign language skills are essential for pursuing art historical studies in a professional environment or in graduate school, HIAA requires knowledge equivalent to passing a 500-level language course at Brown.

Our general survey in history of art and architecture (HIAA 0010) is an excellent foundation for the concentration. It is not a prerequisite for taking other lecture courses but you can count it as one of the 4 non-core courses required for the concentration (see below for core and non-core courses).

Since the history of art and architecture addresses issues of practice within specific historical contexts, concentrators are encouraged to take at least 1 studio art course. Courses in history also train students in methods and approaches that are highly relevant to the history of art and architecture. 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 concentrators program of study.

Four core general lecture courses, numbered HIAA 0020 - HIAA 0940. The courses should be distributed between three of the seven available areas of the discipline: Ancient; Medieval; Islamic; East Asian; Latin American; Early Modern (ca. 1400-1800); Modern, Contemporary

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>HIAA 0010</td>
<td>A Global History of Art and Architecture</td>
</tr>
<tr>
<td>HIAA 0011</td>
<td>Introduction to the History of Architecture and Urbanism</td>
</tr>
<tr>
<td>HIAA 0013</td>
<td>Introduction to Indian Art</td>
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<tr>
<td>HIAA 0021</td>
<td>Arts of Asia</td>
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<tr>
<td>HIAA 0022</td>
<td>The Art of Enlightenment</td>
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<tr>
<td>HIAA 0031</td>
<td>Pre-Islamic Empires of Iran</td>
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<tr>
<td>HIAA 0040</td>
<td>Introduction to Medieval Art and Architecture</td>
</tr>
<tr>
<td>HIAA 0041</td>
<td>The Architectures of Islam</td>
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<tr>
<td>HIAA 0042</td>
<td>Islamic Art and Architecture</td>
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<tr>
<td>HIAA 0061</td>
<td>Baroque</td>
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<tr>
<td>HIAA 0062</td>
<td>Dutch and Flemish Art: Visual Culture of the Netherlands in the Seventeenth Century</td>
</tr>
<tr>
<td>HIAA 0070</td>
<td>Introduction to American Art: The 19th Century</td>
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<tr>
<td>HIAA 0075</td>
<td>Introduction to the History of Art: Modern Photography</td>
</tr>
<tr>
<td>HIAA 0077</td>
<td>Revolutions, Illusions, Impressions: A History of Nineteenth-Century Art</td>
</tr>
<tr>
<td>HIAA 0081</td>
<td>Architecture of the House Through Space and Time</td>
</tr>
<tr>
<td>HIAA 0082</td>
<td>Art and Technology from Futurism to Hacktivism</td>
</tr>
<tr>
<td>HIAA 0089</td>
<td>Contemporary Photography</td>
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<tr>
<td>HIAA 0100</td>
<td>Introduction to Architectural Design Studio</td>
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<tr>
<td>HIAA 0321</td>
<td>Toward a Global Late Antiquity: 200-800 CE</td>
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<tr>
<td>HIAA 0340</td>
<td>Roman Art and Architecture: From Julius Caesar to Hadrian</td>
</tr>
<tr>
<td>HIAA 0400</td>
<td>Early Christian, Jewish, and Byzantine Art and Architecture</td>
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<tr>
<td>HIAA 0440</td>
<td>Gothic Art and Architecture</td>
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<tr>
<td>HIAA 0460</td>
<td>Muslims, Jews and Christians in Medieval Iberia</td>
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<tr>
<td>HIAA 0550</td>
<td>Gold, Wool and Stone: Painters and Bankers in Renaissance Tuscany</td>
</tr>
<tr>
<td>HIAA 0560</td>
<td>Popes and Pilgrims in Renaissance Rome</td>
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<tr>
<td>HIAA 0570</td>
<td>The Renaissance Embodied</td>
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<tr>
<td>HIAA 0580</td>
<td>Word, Image and Power in Renaissance Italy</td>
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<tr>
<td>HIAA 0600</td>
<td>From Van Eyck to Bruegel</td>
</tr>
<tr>
<td>HIAA 0630</td>
<td>Cultural History of the Netherlands in a Golden Age and a Global Age</td>
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<tr>
<td>HIAA 0660</td>
<td>Giotto to Watteau: Introduction to the Art of Europe from Renaissance to French Revolution</td>
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<tr>
<td>HIAA 0710</td>
<td>The Other History of Modern Architecture</td>
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<td>HIAA 0770</td>
<td>Architecture and Urbanism of the African Diaspora</td>
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<tr>
<td>HIAA 0771</td>
<td>African American and Caribbean Architectures: Domestic Space</td>
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<td>HIAA 0801</td>
<td>Art After '68</td>
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<td>HIAA 0810</td>
<td>20th Century Sculpture</td>
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<td>HIAA 0830</td>
<td>Revolutionary Forms: 100 Years of Art and Politics in Latin America</td>
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<tr>
<td>HIAA 0840</td>
<td>History of Rhode Island Architecture</td>
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<tr>
<td>HIAA 0850</td>
<td>Modern Architecture</td>
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<td>HIAA 0860</td>
<td>Contemporary Architecture</td>
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<td>HIAA 0861</td>
<td>City and Cinema</td>
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<tr>
<td>HIAA 0870</td>
<td>20th Century British Art: Edwardian to Contemporary</td>
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<td>HIAA 0881</td>
<td>City and Cinema</td>
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Two core seminar courses, numbered between HIAA 1020 and HIAA 1930

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>HIAA 1020</td>
<td>Topics in East Asian Art</td>
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<tr>
<td>HIAA 1090</td>
<td>Writing About the Arts</td>
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<tr>
<td>HIAA 1101A</td>
<td>Illustrating Knowledge</td>
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<tr>
<td>HIAA 1101B</td>
<td>Seeing and Writing on Contemporary Arts</td>
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<tr>
<td>HIAA 1120B</td>
<td>History of Urbanism, 1300-1700</td>
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<tr>
<td>HIAA 1120C</td>
<td>History of Western European Urbanism 1200-1600</td>
</tr>
<tr>
<td>HIAA 1105</td>
<td>Other worldly and Other Worlds: Representing the Unseen in Early Modern Europe</td>
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<tr>
<td>HIAA 1150C</td>
<td>El Greco and Velazquez</td>
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<tr>
<td>HIAA 1150D</td>
<td>El Greco and the Golden Age of Spanish Painting</td>
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<tr>
<td>HIAA 1170B</td>
<td>Twentieth-Century American Painting</td>
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<td>HIAA 1181</td>
<td>Prefabrication and Architecture</td>
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<tr>
<td>HIAA 1182</td>
<td>Spaces and Institutions of Modernity</td>
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<tr>
<td>HIAA 1200A</td>
<td>Ancient Art in the RISD Collection</td>
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<td>HIAA 1200D</td>
<td>Pompeii</td>
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<tr>
<td>HIAA 1201</td>
<td>Brushwork: Chinese Painting in Time</td>
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</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>HIAA 1300</td>
<td>Topics in Classical Art and Architecture</td>
</tr>
<tr>
<td>HIAA 1301</td>
<td>The Palaces of Ancient Rome</td>
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<tr>
<td>HIAA 1302</td>
<td>Women and Families in the Ancient Mediterranean</td>
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<tr>
<td>HIAA 1303</td>
<td>Pompeii: Art, Architecture, and Archaeology in the Lost City</td>
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<tr>
<td>HIAA 1304</td>
<td>Spectacle! Games, Gladiators, Performance, and Ceremony in the Roman World</td>
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<tr>
<td>HIAA 1310</td>
<td>Topics in Hellenistic Art</td>
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<tr>
<td>HIAA 1400F</td>
<td>Research Seminar Gothic Art</td>
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<tr>
<td>HIAA 1410A</td>
<td>Topics in Islamic Art: Islamic Art and Architecture on the Indian Subcontinent</td>
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<tr>
<td>HIAA 1410B</td>
<td>Painting in Mughal India 1550-1650</td>
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<tr>
<td>HIAA 1430A</td>
<td>The Visual Culture of Medieval Women</td>
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<tr>
<td>HIAA 1440D</td>
<td>The Gothic Cathedral</td>
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<td>HIAA 1440F</td>
<td>Architectural Reuse: The Appropriation of the Past</td>
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<td>HIAA 1440B</td>
<td>Architecture of Solitude: The Medieval Monastery</td>
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<td>Topics in Medieval Archaeology</td>
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<td>HIAA 1550B</td>
<td>Topics in the Early History of Printmaking: Festival and Carnival</td>
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<td>HIAA 1550A</td>
<td>Prints and Everyday Life in Early Modern Europe</td>
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<td>HIAA 1560A</td>
<td>Italy and the Mediterranean</td>
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<td>HIAA 1560B</td>
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<td>HIAA 1560C</td>
<td>Renaissance Venice and the Veneto</td>
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<td>HIAA 1560D</td>
<td>Siena from Simone Martini to Beccafumi</td>
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<td>HIAA 1560E</td>
<td>The Arts of Renaissance Courts</td>
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<tr>
<td>HIAA 1560F</td>
<td>Topics in Italian Visual Culture: The Visible City, 1400-1800</td>
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<tr>
<td>HIAA 1600A</td>
<td>Bosch and Bruegel: Art Turns the World Upside Down</td>
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<td>HIAA 1600B</td>
<td>Caravaggio</td>
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<td>HIAA 1600C</td>
<td>Italian Baroque Painting and Sculpture</td>
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<tr>
<td>HIAA 1600D</td>
<td>The Art of Peter Paul Rubens</td>
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<tr>
<td>HIAA 1600E</td>
<td>The World Turned Upside Down</td>
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<td>HIAA 1600F</td>
<td>Antwerp: Art and Urban History</td>
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<tr>
<td>HIAA 1600G</td>
<td>Art + Religion in Early Modern Europe</td>
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<td>HIAA 1600H</td>
<td>Comedy in Netherlandish Art From Hieronymus Bosch to Jan Steen</td>
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<td>HIAA 1600I</td>
<td>Collections and Visual Knowledge in Early Modern Europe: 1400-1800</td>
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<td>HIAA 1600J</td>
<td>Rembrandt</td>
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<td>HIAA 1650A</td>
<td>About Face: English Portraiture: 1600-1800</td>
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<td>HIAA 1650B</td>
<td>Visualizing Revolutionary Bodies 1785-1815</td>
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<td>HIAA 1650C</td>
<td>Visual Culture and the Production of Identity in the Atlantic World, 1700-1815</td>
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<td>HIAA 1650D</td>
<td>Souvenirs: Remembering the Pleasures and Perils of the Grand Tour</td>
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<tr>
<td>HIAA 1711</td>
<td>Black and White: Imagining Africans and African Americans in Visual Culture</td>
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<td>HIAA 1770</td>
<td>Architecture and Visual Culture of Empire</td>
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<tr>
<td>HIAA 1811</td>
<td>Possible Futures: Art and the Social Network before the Internet (1950-1979)</td>
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<tr>
<td>HIAA 1850A</td>
<td>Frank Lloyd Wright</td>
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<td>HIAA 1850D</td>
<td>Film Architecture</td>
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<tr>
<td>HIAA 1850E</td>
<td>Architecture, Light and Urban Screens</td>
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<tr>
<td>HIAA 1850G</td>
<td>Contemporary American Urbanism: City Design and Planning, 1945-2000</td>
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<tr>
<td>HIAA 1850H</td>
<td>Berlin: Architecture, Politics and Memory</td>
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<td>HIAA 1870</td>
<td>Cannibalism, Inversion, and Hybridity: Creative Disobedience in the Americas</td>
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<tr>
<td>HIAA 1890E</td>
<td>SoCal: Art in Los Angeles, 1945-Present</td>
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<td>HIAA 1890G</td>
<td>Contemporary Art of Africa and the Diaspora</td>
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<td>HIAA 1910A</td>
<td>Providence Architecture</td>
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<td>HIAA 1910B</td>
<td>Project Seminar: The Architecture of Bridges</td>
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<td>HIAA 1910D</td>
<td>Water and Architecture</td>
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<td>HIAA 1910E</td>
<td>Project Seminar for Architectural Studies Concentrators</td>
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<td>HIAA 1910F</td>
<td>City Senses: Urbanism Beyond Visual Spectacle</td>
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<tr>
<td>HIAA 1920</td>
<td>Individual Study Project in the History of Art and Architecture</td>
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<tr>
<td>HIAA 1930</td>
<td>The History and Methods of Art Historical Interpretation</td>
</tr>
<tr>
<td>HIAA 1990</td>
<td>Honors Thesis</td>
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</tbody>
</table>

Four elective courses. These can include courses taught in the department, cross-listed courses from other departments, or courses in other departments approved by the concentration advisor. HIAA 0010 may count as one of these courses but cannot count as one of the four core lecture courses. Students are encouraged to take a studio class as part of this requirement.

Total Credits: 10

1. The six core lecture and seminar courses must be taken in the History of Art and Architecture department and cannot be replaced with independent study, honors thesis or classes taken in other departments, universities, or high schools.

2. A maximum of two (2) credits may be allowed for courses taken at other universities (transfer credits or from study abroad) or courses that also count toward a second concentration. No concentration credit will be granted for AP/A-level scores, or for language classes.

**Architectural Studies Track**

The **Optional** Architectural Studies track within the History of Art and Architecture concentration 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.

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 a 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.

Four lecture courses. These courses will be numbered between HIAA 0020 and HIAA 0940 and will be marked with an "A" in the course description. The courses must be distributed over three of seven areas in architectural history: Ancient; Medieval; Islamic; East Asian; Latin American; Early Modern (ca. 1400-1800); Modern/Contemporary.

- HIAA 0040 Introduction to Medieval Art and Architecture
- HIAA 0042 Islamic Art and Architecture
- HIAA 0031 Pre-Islamic Empires of Iran
- HIAA 0041 The Architectures of Islam
- HIAA 0061 Baroque
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIAA 0062</td>
<td>Dutch and Flemish Art: Visual Culture of the Netherlands in the Seventeenth Century</td>
</tr>
<tr>
<td>HIAA 0070</td>
<td>Introduction to American Art: The 19th Century</td>
</tr>
<tr>
<td>HIAA 0075</td>
<td>Introduction to the History of Art: Modern Photography</td>
</tr>
<tr>
<td>HIAA 0081</td>
<td>Architecture of the House Through Space and Time</td>
</tr>
<tr>
<td>HIAA 0089</td>
<td>Contemporary Photography</td>
</tr>
<tr>
<td>HIAA 0321</td>
<td>Toward a Global Late Antiquity: 200-800 CE</td>
</tr>
<tr>
<td>HIAA 0340</td>
<td>Roman Art and Architecture: From Julius Caesar to Hadrian</td>
</tr>
<tr>
<td>HIAA 0400</td>
<td>Early Christian, Jewish, and Byzantine Art and Architecture</td>
</tr>
<tr>
<td>HIAA 0440</td>
<td>Gothic Art and Architecture</td>
</tr>
<tr>
<td>HIAA 0460</td>
<td>Muslims, Jews and Christians in Medieval Iberia</td>
</tr>
<tr>
<td>HIAA 0550</td>
<td>Gold, Wool and Stone: Painters and Bankers in Renaissance Tuscany</td>
</tr>
<tr>
<td>HIAA 0560</td>
<td>Popes and Pilgrims in Renaissance Rome</td>
</tr>
<tr>
<td>HIAA 0570</td>
<td>The Renaissance Embodied</td>
</tr>
<tr>
<td>HIAA 0580</td>
<td>Word, Image and Power in Renaissance Italy</td>
</tr>
<tr>
<td>HIAA 0600</td>
<td>From Van Eyck to Bruegel</td>
</tr>
<tr>
<td>HIAA 0630</td>
<td>Cultural History of the Netherlands in a Golden Age and a Global Age</td>
</tr>
<tr>
<td>HIAA 0710</td>
<td>The Other History of Modern Architecture</td>
</tr>
<tr>
<td>HIAA 0770</td>
<td>Architecture and Urbanism of the African Diaspora</td>
</tr>
<tr>
<td>HIAA 0771</td>
<td>African American and Caribbean Architectures: Domestic Space</td>
</tr>
<tr>
<td>HIAA 0801</td>
<td>Art After ‘68</td>
</tr>
<tr>
<td>HIAA 0810</td>
<td>20th Century Sculpture</td>
</tr>
<tr>
<td>HIAA 0830</td>
<td>Revolutionary Forms: 100 Years of Art and Politics in Latin America</td>
</tr>
<tr>
<td>HIAA 0840</td>
<td>History of Rhode Island Architecture</td>
</tr>
<tr>
<td>HIAA 0850</td>
<td>Modern Architecture</td>
</tr>
<tr>
<td>HIAA 0860</td>
<td>Contemporary Architecture</td>
</tr>
<tr>
<td>HIAA 0861</td>
<td>City and Cinema</td>
</tr>
<tr>
<td>HIAA 0870</td>
<td>20th Century British Art: Edwardian to Contemporary</td>
</tr>
<tr>
<td>HIAA 0881</td>
<td>City and Cinema</td>
</tr>
</tbody>
</table>

One seminar or independent study in architectural history, numbered between HIAA 1100 and HIAA 1890, and marked with an "A" in the course description.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>HIAA 1101A</td>
<td>Illustrating Knowledge</td>
</tr>
<tr>
<td>HIAA 111B</td>
<td>Seeing and Writing on Contemporary Arts</td>
</tr>
<tr>
<td>HIAA 1120B</td>
<td>History of Urbanism, 1300-1700</td>
</tr>
<tr>
<td>HIAA 1120C</td>
<td>History of Western European Urbanism 1200-1600</td>
</tr>
<tr>
<td>HIAA 1150C</td>
<td>El Greco and Velazquez</td>
</tr>
<tr>
<td>HIAA 1150D</td>
<td>El Greco and the Golden Age of Spanish Painting</td>
</tr>
<tr>
<td>HIAA 1170B</td>
<td>Twentieth-Century American Painting</td>
</tr>
<tr>
<td>HIAA 1181</td>
<td>Prefabrication and Architecture</td>
</tr>
<tr>
<td>HIAA 1200A</td>
<td>Ancient Art in the RISD Collection</td>
</tr>
<tr>
<td>HIAA 1200D</td>
<td>Pompeii</td>
</tr>
<tr>
<td>HIAA 1201</td>
<td>Brushwork: Chinese Painting in Time</td>
</tr>
<tr>
<td>HIAA 1300</td>
<td>Topics in Classical Art and Architecture</td>
</tr>
<tr>
<td>HIAA 1301</td>
<td>The Palaces of Ancient Rome</td>
</tr>
<tr>
<td>HIAA 1302</td>
<td>Women and Families in the Ancient Mediterranean</td>
</tr>
<tr>
<td>HIAA 1303</td>
<td>Pompeii: Art, Architecture, and Archaeology in the Lost City</td>
</tr>
<tr>
<td>HIAA 1310</td>
<td>Topics in Hellenistic Art</td>
</tr>
<tr>
<td>HIAA 1360X</td>
<td>The Aesthetics of Color: History, Theory, Critique (GNSS 1960X)</td>
</tr>
<tr>
<td>HIAA 1400F</td>
<td>Research Seminar Gothic 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>HIAA 1430A</td>
<td>The Visual Culture of Medieval Women</td>
</tr>
<tr>
<td>HIAA 1440B</td>
<td>Architecture of Solitude: The Medieval Monastery</td>
</tr>
<tr>
<td>HIAA 1440D</td>
<td>The Gothic Cathedral</td>
</tr>
<tr>
<td>HIAA 1460</td>
<td>Topics in Medieval Archaeology</td>
</tr>
<tr>
<td>HIAA 1550A</td>
<td>Prints and Everyday Life in Early Modern Europe</td>
</tr>
<tr>
<td>HIAA 1550B</td>
<td>Topics in the Early History of Printmaking: Festival and Carnival</td>
</tr>
<tr>
<td>HIAA 1560A</td>
<td>Italy and the Mediterranean</td>
</tr>
<tr>
<td>HIAA 1560B</td>
<td>Mannerism</td>
</tr>
<tr>
<td>HIAA 1560C</td>
<td>Renaissance Venice and the Veneto</td>
</tr>
<tr>
<td>HIAA 1560D</td>
<td>Siena from Simone Martini to Beccafumi</td>
</tr>
<tr>
<td>HIAA 1560E</td>
<td>The Arts of Renaissance Courts</td>
</tr>
<tr>
<td>HIAA 1560F</td>
<td>Topics in Italian Visual Culture: The Visible City, 1400-1800</td>
</tr>
<tr>
<td>HIAA 1600C</td>
<td>Italian Baroque Painting and Sculpture</td>
</tr>
<tr>
<td>HIAA 1600D</td>
<td>The Art of Peter Paul Rubens</td>
</tr>
<tr>
<td>HIAA 1600A</td>
<td>Bosch and Bruegel: Art Turns the World Upside Down</td>
</tr>
<tr>
<td>HIAA 1600B</td>
<td>Caravaggio</td>
</tr>
<tr>
<td>HIAA 1600E</td>
<td>The World Turned Upside Down</td>
</tr>
<tr>
<td>HIAA 1600F</td>
<td>Antwerp: Art and Urban History</td>
</tr>
<tr>
<td>HIAA 1600G</td>
<td>Art + Religion in Early Modern Europe</td>
</tr>
<tr>
<td>HIAA 1600H</td>
<td>Comedy in Netherlandish Art from Hieronymus Bosch to Jan Steen</td>
</tr>
<tr>
<td>HIAA 1601I</td>
<td>Collections and Visual Knowledge in Early Modern Europe: 1400-1800</td>
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<tr>
<td>HIAA 1770</td>
<td>Architecture and Visual Culture of Empire</td>
</tr>
<tr>
<td>HIAA 1850A</td>
<td>Frank Lloyd Wright</td>
</tr>
<tr>
<td>HIAA 1850D</td>
<td>Film Architecture</td>
</tr>
<tr>
<td>HIAA 1850E</td>
<td>Architecture, Light and Urban Screens</td>
</tr>
<tr>
<td>HIAA 1850G</td>
<td>Contemporary American Urbanism: City Design and Planning, 1945-2000</td>
</tr>
<tr>
<td>HIAA 1850H</td>
<td>Berlin: Architecture, Politics and Memory</td>
</tr>
</tbody>
</table>

A project seminar from the HIAA 1910 series. This must be taken in the junior or senior year. 1, 2

One studio art course in design 3

Three elective courses. These can include other courses taught in the History of Art and Architecture department and cross-listed courses in other departments that are pertinent to architectural studies. They may also include a select number of non-cross-listed courses approved by the concentration advisor. 4, 5

| Total Credits | 10 |

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
The non-cross-listed courses include but are not limited to MATH 0090, MATH 0100, PHYS 0030, PHYS 0040, ENGN 0030, Urban Studies and Engineering courses, and scenic design and technical production courses offered by the department of Theatre Arts and Performance Studies.

A maximum of two credits may be awarded for courses taken at other universities or for courses that count toward a second concentration. No concentration credit is awarded for high school AP/A-level courses or for language courses.

The below pertains to ALL concentrators in the department:

Self Assesment
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.

Capstone Project
At the beginning of your senior year you will be actively encouraged to propose and undertake a Capstone Project. The Capstone Project is intended to challenge you with an opportunity to synthesize at a high level of achievement the knowledge and understanding you have gained by concentrating in the History of Art and Architecture or Architectural Studies. To propose and work on a Capstone Project you will need the support of a faculty sponsor. Capstone Projects embrace many possibilities. You can perfect a seminar paper in which you have developed a strong interest. You can participate in a graduate seminar to which the instructor has admitted you. You can serve as an undergraduate TA. You can work as an intern in museums and auction houses such as Christie’s. You might work on an archaeological excavation. You can participate in the Honors Program. Beyond these opportunities, the Department is open to other approaches. You should work with a faculty sponsor and with the Undergraduate Concentration Advisor to decide what will work best for you.

Honors
The Honors program in History of Art & Architecture and Architectural Studies will be administered as follows: accepted students will sign up for HIAA 1990 in the Fall and in the Spring. In the Fall, students will meet regularly with the whole Honors group and HIAA 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 in the concentration. It is advisable for them to have taken at least one seminar in the department and written a research paper before choosing to undertake a thesis. While acceptance into the Honors program depends on the persuasiveness of the thesis topic as well as the number of students applying, students may refine their proposals by speaking in advance with potential advisors. No honors student may take more than four classes either semester of their senior year-- being considered one of your four classes. Students who are expecting to graduate in the middle of the year are encouraged to discuss a different capstone project with individual advisors or the concentration advisor.

Honors Application Process
During the second semester of the junior year all concentrators will be invited to apply for admission to the Honor Program in History of Art and Architecture and Architectural Studies.

Admission to the Honors Program
1. To be admitted to the Honors Program you should have produced consistently excellent work and maintained a high level of achievement in all your concentration course. You should have earned an A grade in most of your concentration courses.
2. The key project for honors is to write an honors thesis. When you apply for admission you will be asked to submit a proposal of no more than two double-spaced pages that states the topic (subject and argument) of the research to be undertaken as clearly as possible, and add 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 readers 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 semester.
3. For admission to the Honor Program you must include with your proposal a letter of support from a faculty member of the History of Art and Architecture Department who has agreed to serve as your thesis advisor. You should discuss the thesis topic with your advisor before you submit your proposal. During the process of researching and writing you will meet regularly with your advisor to discuss your work.

Writing the Honors Thesis
1. If you are accepted into the Honors Program you will register for HIAA 1990 during the two semesters when you are working on a thesis. This is a seminar led by the Department Undergraduate Concentration Advisor in which all honors students meet once a month to present the current progress of their work. It is a valuable opportunity to share ideas and receive feedback from your fellow honors students and faculty alike. The honors seminar also offers a practical framework around which you can organize the progress of your work.
2. You will meet regularly with your thesis advisor and with a second reader to develop your ideas and writing.
3. 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 by April 1 of the Spring semester or by November 1 of the Fall semester if you plan on graduating in December. 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.

Independent Concentration
The Independent Concentration 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 “Deaf and Disability Studies.” The IC proposal process consists of: 1) Meeting with the Curricular Resource Center’s IC Peer Coordinators (https://www.brown.edu/academics/college/advising/curricular-resource-center/interdepartmental-concentrations/ic-proposal-submission/ic-proposal); 2) Completing a draft IC Application (https://www.brown.edu/academics/college/advising/curricular-resource-center/interdepartmental-concentrations/ic-proposal-submission/ic-proposal) and soliciting feedback from the Peer Coordinators; 3) Identifying an approved Faculty Sponsor (an advisor) and obtaining a letter of support (http://brown.edu/academics/college/advising/curricular-resource-center/sites/brown.edu.academics.college.advising.curricular-resource-center/files/uploads/IC_FacultyAdvisorInfoSheet.docx); and 4) Submitting the application and letter of support by the deadline (Optional: Students interested in pursuing honors should read the IC Honors Thesis Guidelines for up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).

Deadlines: The IC subcommittee of the College Curriculum Council reviews proposals six times per year; applicants must have satisfied two requirements: (1) submission of their first IC proposal by the end of their 5th semester; (2) meeting with at least one of the IC Peer Co-Coordinators before submitting their proposal.

Independent concentration proposals are reviewed and approved by the College Curriculum Council.

### International Relations

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. Prospective concentrators should visit the IR site (http://watson.brown.edu/ir/requirements/filing) for next steps.

### Requirements

The IR concentration requires 14 courses and the equivalent of 3 years of study in a second language. Regardless of track, all IR concentrators must take all five core courses, research methods, regional focus, and capstone courses.

#### Security and Society track

**Core Courses**

Students must take 5 core courses, preferably during freshman or sophomore year. AP credit does not count toward the concentration.

- **ANTH 0110** Anthropology and Global Social Problems: Environment, Development, and Governance
- **ECON 0110** Principles of Economics
- **POLS 0400** Introduction to International Politics
- **SOC 1620** Globalization and Social Conflict

Plus 1 History course from the following:

- **HIST 0150A** History of Capitalism
- **HIST 0244** Understanding the Middle East: 1800s to the Present
- **HIST 1121** The Modern Chinese Nation: An Idea and Its Limits

**Track Requirements (five courses distributed between the sub-themes):**

Governess and Diplomacy (two or three courses):

- **CSCI 1800** Cybersecurity and International Relations
- **FREN 1900H** La France en guerre
- **HIST 0150C** Locked Up: A Global History of Prison and Captivity
- **HMAN 1971T** Law, Nationalism, and Colonialism
- **INTL 1443** History of American Intervention
- **INTL 1700** International Law
- **INTL 1802Q** Iran and the Islamic Revolution
- **INTL 1802V** Diplomacy, Economics & Influence
- **INTL 1804B** Computers, Freedom and Privacy: Current Topics in Law and Policy
- **POLS 1020** Politics of the Illicit Global Economy
- **POLS 1220** Politics in Russia and Eastern Europe

#### Research Methods

Prior to 7th semester. Quantitative or qualitative course from the following approved list.

- **ANTH 1151** Ethnographies of the Muslim Middle East
- **ANTH 1940** Ethnographic Research Methods
- **APMA 0650** Essential Statistics
- **APMA 1650** Statistical Inference I
- **CLPS 0900** Statistical Methods
- **ECON 1620** Introduction to Econometrics
- **ECON 1630** Econometrics I
- **EDUC 1100** Introduction to Qualitative Research Methods
- **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

#### Regional Focus

Both courses must be on the same area. Students are required to link these to language study.

#### Language

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Three years university study or equivalent. Must correspond to region.

**Capstone Course, from the following options:**

Must be taken senior year. Must incorporate language skills.

Students may choose from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 0150A</td>
<td>Decolonizing Minds: A People's History of the World</td>
</tr>
<tr>
<td>HIST 0169B</td>
<td>Israel-Palestine: Lands and Peoples II</td>
</tr>
<tr>
<td>HIST 0174J</td>
<td>Law and Religion</td>
</tr>
<tr>
<td>INTL 1802Q</td>
<td>Iran and the Islamic Revolution</td>
</tr>
<tr>
<td>INTL 1802V</td>
<td>Diplomacy, Economics &amp; Influence</td>
</tr>
<tr>
<td>INTL 1802W</td>
<td>International Journalism</td>
</tr>
<tr>
<td>INTL 1802Y</td>
<td>India in the World</td>
</tr>
<tr>
<td>INTL 1803G</td>
<td>Global Women's Issues: Investing in women as strategy for sustainable growth and global development</td>
</tr>
<tr>
<td>INTL 1803</td>
<td>Risk, Regulation and the Comparative Politics of Finance</td>
</tr>
<tr>
<td>INTL 1803A</td>
<td>The International Politics of Organized Crime</td>
</tr>
<tr>
<td>INTL 1803K</td>
<td>Media Wars: The Middle East</td>
</tr>
<tr>
<td>INTL 1803L</td>
<td>Humanitarianism in Uniform</td>
</tr>
<tr>
<td>INTL 1803M</td>
<td>Reassessing Contentious Politics, and Social Movements</td>
</tr>
<tr>
<td>INTL 1803N</td>
<td>The Politics of Food Security</td>
</tr>
<tr>
<td>POLS 1821L</td>
<td>International Relations of Russia, Europe and Asia</td>
</tr>
<tr>
<td>POLS 1823G</td>
<td>Women and War</td>
</tr>
<tr>
<td>POLS 1820H</td>
<td>Contraband Capitalism: States and Illegal Global Markets</td>
</tr>
<tr>
<td>POLS 1822I</td>
<td>Geopolitics of Oil and Energy</td>
</tr>
<tr>
<td>POLS 1822U</td>
<td>War and Human Rights</td>
</tr>
<tr>
<td>POLS 1822X</td>
<td>Technology and International Politics</td>
</tr>
<tr>
<td>POLS 1823I</td>
<td>Urban Politics and Policy</td>
</tr>
<tr>
<td>POLS 1823Q</td>
<td>Democratic Theory and Globalization</td>
</tr>
<tr>
<td>POLS 1824B</td>
<td>Post Conflict Politics</td>
</tr>
</tbody>
</table>

**Total Credits** 14

### Political Economy and Society Track

**Core Courses**

Students must take all 5 core courses, preferably during freshman or sophomore year. AP credit does not count toward the concentration.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 0110</td>
<td>Anthropology and Global Social Problems: Environment, Development, and Governance</td>
</tr>
<tr>
<td>ECON 0110</td>
<td>Principles of Economics</td>
</tr>
<tr>
<td>POLS 0400</td>
<td>Introduction to International Politics</td>
</tr>
<tr>
<td>SOC 1620</td>
<td>Globalization and Social Conflict</td>
</tr>
</tbody>
</table>

Plus 1 History course from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 0150</td>
<td>History of Capitalism</td>
</tr>
<tr>
<td>HIST 0244</td>
<td>Understanding the Middle East: 1800s to the Present</td>
</tr>
<tr>
<td>HIST 1121</td>
<td>The Modern Chinese Nation: An Idea and Its Limits</td>
</tr>
</tbody>
</table>

**Track Requirements (five courses from distributed between the sub-themes):**

Economics (two or three courses): All students MUST take Micro and Macro

**Political Economy (two or three courses):**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1110</td>
<td>Intermediate Microeconomics</td>
</tr>
<tr>
<td>ECON 1210</td>
<td>Intermediate Macroeconomics</td>
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</table>

Plus an International Economics course:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 0510</td>
<td>Development and the International Economy</td>
</tr>
<tr>
<td>ECON 1500</td>
<td>Current Global Macroeconomic Challenges</td>
</tr>
<tr>
<td>ECON 1510</td>
<td>Economic Development</td>
</tr>
<tr>
<td>ECON 1540</td>
<td>International Trade</td>
</tr>
<tr>
<td>ECON 1550</td>
<td>International Finance</td>
</tr>
<tr>
<td>ECON 1570</td>
<td>The Economics of Latin Americans</td>
</tr>
<tr>
<td>ECON 1590</td>
<td>The Economy of China since 1949</td>
</tr>
<tr>
<td>ECON 1760</td>
<td>Financial Institutions</td>
</tr>
<tr>
<td>ECON 1850</td>
<td>Theory of Economic Growth</td>
</tr>
</tbody>
</table>

**Research Methods**

Prior to 7th semester. Quantitative or qualitative course from the following approved list.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 0115</td>
<td>Ethnographies of the Muslim Middle East</td>
</tr>
<tr>
<td>ANTH 1940</td>
<td>Ethnographic Research Methods</td>
</tr>
<tr>
<td>APMA 0650</td>
<td>Essential Statistics</td>
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<td>APMA 1650</td>
<td>Statistical Inference I</td>
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<td>CLPS 0900</td>
<td>Statistical Methods</td>
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<tr>
<td>ECON 1620</td>
<td>Introduction to Econometrics</td>
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<td>ECON 1630</td>
<td>Econometrics I</td>
</tr>
<tr>
<td>EDUC 1110</td>
<td>Introduction to Qualitative Research Methods</td>
</tr>
<tr>
<td>EDUC 1111</td>
<td>Introduction to Qualitative Research Methods</td>
</tr>
<tr>
<td>EDUC 1111</td>
<td>Introductory Statistics for Education Research and Policy Analysis</td>
</tr>
<tr>
<td>EDUC 1110</td>
<td>Introductory Statistics for Education Research and Policy Analysis</td>
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<tr>
<td>POLS 1600</td>
<td>Political Research Methods</td>
</tr>
<tr>
<td>SOC 1020</td>
<td>Methods of Social Research</td>
</tr>
<tr>
<td>SOC 1100</td>
<td>Introductory Statistics for Social Research</td>
</tr>
</tbody>
</table>

**Regional Focus**

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Both courses must be on the same area. Students are required to link these to language study.

**Language**

Three years university study or equivalent. Must correspond to region.

**Capstone Course, from the following options:** 1

Must be taken senior year. Must incorporate language skills. Students may choose from the following:

- ANTH 1910G Senior Seminar: Politics and Symbols
- FREN 1900H La France en guerre
- HIST 1969B Israel-Palestine: Lands and Peoples II
- HIST 1974J Decolonizing Minds: A People’s History of the World
- HMAN 1970K Law and Religion
- INTL 1802Q Iran and the Islamic Revolution
- INTL 1802V Diplomacy, Economics & Influence
- INTL 1802W International Journalism
- INTL 1802Y India in the World
- INTL 1803 Risk, Regulation and the Comparative Politics of Finance
- INTL 1803A The International Politics of Organized Crime
- INTL 1803G Global Women’s Issues: Investing in women as strategy for sustainable growth and global development
- INTL 1803K Media Wars: The Middle East
- INTL 1803L Humanitarianism in Uniform
- INTL 1803M Reassessing Contentious Politics, and Social Movements
- INTL 1803N The Politics of Food Security
- INTL 1910 Senior Honors Seminar
- POLS 1820H Contraband Capitalism: States and Illegal Global Markets
- POLS 1821L International Relations of Russia, Europe and Asia
- POLS 1822I Geopolitics of Oil and Energy
- POLS 1822U War and Human Rights
- POLS 1822X Technology and International Politics
- POLS 1823E Global Justice
- POLS 1823G Women and War
- POLS 1823Q Democratic Theory and Globalization
- POLS 1824B Post Conflict Politics
- POLS 1824J Culture, Identity and Development

**ITALIAN STUDIES COURSES**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ITAL 0550</td>
<td>Gold, Wool and Stone: Painters and Bankers in Renaissance Tuscany (HIAA 0550)</td>
</tr>
<tr>
<td>ITAL 0560</td>
<td>Constructing the Eternal City: Popes and Pilgrims in Renaissance Rome (HIAA 0560)</td>
</tr>
<tr>
<td>ITAL 0600</td>
<td>Advanced Italian II</td>
</tr>
<tr>
<td>ITAL 0750</td>
<td>Truth on Trial: Justice in Italy</td>
</tr>
<tr>
<td>ITAL 0751</td>
<td>When Leaders Lie: Machiavelli in International Context</td>
</tr>
<tr>
<td>ITAL 0950</td>
<td>Introduction to Italian Cinema: Italian Film and History</td>
</tr>
<tr>
<td>ITAL 0951</td>
<td>The Grand Tour, or a Room with a View: Italy and the Imagination of Others</td>
</tr>
<tr>
<td>ITAL 0981</td>
<td>When Leaders Lie: Machiavelli in International Context</td>
</tr>
<tr>
<td>ITAL 0985</td>
<td>Visions of War: Representing Italian Modern Conflicts</td>
</tr>
<tr>
<td>ITAL 1000A</td>
<td>Luigi Pirandello: Masks and Society</td>
</tr>
<tr>
<td>ITAL 1000B</td>
<td>Reading Recent Italian Fiction</td>
</tr>
<tr>
<td>ITAL 1000C</td>
<td>Nord - Sud e Identità Italiana</td>
</tr>
<tr>
<td>ITAL 1000D</td>
<td>Italian National Identity: Criticisms and Crises</td>
</tr>
<tr>
<td>ITAL 1000E</td>
<td>Masterpieces of Italian Cinema - Capolavori del cinema italiano</td>
</tr>
<tr>
<td>ITAL 1000F</td>
<td>20th Century Italian Poetry</td>
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<tr>
<td>ITAL 1000G</td>
<td>Italian Identity</td>
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<tr>
<td>ITAL 1010</td>
<td>Dante in English Translation: Dante’s World and the Invention of Modernity</td>
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<tr>
<td>ITAL 1020</td>
<td>Boccaccio’s Decameron</td>
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<tr>
<td>ITAL 1029</td>
<td>World Cinema in a Global Context</td>
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<td>ITAL 1030A</td>
<td>Fellini</td>
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<td>ITAL 1310</td>
<td>Literature of the Middle Ages</td>
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<tr>
<td>ITAL 1320</td>
<td>Great Authors and Works of Italian Renaissance</td>
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<tr>
<td>ITAL 1340</td>
<td>The Panorama and 19th-Century Visual Culture</td>
</tr>
<tr>
<td>ITAL 1350A</td>
<td>Transmedia Storytelling and the New Italian Epic.</td>
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<tr>
<td>ITAL 1350B</td>
<td>Non Fiction</td>
</tr>
<tr>
<td>ITAL 1360</td>
<td>Renaissance Italy</td>
</tr>
<tr>
<td>ITAL 1380</td>
<td>Italy: From Renaissance to Enlightenment</td>
</tr>
<tr>
<td>ITAL 1390</td>
<td>Modern Italy</td>
</tr>
<tr>
<td>ITAL 1400A</td>
<td>“Italian (Mediterranean) Orientalisms” Major Italian Writers and Filmmakers</td>
</tr>
<tr>
<td>ITAL 1400B</td>
<td>Fascism and Antifascism: Culture and Literature between the Two World Wars</td>
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<tr>
<td>ITAL 1400C</td>
<td>Literature and Adolescence</td>
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<tr>
<td>ITAL 1400D</td>
<td>Photography and Literature: Italian Examples of an Uncanny Relationship</td>
</tr>
<tr>
<td>ITAL 1400F</td>
<td>Twentieth Century Italian Culture</td>
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<tr>
<td>ITAL 1400H</td>
<td>Early Modern Italy</td>
</tr>
<tr>
<td>ITAL 1400I</td>
<td>Rituals, Myths and Symbols</td>
</tr>
<tr>
<td>ITAL 1400J</td>
<td>The Many Faces of Casanova</td>
</tr>
<tr>
<td>ITAL 1400K</td>
<td>Italy as Other</td>
</tr>
<tr>
<td>ITAL 1400L</td>
<td>History of Masculinity and Femininity from the Unification to 1968</td>
</tr>
</tbody>
</table>

The program has a director, an associate director/concentration advisor, and two faculty advisors 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 ITAL 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.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 1990 and continue to work with their advisor to complete the project. ITAL 1990 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

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 (HEBR 0100/HEBR 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 of their area of disciplinary focus (History or Religious Studies).
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 (HEBR 0300, HEBR 0400, or HEBR 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 (HEBR 0100 / HEBR 0200; HEBR 0300/HEBR 0400; HEBR 0500). In addition, students will take Issues in Israel in Hebrew (HEBR 0600) 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 a student opts 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 Program
Any student who wishes to engage more deeply in research related to Judaic Studies in any of its disciplines or branches is invited to consider writing an Honors Thesis.

The Honors Thesis
The goal of the thesis is to add to the existing scholarship in the field of Judaic Studies. It should be based on original research, involving the close reading of primary sources. The honors thesis is expected to present an argument based on the student’s own analysis and will engage an ongoing debate or discussion in the field, demonstrating an awareness of the major research done until now and clearly identifying its own contribution, however limited. Since it is the equivalent of two semester-long courses, it should be a substantial piece of work (typically between 35,000-55,000 words) containing a sustained and consistently supported argument. To be successful, the student needs to adopt both a critical research methodology and a logical research strategy, both of which should be discussed in the thesis itself. In addition to being assessed in all these aspects, the thesis will also be graded on its organization (the way in which it is structured into separate and clearly defined chapters to support the main argument) as well as the quality and precision of its writing.

Work that simply describes and summarizes its sources along with previous research is not acceptable. The goal here is original research and analysis.

Entering the Program
In order to be considered a candidate for Honors, students will be expected to have maintained 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 (numbered JUDS 1975/JUDS 1976) during the senior year. A student contemplating a thesis should approach the faculty member with whom he or she hopes to work during the sixth semester. Once he or she has agreed to be the advisor (or helped find another member of the program better suited to the project), the student begins a process of consultation in order to determine a topic for the thesis, its sources, and proposed methodology. The contours of the project should also be laid out so that the student can commence productive research at the very beginning of the seventh semester. After this, a second reader for the thesis should be chosen by the advisor in consultation with the student. This may be a faculty member of the Judaic Studies program, one of the affiliate faculty, or, should the topic require it, a member of a different department. By the last week of the semester, the student should submit a thesis information form detailing the thesis topic with a short description of the proposed project, countersigned by advisor and second reader.

Thesis Proposal
During the first three weeks of the seventh semester, the student should work with the faculty advisor to write a thesis proposal.

This should be a brief document (1,500-2,000 words) explaining the topic chosen for the thesis and its significance to the field of Judaic Studies, with reference to previous research on the subject. The proposal should detail the questions to be asked and the kind of argument that will be made as well as explaining the primary sources and research methodology that will be employed. The proposed research strategy (i.e. the stages by which research and writing will be done) and timetable should be appended together with a brief, one page bibliography of primary sources and major research to be consulted.

Once the advisor is satisfied with the proposal, the student will be considered fully accepted into the Honors program and can enroll in the required independent study course by the last day to add a course in the fourth week of the term.

Research and Writing
It is the responsibility of the student to carry out the research program outlined in the proposal, as well as to write the thesis in an organized and timely fashion. During the process of research and writing, the advisor will continue to work closely with the student, providing guidance on research methods and suggesting further secondary reading. A regular meeting schedule will be set up to help the student meet the short- and long-term deadlines he or she has set. The advisor will also evaluate the progress of the research, providing any necessary direction and detailed feedback on written drafts.

The second reader will also be available to provide a measure of input and guidance during the process of research and writing. This may be particularly important in those areas where the primary advisor has limited expertise. The second reader may also be willing to help with giving feedback on various sections of the thesis drafts. All these roles should be determined by a process of consultation involving the advisor, the student, and the second reader him/herself.

The final thesis should have a complete scientific apparatus - citations and a full bibliography - in a form determined by the advisor.

Assessment
The thesis will be assessed independently by the advisor and the second reader in written reports. In order to receive Honors, it should be deemed excellent according to the following standards:

- Is the scope of the work appropriate for an Honors thesis?
- To what extent does it qualify as original research?
- To what extent does it sustain an analytic argument throughout?
- To what degree is it rooted in an engagement with previous research?
- How well does it reflect critically on its method and process?
- To what extent is the organization adequate to the argument presented?
- How well is the thesis rooted in the common conventions of the field?
• To what degree is the writing clear, cogent, and free of errors of grammar, tone, and style?

The two reports will be circulated to all faculty members in the program, who will review them before making the final determination at the next faculty meeting whether the thesis merits Honors. The meeting must be held, the decision reached, and the candidate informed before the Registrar's deadline for that semester.

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 advisor, [Tel: 401.863.3912] or Judaic@brown.edu.

Latin American and Caribbean Studies

The concentration in Latin American and Caribbean Studies (LACA) leads to a strong, interdisciplinary understanding of culture, history, and contemporary issues in Latin America, the Caribbean, and the Latinx diaspora. Requirements are intentionally broad and flexible to accommodate the focused interests of students in understanding the diverse reality of this region. Concentration requirements include four themes: language, area studies, research, and internship or service work. A wide selection of courses from departments across the University expose students to the methods and materials of different disciplines and provide a background in the contemporary and historical contours of Latin American, Caribbean, and Latinx societies. For more information, contact the Director of Undergraduate Studies, Professor Erica Durante (erica_durante@brown.edu?subject=LACA concentration).

Concentration Requirements

1. Ten courses on Latin American, Caribbean, and/or Latinx subjects.

   These may be explicitly designated as LACA classes, but do not need to be. Up to two of these courses can be language learning classes. Relevant courses from study abroad may count toward this total. For double concentrators, up to two classes can count toward the course requirements of both LACA and another concentration. At least two different academic disciplines should be represented in the ten courses. Courses in which the student did substantial work on a Latin American, Caribbean, or Latinx subject may count toward this total, even if the course as a whole has a more general subject matter. Concentrators should periodically update their courses on ASK and confirm with the Director of Undergraduate Studies that they are on track to meeting the coursework requirement.

   The courses must include at least one survey course providing a comprehensive and comparative view of the region. Examples include the following:

   LACA 0100 Introduction to Latin America
   LACA 0500 Around Latin America in 80 Days: An Historical and Cultural Journey
   AFRI 1100B The Caribbean: Cultures, Politics, Histories and Literature
   ANTH 1505 Vertical Civilization: South American Archaeology from Monte Verde to the Incas
   DEVL 1560 Economic Development in Latin America
   ECON 1570 The Economics of Latin Americans
   HISP 0730 Encounters: Latin America in Its Literature and Culture
   HIST 0234 Modern Latin America
   POLS 1285 Quality of Democracy in Latin America

2. Competence in a Latin American and/or Caribbean language.

   Competence in Spanish, Portuguese, French, Haitian Kreyol, Kaqchikel Maya, etc. may be demonstrated through a departmental test, AP credit, language courses at Brown or elsewhere, study abroad, etc; please contact the concentration advisor to confirm. (If the student’s primary area of study is the Anglophone Caribbean, a field language is not necessary.)

3. An internship or volunteer service, located in the U.S. or overseas, for one semester or one summer. Work completed during study abroad may count toward this requirement. The service work will connect theory to practice, applying scholarly knowledge to social challenges. Students are encouraged to consult with the Swearer Center for Public Service for assistance finding a volunteer placement. Students should also meet with the DUS by the beginning of junior year to discuss their work plan for their service component. Upon completion of the internship or service work, students fill and submit via ASK the Internship, Work or Volunteer Service Form, available online in the LACA Undergraduate Concentration webpage (https://watson.brown.edu/clacs/education/undergraduate). In addition they are expected to submit via ASK a short letter from a supervisor confirming the completion of the work.

4. A capstone project. This may be a senior honors thesis or creative project, supervised by a primary advisor and a secondary reader; a non-honors research paper; or a reflective paper about non-academic work (such as service or foreign study) related to Latin America, the Caribbean or the Latinx experience.

   The project may be completed for honors if the student is eligible (see Honors, below).

   Students undertaking a capstone project are encouraged to enroll in LACA 1900. Alternatively, they may elect to enroll in one or two semesters of independent study (LACA 1990, LACA 1991) with their thesis/project advisor.

Writing Requirement

To satisfy Brown's writing requirement as a LACA concentrator (which must be completed by the end of the 7th semester), students are encouraged to consider courses that have an emphasis on revision and feedback such as the following:

LACA 1990 Individual Thesis Preparation
ETHN 1200D Latinx Literature
GNSS 1520 Latin American Horror
HIST 0232 Clash of Empires in Latin America
HIST 0537A Popular Culture in Latin America and the Caribbean
MUSC 0021F Popular Music and Society in Latin America
POLS 0820U Drug War Politics
POLS 1820F Black Protest: Theory and Praxis

Engaged Scholars Program

The concentration also allows students to pursue the Engaged Scholars Program (http://watson.brown.edu/clacs/node/654). The Engaged Scholars Program (ESP) in Latin American and Caribbean Studies (LACA) is designed for LACA concentrators who are especially interested in making deeper connections between their academic work and local communities in Providence and beyond. Engaged Scholars combine hands-on experiences such as internships, public service, humanitarian, and development work with their academic learning in order to develop a deeper understanding of, and appreciation for, social engagement.

Honors

Qualified undergraduates may work towards the A.B. in Latin American and Caribbean Studies with Honors.

Requirements to graduate with Honors:

1. Maintenance of at least a A- average in the ten courses counting for the Latin American and Caribbean Studies concentration
2. Maintenance of at least a B+ average in all course work at Brown
3. Completion of a senior honors thesis or project with a grade of A

Grades of S do not negatively affect the eligibility for honors.

Graduating seniors with Honors in Latin American and Caribbean Studies are eligible for an award administered by the concentration for Outstanding Senior Thesis or Project.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Senior Honors Thesis or Project Timeline:

For Senior-Year Students:
- **By end of sixth semester**: Students fill and submit a one page proposal to the concentration advisor the Honors Thesis Declaration Form available online in the LACA Undergraduate Concentration webpage (https://watson.brown.edu/clacs/education/undergraduate). In the form, they are expected to indicate their thesis or project title and short description. The Honors Thesis Declaration Form must be signed by a primary advisor. Students who study abroad spring semester junior year may apply for admission to the Honors Program but must meet the application deadline. Students in this position should start thinking about a proposal and contact advisors well in advance.
- **By October 15**: Students submit the first section of their thesis or project to their research advisor for review. They should agree with their advisor on the schedule for the remaining portions.
- **By March 15**: A draft of the entire thesis or project is due to the primary advisor and the secondary reader for review and feedback.
- **By 5 pm on April 15**: The final, complete senior honors thesis or project is due.
- **Students submit one copy each to the primary advisor and the secondary reader.**
- **Students submit one paper copy and one electronic copy to the concentration advisor and one electronic copy to the Brown Library Digital Repository (BDR).**

For Mid-Year Completers:

Mid-year completors must apply for the Honors Program their 6th semester, as 2nd semester Juniors. They undertake the thesis in their 7th and 8th semesters, allowing them to complete the following Honors course sequence:
- **By the end of the 6th semester**: Students fill and submit to the concentration advisor the Honors Thesis Declaration Form available online in the LACA Undergraduate Concentration webpage (https://watson.brown.edu/clacs/education/undergraduate). In the form, they are expected to indicate their thesis or project title and short description. The Honors Thesis Declaration Form must be signed by a primary advisor.
- **By May 15**: Students submit the first section of their thesis or project to their research advisor for review. They should agree with their advisor on the schedule for the remaining portions.
- **By October 15**: A draft of the entire thesis or project is due to the primary advisor and the secondary reader for review and feedback.
- **By 5 pm on November 15**: The final, complete senior honors thesis or project is due.
- **Students submit one copy each to the primary advisor and the secondary reader.**
- **Students submit one paper copy and one electronic copy to the concentration advisor and one electronic copy to the Brown Library Digital Repository (BDR).**

**Linguistics**

Language is a uniquely human capacity that enables us to communicate a limitless set of messages on any topic. While human languages can differ greatly in certain respects, all are intricate, complex, rule-governed systems. Linguistics is the scientific study of these systems, their use in communicative and other social settings, and their cognitive and neural underpinnings. The linguistics concentration at Brown gives students a background in the “core” aspects of the language system: phonetics/phonology (the study of speech sounds and their patterning), syntax (the study of combinatorics of words, phrases, and sentences), and semantics/pragmatics (the study of the meanings of words, sentences, and conversation). Beyond this, students may focus more heavily in one or more of these areas and/or explore related questions such as how children and adults learn language (language acquisition), how utterances are produced and understood in real time (psycholinguistics), or how speaking and understanding are anchored in underlying neural systems (neurolinguistics). Other areas such as historical linguistics, sociolinguistics, philosophy of language, and linguistic anthropology can also be pursued in conjunction with offerings in other departments.

**Requirements (10 courses)**

**Prerequisite Course**

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<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>CLPS 0300</td>
<td>Introduction to Linguistics (May be waived in special instances)</td>
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**Required Courses**

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<th>Course</th>
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<td>CLPS 1310</td>
<td>Phonology ¹</td>
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<tr>
<td>CLPS 1330</td>
<td>Introduction to Syntax ¹</td>
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<td>OR</td>
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<tr>
<td>CLPS 1331</td>
<td>Linguistic Typology</td>
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AND one of:

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<tr>
<td>CLPS 1341</td>
<td>Lexical Semantics</td>
</tr>
<tr>
<td>CLPS 1342</td>
<td>Formal Semantics</td>
</tr>
<tr>
<td>CLPS 1370</td>
<td>Introduction to Pragmatics</td>
</tr>
</tbody>
</table>

One course in Psycholinguistics to be drawn from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLPS 0800</td>
<td>Language and the Mind</td>
</tr>
<tr>
<td>CLPS 1650</td>
<td>Child Language Acquisition</td>
</tr>
<tr>
<td>CLPS 1800</td>
<td>Language Processing</td>
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<tr>
<td>CLPS 1820</td>
<td>Language and the Brain</td>
</tr>
<tr>
<td>CLPS 1821</td>
<td>Neuroimaging and Language</td>
</tr>
<tr>
<td>CLPS 1890</td>
<td>Laboratory in Psycholinguistics</td>
</tr>
</tbody>
</table>

or any Topics Course in Language Acquisition or Language Processing

5 additional appropriate electives forming a thematically related set to be determined in consultation with the Concentration Advisor.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Candidates for the Bachelor of Arts degree with concentration in Literary course(s). Students should consult a concentration advisor to develop their skills in one or more genres while deepening their writing and mixed media. The concentration allows student writers to sign up for Independent study is encouraged for the A.B. degree. Students should do Foreign Language Courses Count? Foreign language courses will generally not count towards the concentration requirements, except those that 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. NOTE: Please refer to the Cognitive, Linguistic, and Psychological Sciences undergraduate Linguistics concentration page for updates not listed here.

**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 sequences: LITR 0100A, LITR 0100B, LITR 0110A, LITR 0110B, LITR 0110D, LITR 0110E, the various courses under LITR 0210, LITR 0310, LITR 0610, LITR 1010, LITR 1110, LITR 1150/1151 and LITR 1410. At least two genres must be covered within the four courses taken. An independent study in literary arts (LITR 1310 and LITR 1510) 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 before 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 Dramatic 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. At least six classes (workshops and reading/research courses) that shall count toward the concentration must be taken at Brown through the Literary Arts Department. 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 at least six classes (workshops and independent study) may submit honors applications to the Literary Arts Department. Students should obtain information from the office of the Literary Arts Department.

**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):

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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

Core Courses
MATH 1530 Abstract Algebra

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 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 1010 Theory of Computation

Three 1000-level Mathematics courses
Three advanced courses in Computer Science 1, 2
Three additional courses different from any of the above chosen from Mathematics, Computer Science, Applied Mathematics, or related areas 3

A capstone course in Computer Science or Mathematics

Total Credits

1 These courses must be at the 1000-level or higher. Two of these courses and the intermediate courses must satisfy one of the CS pathways (https://cs.brown.edu/degrees/undergrad/new-concentration-requirements/pathways-scb-and-ab-concentrations).
2 Note: CSCI 1010 may be used either as a math-oriented intermediate course or as an advanced course. CSCI 1010 was formerly known as CSCI 510; they are the same course and hence only one may be taken for credit. CSCI 1450 was formerly known as CSCI 450; they are the same course and hence only one may be taken for credit. Applied Math 1650 or 1655 may be used in place of CSCI 1450 in CS pathway requirements (https://cs.brown.edu/degrees/undergrad/new-concentration-requirements/pathways-scb-and-ab-concentrations). However, concentration credit will be given for only one of Applied Math 1650, 1655, and CSCI 1450.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Concentration
Standard Mathematics-Economics
the professional track, both award a Bachelor of Arts degree. Students may choose either the standard or analyze and develop additional theoretical constructions. The emphasis is background in economic theory plus the mathematical tools needed to

The Mathematics Economics concentration is designed to give a

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
The Mathematics 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. Students may choose either the standard or the professional track, both award a Bachelor of Arts degree.

Standard Mathematics-Economics Concentration

Economics
ECON 1130 Intermediate Microeconomics 1
ECON 1210 Intermediate Macroeconomics 1
ECON 1630 Econometrics I 1
Two courses from the "mathematical-economics" group: 2
ECON 1170 Welfare Economics and Social Choice Theory 2
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 1660 Big Data
ECON 1750 Investments II

One course from the "data methods" group: 2
ECON 1301 Economics of Education I
ECON 1305 Economics of Education: Research
ECON 1310 Labor Economics
ECON 1360 Health Economics
ECON 1410 Urban Economics
ECON 1480 Public Economics
ECON 1510 Economic Development
ECON 1520 The Economic Analysis of Institutions
ECON 1530 Health, Hunger and the Household in Developing Countries
ECON 1629 Applied Research Methods for Economists
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 2

Mathematics
Calculus: MATH 0180 or higher 1
Linear Algebra - one of the following:
MATH 0520 Linear Algebra
MATH 0540 Honors Linear Algebra
Probability Theory - one of the following:
MATH 1610 Probability
MATH 1620 Mathematical Statistics
APMA 1650 Statistical Inference I
Analysis - one of the following:
MATH 1010 Analysis: Functions of One Variable
MATH 1130 Functions of Several Variables
MATH 1140 Functions Of Several Variables
Differential Equations - one of the following:
MATH 1110 Ordinary Differential Equations
MATH 1120 Partial Differential Equations
One additional course from the Probability, Analysis, and Differential Equations courses listed above 1

Total Credits 14

1 Or ECON 1110 with permission.
2 No course may be "double-counted" to satisfy both the mathematical-economics and data methods requirement.

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 3.5 GPA overall. To graduate with honors, a student must write an honors thesis in senior year following the procedures specified by the concentration (see Economics Department website).

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 relevant 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.

## Medieval Cultures

The program in Medieval Studies offers a concentration in Medieval Cultures with two tracks with distinct foci: one in Medieval Cultures and the other in Late Antique Cultures. **Medieval Cultures** focuses on the 6th-15th centuries, combining interdisciplinary perspectives with in-depth study of one or two related disciplines.

**Late Antique Cultures** deals with the 3rd-9th 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 studies the changing relation of cultural practices, social patterns, political and economics forms, and artistic and literary traditions in this important transition period.

A traditional area of study in Medieval Cultures is Western Europe in the High Middle Ages, but students are encouraged to work comparatively in Byzantine, Islamic, Judaic and/or Slavic cultures in the middle ages.

### 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.

Under the supervision of the director of the program, students may choose courses from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>RELS 0025</td>
<td>Wealth: Religious Approaches</td>
</tr>
<tr>
<td>JUDS 0050M</td>
<td>Difficult Relations? Judaism and Christianity from the Middle Ages until the Present</td>
</tr>
<tr>
<td>ENGL 0100D</td>
<td>Matters of Romance</td>
</tr>
<tr>
<td>RELS 0110</td>
<td>Christians</td>
</tr>
<tr>
<td>RELS 0150</td>
<td>Islam Unveiled</td>
</tr>
<tr>
<td>HIST 0150B</td>
<td>The Philosophers' Stone: Alchemy From Antiquity to Harry Potter</td>
</tr>
<tr>
<td>ENGL 0150C</td>
<td>The Medieval King Arthur</td>
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<tr>
<td>RELS 0290D</td>
<td>Islamic Sexualities</td>
</tr>
<tr>
<td>ENGL 0300F</td>
<td>Beowulf to Aphra Behn: The Earliest British Literatures</td>
</tr>
<tr>
<td>ENGL 0310F</td>
<td>Prose Sagas of the Medieval North</td>
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</tbody>
</table>

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<thead>
<tr>
<th>Course Code</th>
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</tr>
</thead>
<tbody>
<tr>
<td>HIAA 0321</td>
<td>Toward a Global Late Antiquity: 200-800 CE</td>
</tr>
<tr>
<td>MDVL 0360</td>
<td>Cities: Medieval Perspectives</td>
</tr>
<tr>
<td>RELS 0410</td>
<td>Christianity in Late Antiquity</td>
</tr>
<tr>
<td>RELS 0415</td>
<td>Ancient Christian Culture</td>
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<tr>
<td>HIAA 0460</td>
<td>Muslims, Jews and Christians in Medieval Iberia</td>
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<tr>
<td>COLT 0510K</td>
<td>The 1001 Nights</td>
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<tr>
<td>HIST 0521A</td>
<td>Christianity in Conflict in the Medieval Mediterranean</td>
</tr>
<tr>
<td>HIST 0521M</td>
<td>The Holy Grail and the Historian's Quest for the Truth</td>
</tr>
<tr>
<td>CLAS 0600</td>
<td>The Literary Worlds of Late Antiquity</td>
</tr>
<tr>
<td>MDVL 0620</td>
<td>Muslims, Jews, and Christians in Medieval Iberia</td>
</tr>
<tr>
<td>HIST 0621B</td>
<td>The Search for King Arthur</td>
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<tr>
<td>RELS 0640</td>
<td>Dying To Be With God: Jihad, Past and Present</td>
</tr>
<tr>
<td>CLAS 0660</td>
<td>The World of Byzantium</td>
</tr>
<tr>
<td>JUDS 0681</td>
<td>Great Jewish Books</td>
</tr>
<tr>
<td>HISP 0750E</td>
<td>Topics in Hispanic Culture and Civilization</td>
</tr>
<tr>
<td>MUSC 0910</td>
<td>Medieval and Renaissance Music</td>
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<tr>
<td>ITAL 1010</td>
<td>Dante in English Translation: Dante's World and the Invention of Modernity</td>
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<tr>
<td>PHIL 1100C</td>
<td>Medieval Arabic Philosophy</td>
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<tr>
<td>LATN 1110F</td>
<td>Fortunatus</td>
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<tr>
<td>LATN 1110H</td>
<td>Literature at the Court of Charlemagne</td>
</tr>
<tr>
<td>LATN 1110L</td>
<td>Medieval Latin Lyric</td>
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<tr>
<td>GREK 1110Q</td>
<td>Greek Erotic Literature: From Plato to the Medieval Romances</td>
</tr>
<tr>
<td>GREK 1110T</td>
<td>Rhetors and Philosophers: Intellectual Thought and Sophistic Style in the Ancient World</td>
</tr>
<tr>
<td>LATN 1120C</td>
<td>Survey of Late and Medieval Latin</td>
</tr>
<tr>
<td>LATN 1120D</td>
<td>Alcuin</td>
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<tr>
<td>CLAS 1120G</td>
<td>The Idea of Self</td>
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<tr>
<td>CLAS 1120V</td>
<td>The Age of Constantine: The Roman Empire in Transition</td>
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<tr>
<td>HIST 1205</td>
<td>The Long Fall of the Roman Empire</td>
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<tr>
<td>HIST 1210A</td>
<td>The Viking Age</td>
</tr>
<tr>
<td>HIST 1211</td>
<td>Crusaders and Cathedrals, Deviants and Dominance: Europe in the High Middle Ages</td>
</tr>
<tr>
<td>HIST 1260D</td>
<td>Living Together: Muslims, Christians, and Jews in Medieval Iberia</td>
</tr>
<tr>
<td>HIST 1280</td>
<td>Death from Medieval Relics to Forensic Science</td>
</tr>
<tr>
<td>RELS 1300</td>
<td>Ancient Christianity and the Sensing Body</td>
</tr>
<tr>
<td>COLT 1310E</td>
<td>A Classical Islamic Education: Readings in Arabic Literature</td>
</tr>
<tr>
<td>ENGL 1310T</td>
<td>Chaucer</td>
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<tr>
<td>ENGL 1310V</td>
<td>Chaucer: The Canterbury Tales</td>
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<tr>
<td>ENGL 1311E</td>
<td>History of the English Language</td>
</tr>
<tr>
<td>ENGL 1311H</td>
<td>Sagas Without Borders: Multilingual Literatures of Early England</td>
</tr>
<tr>
<td>ENGL 1311L</td>
<td>From Mead-Hall to Mordor: The Celtic and Germanic Roots of Tolkien's Fiction</td>
</tr>
<tr>
<td>RELS 1325D</td>
<td>Desire and the Sacred</td>
</tr>
<tr>
<td>HISP 1330T</td>
<td>El amor en español</td>
</tr>
<tr>
<td>ENGL 1360F</td>
<td>Quest, Vision, Diaspora: Medieval Journey Narratives</td>
</tr>
<tr>
<td>ENGL 1360H</td>
<td>Introduction to the Old English Language</td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
ENGL 1360J Middle English Literature
ENGL 1360U Europe in the Vernacular
ENGL 1361D Women's Voices in Medieval Literature
ENGL 1361K Seminar in the Old English Language II
HIST 1440 The Ottomans: Faith, Law, Empire
HIAA 1440B Architecture of Solitude: The Medieval Monastery
RELS 1520 Pilgrimage and Sacred Travel in the Lands of Islam
RELS 1530A Methods and Problems in Islamic Studies: Narratives
RELS 1530D Medieval Islamic Sectarianism
HIAA 1560A Italy and the Mediterranean
ASYR 1600 Astronomy Before the Telescope
JUDS 1630 The Talmud
CLAS 1750L Erotic Desire in the Premodern Mediterranean
COLT 1813P Captive Imaginations: Writing Prison in the Middle Ages
ENGL 1900Y Medieval Manuscript Studies: Paleography, Codicology, and Interpretation
HIST 1963L Barbarians, Byzantines, and Berbers: Early Medieval North Africa, AD 300-1050
HIST 1963M Charlemagne: Conquest, Empire, and the Making of the Middle Ages
HIST 1963Q Sex, Power, and God: A Medieval Perspective
MDVL 1970 Independent Study
HIST 1979H Prostitutes, Mothers, + Midwives: Women in Pre-modern Europe and North America
MDVL 1990 Honors Thesis
HISP 2030D Fifteenth-Century Sentimental Romances and Celestina
GREK 2110F Greek Palaeography and Premodern Book Cultures
ENGL 2360Q Manuscript, Image, and the Middle English Text
HIST 2970A New Perspectives on Medieval History

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:
One course in Roman history: 1
  CLAS 1310 Roman History I: The Rise and Fall of an Imperial Republic
  CLAS 1320 Roman History II: The Roman Empire and Its Impact (recommended)
One course in medieval history 1

One course at the advanced level (numbered at least 1000) in one approved language 1
Six other courses drawn from appropriate offerings and with the approval of the concentration advisor. These courses should support a concentration area of special interest.

Total Credits 9

The language in most cases will be Latin, but students will present different competencies and interests; other languages, such as Greek, Hebrew, or one of the medieval vernaculars can be substituted for Latin, with the approval of the concentration advisor and in conjunction with a clearly articulated program of study.

Under the supervision of the director of the program, students may choose courses from the following:

CLAS 0660 The World of Byzantium
CLAS 1120G The Idea of Self
CLAS 1120V The Age of Constantine: The Roman Empire in Transition
CLAS 1750L Erotic Desire in the Premodern Mediterranean
COLT 0510K The 1001 Nights
COLT 1813P Captive Imaginations: Writing Prison in the Middle Ages
ENGL 0100D Matters of Romance
ENGL 0150C The Medieval King Arthur
ENGL 0300F Beowulf to Aphra Behn: The Earliest British Literatures
ENGL 0310F Prose Sagas of the Medieval North
ENGL 1310T Chaucer
ENGL 1310V Chaucer: The Canterbury Tales
ENGL 1311H Sagas Without Borders: Multilingual Literatures of Early England
ENGL 1311L From Mead-Hall to Mordor: The Celtic and Germanic Roots of Tolkien’s Fiction
ENGL 1360F Quest, Vision, Diaspora: Medieval Journey Narratives
ENGL 1360H Introduction to the Old English Language
ENGL 1360J Middle English Literature
ENGL 1360U Europe in the Vernacular
ENGL 1361D Women's Voices in Medieval Literature
ENGL 1900Y Medieval Manuscript Studies: Paleography, Codicology, and Interpretation
ENGL 2360Q Manuscript, Image, and the Middle English Text
GREK 1110Q Greek Erotic Literature: From Plato to the Medieval Romances
GREK 1110T Rhetors and Philosophers: Intellectual Thought and Sophistic Style in the Ancient World
GREK 2110F Greek Palaeography and Premodern Book Cultures
HIAA 0321 Toward a Global Late Antiquity: 200-800 CE
HIAA 0460 Muslims, Jews and Christians in Medieval Iberia
HIAA 1440B Architecture of Solitude: The Medieval Monastery
HISP 2030D Fifteenth-Century Sentimental Romances and Celestina
HIST 0150B The Philosophers' Stone: Alchemy From Antiquity to Harry Potter
HIST 0521A Christianity in Conflict in the Medieval Mediterranean

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
HIST 0521M The Holy Grail and the Historian's Quest for the Truth
HIST 0621B The Search for King Arthur
HIST 1205 The Long Fall of the Roman Empire
HIST 1210A The Viking Age
HIST 1260D Living Together: Muslims, Christians, and Jews in Medieval Iberia
HIST 1211 Crusaders and Cathedrals, Deviants and Dominance: Europe in the High Middle Ages
HIST 1963L Barbarians, Byzantines, and Berbers: Early Medieval North Africa, AD 300-1050
HIST 1963Q Sex, Power, and God: A Medieval Perspective
HIST 1963M Charlemagne: Conquest, Empire, and the Making of the Middle Ages
HIST 1974M Early Modern Globalization
HIST 2970A New Perspectives on Medieval History
JUDS 0050M Difficult Relations? Judaism and Christianity from the Middle Ages until the Present
JUDS 0681 Great Jewish Books
JUDS 1630 The Talmud
LATN 1110F Fortunatus
LATN 1110H Literature at the Court of Charlemagne
LATN 1120C Survey of Late and Medieval Latin
LATN 1120D Alcuin
MDVL 0360 Cities: Medieval Perspectives
MDVL 0620 Muslims, Jews, and Christians in Medieval Iberia
MDVL 1970 Independent Study
MDVL 1990 Honors Thesis
PHIL 1100C Medieval Arabic Philosophy
RELS 0025 Wealth: Religious Approaches
RELS 0110 Christians
RELS 0150 Islam Unveiled
RELS 0290D Islamic Sexualities
RELS 0410 Christianity in Late Antiquity
RELS 0640 Dying To Be With God: Jihad, Past and Present
RELS 1300 Ancient Christianity and the Sensing Body
RELS 1520 Pilgrimage and Sacred Travel in the Lands of Islam
RELS 1530A Methods and Problems in Islamic Studies: Narratives
RELS 1530D Medieval Islamic Sectarianism

Honors

When in Late Antique Cultures, these are awarded to students who present a meritorious honors thesis in addition to completing the required courses of the concentration. Application for admission to honors should be made in the spring of the junior year, by which time honors candidates must have completed a minimum of six approved courses in Late Antique Studies. Accepted candidates write the thesis in a two-semester course sequence (MDVL 1990) under the supervision of a director and a second reader to be determined in consultation with the advisor.

Middle East Studies

The concentration in Middle East Studies (MES) seeks to build a strong, interdisciplinary understanding of historical and contemporary issues within the Middle East, broadly defined. Requirements are intentionally flexible to accommodate the focused interests of students in understanding the diverse dynamics, histories, and societies of this region. A variety of courses from departments across the University, addressing subjects from antiquity to the present, expose students to methods and materials of different disciplines and help them build a framework for understanding the Middle East in historical and contemporary context. Concentration requirements are structured around four major cornerstones: language, foundational knowledge and methods, multidisciplinary area studies, and research.

Standard Program for the AB Degree

Foundational Courses: All MES concentrators are expected to take both of the following foundational courses. It is recommended that students take the first foundational course (MES 0100: The Middle East: Cultures and Societies—offered every spring) before taking the second foundational course (MES 1968: Approaches to the Middle East—offered every fall). Foundational course requirements cannot be fulfilled via independent study, study abroad, or transfer credits.

MES 0100 The Middle East: Cultures & Societies
MES 1968 Approaches to the Middle East (HIST 1968A)

Electives: Students must take at least three elective courses chosen in consultation with the Director of Undergraduate Studies (DUS) from the list of courses offered within MES or that are cross- or X-listed by MES. To allow for exposure of different disciplinary approaches to the Middle East, students must take at least one course in the humanities (offered within the departments of Archaeology and the Ancient World, Classics, Comparative Literature, History of Art and Architecture, Modern Culture and Media, Philosophy, or Religious Studies) and at least one course in the social sciences (offered within the departments of Anthropology, History, International Relations, Political Science, Sociology, or Urban Studies). Some examples of recent courses that would fulfill these requirements include:

Humanities

CLAS 0660 The World of Byzantium
HIAA 0041 The Architectures of Islam
PHIL 0203 Introduction to Islamic Philosophy
RELS 0088 Judaism, Christianity, and Islam

Social Sciences:

ANTH 1150 Middle East in Anthropological Perspective
INTL 1802Q Iran and the Islamic Revolution
POLI 1822I Geopolitics of Oil and Energy
SOC 1871L Migration, Displacement and Emerging Community Experiences: Contemporary Turkey

URBN 1870K Jerusalem Since 1850: Religion, Politics, Cultural Heritage

Language Semesters: Middle East Studies concentrators are expected to achieve competence in at least one of the modern Middle Eastern languages, such as Arabic, Persian, Hebrew, or Turkish. This entails the completion of at least six semesters of Brown language coursework in one of these languages, or the equivalent through transfer or study abroad credits. Students who have reached proficiency in a Middle Eastern language but have not received six credits at Brown (including transfer and/or study abroad credits) can fulfill this requirement:

- Through advanced reading and writing courses in that language. Recent examples include:
  COLT 1310J The Arab Renaissance
  COLT 1431B Modern Arabic Poetry
- Through taking courses in a second Middle Eastern language.
- Or through courses in a non–Middle Eastern language to be used in a senior capstone project (for example, Spanish for the study of Andalucía or French for the study of North Africa).

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Capstone/Honors Project: MES requires all concentrators to conduct a capstone project within their senior year (i.e., in their last two semesters before graduation). The purpose of the capstone is to synthesize and apply the skills and knowledge that MES concentrators have acquired through the MES curriculum—including disciplinary perspectives, methodological and theoretical approaches, background in the historical and contemporary dynamics of the region, and language competency—to particular interests developed through the concentration. Capstones offer students the opportunity to integrate and build upon their experiences within the concentration, while demonstrating intellectual creativity, research skills, and effective communication, and should serve in some sense as a culmination of or reflection on what one has gained in the concentration. All students are expected to present their capstone research in the final semester before graduation. Presentations of honors theses will be approximately twenty minutes long, and those of non-honors capstone projects will be approximately ten minutes long, both followed by a question-and-answer session. Capstone projects must fulfill the following requirements:

- Must be taken in the final two semesters before graduation (excluding summer and winter sessions)
- Must incorporate research in a Middle Eastern language
- Must be taken for a letter grade
- Must be approved or overseen by a MES or MES-affiliated faculty member
- Must be presented in the final semester before graduation.

Capstones can take one of three forms:

a. A Middle East–focused research paper of at least 20 pages for an existing concentration-eligible (MES-coded or X-Listed) course, undertaken with the permission and supervision of the instructor.

b. An independent study or project (artistic, research, or otherwise), approved by the DUS and supervised by at least one faculty member for at least one semester under the MES 1970 - Independent Study designation.

c. A two-semester honors thesis, completed under the supervision of a primary reader (who is an MES or MES-affiliated faculty member) and a secondary reader (who can be from other Brown departments and programs), and in coordination with the DUS.

**Total Credits**

1 For concentrators graduating before 2023, courses designated “Foundational Courses” under previous concentration requirements may be used to fulfill this requirement. Please meet with the MES Director of Undergraduate Studies (DUS) to discuss any such arrangements.

2 Previously HIST 1968 or HIST 1968A: Approaches to the Middle East. Any student who has taken HIST 1968 or HIST 1968A: Approaches to the Middle East, will have fulfilled this requirement.

3 Concentrators are encouraged to discuss options for fulfilling language requirements with the DUS.

4 Two semesters of Independent Study (MES 1970) are required for honors and will raise the number of required courses to 13. One of these Independent Study courses should take the form of a thesis writing workshop supervised by the DUS or other designated MES faculty during the first semester of thesis writing. Students must declare their intention to write an honors thesis and submit a thesis prospectus (to include a thesis proposal, research plan, proposed thesis outline, initial literature review, and initial bibliography) by April 25th of their junior year (for May graduates) or November 20th of their junior year (for December graduates).

* Study Abroad
Concentrators may apply up to two courses per semester of study abroad toward their MES concentration requirements, with a maximum of four courses (for two semesters abroad). Students must meet with their advisors and have them sign off on their specific course selections prior to embarking upon their program. Study abroad transfer credits may only be applied toward fulfilling elective and language requirements. Study abroad transfer credit may not be used to fulfill foundational course requirements.

** Dual Concentrators
Middle East Studies concentrators may apply up to two courses that fulfill MES concentration requirements toward fulfilling the requirements of another concentration. Language courses do not count toward this two-course limit on overlapping courses.

**Honors**
To be eligible for honors, students will have earned an “A” in the majority of courses for the concentration. Honors students will be required to have at least six semesters of language study (Advanced), two semesters of which may be counted toward the elective requirement. Two semesters of Independent Study (MES 1970) towards the Honors Thesis with the thesis advisor(s) are required. This is typically done during senior year and will raise the total number of required courses to 13.

**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 on 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-Colonial 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**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCM 0150</td>
<td>Text/Media/Culture: Theories of Modern Culture and Media</td>
<td>1</td>
</tr>
<tr>
<td>Select two of the following:</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>MCM 0220</td>
<td>Print Cultures: Textuality and the History of Books</td>
<td></td>
</tr>
<tr>
<td>MCM 0230</td>
<td>Digital Media</td>
<td></td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
**Track II** consists of 11 courses:

- 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
- Two must be senior seminars from the MCM 1500 or MCM 1700 series
- Two must be at any level in MCM above MCM 0260

Three additional courses. These courses must be in MCM or in related departments.  

<table>
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<td>Cinematic Coding and Narrativity</td>
</tr>
<tr>
<td>MCM 1110</td>
<td>The Theory of the Sign</td>
</tr>
</tbody>
</table>

| Total Credits | 11 |

1. No more than three courses from this list may count for concentration requirements.  
2. The specific courses must be approved by an MCM concentration advisor as part of a coherent program of study.

**Other Requirements:**

1. **Focus Area:** Of the 11 courses required for the concentration, at least 3 courses must be in a focus area approved by a concentration advisor. These courses may be MCM courses, related courses, or a combination of the two, and they must represent a focus on some aspect of modern literature, theory, media, art or culture. Examples of possible focus areas are: mass/popular culture, gender/sexuality, language/representation/subjectivity, narrative, digital media, film, modern thought, television, the modern arts, the novel, colonialism and post-colonialism. This is not an exhaustive list. Production courses may be in the focus area but must be in addition to the minimum 3 courses.

2. **Production:** Work in production is encouraged but not required for Track I concentrators. Of the 11 courses required for concentration, as many as 3 may be in production. These may be production courses offered by MCM (film, video, digital media) or courses in creative writing, painting, photography, journalism, etc., provided they do not bring the total number of concentration courses taken outside MCM to more than 3.

**Honors:**

The honors program in MCM is designed for students who wish to integrate their skills in a special project. Students who qualify for Honors in Track I are eligible to apply to do an Honors project or thesis. Students should submit a letter of intent in their 6th semester, and a formal proposal by the first day of their 7th semester. Applications will be screened by the MCM Honors Committee. (Application forms are available in the MCM office.) If approved, a student must then register for MCM1970 (taken in the 7th semester), a one-credit course which can count towards their Focus Area requirements, and MCM1990 (taken in the 8th semester), a one-credit thesis course in which they complete the Honors project/thesis.

**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 0150 Text/Media/Culture: Theories of Modern Culture and Media  
  - MCM 0730 Introduction to Video Production: Critical Strategies and Histories

- **Select one of the following Introductory Practice or History of a Medium courses:**
  - MCM 0100 Studio Foundation
  - VISA 0100 Advanced Studio Foundation

| Total Credits | 11 |

1. At least one must be from the MCM 1500 series.
2. Courses can be in any medium or combinatory 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:**

The honors program in MCM is designed for students who wish to integrate their skills in a special project. Students who qualify for Honors in Track II are eligible to apply to do an Honors project or thesis. Students should submit a letter of intent in their 6th semester, and a formal proposal by the first day of their 7th semester. Applications will be screened by the MCM Honors Committee. (Application forms are available in the MCM office.) If approved, a student must then register for MCM1970 (taken in the 7th semester), a one-credit course which can count towards their Focus Area requirements, and MCM1990 (taken in the 8th semester), a one-credit thesis course in which they complete the Honors project/thesis.

**Music**

The concentration in Music integrates theory, history, ethnomusicology, technology, composition, and performance. Upon completing two foundational courses in theory and musicianship, concentrators have the flexibility to craft an intellectual pathway based on their particular interests and goals. The 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, or Ghanaian Drumming.

**Concentrating in Music**

If you choose Music as a Concentration*, you will be expected to achieve well-rounded training as a musician, regardless of the genre(s) in which you specialize. This training is manifested in the following general components:

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Fundamental skills are important for any musician, and therefore a minimum of two music theory/musicianship courses are required of all students who wish to Concentrate. Students have the opportunity to enter into various theory courses according to their interest and experience.

Historical and cultural knowledge of music is another key area from which Concentrators are required to complete courses. These courses may be studies of Western or non-Western forms of music.

The creation of music is also central to the Music Concentration. Students are encouraged to make music in a number of ways, including participation in ensembles, solo performance, composition, music production, and/or conducting.

Music faculty will be available to advise students on shaping the flexible parts of their Concentration and achieving their goal at Brown.

Concentration Requirements:

Music Theory
- Two courses in music theory, which may include one 400-level and one 500-level course, or two 500-level courses.

Music Scholarship, Production and Advance Theory
A minimum of four upper-level courses above 1000, must include:
- One upper-level course in musicology or ethnomusicology
- Any three upper-level courses, including graduate-level courses

Additional Electives (according to student interest)
Four additional elective courses, may include:
- Up to four half-credit courses in performance - AMP music instruction and/or Ensemble Participation (2 credits)
- Up to two courses outside of the department
- One music course below the 1000 level

Senior Project
All music concentrators will choose a culminating experience for their senior year, either a capstone project or honors project. This may take the form of a performance, scholarly study, or original creative work. All students will have a primary advisor for their Senior Project. The work may be done independently of a course for credit, as an independent study, or within the framework of an existing course.

Honors in Music (optional)
Faculty Rules stipulate “Brown University shall, at graduation, grant honors to students whose work in a field of concentration has demonstrated superior quality and culminated in an honors thesis of distinction.” In order to apply for Honors in Music, a student must fulfill the following criteria:

1. The student must have acquired a 3.5 cumulative grade point average overall.
2. The student must also have acquired a 3.5 cumulative grade point average in courses that count toward the concentration. (“S with distinction” equates with “A”. Grades of “S” are not computed in the grade point average.)

Departmental Procedures:
The Department designates three kinds of projects leading to honors in music:
(a) Research project in history, theory, or ethnomusicology.
(b) Performance project accompanied by pertinent research of lesser scope than (a). (Scholarly program notes required)
(c) Composition/Computer Music project. (score required if applicable; recording and/or video documentation desired, short project description)

NOTE: the term HONORS COMMITTEE refers to a student’s honors thesis advisor and readers.

A student wishing to propose a project should proceed as follows:
1. An honors candidate must secure a faculty advisor and a second reader to serve as an honors committee for his or her project by the end of the year before graduation—typically, the end of the sixth semester. At the beginning of the penultimate semester the student will submit a proposal describing the project to the honors committee for approval. The proposal must receive committee approval and be given to Mary Rego for distribution to the full faculty by the first day of the first full week of classes of the semester. The department faculty will vote on the proposals at the next regularly scheduled meeting. Decisions will be based on the student’s overall performance in music courses and on the quality of the proposal. The advisor will notify the student of the faculty’s decision.
2. It is expected that honors projects will normally take two semesters to complete. Students pursuing honors may choose to register for MUSC 1970 in the Fall and/or in the Spring. In any case, they will establish a series of regular meetings with their advisor. By finals week of the penultimate semester, honors candidates must demonstrate substantial progress by submitting to the honors committee a partial draft of a paper or composition or, for performance projects, by playing a significant portion of the programmed repertoire. Failure to make sufficient progress may result in the termination of the honors project.
3. Last semester deadlines: Honors candidates must submit a complete draft to their honors committee by the first day of classes following the eighth week of the last semester. The committee will comment on the project and suggest revisions. Revisions must be completed, and the final project submitted to the honors committee by the first day of classes two weeks later. In the case of performance projects, this means that both the public performance and the scholarly component must have been completed by this date. In the case of research projects, all figures, notes, bibliography, and other critical apparatus must have been completed. Failure to make the deadline may result in the forfeiting of honors by the candidate, though the student may complete the project as a capstone project.
4. The honors committee will confer to determine their views on their projects. If the second reader is outside Music, the advisor may solicit a written recommendation about the merits of the project.
5. The advisor will deliver a copy of the completed thesis to the Mary Rego by the middle of the eleventh week of the last semester so that it may be made available for review by the full faculty. (Online, or hard copy on reserve in the Music Library.)
6. During the twelfth week of the last semester, the advisor will report on the project at a meeting of the Department faculty for a vote. The advisor will notify the student of the faculty’s decision.
7. Honors recipients will present their projects at a Department of Music Convocation held once annually at noon on the first day of final examination period in Semester II.

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 Elyse_Netto@brown.edu in order to have a faculty advisor assigned to them.

Standard program for the Sc.B. degree
The concentration combines a general science background with a number of specific courses devoted to the cellular, molecular, and integrative functions of the nervous system. The concentration allows considerable flexibility for students to tailor a program to their individual interests. Elective courses focus on a variety of areas including molecular mechanisms, cellular function, sensory and motor systems, neuropharmacology, learning and memory, animal behavior, cognitive function, bioengineering, theoretical neuroscience and computer modeling.

The concentration in neuroscience leads to an Sc.B. degree. The following background courses, or their equivalent, are required for the degree:
Background Courses:

- MATH 0090 Introductory Calculus, Part I 1
- MATH 0100 Introductory Calculus, Part II 1
- PHYS 0030 Basic Physics A 1
- PHYS 0040 Basic Physics B 1
- BIOL 0200 The Foundation of Living Systems 1
- CHEM 0330 Equilibrium, Rate, and Structure 1
- CHEM 0350 Organic Chemistry 1

Core Concentration Courses:

- NEUR 0010 The Brain: An Introduction to Neuroscience 1
- NEUR 1020 Principles of Neurobiology 1
- NEUR 1030 Neural Systems 1
- One neuroscience lab course 1
- One critical reading course 1
- One statistics course 1
- Four electives related to neuroscience 1

Total Credits 17

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.

Standard Concentration

10 courses total, of which no more than one may be below PHIL 0350, and at least three must be at or above PHIL 0990.

A. Five Area Requirements:

One course in Ancient Philosophy, e.g. 1

- 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. 1

- PHIL 0360 Early Modern Philosophy
- PHIL 1700 Locke, Berkeley, Hume and Others
- PHIL 1710 18th Century Continental Rationalism
- PHIL 1720 Kant: The Critique of Pure Reason

One course in Epistemology or Metaphysics, e.g. 1

- 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. 1

- PHIL 0500 Moral Philosophy
- PHIL 0560 Political Philosophy
- PHIL 0880 Ethical Themes in the Contemporary American Short Story
- PHIL 1400 Ethics in the Novel
- PHIL 1640 The Nature of Morality
- PHIL 1650 Moral Theories

One course in Logic, e.g. 1

- PHIL 0540 Logic
- PHIL 1630 Mathematical Logic

PHIL 1880 Advanced Deductive Logic

B. Five further courses, chosen to include an item under each of the following three headings:

1) One seminar: a course from the PHIL 0990 series or a seminar at the 2000-level
2) Either a 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. See Notes below for further details.
3) Capstone: One of the following four options
   a. Reading Course (PHIL 1990): 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.
   b. Senior Seminar (PHIL 0990 or 0991): Seminars aimed primarily at advanced undergraduates, on varying topics each year, requiring the completion of substantial research and writing.
   c. Graduate Seminar (PHIL 2000-level): seminars mainly aimed at graduate students, but also open to advanced undergraduates, requiring the completion of substantial research and writing. (A 0990- or 2000-level seminar taken as a Capstone also fulfills requirement (B, 1) for a seminar).
   d. 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 (with enrollment in PHIL 1995 Senior Thesis for two semesters) under the supervision of a thesis advisor. (A 0990- or 2000-level seminar taken as a Capstone also fulfills requirement (B, 1) for a seminar).

Total Credits 10

Notes:

- Up to two courses from departments other than the Philosophy department may be included among the ten courses required for the Concentration; no more than one of these two outside courses may count toward the three specialization requirements.
- One course, but not more, may fulfill both an Area Requirement and a Specialization requirement.
- 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 DUS (Director of Undergraduate Studies).

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, five of which were taken for a letter grade).
- Thesis: for further details, see "Senior Year Options" and "Thesis" on the Departmental website.

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.

### Standard concentration for the A.B. degree

Select one of the following Series:  

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0070 &amp; PHYS 0160</td>
<td>Analytical Mechanics and Introduction to Relativity, Waves and Quantum Physics</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 0030 &amp; PHYS 0040</td>
<td>Basic Physics A and Basic Physics B</td>
<td>2</td>
</tr>
<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 0470</td>
<td>Electricity and Magnetism</td>
<td>1</td>
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<tr>
<td>PHYS 0500</td>
<td>Advanced Classical Mechanics</td>
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<td>PHYS 0560</td>
<td>Experiments in Modern Physics</td>
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</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>
</tbody>
</table>

One additional 1000-level course or a mathematics course beyond the introductory level.  

Total Credits: 8

### Standard program for the Sc.B. degree

**Prerequisites:**  
Select one of the following Series:  

<table>
<thead>
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<td>PHYS 0050 &amp; PHYS 0060</td>
<td>Foundations of Mechanics and Foundations of Electromagnetism and Modern Physics</td>
<td>2</td>
</tr>
</tbody>
</table>

Select one of the following:  

- MATH 0190 Advanced Placement Calculus (Physics/Engineering) 
- Or MATH 0090, MATH 0100

**Program:**  

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<td>Quantum Mechanics A</td>
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<td>PHYS 1420</td>
<td>Quantum Mechanics B</td>
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</tr>
<tr>
<td>PHYS 1510</td>
<td>Advanced Electromagnetic Theory</td>
<td>1</td>
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<tr>
<td>PHYS 1530</td>
<td>Thermodynamics and Statistical Mechanics</td>
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</tr>
<tr>
<td>PHYS 1560</td>
<td>Modern Physics Laboratory</td>
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</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>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1990</td>
<td>Senior Conference Course</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Credits: 17

---

1 In addition, courses in computer programming are recommended.  
2 A senior thesis is required. This is to be prepared in connection with PHYS 1990 under 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.

### 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 0190) 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

**Prerequisites:**  
Select one of the following Series:  

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0170</td>
<td>Advanced Placement Calculus with Honors</td>
<td>2</td>
</tr>
<tr>
<td>&amp; MATH 0180</td>
<td>and Intermediate Calculus</td>
<td>2</td>
</tr>
<tr>
<td>MATH 0190</td>
<td>Advanced Placement Calculus (Physics/Engineering) &amp; MATH 0200</td>
<td>1</td>
</tr>
</tbody>
</table>

Select one of the following:  

- MATH 0350 Honors Calculus (or equivalent)  
- PHYS 0470 Electricity and Magnetism

**Program:**  

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>APMA 0330</td>
<td>Methods of Applied Mathematics I, II</td>
<td>1</td>
</tr>
<tr>
<td>APMA 0340</td>
<td>Methods of Applied Mathematics I, II</td>
<td>1</td>
</tr>
<tr>
<td>APMA 0350</td>
<td>Applied Ordinary Differential Equations</td>
<td>1</td>
</tr>
<tr>
<td>APMA 0360</td>
<td>Applied Partial Differential Equations I</td>
<td>1</td>
</tr>
<tr>
<td>MATH 1110</td>
<td>Ordinary Differential Equations</td>
<td>1</td>
</tr>
<tr>
<td>MATH 1120</td>
<td>Partial Differential Equations</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>
</tbody>
</table>

Three of the following:  

- 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

Two additional 1000- or 2000-level courses in physics or a related field which are not listed as requirements.  

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1990</td>
<td>Senior Conference Course</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Credits: 18

---

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
A senior thesis is required. This is to be prepared in connection with under 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.

**Biological Physics Track for the Sc.B. degree**

Foundations of Physics

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PHYS 0070</td>
<td>Analytical Mechanics</td>
<td>1</td>
</tr>
<tr>
<td>or PHYS 0050</td>
<td>Foundations of Mechanics</td>
<td></td>
</tr>
<tr>
<td>or ENGN 0040</td>
<td>Dynamics and Vibrations</td>
<td></td>
</tr>
<tr>
<td>PHYS 0160</td>
<td>Introduction to Relativity, Waves and Quantum Physics</td>
<td>1</td>
</tr>
<tr>
<td>or PHYS 0060</td>
<td>Foundations of Electromagnetism and Modern Physics</td>
<td></td>
</tr>
<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 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>

Select one of the following Series: 1

**Series A**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0720</td>
<td>Methods of Mathematical Physics</td>
<td>1</td>
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</table>

**Series B**

Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>APMA 0330</td>
<td>Methods of Applied Mathematics I, II</td>
<td></td>
</tr>
<tr>
<td>APMA 0350</td>
<td>Applied Ordinary Differential Equations</td>
<td></td>
</tr>
<tr>
<td>MATH 1110</td>
<td>Ordinary Differential Equations</td>
<td></td>
</tr>
</tbody>
</table>

And select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0180</td>
<td>Intermediate Calculus</td>
<td></td>
</tr>
<tr>
<td>MATH 0200</td>
<td>Intermediate Calculus (Physics/Engineering)</td>
<td></td>
</tr>
<tr>
<td>MATH 0350</td>
<td>Honors Calculus</td>
<td></td>
</tr>
<tr>
<td>MATH 0520</td>
<td>Linear Algebra</td>
<td></td>
</tr>
<tr>
<td>MATH 0540</td>
<td>Honors Linear Algebra</td>
<td></td>
</tr>
</tbody>
</table>

**Basic Biology and Chemistry**

<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 (or placement out of BIOL 0200)</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 0500</td>
<td>Cell and Molecular Biology</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 0330</td>
<td>Equilibrium, Rate, and Structure</td>
<td>1</td>
</tr>
</tbody>
</table>

**Advanced Biophysical Topics and Techniques**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1610</td>
<td>Biological Physics</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 1990</td>
<td>Senior Conference Course</td>
<td>1</td>
</tr>
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</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>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>APMA 0360</td>
<td>Applied Partial Differential Equations I</td>
<td></td>
</tr>
<tr>
<td>APMA 0410</td>
<td>Mathematical Methods in the Brain Sciences</td>
<td></td>
</tr>
<tr>
<td>APMA 0650</td>
<td>Essential Statistics</td>
<td></td>
</tr>
<tr>
<td>APMA 1070</td>
<td>Quantitative Models of Biological Systems</td>
<td></td>
</tr>
<tr>
<td>APMA 1080</td>
<td>Inference in Genomics and Molecular Biology</td>
<td></td>
</tr>
<tr>
<td>BIOL 0280</td>
<td>Biochemistry</td>
<td></td>
</tr>
<tr>
<td>BIOL 0470</td>
<td>Genetics</td>
<td></td>
</tr>
<tr>
<td>BIOL 1050</td>
<td>Biology of the Eukaryotic Cell</td>
<td></td>
</tr>
<tr>
<td>BIOL 1200</td>
<td>Protein Biophysics and Structure</td>
<td></td>
</tr>
<tr>
<td>BIOL 1270</td>
<td>Advanced Biochemistry</td>
<td></td>
</tr>
<tr>
<td>BIOL 1870</td>
<td>Techniques and Clinical Applications in Pathobiology</td>
<td></td>
</tr>
<tr>
<td>CHEM 0350</td>
<td>Organic Chemistry</td>
<td></td>
</tr>
<tr>
<td>CHEM 0360</td>
<td>Organic Chemistry</td>
<td></td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0090</td>
<td>Introductory Calculus, Part I</td>
<td></td>
</tr>
<tr>
<td>MATH 0170</td>
<td>Advanced Placement Calculus</td>
<td></td>
</tr>
<tr>
<td>MATH 0190</td>
<td>Advanced Placement Calculus (Physics/Engineering)</td>
<td></td>
</tr>
<tr>
<td>MATH 1610</td>
<td>Probability</td>
<td></td>
</tr>
<tr>
<td>MATH 1620</td>
<td>Mathematical Statistics</td>
<td></td>
</tr>
<tr>
<td>PHYS 0560</td>
<td>Experiments in Modern Physics</td>
<td></td>
</tr>
<tr>
<td>PHYS 1510</td>
<td>Advanced Electromagnetic Theory</td>
<td></td>
</tr>
<tr>
<td>PHYS 1560</td>
<td>Modern Physics Laboratory</td>
<td></td>
</tr>
<tr>
<td>PHYS 2620F</td>
<td>Selected Topics in Molecular Biophysics</td>
<td></td>
</tr>
<tr>
<td>PHYS 1990</td>
<td>Senior Conference Course</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Credits 17-18

1 Select Series A alone or two from Series B as indicated.

2 A senior thesis is required. This is to be prepared in connection with under 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>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0090</td>
<td>Introductory Calculus, Part I</td>
<td></td>
</tr>
<tr>
<td>or MATH 0100</td>
<td>Introductory Calculus, Part II</td>
<td></td>
</tr>
<tr>
<td>or MATH 0190</td>
<td>Advanced Placement Calculus (Physics/Engineering)</td>
<td></td>
</tr>
<tr>
<td>PHYS 0050</td>
<td>Foundations of Mechanics</td>
<td>1</td>
</tr>
<tr>
<td>or PHYS 0070</td>
<td>Analytical Mechanics</td>
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</tbody>
</table>

**Mathematics Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0180</td>
<td>Intermediate Calculus</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 0200</td>
<td>Intermediate Calculus (Physics/Engineering)</td>
<td></td>
</tr>
<tr>
<td>or MATH 0350</td>
<td>Honors Calculus</td>
<td></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 1110</td>
<td>Ordinary Differential Equations</td>
<td>1</td>
</tr>
</tbody>
</table>

Select at least one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1060</td>
<td>Differential Geometry</td>
<td></td>
</tr>
<tr>
<td>MATH 1120</td>
<td>Partial Differential Equations</td>
<td></td>
</tr>
<tr>
<td>MATH 1610</td>
<td>Probability</td>
<td></td>
</tr>
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</table>

**Physics Courses**

<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>or PHYS 0160</td>
<td>Introduction to Relativity, Waves and Quantum Physics</td>
<td></td>
</tr>
<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>
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Select at least two of the following:

<table>
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<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1410</td>
<td>Quantum Mechanics A</td>
<td></td>
</tr>
<tr>
<td>PHYS 1420</td>
<td>Quantum Mechanics B</td>
<td></td>
</tr>
<tr>
<td>PHYS 1510</td>
<td>Advanced Electromagnetic Theory</td>
<td></td>
</tr>
<tr>
<td>PHYS 1530</td>
<td>Thermodynamics and Statistical Mechanics</td>
<td></td>
</tr>
<tr>
<td>PHYS 1560</td>
<td>Modern Physics Laboratory</td>
<td></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 Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0070</td>
<td>Analytical Mechanics</td>
<td>2</td>
</tr>
<tr>
<td>&amp; PHYS 0160</td>
<td>and Introduction to Relativity, Waves and Quantum Physics</td>
<td></td>
</tr>
<tr>
<td>PHYS 0050</td>
<td>Foundations of Mechanics</td>
<td></td>
</tr>
<tr>
<td>&amp; PHYS 0060</td>
<td>and Foundations of Electromagnetism and Modern Physics</td>
<td></td>
</tr>
</tbody>
</table>

Select one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0190</td>
<td>Advanced Placement Calculus (Physics/Engineering)</td>
<td>1-2</td>
</tr>
<tr>
<td>MATH 0090</td>
<td>Introductory Calculus, Part I</td>
<td></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 Code</th>
<th>Course Name</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</td>
<td>Intermediate Calculus and Intermediate Calculus (Physics/Engineering)</td>
<td>1-2</td>
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<td>or MATH 0350</td>
<td>Honors Calculus</td>
<td></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>or PHYS 0720</td>
<td>Methods of Mathematical Physics</td>
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</tr>
<tr>
<td>MATH 1260</td>
<td>Complex Analysis</td>
<td>1</td>
</tr>
<tr>
<td>Four additional 1000 or 2000 level Physics courses</td>
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<td>4</td>
</tr>
<tr>
<td>Two additional 1000 or 2000 level Math courses</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>PHYS 1990</td>
<td>Senior Conference Course</td>
<td>1</td>
</tr>
<tr>
<td>Total Credits</td>
<td></td>
<td>18-20</td>
</tr>
</tbody>
</table>

A senior thesis is required. This is to be prepared in connection with 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 deepen their 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 with combined interest in philosophy and physics (e.g., Rene Descartes, Blaise Pascal, Gottfried Wilhelm Leibniz). The influence of the XVII century physics revolution 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 Code</th>
<th>Course Name</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, Waves and Quantum Physics</td>
<td></td>
</tr>
</tbody>
</table>

One course in Special Relativity and Classical Field Theory:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0470</td>
<td>Electricity and Magnetism</td>
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</table>

Select one of the following in Methods of Experimental and Theoretical physics:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0500</td>
<td>Advanced Classical Mechanics</td>
<td></td>
</tr>
<tr>
<td>PHYS 0560</td>
<td>Experiments in Modern Physics</td>
<td></td>
</tr>
</tbody>
</table>

Select one of the following in Quantum Mechanics and its applications

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1410</td>
<td>Quantum Mechanics A</td>
<td></td>
</tr>
<tr>
<td>PHYS 1530</td>
<td>Thermodynamics and Statistical Mechanics</td>
<td></td>
</tr>
</tbody>
</table>

One more 1000-level Physics course

**Philosophy Courses**

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Select one of the following gateway courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 0210</td>
<td>Science, Perception and Reality</td>
</tr>
<tr>
<td>PHIL 0100</td>
<td>Critical Reasoning</td>
</tr>
<tr>
<td>PHIL 0060</td>
<td>Modern Science and Human Values</td>
</tr>
<tr>
<td>PHIL 0540</td>
<td>Logic</td>
</tr>
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</table>

Select one of the following courses in Early Modern Philosophy:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>PHIL 0360</td>
<td>Early Modern Philosophy</td>
</tr>
<tr>
<td>PHIL 1700</td>
<td>Locke, Berkeley, Hume and Others</td>
</tr>
<tr>
<td>PHIL 1710</td>
<td>17th Century Continental Rationalism</td>
</tr>
<tr>
<td>PHIL 1720</td>
<td>Kant: The Critique of Pure Reason</td>
</tr>
</tbody>
</table>

Select two of the following courses in Epistemology, Metaphysics and Philosophy of Science:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 1590</td>
<td>Philosophy of Science</td>
</tr>
<tr>
<td>PHIL 1620</td>
<td>Philosophy of Quantum Mechanics</td>
</tr>
<tr>
<td>PHIL 1660</td>
<td>Metaphysics</td>
</tr>
<tr>
<td>PHIL 1670</td>
<td>Time</td>
</tr>
<tr>
<td>PHIL 1750</td>
<td>Epistemology</td>
</tr>
</tbody>
</table>

**History Courses**

Select one of the following courses in History of Science:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 0522N</td>
<td>Reason, Revolution and Reaction in Europe</td>
</tr>
<tr>
<td>HIST 1825M</td>
<td>Science at the Crossroads</td>
</tr>
<tr>
<td>HIST 1976I</td>
<td>The World of Isaac Newton</td>
</tr>
</tbody>
</table>

**Calculus**

Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>MATH 0180</td>
<td>Intermediate Calculus</td>
</tr>
<tr>
<td>MATH 0200</td>
<td>Intermediate Calculus (Physics/Engineering)</td>
</tr>
<tr>
<td>MATH 0350</td>
<td>Honors Calculus</td>
</tr>
</tbody>
</table>

**Final Project**

Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>PHIL 1990</td>
<td>Independent Studies</td>
</tr>
<tr>
<td>PHYS 1990</td>
<td>Senior Conference Course</td>
</tr>
<tr>
<td>A course from the PHIL 0990 Senior Seminar series</td>
<td></td>
</tr>
<tr>
<td>Any graduate seminar in Philosophy</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits: 12

1 Or one more Philosophy course.

**Honors**

Seniors wishing to earn honors by presenting a senior honors thesis should consult their concentration advisor during their sixth semester or at the start of the seventh semester concerning procedures and requirements. Students may earn honors by presenting a senior thesis judged to be of honors quality by two readers. In addition to completing the usual nonhonors requirements, the student should also have a grade point average of over 3.4 in physics, philosophy and history of science courses (of which at least five must be taken for a letter grade). Honors theses are usually prepared over a period of two semesters with an advisor from the Department of Physics or the Department of Philosophy.

**Political Science**

Why do Hindus and Muslims live in harmony in one city and fight bitterly in another just a few miles away? Why is the U.S. the only industrialized nation without a complete national health insurance? What is the legacy of slavery in the U.S.? Why are there so few women in Congress? How is radicalism in the Middle East changing? Why and how does democracy flourish? Just what is democracy? How do emotions shape our political behavior? What do war movies tell us about the USA? Would less government lead to more social justice? What is social justice? How does smuggling (of drugs, guns, and people) reshape international relations? How do immigrants see the American Dream? What is the American dream? Political science is about questions like these. You can grapple with every one of them—and many more—in the classrooms of the Brown political science department. We study how people—nations, regions, cities, communities—live their common lives. How people solve (or duck) their common problems. How people govern themselves. How they think, talk, argue, fight, and vote. Students passionate about social challenges may also choose to pursue the Engaged Scholars Program, which allows them to connect theory and practice and gain hands-on experience working with community partners.

The undergraduate concentration is organized around three broad tracks, or programs of study: American politics, international and comparative 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 track, the following two introductory courses are required:

- PHIL 0010 Introduction to the American Political Process
- or PHIL 0200 Introduction to International Politics
- and -
- PHIL 0110 Introduction to Political Thought
- or PHIL 0200 Introduction to Comparative Politics
- or PHIL 0400 Introduction to International Politics

For the international and comparative politics track, the following two introductory courses are required:

- PHIL 0200 Introduction to Comparative Politics
- or PHIL 0400 Introduction to International Politics
- and -
- PHIL 0110 Introduction to Political Thought
- or PHIL 0200 Introduction to Comparative Politics
- or PHIL 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:**

- PHIL 0500 Foundations of Political Analysis
- or PHIL 1600 Political Research Methods

**One research seminar from the POLS 1820, 1821, 1822, 1823 or 1824 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.**

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Appropriate 1000-level courses offered in (but not limited to) Africana Studies, American Studies, Anthropology, Classics, Economics, History, International Relations, Philosophy, Public Policy, Religious Studies, Sociology or Urban Studies may apply. The concentration advisor may approve a course from another department if it clearly meets the intent of the outside course requirement.

To obtain an advisor contact the Concentration Coordinator Patti Gardner.

**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 one of the specific geographical entities mentioned above. Concentrators will strengthen their Portuguese language skills (Portuguese 400 or the equivalent is a prerequisite) and explore relevant Lusophone literature, education, history and social science. The concentration offers one program in language and literature and another that is interdisciplinary. Most concentrators study abroad in either Brazil or Portugal.

**Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>POBS 0610</td>
<td>Mapping Portuguese-Speaking Cultures: Brazil 1</td>
<td>1</td>
</tr>
<tr>
<td>POBS 0620</td>
<td>Mapping Portuguese-Speaking Cultures: Portugal and Africa</td>
<td>1</td>
</tr>
<tr>
<td>POBS 1030</td>
<td>Portuguese Stylistics: Language Study and Creative Writing</td>
<td>1</td>
</tr>
<tr>
<td>POBS 1800E</td>
<td>The Brazilian Puzzle: Advanced Language Study and Creative Writing</td>
<td>1</td>
</tr>
<tr>
<td>or POBS 1800F</td>
<td>The Lusophone World and the Struggle for Modernity</td>
<td>1</td>
</tr>
</tbody>
</table>

Four additional courses from Portuguese and Brazilian Studies and/or related departments, such as History, Africana Studies, Political Science, Anthropology, Sociology, Music, and the Watson Institute. These courses are intended to develop students' specific interests within the concentration.

**Total Credits**

1. One or both of these courses may be replaced by more advanced literature courses conducted in Portuguese.
2. Conducted in Portuguese, the seminar brings the concentrators together for an interdisciplinary consideration of key topics in the Portuguese-speaking world. A research paper written in Portuguese is required.

**Senior Project (optional)**

In addition to taking a POBS 1800-series concentration seminar, students may choose to complete a senior project attached to any course in Portuguese and Brazilian Studies and related fields, including the Concentration Seminar, the latter possibility to be made at the discretion of the instructor. The advisor of the senior project is the professor of the course from which the project stems. Projects are not limited to papers, and may include short documentaries, a visual arts project, or an oral history project.

**Psychology**

Psychology encompasses a range of phenomena and levels of analysis in pursuit of three goals: to deepen understanding of cognitive and neural mechanisms of sensation, perception, learning, and emotion; to probe the biological and evolutionary foundations of animal behavior; and to clarify the social perception and assessment of individuals and groups. The concentration offers an array of course options, including study in quantitative methods, laboratory techniques, and seminars on specialized topics. Students take upper-level courses in the field's major sub-disciplines, including perception and cognition, behavioral neuroscience, and social psychology. The concentration in Psychology prepares students for careers in clinical psychology, business, policy-related research positions, law, and education.

The A.B. concentration requires 12 courses. The Sc.B concentration additionally requires 1 laboratory course and 4 approved science courses, totaling to a total of 17 required courses.

**Common Core**

The introductory course, "CLPS 0010 Mind, Brain, and Behavior," surveys the broad territory of the scientific study of the mind, as uniquely represented by our department. The course maps the breadth of the science of the mind, focusing on fascinating questions, garnered insights, common commitments, and successful techniques and approaches. The course could be taken by students interested in the CLPS concentrations or as an introduction at the beginning of one's college career or as an integration after having completed a number of specialized courses in a particular concentration.

Careers in Psychology and related fields requires familiarity with statistics. Therefore, the Psychology concentration requires a course in Quantitative Methods (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 of AP Statistics, regardless of score. Students who feel that CLPS 0900 is too elementary can complete an approved alternative course (e.g., CLPS 2906, CLPS 2908).

**Foundation**

To provide students with a solid foundation of knowledge in their area of concentration and to minimize redundancy, the Psychology concentration requires four foundation courses in Social/Personality, Perception/Cognition, Development, and Learning/Animal Behavior/Behavioral Neuroscience. The courses designed to count as electives will often have foundation courses as prerequisites and may include laboratory courses, content courses, or seminars.

**Research Methods and Capstone**

Another element in the Psychology concentration is a research methods course that builds on the introductory statistics course (which will be a prerequisite) but exposes students to a variety of topics in research of the mind; to empirical methods (e.g., surveys, chronometry, eye tracking, brain imaging), to common designs (e.g., factorial experimental, correlational, longitudinal), to research ethics, and to best practices of literature review. Concentrators will additionally take either a seminar course or an independent research course to serve as their capstone experience.

**Additional requirements for Sc.B.**

In line with university expectations, the Sc.B. requirements include a greater number of courses and especially science courses. The definition of "science" is flexible. A good number of these courses will be outside of CLPS, but several CLPS courses might fit into a coherent package as well. In addition, the Sc.B. degree also requires a lab course to provide these...
students with in-depth exposure to research methods in a particular area of the science of the mind.

**Honors Requirement**

The Research Methods course will serve as a requirement for admission to the Honors program in Cognitive Science, Cognitive Neuroscience, and Psychology. Previously, any lab course served as this requirement. This practice not only demanded a large number of lab courses as part of the CLPS curriculum but also suffered from frequent mismatches between the type of research the student wished to pursue and the type of lab course available in the relevant semesters. A more general research methods course is likely to prepare students better and more broadly than any single lab course can.

**FOR DETAILED UPDATES, PLEASE REFER TO THE COGNITIVE, LINGUISTIC, AND PSYCHOLOGICAL SCIENCES (CLPS) UNDERGRADUATE PAGE.**

### Requirements for the A.B. degree

**STANDARD PROGRAM FOR THE A.B. DEGREE**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLPS 0010</td>
<td>Mind, Brain and Behavior: An Interdisciplinary Approach</td>
<td>1</td>
</tr>
<tr>
<td>CLPS 0900</td>
<td>Statistical Methods</td>
<td>1</td>
</tr>
<tr>
<td>One approved course in Social/Personality, such as:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLPS 0700</td>
<td>Social Psychology</td>
<td>1</td>
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<tr>
<td>CLPS 0701</td>
<td>Personality</td>
<td>1</td>
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<tr>
<td>CLPS 1700</td>
<td>Abnormal Psychology</td>
<td>1</td>
</tr>
<tr>
<td>One approved course in Perception/Cognition:</td>
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<tr>
<td>CLPS 0200</td>
<td>Human Cognition</td>
<td>1</td>
</tr>
<tr>
<td>CLPS 0450</td>
<td>Brain Damage and the Mind</td>
<td>1</td>
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<td>CLPS 0500</td>
<td>Perception and Mind</td>
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<tr>
<td>One approved course in Development, such as:</td>
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<tr>
<td>CLPS 0600</td>
<td>Developmental Psychology</td>
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<tr>
<td>CLPS 0610</td>
<td>Children's Thinking: The Nature of Cognitive Development</td>
<td>1</td>
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<tr>
<td>CLPS 0620</td>
<td>Social and Moral Development</td>
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<tr>
<td>One approved course in Learning/Animal Behavior/Behavioral Neuroscience, such as:</td>
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<tr>
<td>CLPS 0100</td>
<td>Learning and Conditioning</td>
<td>1</td>
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<tr>
<td>CLPS 0110</td>
<td>Animal Behavior</td>
<td>1</td>
</tr>
<tr>
<td>CLPS 0150</td>
<td>Behavioral Neuroscience: Introduction to Biological Psychiatry</td>
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<tr>
<td>Four Approved Electives related to Psychology, such as:</td>
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<tr>
<td>CLPS 0950</td>
<td>Introduction to programming</td>
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<tr>
<td>CLPS 1100</td>
<td>Animal Cognition</td>
<td>1</td>
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<tr>
<td>CLPS 1150</td>
<td>Memory and the Brain</td>
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<tr>
<td>CLPS 1160</td>
<td>Evolution and Development of the Brain</td>
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<tr>
<td>CLPS 1194</td>
<td>Sleep and Chronobiology Research</td>
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<tr>
<td>CLPS 1200</td>
<td>Thinking</td>
<td>1</td>
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<tr>
<td>CLPS 1250</td>
<td>Human Factors</td>
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<tr>
<td>CLPS 1480B</td>
<td>Cognitive Aging and Dementia</td>
<td>1</td>
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<tr>
<td>CLPS 1500</td>
<td>Perception and Action</td>
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<tr>
<td>CLPS 1510</td>
<td>Auditory Perception Laboratory</td>
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<td>CLPS 1610</td>
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<td>Child Language Acquisition</td>
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<td>CLPS 1720</td>
<td>Human Resilience</td>
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<tr>
<td>CLPS 1730</td>
<td>Psychology in Business and Economics</td>
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<tr>
<td>CLPS 1820</td>
<td>Language and the Brain</td>
<td>1</td>
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<tr>
<td>EDUC 1260</td>
<td>Emotion, Cognition, Education</td>
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<tr>
<td>PHIL 1770</td>
<td>Philosophy of Mind</td>
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<tr>
<td>One Independent Study or Approved Seminar, such as:</td>
<td></td>
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<tr>
<td>CLPS 1400</td>
<td>The Neural Bases of Cognition</td>
<td>1</td>
</tr>
<tr>
<td>CLPS 1480B</td>
<td>Cognitive Aging and Dementia</td>
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</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).

### Requirements Specific for the Sc.B. degree

**STANDARD PROGRAM FOR THE Sc.B. DEGREE**

<table>
<thead>
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</tr>
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<tr>
<td>CLPS 0010</td>
<td>Mind, Brain and Behavior: An Interdisciplinary Approach</td>
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<tr>
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<td>Statistical Methods</td>
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<tr>
<td>One approved course in Social/Personality, such as:</td>
<td></td>
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<td>One approved course in Perception/Cognition, such as:</td>
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<td>CLPS 0200</td>
<td>Human Cognition</td>
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<td>CLPS 0450</td>
<td>Brain Damage and the Mind</td>
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<td>CLPS 1820</td>
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One Independent Study or Approved Seminar, such as:

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<tbody>
<tr>
<td>CLPS 1400</td>
<td>The Neural Bases of Cognition</td>
<td>1</td>
</tr>
<tr>
<td>CLPS 1480B</td>
<td>Cognitive Aging and Dementia</td>
<td>1</td>
</tr>
</tbody>
</table>
This course is best taken as a freshman or sophomore.

PHP 0320 Introduction to Public Health 1
This course is a prerequisite to the Fundamentals of Epidemiology (PHP 0850) and is best taken as a freshman or sophomore.

PHP 0850 Fundamentals of Epidemiology 1
This course is best taken by end of junior year before PHP 1910, Senior Seminar.

PHP 1501 Essentials of Data Analysis 1
This course is best taken by end of junior year before PHP 1910, Senior Seminar.

PHP 1910 Public Health Senior Seminar 1
This course is required for all non-honors seniors. PHP 0320 and PHP 0310 are required prerequisites.

2. Environmental Health and Policy (Select one of the following): 1

PHP 1101 World of Food: Personal to Global Perspectives on Nutrition, Agriculture and Policy

PHP 1700 Current Topics in Environmental Health

PHP 1710 Climate Change and Human Health

AMST 1700I Community Engagement with Health and the Environment

BIOL 1820 Environmental Health and Disease

ENVS 0705 Equity and the Environment: Movements, Scholarship, Solutions

ENVS 1580 Environmental Stewardship and Resilience in Urban Systems

PLCY 1702E Environmental Law and Policy

3. Health, Health Care Systems and Policy (Select one of the following): 1

PHP 1070 The Burden of Disease in Developing Countries

PHP 1100 Comparative Health Care Systems

PHP 1500 Global Health Nutrition

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 1802S Human Security and Humanitarian Response: Increasing Effectiveness and Accountability

PHP 1820 Designing Education for Better Prisoner and Community Health

ECON 1360 Health Economics

PLCY 1700K Health Policy Challenges

4. Social and Behavioral Science for Prevention (Select one of the following): 1

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 1610 Tobacco, Disease and the Industry: cigs, e-cigs and more

PHP 1680U Intersectionality and Health Inequities

PHP 1880 Meditation, Mindfulness and Health

PHP 1920 Social Determinants of Health

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).

Public Health

Public Health is an interdisciplinary concentration through which students examine a variety of health 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 methods and statistics necessary for problem solving and critical thinking in the emerging emphasis on evidence-based health care and public health.

The undergraduate component to the five-year AB/MPH differs in some ways from the Public Health concentration. Please refer to https://www.brown.edu/academics/public-health/academics. Meet early with a concentration adviser to discuss your plans.

Requirements for Class of 2020

1. Core Courses: (non-substitutable; 4 required for honors, 5 for non-honors)

PHP 0310 Health Care in the United States 1

- CLPS 1480C Cognitive Control Functions of the Prefrontal Cortex
- CLPS 1470 Mechanisms of Motivated Decision Making
- CLPS 1495 Affective Neuroscience
- CLPS 1560 Visually-Guided Action and Cognitive Processes
- CLPS 1720 Human Resilience
- CLPS 1760 The Moral Brain
- CLPS 1781 Thinking about the Social World
- CLPS 1783 Nudge: How to Use Social Psychology to Create Social Change
- CLPS 1900 Research Methods And Design 1
- PHP 0310 Introduction to Public Health 1

For the current list of approved courses in all categories, see the CLPS Psychology page.

One Approved Laboratory Course, such as: 1

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).

Total Credits 17

1 For the current list of approved courses in all categories, see the CLPS Psychology page.
### General Electives (Class of 2020: Select three)

General electives may be selected from: A. All PHP and BIOL course offerings; B. the approved content area electives (2, 3, and 4) listed above; or C. the approved general electives listed below. No more than two (2) BIOL courses can count as general electives.

- **PHP 0030** Health of Hispaniola
- **PHP 0050** Pain and the Human Condition: Exploring the Science, Medicine, and Culture of Pain
- **PHP 1400** HIV/AIDS in Africa: A Multidisciplinary Approach to Support HIV/AIDS Care and Treatment Programs
- **PHP 1680I** Pathology to Power: Disability, Health and Community
- **AFRI 1060W** Policy, Culture and Discourse that Shape Health and Access to Healthcare
- **AMST 1601** Health and Healing in American History
- **AMST 1906P** Food in American Society and Culture
- **ANTH 0110** Anthropology and Global Social Problems: Environment, Development, and Governance
- **ANTH 0300** Culture and Health
- **ANTH 1020** AIDS in Global Perspective
- **ANTH 1242** Bioethics and Culture
- **ANTH 1300** Anthropology of Addictions and Recovery
- **ANTH 1310** International Health: Anthropological Perspectives
- **BIOL 0030** Principles of Nutrition (Human Biology/Physiology course)
- **BIOL 0040** Nutrition for Fitness and Physical Activity
- **BIOL 0140K** Conservation Medicine
- **BIOL 0180** The Biology of AIDS
- **BIOL 0190E** Botanical Roots of Modern Medicine
- **BIOL 0200** The Foundation of Living Systems (Human Biology/Physiology course)
- **BIOL 0470** Genetics (Human Biology/Physiology course)
- **BIOL 0530** Principles of Immunology (Human Biology/Physiology course)
- **BIOL 0800** Principles of Physiology (Human Biology/Physiology course)
- **BIOL 0860** Diet and Chronic Disease
- **BIOL 0920A** Controversies in Medicine (Human Biology/Physiology course)
- **BIOL 1920B** Health Inequality in Historical Perspective
- **BIOL 1920C** Social Contexts of Disease
- **BIOL 1920D** Race, Difference and Biomedical Research: Historical Considerations
- **CLPS 0700** Social Psychology
- **CLPS 1700** Abnormal Psychology
- **CLPS 1783** Nudge: How to Use Social Psychology to Create Social Change
- **ECON 0390** Income, Wealth, and Health Inequality in the United States
- **ECON 0510** Development and the International Economy
- **ENVS 0490** Environmental Science in a Changing World
- **ENVS 1105** Introduction to Environmental GIS
- **ETHN 1890B** Treaty Rights and Food Fights: Eating Local in Indian Country
- **HMAN 1707G** Native American Environmental Health Movements
- **GNSS 0090C** Reproductive Health: Science and Politics
- **GNSS 1961H** Literary Imaginations of the Law: Human Rights and Literature
- **HISP 0490A** Spanish for Health Care Workers
- **HISP 0750Q** Health, Illness and Medicine in Spanish American Literature and Film
- **HIST 0150H** Foods and Drugs in History
- **HIST 0270B** From the Columbian Exchange to Climate Change: Modern Global Environmental History
- **HIST 0286A** History of Medicine I: Medical Traditions in the Old World Before 1700
- **HIST 1080** Humanitarianism and Conflict in Africa
- **HIST 1830M** From Medieval Bedlam to Prozac Nation: Intimate Histories of Psychiatry and Self
- **HIST 1977I** Gender, Race, and Medicine in the Americas
- **HIST 1960Q** Medicine and Public Health in Africa
- **HIST 1972H** U.S. Human Rights in a Global Age
- **HMAN 1970G** International Perspectives on NGOs, Public Health, and Health Care Inequalities
- **LACA 1503H** Sexuality, Human Rights and Health: Latin American Perspective and Brazilian Experiences
- **PHIL 0060** Modern Science and Human Values
- **PHIL 0260** Philosophy of Social Science
- **PHIL 0390** Global Justice
- **POBS 1501E** Histories of Global Health from Lusophone Africa: Biomedical Actions in Angola, Mozambique, Guinea
- **TAPS 1281W** Artists and Scientists as Partners

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
### Requirements for Class of 2024

1. **Core Courses:** (non-substitutable; 4 required for honors, 5 for non-honors)
   - **PHP 0310**: Health Care in the United States 1
     - This course is best taken as a freshman or sophomore.
   - **PHP 0320**: Introduction to Public Health 1
     - This course is a prerequisite to the Fundamentals of Epidemiology (PHP 0850) and is best taken as a freshman or sophomore.
   - **PHP 0850**: Fundamentals of Epidemiology 1
     - This course is best taken by end of junior year before PHP 1910, Senior Seminar.
   - **PHP 1501**: Essentials of Data Analysis 1
     - This course is best taken by end of junior year before PHP 1910, Senior Seminar.
   - **PHP 1910**: Public Health Senior Seminar 1
     - This course is required for all non-honors seniors. PHP 0320 and PHP 0310 are required prerequisites.

2. **Environmental Health and Policy (Select one of the following):** 1
   - **PHP 1101**: World of Food: Personal to Global Perspectives on Nutrition, Agriculture and Policy
   - **PHP 1700**: Current Topics in Environmental Health
   - **PHP 1710**: Climate Change and Human Health
   - **AMST 1700I**: Community Engagement with Health and the Environment
   - **BIOL 1820**: Environmental Health and Disease
   - **ENVS 0705**: Equity and the Environment: Movements, Scholarship, Solutions
   - **ENVS 1580**: Environmental Stewardship and Resilience in Urban Systems
   - **PLCY 1702E**: Environmental Law and Policy

3. **Health, Health Care Systems and Policy (Select one of the following):** 1
   - **PHP 1070**: The Burden of Disease in Developing Countries
   - **PHP 1100**: Comparative Health Care Systems
   - **PHP 1500**: Global Health Nutrition
   - **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 1802S**: Human Security and Humanitarian Response: Increasing Effectiveness and Accountability
   - **PHP 1820**: Designing Education for Better Prisoner and Community Health
   - **ECON 1360**: Health Economics
   - **PLCY 1700K**: Health Policy Challenges

4. **Social and Behavioral Science for Prevention (Select one of the following):** 1
   - **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 1610**: Tobacco, Disease and the Industry: cigs, e-cigs and more
   - **PHP 1680U**: Intersectionality and Health Inequities
   - **PHP 1880**: Meditation, Mindfulness and Health
   - **PHP 1920**: Social Determinants of Health
   - **PHP 2355**: Designing and Evaluating Public Health Interventions
   - **POLS 1740**: Politics of Food

5. **Biology (Select one of the following):** 1
   - **BIOL 0200**: The Foundation of Living Systems
   - **BIOL 0470**: Genetics
   - **BIOL 0510**: Introductory Microbiology
   - **BIOL 0530**: Principles of Immunology
   - **BIOL 0800**: Principles of Physiology

6. **Humanities/Fine Arts/Humanistic Social Sciences Course for Public Health (Select one of the following):** 1
   - **AFRI 0550**: African American Health Activism from Emancipation to AIDS
   - **AFRI 1060W**: Policy, Culture and Discourse that Shape Health and Access to Healthcare
   - **AFRI 1060Z**: Race, Sexuality, and Mental Disability History
   - **AMST 1600C**: The Anti-Trafficking Savior Complex: Saints, Sinners, and Modern-Day Slavery
   - **AMST 1601**: Health and Healing in American History
   - **COST 0100**: Introduction to Contemplative Studies
   - **EDUC 0800**: Introduction to Human Development and Education
   - **ENGL 1030C**: Writing Science
   - **ETHN 1750B**: Treaty Rights and Food Fights: Eating Local in Indian Country

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
ETHN 1890J Native American Environmental Health Movements
GNSS 0090C Reproductive Health: Science and Politics
GNSS 0120 Introduction to Gender and Sexuality Studies
GNSS 1961H Literary Imaginations of the Law: Human Rights and Literature
HISP 0490A Spanish for Health Care Workers
HISP 0750Q Health, Illness and Medicine in Spanish American Literature and Film
HIST 0150H Foods and Drugs in History
HIST 0270B From the Columbian Exchange to Climate Change: Modern Global Environmental History
HIST 0286A History of Medicine I: Medical Traditions in the Old World Before 1700
HIST 1080 Humanitarianism and Conflict in Africa
HIST 1830M From Medieval Bedlam to Prozac Nation: Intimate Histories of Psychiatry and Self
HIST 1977I Gender, Race, and Medicine in the Americas
HIST 1960Q Medicine and Public Health in Africa
HIST 1972H U.S. Human Rights in a Global Age
HMAN 1970G International Perspectives on NGOs, Public Health, and Health Care Inequalities
LACA 1503H Sexuality, Human Rights and Health: Latin American Perspective and Brazilian Experiences
PHIL 0060 Modern Science and Human Values
PHIL 0280 Philosophy of Social Science
PHIL 0390 Global Justice
POBS 1501E Histories of Global Health from Lusophone Africa: Biomedical Actions in Angola, Mozambique, Guinea
TAPS 1281W Artists and Scientists as Partners

7. General Electives (Class of 2021: Select two)

General electives may be selected from: A. All PHP and BIOL course offerings; B. the approved content area electives (#2, #3, #4, and #5) listed above; or C. the approved general electives listed below. No more than one (1) BIOL course can count as a general elective.

- PHP 0030 Health of Hispaniola
- PHP 0050 Pain and the Human Condition: Exploring the Science, Medicine, and Culture of Pain
- PHP 1400 HIV/AIDS in Africa: A Multidisciplinary Approach to Support HIV/AIDS Care and Treatment Programs
- PHP 1680I Pathology to Power: Disability, Health and Community
- AFRI 1060W Policy, Culture and Discourse that Shape Health and Access to Healthcare
- AMST 1601 Health and Healing in American History
- AMST 1906P Food in American Society and Culture
- ANTH 0110 Anthropology and Global Social Problems: Environment, Development, and Governance
- ANTH 0300 Culture and Health
- ANTH 1020 AIDS in Global Perspective
- ANTH 1242 Bioethics and Culture
- ANTH 1300 Anthropology of Addictions and Recovery
- ANTH 1310 International Health: Anthropological Perspectives

- BIOL 0030 Principles of Nutrition (Human Biology/Physiology course)
- BIOL 0040 Nutrition for Fitness and Physical Activity
- BIOL 0140K Conservation Medicine
- BIOL 0180 The Biology of AIDS
- BIOL 0190E Botanical Roots of Modern Medicine
- BIOL 0200 The Foundation of Living Systems (Human Biology/Physiology course)
- BIOL 0470 Genetics (Human Biology/Physiology course)
- BIOL 0530 Principles of Immunology (Human Biology/Physiology course)
- BIOL 0800 Principles of Physiology (Human Biology/Physiology course)
- BIOL 0860 Diet and Chronic Disease
- BIOL 0920A Controversies in Medicine (Human Biology/Physiology course)
- BIOL 1920B Health Inequality in Historical Perspective
- BIOL 1920C Social Contexts of Disease
- BIOL 1920D Race, Difference and Biomedical Research: Historical Considerations
- CLPS 0700 Social Psychology
- CLPS 1700 Abnormal Psychology
- CLPS 1783 Nudge: How to Use Social Psychology to Create Social Change
- ECON 0390 Income, Wealth, and Health Inequality in the United States
- ECON 0510 Development and the International Economy
- ENVS 0490 Environmental Science in a Changing World
- ENVS 1105 Introduction to Environmental GIS
- ETHN 1890J Native American Environmental Health Movements
- GNSS 0090C Reproductive Health: Science and Politics
- HMAN 1970G International Perspectives on NGOs, Public Health, and Health Care Inequalities
- NEUR 0010 The Brain: An Introduction to Neuroscience (Human Biology/Physiology course)
- NEUR 0700 Psychoactive Drugs and Society
- PLCY 1700V Nonprofit Organizations
- PLCY 1802 Engaged Research Engaged Publics
- PLCY 1910 Social Entrepreneurship
- POLS 1740 Politics of Food
- SOC 0230 Sex, Gender, and Society
- 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

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Honors:
An Honors track is available for students who qualify. Honors track students do not enroll in PHP1910, Senior Seminar, during the Fall semester of their senior year, but rather are required to enroll in PHP 1980 for both semesters of their senior year to conduct research and write the honors thesis. Thus, thirteen courses are required for completion of the concentration requirements for an honors track student. Please visit https://www.brown.edu/academics/public-health/undergraduate/curriculum for details or email Barbara Dailey (Barbara_Dailey@brown.edu) for more information.

Study Abroad/Study Away: Up to four courses taken elsewhere (study abroad or other transfer) may be applied to non-core courses (up to two per semester abroad). Meet with a concentration adviser to discuss; provide a syllabus for each course to be considered for transfer to your concentration plan.

Public Policy
Housed in the Watson Institute for International and Public Affairs, the concentration in public policy is organized around the interdisciplinary and comparative study of human societies, but with a particular focus on the rules and norms by which we govern ourselves. The concentration is grounded in the analysis of pressing social problems and the design, implementation, and evaluation of better policies and practices. This commitment to using knowledge to improve the life chances of people who occupy different positions of wealth and power, and who have competing and contentious ideas of about the common good, makes public policy a value-laden and political enterprise that is as much an art as it is a science. It is also a team sport that requires players with different skills and talents to work together across a wide variety of settings.

Students will learn how social, economic, and political issues become the object of public policy, how policy decisions are crafted, made and implemented, as well as different strategies for evaluating their impact. The concentration draws its instructors from a wide variety of disciplines and offers students opportunities for engaged scholarship at the local, national, and global levels. With the support of the advisory team, students develop their own curriculum of study, integrating core courses with electives, internships, independent research, and a capstone experience.

Required Courses: 10 courses + capstone

Core Courses:
- PLCY 0100 Introduction to Public Policy 1
- Ethics and Public Policy 1
- POLS 1050 Ethics and Public Policy or PLCY 1700T Good Government
- Economics for Public Policy
- ECON 1110 Intermediate Microeconomics
- ECON 1130 Intermediate Microeconomics (Mathematical)
- EDUC 1130 Economics of Education I
- Statistics for Public Policy 1
- POLS 1600 Political Research Methods
- EDUC 1100 Introduction to Qualitative Research Methods
- ECON 1620 Introduction to Econometrics
- ECON 1630 Econometrics I
- SOC 1100 Introductory Statistics for Social Research
- Policy Analysis and Program Evaluation 1
- PLCY 1200 Program Evaluation

Total Credits 12

Elective Courses:

Three Broad Elective Courses: May be taken in any policy area 3
Two more electives in one of the areas you have already studied 2
Sample electives may include the following:

Health Policy
- PHP 1100 Comparative Health Care Systems
- PHP 1520 Emergency Medical Systems: An Anatomy of Critical Performance
- PHP 1530 Case Studies in Public Health: The Role of Governments, Communities and Professions
- PLCY 1700K Health Policy Challenges

Technology Policy
- CSCI 1800 Cybersecurity and International Relations
- PLCY 1700J GIS and Public Policy
- POLS 1822X Technology and International Politics
- STS 1700C Science and Technology Policy in the Global South

Environmental Policy
- ENVS 1350 Environmental Economics and Policy
- ENVS 1410 Environmental Law and Policy
- ENVS 1530 From Locke to Deep Ecology: Property Rights and Environmental Policy
- ENVS 1555 Urban Agriculture: The Importance of Localized Food Systems
- PHP 1700 Current Topics in Environmental Health

Governance, Law, and Ethics
- PLCY 1700Z State and Local Government
- PLCY 1701H Congressional Leadership, Parties and Public Policy
- POLS 0220 City Politics
- POLS 1010 Topics in American Constitutional Law

Social Policy
- ECON 1170 Welfare Economics and Social Choice Theory
- PLCY 1700B Social Welfare Policy in the United States
- PLCY 1700S Policies Affecting Working Families
- PLCY 1701M Juvenile Justice Institutions and Policy
- SOC 1540 Human Needs and Social Services

Urban Policy
- ECON 1420 Urbanization in China
- PLCY 1700Q Urban Policy Challenges: Spatial Inequality in Metropolitan America
- PLCY 1700R Urban Revitalization: Lessons from the Providence Plan
- SOC 1600 Comparative Development
- URBN 1870F Housing and Homelessness

Modes of Social Change
- PLCY 1700V Nonprofit Organizations
- PLCY 1701Q Leading Social Ventures - Social Entrepreneurship in Action
- PLCY 1800 Investigating Modes of Social Change
- PLCY 1910 Social Entrepreneurship
- SOC 1870A Investing in Social Change

Senior Capstone: The capstone may take the form of an Honors Thesis, Independent Study, a Public Policy internship, research Assistantship, UTRA Assistantship, or designated Senior Seminar

Total Credits 10

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Two of the five elective courses must have a primary listing in Public Policy. One of the five 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 explores religious thought and practice in various historical, political, cultural, and social contexts in order to understand and interpret societies and cultures throughout the world. It fosters scholarly skills such as close reading (of texts, images, artifacts, and other social data), excellence in writing and verbal expression, interpretation of the past and present from multiple forms of evidence, and assessment of contemporary social issues. By exploring the public and private concerns that the study of religion highlights — for example, the creation of community, the nature of the individual, suffering and death, notions of good and evil — students discover new ways of engaging the complex world in which they live. As students examine religious activity in the Americas, South and East Asia, the Middle East and West Asia, Africa, and Europe, they not only learn about the formation and transmission of beliefs, behaviors, values, rituals, and identities but also come to understand how diverse peoples have expressed religious understandings of themselves and others through politics, institutions, conflicts, and spaces commonly recognized as secular.

1. Basic Requirement
A concentration in Religious Studies includes a minimum of nine semester-long courses. Those nine courses include RELS 1000 (a seminar in methods in the study of religion) and eight other courses, which must satisfy the concentration's distribution requirements. Students who transfer to Brown or study abroad must complete at least five courses in Religious Studies at Brown.

2. Distribution of Introductory, Intermediate, and Advanced courses:
Among the eight concentration courses, no more than four courses (out of nine) can be at the introductory level (0001-0199). In addition to any introductory courses and RELS 1000, the plan of study must include at least two intermediate-level courses (0200-0999) and two advanced-level courses (above 1000).

3. Geographic and Methodological Distribution:
In order to ensure that students study a diversity of religious traditions and learn about multiple methods of study, the eight concentration courses (that is, the courses other than RELS 1000) must: 1) reflect more than one approach to the study of religion (e.g., philosophical, anthropological, historical); and 2) examine more than one religious tradition. To ensure that students examine multiple traditions, the plan of study ordinarily should include two or more courses in each of these areas: A) Traditions that emerge from the Mediterranean world and West Asia/Islamic World (e.g., Judaism, Christianity, Islam); and B) Traditions that emerge from South and East Asia (e.g., Buddhism, Hinduism, Daoism).

A. Traditions that emerge from the Mediterranean world and West Asia/Islamic World (e.g., Christianity, Judaism, Islam)

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>RELS 0011</td>
<td>Faith and Violence</td>
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<td>RELS 0015</td>
<td>Sacred Stories</td>
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<td>RELS 0022</td>
<td>Introduction to the New Testament</td>
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<td>RELS 0025</td>
<td>Wealth: Religious Approaches</td>
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<td>RELS 0050</td>
<td>Love: The Concept and Practice</td>
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<td>RELS 0055</td>
<td>Modern Problems of Belief</td>
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<td>RELS 0056</td>
<td>Spiritual But Not Religious: Making Spirituality in America</td>
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<tr>
<td>RELS 0060A</td>
<td>Islam Today: Religion and Culture in the Modern Middle East and Beyond</td>
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<tr>
<td>RELS 0060B</td>
<td>Islam in America</td>
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<tr>
<td>RELS 0060C</td>
<td>Radical Islam (?)</td>
</tr>
<tr>
<td>RELS 0060D</td>
<td>Black &amp; Brown Islam in the US</td>
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<tr>
<td>RELS 00640</td>
<td>Dying To Be With God: Jihad, Past and Present</td>
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<td>RELS 00820</td>
<td>African American Religious Strategies: Martin and Malcolm</td>
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<td>RELS 00825</td>
<td>Foundational Texts in African American Theology</td>
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<tr>
<td>RELS 00830</td>
<td>Religion, Reason, and Ethics from Kant to Nietzsche</td>
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<td>RELS 00835</td>
<td>Black and Brown Religion in America</td>
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<td>RELS 00840</td>
<td>Religion and Politics</td>
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<td>RELS 00845</td>
<td>Religious Freedom in America</td>
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<td>RELS 00850</td>
<td>Liberation Theology in the Americas</td>
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<tr>
<td>RELS 1050A</td>
<td>Problems in Israeli Religion and Ancient Judaism (JUDS 1625)</td>
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<tr>
<td>RELS 1050C</td>
<td>Prophets and Priests in Exile: Biblical Literature of the 6th Century BCE (JUDS 1690)</td>
</tr>
<tr>
<td>RELS 1050D</td>
<td>Jewish Magic (JUDS 1801)</td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
4. Courses in Other Departments

Courses listed in other departments but taught by Religious Studies faculty count toward the program of study. In addition to cross-listed courses taught by Religious Studies faculty, up to three courses taught by faculty in other departments can count toward the program (pending approval by the DUS). Students who transfer to Brown, study abroad, or otherwise petition to include Brown courses not cross-listed with Religious Studies must complete at least five courses in Religious Studies at Brown.

5. Capstone Project

No later than the end of spring registration in the junior year, the concentrator will determine how they will complete a senior capstone project for this requirement - either by selecting a capstone course, or by undertaking an honors thesis. A capstone course will be selected in consultation with the concentration advisor and other faculty as appropriate. Within the frame of this capstone course and through work completed for the course, the concentrator will address the theoretical and interpretive issues of their particular focus in the Religious Studies concentration.

Honors Thesis (Optional)

A thesis is an opportunity for students to conduct extended independent research under the guidance of faculty. If a student chooses to write an honors thesis, in addition to completing the typical eight concentration courses (in addition to RELS 1000) the student will enroll in RELS 1999 during both semesters of the senior year. Whether or not a student receives honors, RELS 1999 will serve as the student's capstone course.

To be eligible to write a thesis, a student must have earned a grade point average of greater than 3.5 (A=4, B=3, C=2) on courses that count toward the concentration. Additionally, to be eligible for honors, concentrators may take no more than two of the concentration courses with the "S/NC" option, after declaring a Religious Studies concentration. (Note: if a student is philosophically committed to taking the majority of her or his courses at Brown as "S/NC," that student may petition the Department to waive this "S/NC" limit.) Writing the thesis is a necessary, but not sufficient, condition for receiving Honors. In order to receive Honors, the student's thesis must earn an A from its two readers, and the student must
have earned a grade point average of greater than 3.5 in the concentration and satisfied all other concentration requirements. 

Daniel Vaca, Director of Undergraduate Studies
Tina Creamer, Departmental Administrator

Renaissance and Early Modern Studies

The Center for the Study of the Early Modern World promotes interdisciplinary and multidisciplinary approaches to historical cultures around the world between the waning of feudalism and the arrival of global industrial capitalism, from the 1300s to the end of the 1800s. Characterized by new global aspirations as well as new modes of domination, resistance, and conflict, this period yielded significant technological transformations and cultural inventions whose study contributes to the historical understanding of the modern world.

Students take courses in a wide range of departments in the humanities and social sciences and from faculty affiliated with the Center. 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.

Requirements

Concentrators are required to take a minimum of eight courses. These include the following:

• Three courses on early modern topics in one field in which the student has primary interest or training, e.g., literature, history of art and architecture, or history.
• Three courses related to the early modern period chosen from two other fields.
• A senior project. The senior project constitutes the capstone for all concentrators. Examples of possible senior projects include 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 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.
• Other relevant courses 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 eight courses.

Under the supervision of the director of the program, students may choose courses from the following:

- HIAA 0062 Dutch and Flemish Art: Visual Culture of the Netherlands in the Seventeenth Century
- ENGL 0100C Altered States
- ENGL 0150D Shakespeare’s Present Tense
- HIST 0286A History of Medicine I: Medical Traditions in the Old World Before 1700
- ENGL 0310A Shakespeare
- ENGL 0310E Shakespeare: The Screenplays
- HIAA 0550 Gold, Wool and Stone: Painters and Bankers in Renaissance Tuscany
- HIAA 0560 Popes and Pilgrims in Renaissance Rome
- HIAA 0630 Cultural History of the Netherlands in a Golden Age and a Global Age
- COLT 0710I New Worlds: Reading Spaces and Places in Colonial Latin America
- FREN 0720A De l’Amour courtois au désir postmoderne
- POBS 0910 On the Dawn of Modernity
- ITAL 0981 When Leaders Lie: Machiavelli in International Context

- FREN 1030A L’univers de la Renaissance: XVe et XVIe siècles
- FREN 1030B The French Renaissance: The Birth of Modernity?
- FREN 1040B Pouvoirs de la scène: le théâtre du XVIIe siècle
- FREN 1040C Le Grand Siècle à l’écran
- FREN 1040D Molière et son monde
- ENGL 1310A Firing the Canon: Early Modern Women’s Writing
- ENGL 1310H The Origins of American Literature
- ENGL 1310J Imagining the Individual in Renaissance England
- ENGL 1310O Restoration and Early Eighteenth-Century Literature
- ENGL 1360K Shakespeare and Company
- ENGL 1360P Shakespearian Tragedy
- ENGL 1360S Between Gods and Beasts: The Renaissance Ovid
- ENGL 1360Z Shakespeare and Embodiment
- ITAL 1400J The Many Faces of Casanova
- COLT 1410P Shakespeare
- HIAA 1560A Italy and the Mediterranean
- ITAL 1580 Word, Image and Power in Early Modern Italy
- HIAA 1600I Collections and Visual Knowledge in Early Modern Europe: 1400-1800
- JUDS 1751 Jews Between Christians and Muslims in the Early Modern World
- HIST 1825H Science, Medicine and Technology in the 17th Century
- ENGL 1950A Form and Feeling in Renaissance Poetry
- HIST 1964A Age of Impostors: Fraud, Identification, and the Self in Early Modern Europe
- HIST 1974M Early Modern Globalization
- EMOW 1980 Independent Study in EMOW
- LATN 2000A Senecan Tragedy
- FREN 2130E Corps et esprits libertins
- FREN 2130F Façons d’aimer: Discourses of Sexuality in Early Modern France
- HISP 2160G Don Quixote: Contexts and Constructions
- ENGL 2360O Irony and Satire
- ENGL 2360P Thinking with Romance in the Renaissance
- ENGL 2360S Alternative Miltons
- HISP 2520I Sor Juana Inés de la Cruz in Her Literary Context
- ITAL 2550 Gender Matters

Liberal Learning

This concentration develops aesthetic awareness, close reading skills, collaborative skills, cultural understanding, facility with symbolic languages, historical awareness as well as speaking and writing skills.

Honors

Interested and eligible students petition to write a thesis and the faculty chooses 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.

Students accepted in the Honors program sign up for EMOW 1980 in the Fall and again in the Spring, with the section number of their advisor.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Science, Technology, and Society

Science, Technology, and Society (STS, formerly 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. STS 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.

- STS 1000: Introduction to Science and Society: Theories and Controversies, or equivalent introductory course: usually taken in the second or third year.
- STS 1900: Senior Seminar in Science and Society, 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 subject 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 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 https://www.brown.edu/academics/science-and-technology-studies/

Honors

To qualify for Honors a student must:

- Be in good standing
- Have completed at least two thirds of the concentration requirements by the application deadline
- Have earned a majority of "A" grades in the concentration. Classes taken S/NC will count as qualifying towards that majority if they are marked "S with distinction" or are accompanied by a Course Performance Report (https://ask.brown.edu/performance_reports) indicating that had the student taken the course for a grade, the grade would have been an "A."

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 Eastern 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

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.

- **RUSS 0100** Introductory Russian
- **RUSS 0200** Introductory Russian
- **RUSS 0110** Intensive Russian
- **RUSS 0300** Intermediate Russian
- **RUSS 0400** Intermediate Russian
- **RUSS 0500** Advanced Russian
- **RUSS 0600** Advanced Russian

Summer courses offered on the Brown in Petersburg Program can enable advanced placement in academic year courses:

- **RUSS 0250** Introductory Russian in St. Petersburg
- **RUSS 0350** Intermediate Russian in St. Petersburg
- **RUSS 0550** Advanced Russian in St. Petersburg

In cases where a student's interests and course of study warrant it, and only upon consulting the concentration advisor, the student may apply more than one Slavic language to the concentration (Czech or Polish in addition to Russian), and would then need a combined total of eight semesters of two Slavic languages:

- **CZCH 0100** Introductory Czech
  & **CZCH 0200** and Introductory Czech
- **CZCH 0410A** Boys and Girls: Relationships under Soviet Bohemia
- **CZCH 0410B** Coming of Age in Postwar Czechoslovakia
- **CZCH 0410C** Czech View of Self and Others
- **CZCH 0410D** Czechs and the Big Brother: Czech Lands in the 1980s
- **CZCH 0610A** Czech Lands under Occupation and Terror
- **CZCH 0610B** Psychosis of Occupation in the Czech Lands
- **CZCH 0610C** Czech Cultural Icons, Emblems, and National Identity
- **PLSH 0100** Introductory Polish
  & **PLSH 0200** and Introductory Polish
- **PLSH 0300** Intermediate Polish
  & **PLSH 0400** and Intermediate Polish

The concentration in Slavic Studies requires students to complete a minimum of 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 within the Department of Slavic Studies. Students' choice of courses is subject to the approval of the concentration advisor.

Courses in the Department of Slavic Studies:

- **RUSS 1110** Special Topics in Russian Studies I: Advanced Reading and Conversation
- **RUSS 1200** Russian Fantasy and Science Fiction
- **RUSS 1250** Russian Cinema
- **RUSS 1290** Russian Literature in Translation I: Pushkin to Dostoevsky
- **RUSS 1300** Russian Literature in Translation II: Tolstoy to Solzhenitsyn
- **RUSS 1320** Soviet Literature from 1917 to 1953
- **RUSS 1330** Soviet Culture: Propaganda, Dissidence, Underground
- **RUSS 1340** The Russian Novel
- **RUSS 1500** Love, Adultery, and Sexuality
- **RUSS 1600** Literature and History: Russian Historical Imagination in the European Context
- **RUSS 1800** Pushkin
- **RUSS 1810** Tolstoy
- **RUSS 1820** Dostoevsky
- **RUSS 1840** Nabokov
- **RUSS 1860** Chekhov
- **RUSS 1900** Russian Jewish Literature and Film
- **SLAV 1300** Sociolinguistics (with Case Studies on the Former USSR and Eastern Europe)

Sample courses in other departments:

- **HIST 1268C** The Collapse of Socialism and the Rise of New Russia
- **POL 1220** Politics in Russia and Eastern Europe
- **TAPS 1430** Russian Theatre and Drama
- **TAPS 2120** Revolution as a Work of Art

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 190). 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:

- **MATH 0090** Introductory Calculus, Part I
- **SOC 1100** or **APMA 0650** or **ECON 1620**
- **SOC 1020**
- **SOC 2010**
- **SOC 1010**
- **SOC 1950**
- **SOC 1117**

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:

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
SOC 1118  Context Research for Innovation
SOC 1120  Market and Social Surveys
SOC 1127  EPIC: Ethnographic Praxis in Industry
SOC 1260  Market Research in Public and Private Sectors
SOC 1340  Principles and Methods of Geographic Information Systems
SOC 2020  Multivariate Statistical Methods II
SOC 2210  Qualitative Methods
SOC 2230  Techniques of Demographic Analysis
SOC 2240  Event History Analysis
SOC 2610  Spatial Thinking in Social Science
SOC 2612  Geographic Information Systems and Spatial Analysis for the Social Sciences
SOC 2960G  Spatial Data Analysis Techniques in the Social Sciences
SOC 2960Y  Causal Analysis
SOC 2961A  Advanced Spatial Data Analysis Techniques in the Social Sciences

Research experience (1 course) 0-1
A one-semester research internship (not for credit or for credit as SOC 1970 - Independent Study), or a summer research internship (not for credit).

Total Credits 12-13

***See the Sociology website http://www.brown.edu/academics/sociology/ for details regarding Honors and Independent Studies

Course substitutions: Students may petition the Director or Co-Director of Undergraduate Studies 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 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

Social Analysis and Research requires all concentrators to complete a thesis or capstone project in their senior year. The purpose of the thesis or capstone project is to allow students an opportunity to apply the knowledge they acquired on a topic of their own interests. To fulfill this requirement students enroll in SOC 1950 (http://bulletin.brown.edu/search/?P=SOC%201950) – Senior Seminar. 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.

An undergraduate thesis must ask an original research question, answer it with appropriate evidence, and place that work within relevant scholarly literature in sociology. The thesis is supervised by a faculty member who serves as the primary advisor, and one additional faculty member who serves as a reader. By the end of the sixth semester, students must submit a prospectus of the senior thesis to the Co-Director of Undergraduate Studies. At the start of the seventh semester students should submit to the Co-Director of Undergraduate Studies 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 capstone project is an independent, student-initiated project or experience developed during the Senior Seminar (SOC 1950) that connects in a meaningful way to the learning in the concentration. A capstone project differs from a thesis in its scholarly content and form, and it depends only on the evaluation of 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 are complemented by a paper or report that situates the central subject matter of the project within the context of sociological scholarship.

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

The concentration in Sociology (leading to a Bachelor of Arts) provides a foundation in sociological theory and methods and the opportunity to cultivate more specialized knowledge in the discipline's substantive interests. Students develop that focus through their coursework, taking courses in diverse areas such as social inequality, family and gender, organizations, environmental sociology, race and ethnicity and globalization. Students refine their interests during the senior seminar and through their completion of a senior thesis or capstone project. The concentration also allows students to pursue the Engaged Scholars Program (https://www.brown.edu/academics/college/special-programs/public-service/engaged-scholars-program) (ESP). ESP is for students with an interest in making deeper connections between their concentration and long-term community-engaged activities such as internships, public service, and many other possible forms of community involvement.

Standard program for the A.B. degree

Ten courses are required to complete the concentration.

Required core:

SOC 0010 Perspectives on Society: An Introduction to Sociology 1
SOC 1010 Classical Sociological Theory 1
SOC 1020 Methods of Social Research 1
SOC 1100 Introductory Statistics for Social Research 1

(or APMA 0650 or ECON 1620 or CLPS 0900)
SOC 1950 Senior Seminar 1

5 additional courses: 5

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 two courses outside of the discipline (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

***See the Sociology website http://www.brown.edu/academics/sociology/ for detail regarding Honors and Independent Studies

The Senior Seminar

Sociology requires all concentrators to complete a thesis or capstone project in their senior year. The purpose of the thesis or capstone project is to allow students an opportunity to apply the knowledge they acquired on a topic of their own interest. To fulfill this requirement students enroll in SOC 1950 (http://bulletin.brown.edu/search/?P=SOC%201950) – Senior Seminar. 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.

An undergraduate thesis must ask an original research question, answer it with appropriate evidence, and place that work within relevant scholarly literature in sociology. The thesis is supervised by a faculty member who serves as the primary advisor, and one additional faculty member who serves as a reader. By the end of the sixth semester, students must submit a prospectus of the senior thesis to the Co-Director of Undergraduate Studies. At the start of the seventh semester students submit to the Co-Director of Undergraduate Studies 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 capstone project is an independent, student-initiated project or experience developed during the Senior Seminar (SOC 1950) that connects in a meaningful way to the learning in the concentration. A capstone project differs from a thesis in its scholarly content and form, and it depends only on the evaluation of 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 are complemented by a paper or report that situates the central subject matter of the project within the context of sociological scholarship.

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 "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 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. Students who wish to earn honors must take 12 courses total (see Senior-Year Project below).

ANTH 0700 Introduction to Modern South Asia 1

Two courses in the Humanities with a majority focus in South Asia, such as:

CLAS 0995 India’s Classical Performing Arts
CLAS 1140 Classical Philosophy of India
COST 0034 Dharma: A History of Classical Indian Civilization
RELS 1510 Islam in South Asia

Two courses in the Social Sciences with a majority focus on South Asia, such as:

ANTH 0100 Introduction to Cultural Anthropology
ANTH 1110 Anthropology and Global Social Problems: Environment, Development, and Governance
HIST 1979D Ruined History: Visual and Material Culture in South Asia
POLS 1280 Politics, Economy and Society in India

At least five additional elective courses. Students can take additional courses in the humanities or social sciences with a focus on South Asia, such as:

ANTH 0100 Introduction to Cultural Anthropology
ANTH 2320 Ideology of Development
COST 0100 Introduction to Contemporary Studies
ECON 0510 Development and the International Economy
ECON 2510 Economic Development I
HIAA 0081 Architecture of the House Through Space and Time
HIST 1440 The Ottomans: Faith, Law, Empire
HNDI 0200 Beginning Hindi or Urdu
HNDI 0400 Intermediate Hindi-Urdu
HNDI 1080 Advanced Hindi-Urdu
MCM 1505O Does Utopia Still Exist? Media, politics and the hope of something else
POLS 0200 Introduction to Comparative Politics
POLS 1380 Ethnic Politics and Conflict
RELS 0100 Buddhist Thought, Practice, and Society
SANS 0200 Elementary Sanskrit II
SANS 0400 Classical Sanskrit Story Literature
SANS 1100 Vedic Sanskrit

Total Credits 10

Language Requirements

Proficiency in a South Asian language is required for the concentration. Demonstrating proficiency can entail passing a written and oral

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
examination, 4 semesters of formal language study at Brown or another institution, or a high school transcript indicating that the language of instruction for all courses was a South Asian language. Native Hindi/Urdu speakers are encouraged to fulfill the language requirement by taking another South Asian language for four semester, such as Sanskrit at Brown or a relevant language at another institution. Up to two language courses can count toward fulfilling the student's elective requirements.

**Senior-Year Project**

Students must complete either a senior capstone project OR an honors thesis. Capstone projects or honors theses are opportunities for students to creatively synthesize the thinking on South Asia that they have developed during the concentration. The project should exhibit an empirically and theoretically driven research question or argument about some aspect of South Asian Studies. The senior-year project should involve some research in at least one South Asian language. All students are encouraged to start thinking about their capstones in their junior year.

**Capstones** can take two primary forms:

1. A research paper of approximately 30 pages on a topic related to South Asia for an existing concentration-eligible course, undertaken with the permission of the instructor.
2. An independent study-based project. The produce and/or process that constitutes this can be artistic, primary or secondary research-based, internship-related, or something else. The project must be supervised by at least one CCSA faculty member for at least one semester under SAST 1970. This course can count toward the five elective requirement.

At the end of the junior year, each student should meet with the Director of Undergraduate Study (DUS) to review their plan for completing their capstone. If pursuing a capstone project, students will be required to submit, by the end of the shopping period of the fall of their senior year, a short proposal (300 words) that describes how they are going to complete this requirement.

An **Honors Thesis** is a two-semester independent study supervised by a thesis advisor (SAST 1970). These two courses constitute the additional courses needed for honors in the concentration.

An honors thesis can be textual, or it can take other forms (multi-media, visual, artistic, or musical, for example). The form and substance of a non-textual honors thesis must conform to the rigorous regulations set out by the relevant department(s) and the Dean of the College.

**Additional Honors Requirements**

To be eligible for Honors, students will have earned an "A" in the majority of courses for the concentration.

Students may graduate with Honors in South Asian Studies by completing an undergraduate Honors thesis under the supervision of at least one reader drawn from the CCAS faculty and one additional reader from the Brown (or RISD, in the case of Brown-RISD students) faculty community.

In order to pursue Honors, students must submit the following materials to the CCSA DUS by April 25:

1. A prospectus (3-5 pages, describing the major research questions and methods to be used, complete with bibliography) that has been read and vetted by the student's intended primary reader.
2. An email from the faculty member who will serve as primary reader to the CCSA DUS noting their willingness to advise on the thesis.

In addition, students must:

1. Enroll in a two-semester sequence of Independent Study, SAST 1970 or a relevant department course code.
2. Designate a second reader by September 30 of the senior year. Second readers should also confirm their willingness to serve as a reader by sending an email to the CCAS DUS.
3. Be in regular contact with the thesis advisor about the progress of the project.
4. Present their research to the CCAS community during their final semester.

For **mid-year graduating students**, the topic and primary reader must be identified and confirmed by mid-November of the junior year, and a second reader must be arranged and confirmed by January 30 of the senior year.

A complete penultimate draft of the thesis is due to both readers on April 1. A final draft that incorporates readers' comments is due back to the readers on April 15 of the student's senior year.

* This includes all people listed under the Faculty, Postdoctoral Associate, and Visiting Scholars (limited to those in residence at Brown) tabs on the CCSA website.

**Statistics**

The Bachelor of Science degree in Statistics is designed to provide foundations that include basic statistical concepts and methodologies, and to expose students to the role of statistical thinking and analysis in interdisciplinary research and in the public sphere. To ensure deep rigorous understanding of the foundations and main methods of analysis in statistics, the program is composed of three parts: a) foundations in mathematics and computing, combined with an introduction to statistical thinking and practice; b) four core courses on the fundamentals of statistical theory and data analysis; and c) more advanced material covering important areas of statistical methodology. A capstone project involving substantial data analysis or focused on methodology/theory is required. Students also 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 Concentration is based on several premises: that statistics is a scientific discipline in its own right, with specialized methodologies and body of knowledge; that it is essentially concerned with the art and science of data analysis; and that it is best taught in conjunction with specific substantive applications. To this end, the Concentration is designed to provide foundations that include basic statistical concepts and methodologies, and to expose students to the role of statistical thinking and analysis in interdisciplinary research and in the public sphere. The Concentration 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. The undergraduate concentration guide is available here (https://www.brown.edu/academics/public-health/biostatistics/undergraduate-statistics-concentration).

The Undergraduate Concentration in Statistics is administered by the Department of Biostatistics and leads to a Sc.B. degree. To ensure deep rigorous understanding of the foundations and main methods of analysis in statistics, the program is composed of three parts. The first part entails foundations in mathematics and computing, combined with an introduction to statistical thinking and practice. The second part includes four core courses that provide a comprehensive account of the fundamentals of statistical theory and data analysis. The third part delves into more advanced material covering important areas of statistical methodology. In addition to the formal coursework, students are required to complete a capstone project that involves a substantial data analysis or a methodological/theoretical project. Students also 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. Please note that only the required Calculus courses may be accepted with P/F grades. All other required courses must be taken for a grade.

The program requires thirteen one-semester courses. The required courses are as follows:

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<thead>
<tr>
<th>LEVEL I: Foundations in Mathematics - Calculus</th>
<th>2</th>
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<tbody>
<tr>
<td>MATH 0100 Introductory Calculus, Part II</td>
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<td>MATH 0180 Intermediate Calculus</td>
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<tr>
<th>LEVEL I: Foundations in Mathematics - Linear Algebra</th>
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<tr>
<td>MATH 0520 Linear Algebra</td>
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**Computing**

| APMA 0160 Introduction to Scientific Computing | 1 |

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Introduction to Statistical Thinking and Practice

With the approval of the Director of the Statistics Concentration, one of the following courses may serve as replacement:

- SOC 1100: Introductory Statistics for Social Research
- ECON 1620: Introduction to Econometrics
- APMA 0560: Essential Statistics
- BIOL 0495: Statistical Analysis of Biological Data
- EDUC 1110: Introductory Statistics for Education Research and Policy Analysis
- CLPS 0900: Statistical Methods

LEVEL II: Core Courses in Theory and Data Analysis

- APMA 1650: Statistical Inference I
- or APMA 1655: Statistical Inference I
- APMA 1660: Statistical Inference II
- OR
- MATH 1610: Probability
- MATH 1620: Mathematical Statistics

Introduction to Biostatistics

- PHP 1510: Principles of Biostatistics and Data Analysis
- OR
- PHP 2510: Principles of Biostatistics and Data Analysis

LEVEL III: Advanced Courses in Statistical Methods

- PHP 1560: Statistical Programming in R
- OR
- PHP 2560: Statistical Programming with R
- AND
- PHP 1511: Applied Regression Analysis
- OR
- PHP 2511: Applied Regression Analysis

Capstone Project

- PHP 1970: Independent Study

Electives in Social Science and Biostatistics (Students must choose 2)

- SOC 1120: Market and Social Surveys
- SOC 1340: Principles and Methods of Geographic Information Systems
- SOC 2230: Techniques of Demographic Analysis
- CSCI 1420: Machine Learning
- CSCI 1810: Computational Molecular Biology
- CSCI 1820: Algorithmic Foundations of Computational Biology
- CSCI 1951A: Data Science
- PHP 0850: Fundamentals of Epidemiology
- PHP 2030: Clinical Trials Methodology
- PHP 2120: Introduction to Methods in Epidemiologic Research
- PHP 2200: Intermediate Methods in Epidemiologic Research
- PHP 2515: Fundamentals of Probability and Statistical Inference
- PHP 2520: Statistical Inference I
- PHP 2530: Bayesian Statistical Methods
- PHP 2550: Practical Data Analysis
- PHP 2580: Statistical Inference II
- PHP 2602: Analysis of Lifetime Data
- PHP 2604: Statistical Methods for Spatial Data
- PHP 2610: Causal Inference and Missing Data
- PHP 2620: Statistical Methods in Bioinformatics, I
- APMA 1070: Quantitative Models of Biological Systems
- APMA 1080: Inference in Genomics and Molecular Biology
- APMA 1690: Computational Probability and Statistics
- APMA 1710: Information Theory
- APMA 1740: Recent Applications of Probability and Statistics
- APMA 1860: Graphs and Networks
- APMA 2610: Recent Applications of Probability and Statistics
- ENGN 2520: Pattern Recognition and Machine Learning
- CLPS 1292: Introduction to Programming for the Mind, Brain and Behavior
- APMA 1695: Computational Cognitive Neuroscience
- ECON 1360: Health Economics
- ECON 1630: Econometrics I
- ECON 1640: Econometrics II
- ECON 1660: Big Data
- MATH 1810A: Applied Algebraic Topology

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
TAPS concentrators with an interest in socially engaged performance that tackles complex social issues may pursue the Engaged Scholars Program (https://www.brown.edu/academics/theatre-arts-performance-studies/undergraduate-program/engaged-scholars-program). 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, including at least one course that exhibits geographic or topical breadth beyond what might loosely be called “mainstream” Euro-American tradition. 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 trans-cultural arenas.

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>Global Theatre and Performance: Paleolithic to the Threshold of Modernity</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>

Select one of the following:

1. TAPS 0220 Persuasive Communication
2. Any design or theatre production course.
3. Any playwriting course.
4. One elective to be selected from applied design, performance, or writing areas. This class must be approved by the concentration advisor.
5. Two electives to be selected from relevant theoretical and text-based studies in or cross-listed with the Department of Theatre Arts and Performance Studies, at least one of which must show geographical breadth. For example:
   - TAPS 1230 Global Theatre and Performance: Paleolithic to the Threshold of Modernity
   - TAPS 1240 Performance Historiography and Theatre History
   - TAPS 1250 Twentieth-Century Western Theatre and Performance
   - TAPS 1270 Masking, Trancing, Performing, and Spectating in Non-Western and Circum-Pacific Performance
   - TAPS 1281O Acting Outside the Box: Race, Class, Gender and Sexuality in Performance
   - TAPS 1280N New Theories for a Baroque Stage

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 Arts and Performance Studies 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 one of the ten required courses 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

Two of the following three courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAPS 1230</td>
<td>Global Theatre and Performance: Paleolithic to the Threshold of Modernity</td>
<td>2</td>
</tr>
<tr>
<td>TAPS 1240</td>
<td>Performance Historiography and Theatre History</td>
<td></td>
</tr>
<tr>
<td>TAPS 1250</td>
<td>Twentieth-Century Western Theatre and Performance</td>
<td></td>
</tr>
</tbody>
</table>

Select three of the following (one of which must show geographical breadth) in consultation with the advisor:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAPS 1230</td>
<td>Global Theatre and Performance: Paleolithic to the Threshold of Modernity</td>
<td>3</td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
### 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 theatre 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, scenography, ethics, and all fields that focus attention, invoke fascination, and alert the will to the possibilities of transformation.

Students wishing to enroll as concentrators in Theatre Arts and Performance Studies on the Writing for Performance track should see the undergraduate Writing for Performance 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 0100</td>
<td>Playwriting I (or other equivalent Introductory level Playwriting course, to be approved by the advisor)</td>
<td>1</td>
</tr>
</tbody>
</table>

Select one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFRI 1050A</td>
<td>Advanced RPM Playwriting</td>
<td>1</td>
</tr>
<tr>
<td>AFRI 1050D</td>
<td>Intermediate RPM Playwriting</td>
<td>1</td>
</tr>
<tr>
<td>AFRI 1050E</td>
<td>RPM Playwriting</td>
<td>1</td>
</tr>
<tr>
<td>LITR 0610A</td>
<td>Unpublishable Writing</td>
<td>1</td>
</tr>
<tr>
<td>LITR 1150Q</td>
<td>Reading, Writing and Thinking for the Stage</td>
<td>1</td>
</tr>
<tr>
<td>LITR 1010C</td>
<td>Advanced Playwriting</td>
<td>1</td>
</tr>
<tr>
<td>LITR 1150S</td>
<td>What Moves at the Margins</td>
<td>1</td>
</tr>
<tr>
<td>TAPS 0200</td>
<td>Playwriting II - Role Play</td>
<td>1</td>
</tr>
</tbody>
</table>

A course from the TAPS 1500 series (A-Z)

A writing or composition class in a discipline outside of playwriting (e.g., literature, screenwriting, digital media), to be approved by advisor. For example:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAPS 1210</td>
<td>Solo Performance</td>
<td>1</td>
</tr>
<tr>
<td>TAPS 1280S</td>
<td>Libretto Workshop for Musical Theatre</td>
<td>1</td>
</tr>
<tr>
<td>TAPS 1500I</td>
<td>Screenwriting</td>
<td>1</td>
</tr>
<tr>
<td>TAPS 1500J</td>
<td>Script Adaptation</td>
<td>1</td>
</tr>
<tr>
<td>ENV 0520</td>
<td>Wild Literature in the Urban Landscape</td>
<td>1</td>
</tr>
<tr>
<td>LITR 0110A</td>
<td>Fiction I</td>
<td>1</td>
</tr>
<tr>
<td>LITR 0110B</td>
<td>Poetry I</td>
<td>1</td>
</tr>
<tr>
<td>LITR 0210A</td>
<td>Fiction Writing II</td>
<td>1</td>
</tr>
<tr>
<td>LITR 0210B</td>
<td>Poetry Writing II</td>
<td>1</td>
</tr>
<tr>
<td>LITR 1150E</td>
<td>Strange Attractors: Adaptations/Translations</td>
<td>1</td>
</tr>
<tr>
<td>LITR 1150M</td>
<td>Short Fiction Experiments</td>
<td>1</td>
</tr>
<tr>
<td>TAPS 1500L</td>
<td>Acting Together on the World Stage: Writing and Political Performance</td>
<td>1</td>
</tr>
<tr>
<td>TAPS 0250</td>
<td>Introduction to Technical Theatre and Production</td>
<td>1</td>
</tr>
</tbody>
</table>

Two of the following three courses:

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAPS 1230</td>
<td>Global Theatre and Performance: Paleolithic to the Threshold of Modernity</td>
<td>2</td>
</tr>
<tr>
<td>TAPS 1240</td>
<td>Performance Historiography and Theatre History</td>
<td>2</td>
</tr>
<tr>
<td>TAPS 1250</td>
<td>Twentieth-Century Western Theatre and Performance</td>
<td>2</td>
</tr>
</tbody>
</table>

One performance-based class. Options include Acting, Directing, Speech, Dance, Visual Arts, Music, or Sign Language.

Select two additional Theatre/Performance History/Theory classes in or cross-listed with the Department of Theatre Arts and Performance Studies. For example:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAPS 1230</td>
<td>Global Theatre and Performance: Paleolithic to the Threshold of Modernity</td>
<td>2</td>
</tr>
<tr>
<td>TAPS 1240</td>
<td>Performance Historiography and Theatre History</td>
<td>2</td>
</tr>
<tr>
<td>TAPS 1250</td>
<td>Twentieth-Century Western Theatre and Performance</td>
<td>2</td>
</tr>
<tr>
<td>TAPS 1270</td>
<td>Masking, Trancing, Performing, and Spectating in Non-Western and Circumpacific Performance</td>
<td>2</td>
</tr>
</tbody>
</table>

### Total Credits

10

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
For all concentrators, regardless of track:

In cases where dual concentrations are declared, the Department allows two courses to be counted toward both concentrations.

Capstone

The Capstone is a culminating project/experience designed by the student that fulfills the concentration track. TAPS capstones can take a variety of forms, such as a solo performance or dance piece, the writing of a play, an honor’s thesis or a design project, or directing a production. Students begin working on their capstone in the required senior seminar course, which is offered in the fall term. Capstone projects may be completed in either the fall with the termination of the Seminar, or in the subsequent spring term.

Honors

The standard pattern above, plus an honors thesis course taken in Semester VII (TAPS 1990), the topic of which would be determined before Semester VII. Candidates for the honors program should have an outstanding academic record and must apply to the Department by April 1 of Semester VI. Proposals can be submitted electronically. Honors are awarded for theses in all concentration tracks. All theses are substantive pieces of writing. Some of these are strictly academic. Other honors theses may include a creative component (such as the directing of a play, a solo performance piece, the study and performance of a major role, or the design of a production) but the thesis itself will be a critical, written work based in research relative to that artwork. For plays submitted for honors, the essay should accompany the play, reporting on the research and the process of writing, though the play itself can be the substantive written work. See the Honors Advisor for more information about proposal and thesis guidelines.

Urban Studies

The Urban Studies program teaches students to analyze the city, urban life, and urbanization through a variety of disciplinary lenses. Students learn where cities come from, how they grow, thrive, and decline, how they are organized, and how to construct meaningful, inclusive, secure, and sustainable places. The curriculum examines how urban problems arise, how they have been previously addressed, and how to plan cities of the future. Concentrators enjoy the breadth of courses in American Studies, economics, history, literature, history of art and architecture, political science, sociology, and planning as well as provide in-depth courses integrating those perspectives. We introduce the fundamentals of Urban Studies scholarship as well as intense examination of an urban problem in focused seminars. These advanced seminars offer opportunities to write extensive and synthetic interdisciplinary analyses that serve as capstones to the concentration. The program’s 10-course curriculum provides sufficient flexibility to allow students to pursue specific urban interests or to take courses in urban focus areas of Built Environment; Humanities; Social Sciences; and Sustainable Urbanism. The Program insures that students master at least one basic research methodology and perform research or fieldwork projects, which may result in an honors thesis. Fieldwork training includes working with local agencies and nonprofit organizations on practical urban problems. Capstone projects entail original research papers in Urban Studies seminars; academically supervised video, artistic, or community service projects; and Honors Theses for eligible concentrators.

Concentrators who are especially interested in making deeper connections between their curriculum and long-term engaged activities such as internships, public service, humanitarian and development work, and many other possible forms of community involvement might consider the Engaged Scholar Program (https://www.brown.edu/academics/urban-studies/curriculum/engaged-scholars-program) in US. The program combines preparation, experience, and reflection to offer students opportunities to enhance the integration of academic learning and social engagement.

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
- URBN 0230 Urban Life in Providence: An Introduction

**Research Methods (choose one):**

- APMA 0650 Essential Statistics
- APMA 1650 Statistical Inference I
- APMA 1660 Statistical Inference II
- CLPS 0900 Statistical Methods
- ECON 1620 Introduction to Econometrics
- EDUC 1110 Introductory Statistics for Education Research and Policy Analysis
- PHP 1501 Essentials of Data Analysis
- POLS 1600 Political Research Methods
- SOC 1020 Methods of Social Research
- SOC 1100 Introductory Statistics for Social Research

**Core Courses (3 courses required, in at least 3 disciplines, such as American studies, anthropology, economics, education, English, history, history of art and architecture, political science, and sociology, as well as urban planning when staffing allows):**

- AMST 1612D Cities of Sound: Place and History in American Pop Music
- ANTH 1201 Introduction to Geographic Information Systems and Spatial Analysis
- ANTH 1236 Urban Life: Anthropology in and of the City
- ANTH 1255 Anthropology of Disasters
- ECON 1410 Urban Economics
- ENGL 0100N City Novels
- ENGL 0700R Modernist Cities
- ENGL 1711D Reading New York
- ENVS 1400 Sustainable Design in the Built Environment
- ENVS 1580 Environmental Stewardship and Resilience in Urban Systems
- GEOL 1320 Introduction to Geographic Information Systems for Environmental Applications
- HIAA 0100 Introduction to Architectural Design Studio
- HIAA 0710 The Other History of Modern Architecture
- HIAA 0770 Architecture and Urbanism of the African Diaspora
- HIAA 0850 Modern Architecture
- HIAA 0860 Contemporary Architecture
- HIAA 0861 City and Cinema

Total Credits: 10

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Complementary Curriculum (Total of 2 courses required):

1. Any course from the Introductory or Core Curriculum options above not used to fulfill another requirement
2. OR Any of the following:
   - AMST 1903E City of the American Century: The Culture and Politics of Urbanism in Postwar New York City
   - EDUC 1650 Policy Implementation in Education
   - HIAA 1850H Berlin: Architecture, Politics and Memory
   - HIAA 1910A Providence Architecture
   - SOC 0310 Theory and Practice of Engaged Scholarship (ESP Seminar)
   - URBN 1870A American Culture and the City
   - URBN 1870D Downtown Development
   - URBN 1870G Ancient Cities: From the Origins Through Late Antiquity
   - URBN 1870I The Changing American City
   - URBN 1870J The Politics of Community Organizing
   - URBN 1870K Jerusalem Since 1850: Religion, Politics, Cultural Heritage
   - URBN 1870M Urban Regimes in the American Republic
   - URBN 1870N The Cultural and Social Life of the Built Environment
   - URBN 1870Q Cities in Mind: Modern Urban Thought and Theory
   - URBN 1870S The City, the River, and the Sea: Social and Environmental Change at the Water's Edge
   - URBN 1870T Transportation: An Urban Planning Perspective
   - URBN 1870V City Senses: Urbanism Beyond Visual Spectacle
   - URBN 1941 How to Shape a City: An Introduction to Real Estate Development

Seminar courses (choose three)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 0400</td>
<td>City and Sanctuary in the Ancient World</td>
</tr>
<tr>
<td>ARCH 1150</td>
<td>Cities and Urban Space in the Ancient World</td>
</tr>
<tr>
<td>ARCH 1155</td>
<td>Cities, Colonies and Global Networks in the Western Mediterranean</td>
</tr>
<tr>
<td>ARCH 1200F</td>
<td>City and the Festival: Cult Practices and Architectural Production in the Ancient Near East</td>
</tr>
<tr>
<td>ARCH 1600</td>
<td>Archaeologies of the Near East</td>
</tr>
<tr>
<td>ARCH 1720</td>
<td>How Houses Build People</td>
</tr>
<tr>
<td>ARCH 1900</td>
<td>The Archaeology of College Hill</td>
</tr>
<tr>
<td>ECON 1370</td>
<td>Race and Inequality in the United States</td>
</tr>
<tr>
<td>EDUC 0410E</td>
<td>Empowering Youth: Insights from Research on Urban Adolescents</td>
</tr>
<tr>
<td>EDUC 1100</td>
<td>Introduction to Qualitative Research Methods</td>
</tr>
<tr>
<td>EDUC 1150</td>
<td>Education, the Economy and School Reform</td>
</tr>
<tr>
<td>EDUC 1430</td>
<td>Social Psychology of Race, Class, and Gender</td>
</tr>
<tr>
<td>EDUC 1720</td>
<td>Urban Schools in Historical Perspective</td>
</tr>
<tr>
<td>ENGL 1710i</td>
<td>Harlem Renaissance: The Politics of Culture</td>
</tr>
<tr>
<td>ENGN 1930S</td>
<td>Land Use and Built Environment: An Entrepreneurial View</td>
</tr>
<tr>
<td>ENVS 0520</td>
<td>Wild Literature in the Urban Landscape</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>HIAA 0550</td>
<td>Gold, Wool and Stone: Painters and Bankers in Renaissance Tuscany</td>
</tr>
<tr>
<td>HIAA 0560</td>
<td>Popes and Pilgrims in Renaissance Rome</td>
</tr>
<tr>
<td>HIAA 1560C</td>
<td>Renaissance Venice and the Veneto</td>
</tr>
<tr>
<td>HIAA 1850G</td>
<td>Contemporary American Urbanism: City Design and Planning, 1945-2000</td>
</tr>
<tr>
<td>HIST 1140</td>
<td>Samurai and Merchants, Prostitutes and Priests: Japanese Urban Culture in the Early Modern Period</td>
</tr>
<tr>
<td>HIST 1741</td>
<td>Capitalism, Land and Water: A World History: 1848 to the present</td>
</tr>
<tr>
<td>HIST 1961B</td>
<td>Cities and Urban Culture in China</td>
</tr>
<tr>
<td>HIST 1967R</td>
<td>History of Rio de Janeiro</td>
</tr>
<tr>
<td>HIST 1979J</td>
<td>London: 1750 to the Present</td>
</tr>
<tr>
<td>HIST 1979L</td>
<td>Urban History of Latin America</td>
</tr>
<tr>
<td>HIST 1980T</td>
<td>Modernity, Jews, and Urban Identities in Central Europe (JUDS 1718)</td>
</tr>
<tr>
<td>ITAL 1580</td>
<td>Word, Image and Power in Early Modern Italy</td>
</tr>
<tr>
<td>JAPN 0910B</td>
<td>Japanese Cities: Tokyo and Kyoto</td>
</tr>
<tr>
<td>JUDS 1718</td>
<td>Modernity, Jews, and Urban Identities in Central Europe</td>
</tr>
<tr>
<td>PLCY 1200</td>
<td>Program Evaluation</td>
</tr>
<tr>
<td>PLCY 1700Q</td>
<td>Urban Policy Challenges: Spatial Inequality in Metropolitan America</td>
</tr>
<tr>
<td>PLCY 1700R</td>
<td>Urban Revitalization: Lessons from the Providence Plan</td>
</tr>
<tr>
<td>PLCY 1701W</td>
<td>Race, Gentrification, and the Policing of Urban Space</td>
</tr>
<tr>
<td>PLCY 1702E</td>
<td>Environmental Law and Policy</td>
</tr>
<tr>
<td>PLCY 1910</td>
<td>Social Entrepreneurship</td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Concentration Program Requirements

| Concentration Requirements |
|-----------------------------|-----------------|
| **Concentration Requirements:** |                      |
| VISA 0100 | Studio Foundation (Prerequisite for all upper-level studio courses) | 1 |
| 2 of the following 5 discipline-based foundation courses are required. | 2 |
| VISA 0120 | Foundation Media (This course is a prerequisite for upper-level Media courses such as New Genre and Video Art) | |
| VISA 0130 | 3-D Foundation | |
| VISA 0140 | Photography Foundation | |
| VISA 0150 | Digital 2D Foundation | |
| VISA 0160 | Painting Foundation | |
| 5 additional upper level studio courses are required. A minimum of three elective studio courses must be taken in the Brown Visual Art Department | 5 |
| 3 HIAA courses are required: | |
| HIAA 0010 | A Global History of Art and Architecture | 1 |
| 1 course covering Modern or Contemporary Art History such as those listed below | |
| HIAA 0801 | Art After '68 | 1 |
| or HIAA 0810 | 20th Century Sculpture | |
| or HIAA 0870 | 20th Century British Art: Edwardian to Contemporary | |
| One additional History of Art and Architecture course. | 1 |
| Senior Thesis Exhibition: which does not carry academic credit, is required for graduation (usually presented during the seventh or eighth semester) | |
| Total Credits | 11 |

**Honors**

Candidates for Honors must have above average grades and shall apply for this distinction in writing to the Director of the Program by the middle of the second semester of their junior year. They shall include a cover letter with a brief statement of the intended research proposal as well as the name of the member of the Urban Studies faculty who would serve as their advisor and with whom they must work closely. Twelve courses are required for Honors concentrator, two in addition to the ten courses required for a standard program. During the Fall and Spring of the senior year, honors candidates must complete two additional courses beyond the ten courses required by the regular concentration: URBN 1971 Senior Honors Thesis I in Urban Studies(S/NC) and URBN 1972 Senior Honors Thesis II in Urban Studies (grade). The candidate's final thesis must be of outstanding quality, in order to qualify for honors.

**Visual Art**

The Visual Art 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. All Visual Art (VISA) courses are graded S/NC (https://www.brown.edu/academics/college/degree/policies/grade-options).

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).