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.

The image is one of a series of graphite, ink and metal collages that Walter Feldman developed with the poet James Schevill exploring the Don Quixote theme. The metal representing the armor of Don Quixote protecting the poetry and beauty of the world. The work morphed into a book of Schevill poetry published by the Brown Ziggurat Press.

– Walter Feldman
# Table of Contents

<table>
<thead>
<tr>
<th>Academic Calendar</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Regulations</td>
<td>5</td>
</tr>
<tr>
<td>Curricular Programs</td>
<td>7</td>
</tr>
<tr>
<td>Course Descriptions</td>
<td>17</td>
</tr>
<tr>
<td>Africana Studies</td>
<td>17</td>
</tr>
<tr>
<td>American Studies</td>
<td>18</td>
</tr>
<tr>
<td>American Studies</td>
<td>18</td>
</tr>
<tr>
<td>Anthropology</td>
<td>22</td>
</tr>
<tr>
<td>Archaeology and the Ancient World</td>
<td>30</td>
</tr>
<tr>
<td>Biology and Medicine</td>
<td>32</td>
</tr>
<tr>
<td>Biology</td>
<td>32</td>
</tr>
<tr>
<td>BioMed-Neuroscience</td>
<td>40</td>
</tr>
<tr>
<td>Program in Liberal Medical Education</td>
<td>42</td>
</tr>
<tr>
<td>Business, Entrepreneurship and Organizations</td>
<td>42</td>
</tr>
<tr>
<td>Chemistry</td>
<td>43</td>
</tr>
<tr>
<td>Classics</td>
<td>45</td>
</tr>
<tr>
<td>Classics</td>
<td>45</td>
</tr>
<tr>
<td>Greek</td>
<td>47</td>
</tr>
<tr>
<td>Latin</td>
<td>48</td>
</tr>
<tr>
<td>Modern Greek</td>
<td>49</td>
</tr>
<tr>
<td>Sanskrit</td>
<td>49</td>
</tr>
<tr>
<td>Cognitive, Linguistic and Psychological Sciences</td>
<td>49</td>
</tr>
<tr>
<td>Cognitive, Linguistic and Psychological Sciences</td>
<td>49</td>
</tr>
<tr>
<td>Linguistics</td>
<td>54</td>
</tr>
<tr>
<td>Comparative Literature</td>
<td>55</td>
</tr>
<tr>
<td>Computer Science</td>
<td>59</td>
</tr>
<tr>
<td>Development Studies</td>
<td>63</td>
</tr>
<tr>
<td>Early Cultures</td>
<td>64</td>
</tr>
<tr>
<td>East Asian Studies</td>
<td>64</td>
</tr>
<tr>
<td>Chinese</td>
<td>64</td>
</tr>
<tr>
<td>East Asian Studies</td>
<td>65</td>
</tr>
<tr>
<td>Japanese</td>
<td>66</td>
</tr>
<tr>
<td>Korean</td>
<td>67</td>
</tr>
<tr>
<td>Economics</td>
<td>68</td>
</tr>
<tr>
<td>Education</td>
<td>73</td>
</tr>
<tr>
<td>Egyptology and Assyriology</td>
<td>76</td>
</tr>
<tr>
<td>Assyriology</td>
<td>76</td>
</tr>
<tr>
<td>Egyptology</td>
<td>77</td>
</tr>
<tr>
<td>Engineering</td>
<td>78</td>
</tr>
<tr>
<td>English</td>
<td>85</td>
</tr>
<tr>
<td>Environmental Studies</td>
<td>94</td>
</tr>
<tr>
<td>French Studies</td>
<td>97</td>
</tr>
<tr>
<td>Gender and Sexuality Studies</td>
<td>99</td>
</tr>
<tr>
<td>Geological Sciences</td>
<td>100</td>
</tr>
<tr>
<td>German Studies</td>
<td>103</td>
</tr>
<tr>
<td>German Studies</td>
<td>103</td>
</tr>
<tr>
<td>Swedish</td>
<td>105</td>
</tr>
<tr>
<td>Hispanic Studies</td>
<td>105</td>
</tr>
<tr>
<td>History</td>
<td>109</td>
</tr>
<tr>
<td>History of Art and Architecture</td>
<td>118</td>
</tr>
<tr>
<td>Humanities</td>
<td>54</td>
</tr>
<tr>
<td>International Relations</td>
<td>120</td>
</tr>
<tr>
<td>Italian Studies</td>
<td>121</td>
</tr>
<tr>
<td>Judaic Studies</td>
<td>123</td>
</tr>
<tr>
<td>Center for Language Studies</td>
<td>125</td>
</tr>
<tr>
<td>American Sign Language</td>
<td>125</td>
</tr>
<tr>
<td>Arabic</td>
<td>125</td>
</tr>
<tr>
<td>Catalan</td>
<td>126</td>
</tr>
<tr>
<td>English for Internationals</td>
<td>126</td>
</tr>
<tr>
<td>Haitian-Creole</td>
<td>126</td>
</tr>
<tr>
<td>Hindi-Urdu</td>
<td>127</td>
</tr>
<tr>
<td>Language Studies</td>
<td>127</td>
</tr>
<tr>
<td>Persian</td>
<td>127</td>
</tr>
<tr>
<td>Turkish</td>
<td>128</td>
</tr>
<tr>
<td>Latin American Studies</td>
<td>128</td>
</tr>
<tr>
<td>Literary Arts</td>
<td>128</td>
</tr>
<tr>
<td>Mathematics</td>
<td>131</td>
</tr>
<tr>
<td>Medieval Studies</td>
<td>134</td>
</tr>
<tr>
<td>Middle East Studies</td>
<td>134</td>
</tr>
<tr>
<td>Modern Culture and Media</td>
<td>136</td>
</tr>
<tr>
<td>Music</td>
<td>139</td>
</tr>
<tr>
<td>Philosophy</td>
<td>143</td>
</tr>
<tr>
<td>Physics</td>
<td>146</td>
</tr>
<tr>
<td>Political Science</td>
<td>149</td>
</tr>
<tr>
<td>Portuguese and Brazilian Studies</td>
<td>153</td>
</tr>
<tr>
<td>Public Health</td>
<td>155</td>
</tr>
<tr>
<td>Public Policy</td>
<td>161</td>
</tr>
<tr>
<td>Religious Studies</td>
<td>164</td>
</tr>
<tr>
<td>Renaissance and Early Modern Studies</td>
<td>167</td>
</tr>
<tr>
<td>Science and Society</td>
<td>167</td>
</tr>
<tr>
<td>Slavic Languages</td>
<td>168</td>
</tr>
<tr>
<td>Czech</td>
<td>168</td>
</tr>
<tr>
<td>Polish</td>
<td>168</td>
</tr>
<tr>
<td>Russian</td>
<td>169</td>
</tr>
<tr>
<td>Slavic</td>
<td>170</td>
</tr>
<tr>
<td>Undergraduate Concentrations</td>
<td></td>
</tr>
<tr>
<td>-----------------------------</td>
<td>---</td>
</tr>
<tr>
<td>Astronomy</td>
<td>185</td>
</tr>
<tr>
<td>Biophysics</td>
<td>190</td>
</tr>
<tr>
<td>Archaeology and the Ancient World</td>
<td>196</td>
</tr>
<tr>
<td>Astronomy</td>
<td>195</td>
</tr>
<tr>
<td>Biochemistry &amp; Molecular Biology</td>
<td>196</td>
</tr>
<tr>
<td>Chemistry</td>
<td>201</td>
</tr>
<tr>
<td>Classics</td>
<td>203</td>
</tr>
<tr>
<td>Cognitive Neuroscience</td>
<td>204</td>
</tr>
<tr>
<td>Cognitive Science</td>
<td>206</td>
</tr>
<tr>
<td>Community Health</td>
<td>208</td>
</tr>
<tr>
<td>Comparative Literature</td>
<td>209</td>
</tr>
<tr>
<td>Computational Biology</td>
<td>210</td>
</tr>
<tr>
<td>Computer Science</td>
<td>211</td>
</tr>
<tr>
<td>Computer Science-Economics</td>
<td>213</td>
</tr>
<tr>
<td>Contemplative Studies</td>
<td>214</td>
</tr>
<tr>
<td>Development Studies</td>
<td>215</td>
</tr>
<tr>
<td>Early Cultures</td>
<td>216</td>
</tr>
<tr>
<td>East Asian Studies</td>
<td>216</td>
</tr>
<tr>
<td>Economics</td>
<td>218</td>
</tr>
<tr>
<td>Education Studies</td>
<td>219</td>
</tr>
<tr>
<td>Egyptology and Assyriology</td>
<td>221</td>
</tr>
<tr>
<td>Engineering</td>
<td>223</td>
</tr>
<tr>
<td>Engineering and Physics</td>
<td>230</td>
</tr>
<tr>
<td>English</td>
<td>230</td>
</tr>
<tr>
<td>Environmental Studies</td>
<td>232</td>
</tr>
<tr>
<td>Ethnic Studies</td>
<td>234</td>
</tr>
<tr>
<td>French Studies</td>
<td>234</td>
</tr>
<tr>
<td>French and Francophone Studies</td>
<td>235</td>
</tr>
<tr>
<td>Gender and Sexuality Studies</td>
<td>236</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>237</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>237</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>238</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>239</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>240</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>240</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>241</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>242</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>243</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>244</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>245</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>246</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>247</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>248</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>249</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>250</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>251</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>252</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>253</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>254</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>255</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>256</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>257</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>258</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>259</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>260</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>261</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>262</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>263</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>264</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>265</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>266</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>267</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>268</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>269</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>270</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>271</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>272</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>273</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>274</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>275</td>
</tr>
<tr>
<td>Biological Bases</td>
<td>276</td>
</tr>
</tbody>
</table>
## Academic Calendar

### Summer 2015

<table>
<thead>
<tr>
<th>Date Range</th>
<th>Days</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 1 - 9, 2015</td>
<td>Wed. - Thurs.</td>
<td>Pre-registration for Summer courses.</td>
</tr>
<tr>
<td>April 10 - 21, 2015</td>
<td>Fri. - Tues.</td>
<td>Summer registration closed for Fall registration (online via Banner for continuing students).</td>
</tr>
<tr>
<td>April 22 - June 24, 2015</td>
<td>Wed. - Wed.</td>
<td>Late registration period for Summer courses.</td>
</tr>
<tr>
<td>June 22, 2015</td>
<td>Mon.</td>
<td>Summer Session begins.</td>
</tr>
<tr>
<td>June 24, 2015</td>
<td>Wed.</td>
<td>Last day to change courses. (All students MUST be in their registered courses by Thursday, June 25.)</td>
</tr>
<tr>
<td>July 7, 2015</td>
<td>Tues.</td>
<td>Last day to change grade options.</td>
</tr>
<tr>
<td>Aug 1 - 4, 2015</td>
<td>Sat. - Tues.</td>
<td>Reading period.</td>
</tr>
<tr>
<td>Aug 4, 2015</td>
<td>Tues.</td>
<td>Last day to drop a course.</td>
</tr>
<tr>
<td>Aug 8, 2015</td>
<td>Sat.</td>
<td>Residence halls close.</td>
</tr>
<tr>
<td>Aug 31, 2015</td>
<td>Mon.</td>
<td>Last day to initiate a Course Performance Report via ASK.</td>
</tr>
</tbody>
</table>

### Fall 2015

<table>
<thead>
<tr>
<th>Date Range</th>
<th>Days</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug. 1, 2015</td>
<td>Sat.</td>
<td>Last day for payment of charges.</td>
</tr>
<tr>
<td>Sept. 4, 2015</td>
<td>Fri.</td>
<td>Beginning of Graduate School Orientation</td>
</tr>
<tr>
<td>Sept. 5, 2015</td>
<td>Sat.</td>
<td>Beginning of College Orientation</td>
</tr>
<tr>
<td>Sept. 8, 2015</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. 9, 2015</td>
<td>Wed.</td>
<td>Classes of the first semester begin. Web registration begins at 8:00 a.m.</td>
</tr>
<tr>
<td>Sept. 10, 2015</td>
<td>Wed.</td>
<td>First day of RISD Fall Session</td>
</tr>
<tr>
<td>Sept. 17, 2015</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. 22, 2015</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. 6, 2015</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. 12, 2015</td>
<td>Mon.</td>
<td>Fall Weekend holiday. No University exercises.</td>
</tr>
<tr>
<td>Oct. 13, 2015</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>
<tr>
<td>Oct. 15, 2015</td>
<td>Thurs.</td>
<td>Deadline for students currently on leave to apply for readmission for Semester II.</td>
</tr>
</tbody>
</table>

### Spring 2016

<table>
<thead>
<tr>
<th>Date Range</th>
<th>Days</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 1, 2016</td>
<td>Fri.</td>
<td>Last day for payment of charges.</td>
</tr>
<tr>
<td>Jan. 6, 2016</td>
<td>Wed.</td>
<td>First day of RISD Winter Session.</td>
</tr>
<tr>
<td>Jan. 13, 2016</td>
<td>Wed.</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. 18, 2016</td>
<td>Mon.</td>
<td>Martin Luther King, Jr. holiday. No University exercises.</td>
</tr>
<tr>
<td>Jan. 26, 2016</td>
<td>Tues.</td>
<td>Registration of new students for the second semester (4:00 pm to midnight).</td>
</tr>
</tbody>
</table>

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Jan. 27, 2016  Wed.  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.

Feb. 9, 2016  Tues.  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.

Feb. 9, 2016  Tues.  Last day of Winter RISD classes.

Feb. 18, 2016  Thurs.  First day of RISD Spring Session.


Feb. 24, 2016  Wed.  Classes resume. 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).

Feb. 25, 2016  Thurs.  Last day to register for a Spring RISD course without a fee or change a grade option for a Spring RISD course (5:00 p.m. deadline).

Feb. 29, 2016  Mon.  Date by which graduating students with more than one concentration on their record to change/select the departmental ceremony where they wish to obtain their diploma (5:00 p.m. deadline).

Mar. 11, 2016  Fri.  Mid-semester deadline. Last day to change from credit to audit in a course (5:00 p.m. deadline). Mandatory for all Seniors - Last Day to have your updated concentration declaration (including course list) approved in ASK (5:00 p.m. deadline).


April 1, 2016  Fri.  Deadline for students currently on leave to apply for readmission for Semester I.

April 4, 2016  Mon.  Classes resume. Seniors: Last day to update diploma information such as name and mailing address via Self-Service Banner's Application to Graduate (Note: This is a required step for all students planning to graduate).

Apr. 4 - Apr. 21, 2016  Mon. - Thurs.  Advising period for fall pre-registration. Students in their first through third semesters will need to procure their advising PIN from their advisor in order to register.

April 7, 2016  Thurs.  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).

April 8, 2016  Fri.  Deadline for submission of proposals for undergraduate group study projects (GISPs) for Semester I.

April 21, 2016  Thurs.  Date by which advisors must approve sophomore submitted concentrations in ASK to avoid having a No Concentration hold placed against the student's Banner registration. (5:00 pm deadline).

April 25 - May 2, 2016  Mon. - Mon.  Registration for Semester I, 2016-17. (Note: No student will be permitted to register for his or her fifth semester unless an approved declaration of concentration has been filed.)

April 29 - May 10, 2016  Fri. - Tues.  Reading Period (optional and at the discretion of the instructor).

May 1, 2016  Sun.  Deadline for undergraduates to declare a leave for Semester I. Theses of candidates for Masters and Ph.D. degrees in May due.

May 2, 2016  Mon.  End of the pre-registration period.

May 6, 2016  Fri.  Seniors: Honors recommendations from academic departments due (5:00 p.m. deadline). Please have your work in your committee's hands well before this date.

May 10, 2016  Tues.  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.

May 11 - 20, 2016  Wed. - Fri.  Final Examination Period. (No exams on Sunday May 15).

May 18, 2016  Wed.  Last day of Spring RISD classes.

May 20, 2016  Fri.  Seniors: Last day to submit Official Transcripts from study elsewhere to complete degree requirements (5:00 p.m. deadline). Last day to have grades for work from a previous semester submitted by your instructor(s) and/or have a RISD instructor(s) submit your spring 2016 grade to the Office of the Registrar should you need the grade(s) to complete your degree requirements (5:00 p.m. deadline).


May 31, 2016  Tues.  Last day to initiate a Course Performance Report via ASK.

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

General academic requirements

Undergraduate degrees:

Information regarding general academic 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://wiki.brown.edu/confluence/display/CISDOC/Screencasts

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 2015), see:
http://selfservice.brown.edu/menu and select 'Brown Course Search'

Course Credit

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

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 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 below.) Such supplemental evaluations are intended primarily for the information of the student and do not replace departmental evaluations.

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

1. Courses may be designated to be graded on a Mandatory Satisfactory/No Credit basis for all students enrolled on the initiative of the instructor. The designation of a course by an instructor to be graded S/NC only must be announced no later than the first day of classes and entails the responsibility for providing Course 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 midterm of Semester II; for Semester II or the for-credit 7 week Summer Session, 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 may be 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 ABS 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 absence from the examination is excused by the dean, the student will receive no credit for the course.

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 mid-term and, in addition, the department and the registrar shall be informed.

Final Examination Schedule: A pre-defined period at the close of each semester is provided for final examinations for those courses for which such an examination is scheduled. Two examination periods are scheduled for each day. The examination group is determined by, in most cases, the offering time associated with the course (indicated by the figure in parentheses) and also as displayed on Banner Web. The schedule for 2015-2016 is as follows:

<table>
<thead>
<tr>
<th>Date</th>
<th>9 am Group</th>
<th>2 pm Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec. 12</td>
<td>5</td>
<td>16</td>
</tr>
<tr>
<td>Dec. 13</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Dec. 14</td>
<td>15</td>
<td>8</td>
</tr>
<tr>
<td>Dec. 15</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>Dec. 16</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>
the Academic Code, procedures, policies, and a list of penalties, see the pamphlet issued by the Office of the Dean of the College, Principles of the Brown University Community: The Academic Code and Non-Academic Disciplinary System.

Nonacademic Discipline

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

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

Curricular Programs

Diverse Perspectives in Liberal Learning

Brown’s open curriculum challenges students to open their perspective on the world by embracing new experiences, new ways of thinking, and new people. One way students can address this expectation is through challenging coursework. Diverse Perspectives in Liberal Learning courses offer students the means not only to understand the complex dynamics of social inequality, exclusion, and difference but also to do something with what they learn.

Through content, methodology, or pedagogy, DPLL courses seek to:
• Expose and critique the diverse historical and cultural forces that shape the construction of knowledge in all disciplines;
• Teach the arts of critical reflection: questioning thoughtfully, listening openly, and speaking cogently about differing points of view;
• Develop responsible citizens by examining the ways that power and privilege affect human lives and providing pathways to meaningful change.

Some DPLL courses may, through their content, focus on questions of race, nationality, ethnicity, sexuality, religion, gender, age, disability, or socio-economic status. Others may employ creative methods to investigate how knowledge is constructed and received in different contexts. Still others may feature community-based activities, encouraging students to become agents of change both locally and globally.

A complete list of each semester’s DPLL courses may be viewed in the Brown Course Search by choosing “Diverse Perspectives in LL” 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 the Brown Course Search 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.

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

Fall 2015

African Studies
AFRI 0090 S01 16227 An Intro to Africana Studies Keisha-Khan Y. Perry
AFRI 0210 S01 16228 Afro Latin Americans Anani Dzidzienyo
AFRI 1050T S01 16256 Slave Resist /Environ History Vanessa Fabien
AFRI 1110 S01 16226 Voices Beneath the Veil Elmo Terry-Morgan
AFRI 1150 S01 16236 Afro-Caribbean Philosophy Paget Henry
AFRI 1210 S01 16229 Afro-Brazilians + Brazilin Polity Anani Dzidzienyo
AFRI 1620 S01 16230 Black New Orleans: A Research Brenda Marie Osbey
AFRI 1630 S01 16231 Modernist Africana Poetry Brenda Marie Osbey

American Studies
AMST 1600B S01 16515 Global China Elena Shih
AMST 1700D S01 16265 Race and Remembering Monica M. Martinez

Anthropology
ANTH 0066J S01 16880 You Want to Change the World Andrea E. Flores
ANTH 0066W S01 17018 What Does It Mean To Be Green? Dana J. Graef
ANTH 0600 S01 17024 Of Beauty and Violence Yana Genchova Stainova
ANTH 0800 S01 16192 Intro to Linguistic Anthro Paja L. Faudree
ANTH 1201 S01 16730 GIS and Spatial Analysis Parker VanValkenburgh
ANTH 1224 S01 16196 Human Trafficking Kay B. Warren
ANTH 1310 S01 16189 Anthro Perspcvt Intmdi Hilth Katherine A. Mason
ANTH 1910H S01 16880 ANTH Approaches: World Issues Andrea E. Flores

Arabic
ARAB 1100 S01 16637 Modern Arabic Poetry Miled Faiza

Biology
BIOL 0190P S01 14701 Pride/Prej Dev of Sci Theories Stephen L. Helfand

Classics
CLAS 0820 S01 15925 Epics of India James L. Fitzgerald
CLAS 0995 S01 16105 Performing Arts in Clas S Asia David Buchta

Comparative Literature
COLT 0810I S01 15066 Tellers of Non-Western Wrld Dore J. Levy
COLT 1912V S01 16982 War, Anti-War, Postwar Esther K. Whitfield

East Asian Studies
EAST 0500 S01 16283 Childhood and Culture in Japan Samuel E. Perry
EAST 1950W S01 15306 Translating Korean Samuel E. Perry

Economics
ECON 1485 S01 16706 Social Security Reform Eytan Sheshinski
ECON 1590 S01 15176 The Economy of China snc 1949 Louis Putterman

Education
EDUC 1700 S01 14752 Asian Americans in Higher Educ Liza D. Cariaga-Lo

Egyptology
EGYI 1525 S01 17059 Village of Royal Tomb Builders Anne-Claire Salmas

English
ENGL 0710B S01 15474 African Amer Lit and Slavery Rolland D. Murray
ENGL 1710J S01 15511 Modern African Literature Olakunle George
ENGL 1900R S01 15628 Aesthetics and Sexuality Jacques Khalip

Hispanic Studies
HISP 0730 S01 16665 Early/Contmp Wrtr of Span Amer Felipe I. Martinez-Pinson

History
HIST 1553 S01 15423 Empires in America to 1890 John M. Rosenberg

Judaic Studies
JUDS 0050M S01 15077 Judaism and Christianity Adam Teller
JUDS 0681 S01 15078 Great Jewish Books Michael L. Satlow
JUDS 1701 S01 15662 Jews and Revolutions Rachel Rojanski

Middle East Studies
MES 0155 S01 16240 Cultures Contemp. Middle East Sarah A. Tobin
MES 0170 S01 17049 Visual Exprs in Contmp Mid Est Peter S. Chomowicz
MES 1350 S01 16671 Israel/Palestine:1 State Condl Adi Ophir
MES 1999B S01 16238 Colonialism and Human Rights Nicola Perugini

Modern Culture and Media
MCM 1501O S01 14894 Television, Gender + Sexuality Lynne Joyrich

Music
MUSC 0021B S01 16017 Reading Jazz Matthew Richards McGarrell

Public Health
PHP 1070 S01 16212 Brdn of Disease in Devel Cntry Stephen T. McGarvey
PHP 1680I S01 16220 Disability/Health and Community Sarah E. Skeels
PHP 1880 S01 15188 Meditn, Mindfulness, Health Eric B. Loucks

Religious Studies
REL S02 S01 15990 Wealth: Religious Approaches Susan Ashbrook Harvey
REL S080 S01 17122 Experiencing the Sacred Finnn M. Moore-Gerety
REL S0608 S01 16000 Islam in America Nancy Kahle
REL S084 S01 15823 Religious Freedom in America Daniel Vaca
REL S1480 S01 15877 Themes in Japanese Buddhism Janine T. Anderson Sawada
REL S1530 S01 16264 Islamic Sectarianism Nancy Kahle

Slavic
SLAV 1300 S01 15989 Sociology Lida Masako Ueda Fidler

Turkish
TKSH 0100 S01 14811 Introduction to Turkish Ercan Balci

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
<table>
<thead>
<tr>
<th>Field</th>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive, Linguistic and Psychological Sciences</td>
<td>CLPS 0050A S01 15723</td>
<td>Computing as in Brains/Computers James A. Anderson</td>
</tr>
<tr>
<td>Comparative Literature</td>
<td>COLT 0610D S01 15879</td>
<td>Rites of Passage Arnold Louis Weinstein</td>
</tr>
<tr>
<td></td>
<td>COLT 0812A S01 15880</td>
<td>Post-Hamlet Karen A. Newman</td>
</tr>
<tr>
<td>Education</td>
<td>EDUC 0400 S01 14625</td>
<td>Amer College/University-1960's Luther Speehr</td>
</tr>
<tr>
<td>English</td>
<td>ENGL 0150C S01 15463</td>
<td>The Medieval King Arthur Elizabeth Johnson Bryan</td>
</tr>
<tr>
<td></td>
<td>ENGL 0150J S01 15461</td>
<td>Inventing America James F. Egan</td>
</tr>
<tr>
<td></td>
<td>ENGL 0150Q S01 15460</td>
<td>Realism and Modernism Paul B. Armstrong</td>
</tr>
<tr>
<td>Environmental Studies</td>
<td>ENVS 0070C S01 15670</td>
<td>Transcending Transpn Impacts Kurt Teichert</td>
</tr>
<tr>
<td></td>
<td>ENVS 0070D S01 15671</td>
<td>Misusing Scientific Info Cornelia Dean</td>
</tr>
<tr>
<td>French Studies</td>
<td>FREN 0720A S01 16172</td>
<td>De l'Amour courtois au désir Virginia A. Krause</td>
</tr>
<tr>
<td>German Studies</td>
<td>GRMN 0750F S01 16241</td>
<td>Historical Crime Fiction Thomas W. Kneschie</td>
</tr>
<tr>
<td>History</td>
<td>HIST 0521A S01 14917</td>
<td>Christianity in Conflict Jonathan P. Conant</td>
</tr>
<tr>
<td></td>
<td>HIST 0522N S01 15409</td>
<td>Reason, Revolution, Reaction Joan L. Richards</td>
</tr>
<tr>
<td></td>
<td>HIST 0522O S01 16658</td>
<td>The Enlightenment Joel W. Revill</td>
</tr>
<tr>
<td></td>
<td>HIST 0535A S01 14900</td>
<td>Atlantic Pirates Robert Douglas Cope</td>
</tr>
<tr>
<td></td>
<td>HIST 0537A S01 15411</td>
<td>Popular Culture/Latin America Jennifer L. Lambe</td>
</tr>
<tr>
<td></td>
<td>HIST 0540F S01 14902</td>
<td>Women in the Middle East Palmira Brummet</td>
</tr>
<tr>
<td></td>
<td>HIST 0551A S01 15412</td>
<td>Lincoln in History and Culture Michael Vorenberg</td>
</tr>
<tr>
<td></td>
<td>HIST 0556A S01 15413</td>
<td>Sport in American History Howard P. Chudacoff</td>
</tr>
<tr>
<td></td>
<td>HIST 0582A S01 15414</td>
<td>Animal Histories Nancy J. Jacobs</td>
</tr>
<tr>
<td>Judaic Studies</td>
<td>JUDS 0050M S01 15077</td>
<td>Judaism and Christianity Adam Teller</td>
</tr>
<tr>
<td>Literary Arts</td>
<td>LITR 0100A S01 15662</td>
<td>Introduction to Fiction Travis Wayne Vick</td>
</tr>
<tr>
<td></td>
<td>LITR 0100B S01 15663</td>
<td>Introduction to Poetry Nancy E. Kuhl</td>
</tr>
<tr>
<td></td>
<td>LITR 0510B S01 15551</td>
<td>Into the Machine Joanna E. Howard</td>
</tr>
<tr>
<td></td>
<td>LITR 0510C S01 16597</td>
<td>The Pleasures of the Text Carole Maso</td>
</tr>
<tr>
<td></td>
<td>LITR 0710 S01 15556</td>
<td>Writers on Writing Seminar Forrest Gander</td>
</tr>
<tr>
<td>Music</td>
<td>MUSC 0021B S01 16017</td>
<td>Reading Jazz Matthew Richards McGarrell</td>
</tr>
<tr>
<td>Political Science</td>
<td>POLS 0820Q S01 15039</td>
<td>Politics of Amer Fed Holidays Roger Cobb</td>
</tr>
<tr>
<td></td>
<td>POLS 0820V S01 15512</td>
<td>Land and Conflict Latin America N. Branch</td>
</tr>
<tr>
<td></td>
<td>POLS 0820W S01 15510</td>
<td>Bleeding Heart Libertarianism John O. Tomasi</td>
</tr>
<tr>
<td>Portuguese and Brazilian Studies</td>
<td>POBS 0810 S01 15539</td>
<td>Cross-Cultural Identities Patricia I. Sobral</td>
</tr>
<tr>
<td></td>
<td>POBS 0850 S01 16267</td>
<td>Comp Appr Lits Brazil + USA Luiz Fernando Valente</td>
</tr>
<tr>
<td></td>
<td>POBS 0910 S01 15542</td>
<td>On the Dawn of Modernity Onesimo T. Almeida</td>
</tr>
<tr>
<td>Public Health</td>
<td>PHP 0050 S01 16875</td>
<td>Pain and the Human Condition Nisha Gupta Trivedi</td>
</tr>
<tr>
<td></td>
<td>PHP 0100 S01 16794</td>
<td>Statistics is everywhere Zhijin J. Wu</td>
</tr>
<tr>
<td>Religious Studies</td>
<td>RELS 0090J S01 15874</td>
<td>Death/Afterlife in Biblic/ Trad Saul Olyan</td>
</tr>
<tr>
<td></td>
<td>RELS 0090K S01 15992</td>
<td>Christmas in America Daniel Vaca</td>
</tr>
<tr>
<td>Russian</td>
<td>RUSS 0320E S01 15997</td>
<td>Crime and Punishment Vladimir Golstein</td>
</tr>
<tr>
<td>Urban Studies</td>
<td>URBN 0230 S01 15849</td>
<td>Urban Life in Providence Rebecca L. Carter</td>
</tr>
<tr>
<td>Spring 2016</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anthropology</td>
<td>ANTH 0066D S01 26095</td>
<td>Who Owns the Past? Patricia E. Rubertone</td>
</tr>
<tr>
<td></td>
<td>ANTH 0066N S01 25701</td>
<td>Peoples, Cultures Greater Mex Matthew C. Gutmann</td>
</tr>
<tr>
<td>Biology</td>
<td>BIOL 0150C S01 25629</td>
<td>Scndary Metabolites Med Plants Fred Vernon Jackson</td>
</tr>
<tr>
<td></td>
<td>BIOL 0190S S01 23887</td>
<td>Phage Hunters, Part II Yang Zhou</td>
</tr>
<tr>
<td>Classics</td>
<td>CLAS 0210B S01 24882</td>
<td>Death in Ancient Greece Pura Nieto Hernandez</td>
</tr>
<tr>
<td>Comparative Literature</td>
<td>COLT 0510C S01 24222</td>
<td>The World of Lyric Poetry Dore J. Levy</td>
</tr>
<tr>
<td>East Asian Studies</td>
<td>EAST 0950B S01 24126</td>
<td>The Floating World Janine T. Anderson Sawada</td>
</tr>
<tr>
<td>Education</td>
<td>EDUC 0401E S01 23838</td>
<td>Empowering Youth Margary D. Martin</td>
</tr>
<tr>
<td>Egyptology</td>
<td>EGYT 0300 S01 25605</td>
<td>Cosmos Creation Ancient World Matthew T. Rutz</td>
</tr>
<tr>
<td>Engineering</td>
<td>ENGN 0120A S01 25363</td>
<td>Crssng Consumr Chasm by Desgn Richard D. Fleeter</td>
</tr>
<tr>
<td></td>
<td>ENGN 0120B S01 25364</td>
<td>Crssng Space Chsm Thr Engn Dagn Richard D. Fleeter</td>
</tr>
<tr>
<td>English</td>
<td>ENGL 0150E S01 24537</td>
<td>Love and Friendship James A. Kuzner</td>
</tr>
<tr>
<td></td>
<td>ENGL 0150S S01 24535</td>
<td>The Roaring Twenties Tamar Katz</td>
</tr>
<tr>
<td></td>
<td>ENGL 0150V S01 25123</td>
<td>James and Wharton Stuart Burrows</td>
</tr>
<tr>
<td></td>
<td>ENGL 0150X S01 25006</td>
<td>The Claims of Fiction Okakunje George</td>
</tr>
<tr>
<td>French Studies</td>
<td>FREN 0720B S01 25196</td>
<td>The French Novel Today Thangam Ravindranathan</td>
</tr>
<tr>
<td>Gender and Sexuality Studies</td>
<td>GNSS 0090C S01 25597</td>
<td>Reproductive Health Sarah D. Fox</td>
</tr>
<tr>
<td>Hispanic Studies</td>
<td>HISP 0710B S01 25206</td>
<td>Hisp Culture Through Cinema Mercedes Vaquero</td>
</tr>
<tr>
<td></td>
<td>HISP 0750N S01 25769</td>
<td>Muslims,Jews+Christns Mdv Ib Mercedes Vaquero</td>
</tr>
<tr>
<td>History</td>
<td>HIST 0522G S01 24637</td>
<td>The Dutch Golden Age Harold J. Cook</td>
</tr>
<tr>
<td></td>
<td>HIST 0574A S01 23992</td>
<td>The Silk Road, Past / Present Present Cynthia J. Brokaw</td>
</tr>
<tr>
<td>Judaic Studies</td>
<td>JUDS 0050H S01 25282</td>
<td>Israel's Wars Rachel Rojanski</td>
</tr>
<tr>
<td>Literary Arts</td>
<td>LITR 0100A S01 24760</td>
<td>Introduction to Fiction TBD</td>
</tr>
<tr>
<td></td>
<td>LITR 0100B S01 24761</td>
<td>Introduction to Poetry TBD</td>
</tr>
<tr>
<td></td>
<td>LITR 0710 S01 24566</td>
<td>Writers on Writing Seminar Joanna E. Howard</td>
</tr>
<tr>
<td>Physics</td>
<td>PHYS 0113 S01 25803</td>
<td>Squishy Physics Jay X. Tang</td>
</tr>
<tr>
<td></td>
<td>PHYS 0114 S01 25703</td>
<td>Science + Technology of Energy Derek M. Stein</td>
</tr>
</tbody>
</table>

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Public Policy
PLCY 0700J S01 26026 Comparative Policies Geri M. Augusto

Russian
RUSS 0320A S01 25220 Brothers Karamazov/Art of Novi Svetlana Evdokimova

Sociology
SOC 0300K S01 24410 Inequalities and Health Susan Short

Liberal Learning
Fall 2015
Africana Studies
AFRI 0090 S01 16227 An Intro to Africana Studies Keisha-Khan Y. Perry
AFRI 1150 S01 16236 Afro-Caribbean Philosophy Paget Henry

American Studies
AMST 1700D S01 16265 Race and Remembering Monica M. Martinez

Anthropology
ANTH 0066J S01 16680 You Want to Change the World Andrea E. Flores
ANTH 0110 S01 16208 Anth and Global Soc Problems Sarah A. Besky
ANTH 0800 S01 16192 Intro to Linguistic Anthro Paja L. Faadrene
ANTH 1111 S01 16593 Anthropology of China Katherine A. Mason
ANTH 1201 S01 16730 GIS and Spatial Analysis Parker Van Valkenburgh
ANTH 1221 S01 16195 Anthropology of Masculinity Matthew C. Gutmann
ANTH 1224 S01 16196 Human Trafficking Kay B. Warren
ANTH 1300 S01 16199 Anthropology of Addictions Irene Glasser
ANTH 1310 S01 16189 Anthro Perspectiv Intmt Hth Katherine A. Mason
ANTH 1650 S01 16201 Ancient Maya Writing Stephen D. Houston
ANTH 1720 S01 16202 The Human Skeleton Andrew K. Scherer
ANTH 1910H S01 16800 ANTH Approaches: World Issues Andrea E. Flores

Arabic
ARAB 1100 S01 16637 Modern Arabic Poetry Miled Faiza

BioMed-Neuroscience
NEUR 0010 S01 15814 The Brain: Intro to Neuroscienc Michael A. Paradiso

Biology
BIOL 0300 S01 14687 Principles of Nutrition Mary M. Flynn
BIOL 0380 S01 14746 Eco + Evo Infectious Disease Daniel M. Weinreich
BIOL 1430 S01 14749 Comput Theory Molec Evol Daniel M. Weinreich

Classics
CLAS 0995 S01 16772 The Idea of Self Joseph Michael Pucci
CLAS 1120G S01 15934 The Idea of Self Joseph Michael Pucci
CLAS 1120Q S01 16026 Seven Wonders Ancient World John F. Cherry

Comparative Literature
CLPS 0300 S01 15759 Intro to Linguistic Theory Scott H. Anderbois
CLPS 0610 S01 15724 Nature of Cognitive Developmnt David M. Sobel

Cognitive, Linguistic and Psychological Sciences
CLPS 0800 S01 15759 Intro to Linguistic Theory Scott H. Anderbois
CLPS 0810 S01 15724 Nature of Cognitive Developmnt David M. Sobel

Computer Science
CSCI 0020 S01 15976 The Digital World Donald L. Stanford
CSCI 0021 S01 16549 Intro to CS for Hum + Soc Sci Alexandra Papoutsaki

East Asian Studies
EAST 0500 S01 16283 Childhood and Culture in Japan Samuel E. Perry

Education
EDUC 1700 S01 14752 Asian Americans in Higher Educ Liza D. Cariaga-Lo

English
ENGL 0150J S01 15461 Inventing America James F.egan
ENGL 0150Q S01 15460 Realism and Modernism Paul B. Armstrong

Environmental Studies
ENV 0070C S01 15670 Transcending Transp Impacts Kurt Teichert
ENV S070D S01 15671 Misusing Scientific Info Cornelia Dean
ENV 0510 S01 15676 Internat EnvironmLawPolicy Caroline Anne Karp
ENV 1400 S01 15678 Sustainable Design Kurt Teichert

German Studies
GRMN 0750F S01 16241 Historical Crime Fiction Thomas W. Kniesche

Hispanic Studies
HISP 0730 S01 16665 Early/Contmp Wrtr of Span Amer Felipe I. Martinez-Pinzon
HISP 1240L S01 16647 Quijote in Context Golden Age David A. Boruchoff

Judaic Studies
JUDS 0500M S01 15077 Judaism and Christianity Adam Teller
JUDS 0681 S01 15078 Great Jewish Books Michael L. Saffower
JUDS 1701 S01 15652 Jews and Revolutions Rachel Rojanski

Literary Arts
LITR 0510C S01 16597 The Pleasures of the Text Carole Maso

Modern Culture and Media
MCM 0110 S01 14874 Theory and Analysis of MCM Philip Rosen
MCM 0750 S01 17050 Art in Digital Culture Elisa Giardina Papa

Music
MUSC 0021B S01 16017 Reading Jazz Matthew Richards McGarrell
MUSC 0200 S01 16010 Computers and Music Todd E. Winkler
MUSC 1250 S01 16009 Sound Design James R Moses

Portuguese and Brazilian Studies
POBS 0910 S01 15542 On the Dawn of Modernity Onesimo T. Almeida

Public Health
PH 16210 Introduction to Public Health Abigail D. Harrison
PH 1070 S01 16212 Brdn of Disease in Devel Cntry Stephen T. McGarvey
PH 1680I S01 16220 Disability/Health and Commnty Sarah E. Skeels

Religious Studies
RELS 0025 S01 15990 Wealth: Religious Approaches Susan Ashbrook Harvey
RELS 0055 S01 15873 Modern Problems of Belief Mark Cladis
RELS 0090J S01 15874 Death/Afterlife in Bibcl Trad Saul Olyan
RELS 0090K S01 15992 Christmas in America Daniel Vaca
RELS 0290E S01 15994 Engaged Buddhism Harold D. Roth
RELS 0405 S01 17122 Experiencing the Sacred Finnian M. Moore-Gerety
RELS 0600B S01 16000 Islam in America Nancy Khalek
RELS 0845 S01 15823 Religious Freedom in America Daniel Vaca
RELS 1000 S01 15824 Methods in Religious Studies Anna F Bialek
RELS 1440 S01 15877 Themes in Japanese Buddhism Janine T. Anderson Sawada
RELS 1530D S01 16264 Islamic Sectarianism Nancy Khalek

Russian
RUS 1019 S01 16808 Russian Women's Writing Erin K. Kraft

Science and Society
SCSO 0170P S01 16312 Neuroethics Jeffrey S. Poland

Slavic
SLAV 1250 S01 16581 Polish Culture Through Film Magdalena Harrison
SLAV 1300 S01 15989 Sociolinguistics Masako Ueda Fidler

University Courses
UNIV 1950 S01 17160 Contemplative Studies Capstone Harold D. Roth
For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Education
EDUC 0610 S01 23847 Brown v. Board of Education Tracy L. Steffes

History
HIST 0654A S01 25704 Welfare States Robert O. Self

Portuguese and Brazilian Studies
POBS 0990 S01 25224 Mapping Cross-Cult. Identities Patricia I. Sobral

University Courses
UNIV 0540 S01 24949 Intro to Contemplative Studies Harold D. Roth

Writing-Designated Courses
Fall 2015
Africana Studies
AFRI 0090 S01 16227 An Intro to Africana Studies Keisha-Khan Y. Perry
AFRI 1010C S01 16248 Race, Gender, Ethics and Envir Vanessa Fabien
AFRI 1050T S01 16256 Slave Resist /Environ History Vanessa Fabien
AFRI 1110 S01 16226 Voices Beneath the Veil Elmo Terry-Morgan

American Studies
AMST 0191T S01 16897 American Identities Christopher Michael Elias
AMST 0191U S01 16869 Imagining the American Mind Sarah Ann Brown
AMST 1700D S01 16265 Race and Remembering Monica M. Martinez
AMST 1904B S01 15013 Henry James Goes to the Movies Beverly Haviland
AMST 1905N S01 15643 War + Mind in Modern America Debbie F. Weinstein
AMST 1906H S01 16259 Pageantry in American Society Hilary L. Levey Friedman

Archaeology and Ancient World
ARCH 0152 S01 16891 Mysteries of Ancient Egypt Miriam Mueller
ARCH 0775 S01 17136 Foodways + Gastro-Politics Tate S. Paulette
ARCH 1140 S01 17103 The Death of the Ancient City? Margaret Marshall Andrews
ARCH 1525 S01 16784 Power in Prehistoric Mediterranean Clive Vella

Anthropology
ANTH 0310 S01 16190 Human Evolution Andrew K. Scherer
ANTH 1224 S01 16196 Human Trafficking Kay B. Warren
ANTH 1300 S01 16199 Anthropology of Addictions Irene Glasser
ANTH 1310 S01 16189 Anthro Persptcv Internlt Hilth Katherine A. Mason

Business, Entrepreneurship and Organizations
BEO 1010 S03 16844 Entrepreneurial Process Jason D. Harry
BEO 1010 S01 16552 Entrepreneurial Process Daniel E. Warshay

English
ENGL 0150C S01 15463 The Medieval King Arthur Elizabeth Johnson Bryan
ENGL 0150J S01 15461 Inventing America James F. Egan
ENGL 0200B S01 15600 Queer and Feminist Poetics Aaron A. Apps
ENGL 0200C S01 15601 The Art of Catastrophe Claire Guillian-Drolet
ENGL 1561D S01 15626 Writing and Ruins of Empire William Keach

Environmental Studies
ENVS 0455 S01 15674 Coastal Ecology + Conservation Mark D. Bertness
ENVS 0510 S01 15676 Internatnl Environmt Law/Policy Caroline Anne Karp
ENVS 1615 S01 16513 Environmental Policy Process Amanda Lynch

French Studies
FREN 0720A S01 16172 De l'Amour courtois au désir Virginia A. Krause
FREN 1510C S01 16162 A table! Annie J. Wiart

Gender and Sexuality Studies
GNSS 1201 S01 16304 Feminist Utopias and Dystopias Gail E. Cohee
GNSS 1990 S01 15167 Senior Seminar Drew C. Walker

Geological Sciences
GEOL 1430 S02 15199 History of Egypt I Laurel D. Bestock

German Studies
GRMN 0500F S01 15813 20th Century German Culture Kristina C. Menticino

Hispanic Studies
HISP 0730 S01 16665 Early/Contmp Wtrr of Span Amer Felipe I. Martinez-Pinzon
HISP 0740 S01 15580 Intensive Survey of Spanish Lit Sarah L. Thomas
HISP 1290J S01 15709 80 Years of Spanish Cinema Sarah L. Thomas

History of Art and Architecture
HIAA 0321 S01 16275 Toward a Global Late Antiquity Anne Chen
HIAA 0870 S01 14855 20th Century British Art Courtney J. Martin
HIAA 1201 S01 17174 Brushwork: Chinese Painting in Jeffrey C. Moser
HIAA 1302 S01 16271 Women and Families in the Anci Anne Chen

History
HIST 0218 S01 14893 The Making of Modern East Asia Rebecca A. Nedostup
HIST 0233 S01 15407 Colonial Latin America Jeremy R. Mumford
HIST 0252 S01 15408 The American Civil War Michael Vorenberg
HIST 0522N S01 15409 Reason, Revolution, Reaction Joan L. Richards
HIST 0522O S01 16658 The Enlightenment Joel W. Revill

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Modern Culture and Media
MCM 0110 S01 14874 Theory and Analysis of MCM Philip Rosen

Music
MUSC 1920 S01 16012 Music and Modern Life Marc A. Perlman

Philosophy
PHIL 0030 S01 15090 Skepticism and Knowledge Felicia Nimue Ackerman
PHIL 0060 S01 15085 Modern Science + Human Values Nina R. Emery
PHIL 0350 S01 15083 Ancient Philosophy Mary Louise G. Gill
PHIL 0500 S01 15089 Moral Philosophy Normy Arpaly
PHIL 1400 S01 15092 Ethics in the Novel Felicia Nimue Ackerman
PHIL 1590 S01 15081 Philosophy of Science David P. Christensen
PHIL 1600 S01 15082 Philosophy of Law David Estlund
PHIL 1640 S01 15079 The Nature of Morality James Dreier
PHIL 1750 S01 15087 Epistemology David P. Christensen

Physics
PHYS 1270 S01 15244 Extragalactic Astronomy Savvas M. Koushiappas

Political Science
POLI 1820D S01 15041 Civil Liberties/Moral,Political Corey L. Brettschneider
POLI 1823Y S02 16629 Global Governance Nina Tannenwald
POLI 1824B S01 16259 Post Conflict Politics Robert A. Blair
POLI 1824D S01 16905 Power and Prosperity in Urban Margaret M. Weir
POLI 1910 S01 15045 Senior Honors Thesis Preparation Aaron Quinn Weinstein

Portuguese and Brazilian Studies
POLS 0400 S01 15537 Writing + Speaking Portuguese Naomi Parker
POLS 0810 S01 15539 Cross-Cultural Identities Patricia I. Sobral
POLS 0850 S01 16267 Comp Appr Lits Brazil + USA Luiz Fernando Valente
POLS 0910 S01 15542 On the Dawn of Modernity Onesimo T. Almeida
POLS 1030 S01 15540 Adv Lang Study/Creative Wrtn Leonor Simas-Almeida

Public Health
PHP 0050 S01 16675 Pain and the Human Condition Nisha Gupta Trivedi
PHP 1070 S01 16212 Brdn of Disease in Devel Cntry Stephen T. McGarvey

Public Policy
PLCY 0100 S01 16004 Introduction to Public Policy Robert B. Hackey

Religious Studies
RELS 0025 S01 15990 Wealth: Religious Approaches Susan Ashbrook Harvey
RELS 0090J S01 15874 Death/Afterlife in Biblical Trad Saul Olyan
RELS 0090K S01 15992 Christmas in America Daniel Vaca
RELS 0405 S01 17125 Jesus and the Gospels Nathaniel P. Desrosiers
RELS 0600B S01 16000 Islam in America Nancy Khalak
RELS 0845 S01 15823 Religious Freedom in America Daniel Vaca
RELS 1000 S01 15824 Methods in Religious Studies Anna F Bialek
RELS 1300 S01 16001 Anc Christianity and Sensing Body Susan Ashbrook Harvey

Russian
RUSS 0320E S01 15997 Crime and Punishment Vladimir Golstein
RUSS 1019 S01 16808 Russian Women's Writing Erin K. Kraft
RUSS 1290 S01 15991 Russian Lit in Translation I Alexander Levitsky

Slavic
SLAV 1300 S01 15989 Sociolinguistics Masako Ueda Fidler

Sociology
SOCI 1010 S01 15431 Classical Sociological Theory Scott A. Frickel
SOCI 1340 S01 17175 Prm/Method Geographic Info System Rachel S. Franklin
SOCI 1705E S01 15526 Alternatives to Violence Gregory C. Elliott
SOCI 1817R S01 15441 Knowledge Ntwks, Gbl Transf Michael D. Kennedy
SOCI 1950 S01 15440 Senior Seminar Michael D. Kennedy

Theatre Arts and Performance Studies
TAPS 0100 S01 16138 Playwriting I Carlos Montez Harris
TAPS 0100 S02 16140 Playwriting I Elmo Terry-Morgan
For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
HIST 1994 S01 24203 History Honors Thesis Part II Ethan Pollock

Italian Studies
ITAL 1020 S01 24287 Boccaccio's Decameron Massimo Riva
ITAL 1020 S02 25900 Boccaccio's Decameron Massimo Riva
ITAL 1400P S01 24507 Southernism Colonialism Mediterr Nicola Perugini

Judaic Studies
JUDS 0060 S01 25179 The Bible and Moral Debate Saul Olyan
JUDS 0902 S01 25465 History of the Holocaust Adam Teller
JUDS 1602 S01 24243 Mishnah and Tosefta Michael L. Satlow
JUDS 1670 S01 25888 Synagogues, Churches + Mosques Katharina M. Galor
JUDS 1718 S02 25283 Modernity and Jews Mary Gluck

Latin
LATN 1060J S01 25200 Ovid Heroides Jeri B. Debrohun

Literary Arts
LITR 0100A S01 24760 Introduction to Fiction TBD
LITR 0100B S01 24761 Introduction to Poetry TBD
LITR 0110A S01 24762 Fiction I TBD
LITR 0110B S02 24763 Fiction I TBD
LITR 0110B S03 24764 Fiction I TBD
LITR 0110B S04 24765 Poetry I TBD
LITR 0110B S05 24766 Poetry I TBD
LITR 0110D S01 24593 Screenwriting I Laura E. Colella
LITR 0210A S01 24567 Fiction Writing II Joanna E. Howard
LITR 0210A S02 24568 Fiction Writing II TBD
LITR 0210D S01 24771 Digital Language Art II TBD
LITR 0710 S01 24566 Writers on Writing Seminar Joanna E. Howard
LITR 1010A S01 24577 Advanced Fiction Meredith Steinbach
LITR 1010B S01 24585 Advanced Poetry Peter Michael L. Satlow
LITR 1010F S01 24593 Screenwriting I Laura E. Colella
LITR 1010G S01 25888 Synagogues, Churches + Mosques Katharina M. Galor
LITR 1010H S01 25888 Synagogues, Churches + Mosques Katharina M. Galor
LITR 1010I S01 25888 Synagogues, Churches + Mosques Katharina M. Galor

Modern Culture and Media
MCM 0240 S01 24004 Television Studies Lynne Joyrich

Philosophy
PHIL 0010 S01 24254 The Place of Persons David P. Christensen
PHIL 0360 S01 24255 Early Modern Philosophy Paul D. Guyer
PHIL 0880 S01 24261 Ethical Themes Amer Short Story Felicia Nimue Ackerman
PHIL 1260 S01 26007 Plato Mary Louise G. Gill
PHIL 1520 S01 24266 Consciousness Christopher S. Hill
PHIL 1620 S01 24271 Philosophy of Quantum Mechanics Nina R. Emery

Physics
PHYS 0560 S01 24320 Experiments in Modern Physics Xinsheng Sean Ling
PHYS 1560 S01 24322 Modern Physics Laboratory Ulrich Heintz

Political Science
POLS 0110 S01 24165 Intro to Political Thought Corey L. Brett Schneider
POLS 1820J S01 24180 Dynamics of Agenda Building Roger Cobb
POLS 1822A S01 25547 Nuclear Weapons and Intematio Nicholas L. Miller
POLS 1823H S01 24184 Public Opinion Katherine Tate
POLS 1823J S01 25245 Gender and Public Policy Susan L. Moffitt
POLS 1824C S01 25603 Political Communication Richard A. Arenberg
POLS 1920 S01 24188 Senior Honors Thesis Preparatn TBD

Portuguese and Brazilian Studies
POBS 0400 S01 24572 Writing + Speaking Portuguese Naomi Parker

Public Policy
PLCY 0100 S01 24346 Introduction to Public Policy Shankar Kasinadhuni Prasad

PLCY 0700J S01 26026 Comparative Policies Geri M. Augusto
PLCY 1200 S01 24899 Policy Analysis/Program Eval TBD
PLCY 1701M S01 25543 Juvenile Justice Instns + Plcy Valerie A. Cooley
PLCY 1701W S01 26008 Race and Public Policy TBD

Religious Studies
RELS 0068 S01 24900 Religion and Torture Stephen S. Bush
RELS 0325 S01 24904 How the Bible Became Holy Michael L. Satlow
RELS 0410 S01 24905 Christianity in Late Antiquity Susan Ashbrook Harvey

Russian
RUSS 1300 S01 25217 Russian Lit in Translation II Vladimir Golstein

Science and Society
SCSO 1000 S01 25277 Theories and Controversies Joan L. Richards

Sociology
SOC 0300K S01 24410 Inequalities and Health Susan Short
SOC 1620 S01 24419 Globalization/Social Conflict Patrick G. Heller
SOC 1870A S01 24422 Investing in Social Change Katherine C. Trimble
SOC 1870K S01 24423 Demographics and Development Michael White
SOC 1871D S01 24424 Sociology of Development Jose Itzigsohn
SOC 1871L S01 25718 Migration, Displacement and Em Lisa Dicarlo
SOC 1871M S01 25806 3rd Sector and Civil Society TBD
SOC 1950 S01 24420 Senior Seminar Michael D. Kennedy

Theatre Arts and Performance Studies
TAPS 0100 S01 25046 Playwriting I Carlos Montez Harris
TAPS 0200 S01 25059 Playwriting II Diane Exavier
TAPS 1240 S01 25047 Perform.Historph/Theatr Hst VK Preston
TAPS 1250 S01 25049 20th-Cent W Theatre/Performanc Spencer Golub
TAPS 1380 S01 25056 Mise en Scene Spencer Golub

University Courses
UNIV 0540 S01 24949 Intro to Contemplative Studies Harold D. Roth
UNIV 1520 S01 24583 The Shaping of World Views Onesimo T. Almeida

Urban Studies
URBN 1000 S01 24805 Fieldwrk in the Urban Community Jan Mateusz Pacewicz
URBN 1850S S01 24804 The City, the River, + the Sea Rebecca L. Carter
URBN 1870T S01 26020 Transportation: Planning Persp Robert E. Azar

Visual Art
VISA 1800P S01 25114 Art/Work: Professional Practice Heather Darcy Bhandari

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

Africana Studies

AFRI 0090. An Introduction to Africana Studies.
This course introduces students to the vibrant and contested field of Africana Studies by critically exploring and analyzing the links and disjunctures in the cultural, political, and intellectual practices and experiences of people of African descent throughout the African diaspora. Beginning with a critical overview of the history, theoretical orientations, and multiple methodological strategies of the discipline, the course is divided into three thematic units that examine intellectuals, politics, and movements; identity construction and formation; and literary, cultural, and aesthetic theories and practices in the African diaspora. DPLL LILE WRIT
Fall  AFRI0090  S01  16227  TTh  1:00-2:20(10)  (K. Penny)

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. DPLL
Fall  AFRI0210  S01  16228  TTh  2:30-3:50(11)  (A. Dzidzienyo)

How can research advance the global social justice struggle? This course will emphasize the idea that education has never been a politically neutral undertaking. Students' research can have social impact in the university and beyond. We will engage a variety of disciplinary fields to theorize key concepts such as intersectionality of oppression and resistance, power, hegemony, social justice, and activist research. Students will be required to carry out an original research project that tackles a pressing societal problem we face today. SOPH
Spr  AFRI0660  S01  25781  TTh  2:30-3:50(11)  (K. Penny)

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, Corbit, Gibson, Holmes, West, and Pomo Afro Homos. Some evening screenings of videotapes. Enrollment limited to 40. WRIT DPLL
Spr  AFRI0990  S01  25172  TTh  10:30-11:50(09)  (E. Terry-Morgan)

AFRI 1010C. Race, Gender, Ethics and Environmental Justice.
African Americans, Gender, Ethics and Environmental Justice examines the role of African Americans in the larger environmental history conversation. It utilizes a gendered lens to investigate how African American interpreted their natural surroundings and contributed to the development of 20th century American environmental consciousness. This course is reading and writing intensive. WRIT
Fall  AFRI1010C  S01  16248  T  4:00-6:30(18)  (V. Fabien)

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. DPLL
Spr  AFRI1020C  S01  25188  Th  4:00-6:30(17)  (A. Dzidzienyo)

AFRI 1020E. Race and Visual Culture.
This is a sophomore seminar on race and visual media, including everything from high art on canvases to lowbrow film, from the comic book superhero Blank Panther to the Black Panther Party, from the avant-garde to the burlesque, from the web to graffiti to homemade t-shirts. People who sign up for the class should be prepared to read a lot and talk a lot, to regularly get to the RISD museum, to watch a lot of stuff on OCRA, and to maybe take a field trip or two to Boston's MFA and some similar sort of place. Curiosity is required. SOPH
Fall  AFRI1020E  S01  16249  TTh  9:00-10:20(08)  (M. Gutler)

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  25173  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  25174  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). DPLL
Spr  AFRI1050E  S01  25175  Th  4:00-6:30(17)  (E. Terry-Morgan)

AFRI 1050T. Slave Resistance and Moral Order in Environmental History.
This course is designed to examine the avenues by which enslaved persons redefined and re-appropriated the natural landscapes that kept them in bondage into direct forms of cultural and political resistance during the antebellum period. We will investigate rice production in South Carolina, the Dismal Swamp, maroon societies, Negro Spirituals, and the Black Judeo-Christian ethic to understand how the natural environment and the institution of slavery shaped slave resistance in the United States. This course is reading and writing intensive. DPLL WRIT
Fall  AFRI1050T  S01  16256  MWF  12:00-12:50(12)  (V. Fabien)

AFRI 1060E. West African Writers and Political Kingdoms.
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 20. DPLL
Spr  AFRI1060E  S01  25189  W  3:00-5:30(14)  (A. Dzidzienyo)

AFRI 1110. Voices Beneath the Veil.
Thirty plays, written by Afro-American playwrights and presented on the American stage between 1858 and the 1990s, are examined as cultural and historical documents of Afro-American realities. Supplementary readings from the humanities and social sciences provide critical framework for in-class discussions and student papers. Instructor permission required. WRIT DPLL
Fall  AFRI1110  S01  16226  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 historicians, and existentialists. The second half consists of a more intensive comparative focus on the ontologies and epistemologies of two of these schools. DPLL LILE
Fall  AFRI1150  S01  16236  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. DPLL
Fall  AFRI1210  S01  16229  W  3:00-5:30(17)  (A. Dzidzienyo)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Examines the development of a unique African/ American cultural and political identity in New Orleans. The seminar focuses on the development of the Faubourg Tremé, the oldest free black community in the United States, and covers the period from 1718 until 1899. Topics include: slavery and resistance; relations between enslaved and free blacks; social and political agitation; and the resulting early development of the nation's Civil Rights movement and legislation. There is discussion also of the formation and continued tradition of artists' and artisans' guilds; Creole language (e.g., Creole slave songs, proverbs); NOLa relationship to the Caribbean and Latin America. Enrollment limited to 20. DPLL
Fall AFRI1620 S01 16230 T 4:00-6:30(18) (B. Osbey)

Focus on origins of Modernism among Africana authors of the Americas, with emphasis on the poetry, poetics and poetry movements of Brazil and Latin America, the Caribbean and US from 1888 through the first half of the 20th century. Begins with an overview of innovations wrought by Rubén Dario of Nicaragua, arguably the first modernist poet, and continues with the Harlem Renaissance of the 1910's and 20's; the Brazilian writers at the center of the Week of Modern Art of 1922; Caribbean writers of the Negrito and Nègritude movements; concludes with the work of such US and Anglophone Caribbean poets as Gwendolyn Brooks, Robert Hayden and Martin Carter. Enrollment limited to 20. DPLL
Fall AFRI1630 S01 16231 Th 4:00-6:30(02) (B. Osbey)

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 17111 Th 10:00-1:00(13) (P. Henry)

A preoccupation of Africana Studies involves the central yet highly contested role of the notion of what constitutes black culture in the modern world. To what degree can we claim aesthetic and other distinctions between black culture and the Diaspora and other modern 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 which played a central role in literary, musical, philosophical, aesthetic, historical and sociological analyses of the culture of people of African descent this course. Enrollment limited to 12 graduate students.
Spr AFRI2002 S01 25811 T 9:30-12:30(08) (M. Gutier)

AFRI 2104. Theorizing the Black Diaspora.
This seminar will focus on the theorization of the black diaspora as a way to explore the various articulations of colonialism, gendered racism and resistance against that racism throughout African-descendant communities. Course readings will highlight the scholarship of black women who have contributed to the internationalization of radical black vis-a-vis theories of diaspora, transnationalism, transformative politics, identity formation, and community. Enrollment limited to 20.
Spr AFRI2104 S01 25171 W 10:00-1:30(03) (K. Perry)

AFRI 2450. Exchange Scholar Program.
Fall AFRI2450 S01 14531 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 14532 Arranged 'To Be Arranged'
Spr AFRI2970 S01 23744 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 tuition requirement and are paying the Registration Fee to continue active enrollment while preparing a thesis.
Fall AFRI2990 S01 14533 Arranged 'To Be Arranged'
Spr AFRI2990 S01 23745 Arranged 'To Be Arranged'

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

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
### AMST 0191U. Imagining the American Mind
How are theories about our minds and brains represented in American culture? We use literature and film, psychology, neuroscience, philosophy, history and sociology to investigate how we imagine our minds, and the consequences of those representations for our ideas about race and gender, for our social lives and responsibilities, for our means to communicate to one another and, even, to know ourselves. Writing in different formats, students bridge the gap between the humanities and the human sciences. Concentrators in biology and neuroscience consider the cultural history of their research while humanities/social science students explore how culture ties to science. WRIT
Fall AMST0191US01 16869 TTh 9:00-10:20(08) (S. Brown)

### AMST 101. Introduction to American Studies: American Icons.
Why do certain American photos, novels, and films become "iconic?" What does the very word 'icon' mean? Studying a collection of American images, texts, places, and practices, this course investigates the key themes of American Studies. DPLL LILE
Spr AMST101S01 24277 MWF 10:00-10:50(03) (M. Guterl)

### AMST 1250B. Gravestones and Burying Grounds.
Students examine gravestones and burying grounds as material evidence of American cultural history. Themes include the forms of written language and visual imagery in colonial New England, changing roles of women and minorities in society, historical craft practices, implications of stylistic change, attitudes towards death and bereavement, and the material evidence of discrete cultural traditions. Includes field trips.
Fall AMST1250BS01 15010 TTh 10:30-11:50(13) (R. Emlen)

### AMST 1500A. Research and Transnational Communities: Qualitative Fieldwork Methods.
This course will equip students with the skills to design and implement their own transnational American Studies or Public Humanities research project. We will consider different qualitative social science research methods including, ethnographic participant observation, formal and informal interview techniques, and survey data analysis. Students will learn how different methodologies lend unique insights into specific research questions, and will be able to identify different methodological bases for empirical findings across diverse transnational social problems. Throughout the course, we will explicitly engage the personal, public, and ethical concerns involved with conducting research with transnational communities, including researcher positionality, privilege, ethics, and responsibility.
Fall AMST1500AS01 16514 F 3:00-5:30(14) (E. Shih)

### AMST 1510. Museum Collecting and Collections.
This course will explore and examine the methods, practices, and theory of collections management in a museum setting including collections development, museum registration methods, cataloging, collections care, and interpretation. Through readings, discussion, workshops, site visits, and exhibitions, students will explore what it means to be physically and intellectually responsible for museum objects. This course places heavy emphasis on experiential learning and will include several project-based assignments.
Fall AMST1510S01 15011 TTh 1:00-2:20(10) (S. Lubar)

### AMST 1600B. Global China: Flows, FORCES, and Friction.
This course will provide an overview of contemporary issues surrounding Global China, including the People’s Republic of China, Hong Kong, and Taiwan, as well as their regional and global influence through migration, culture, multinational trade, and labor manufacturing. We will study institutions (the government, family, and education), forces of globalization (rural to urban migration, ethnicity and identity, human trafficking, diaspora communities, labor production and consumption, and cultures of resistance (underground music, human rights movements, radical internet blogging, environmental justice activism and Chinese contemporary art), DPLL
Fall AMST1600BS01 16515 MWF 12:00-12:50(12) (E. Shih)

### AMST 1600C. The Anti-Trafficking Savior Complex: Saints, Sinners, and Modern-Day Slavery.
How can we understand the global movement to combat human trafficking within critical frameworks on “industrial complexes”? Drawing from scholarship on the prison industrial, non-profit industrial, and white-savior complexes this course examines human trafficking through the lens of race, class, gender, and national forms of power and subjectivity. Readings will problematize the so-called saints and sinners of the movement, investigating various global helping projects that exist to stop "modern day slavery." DPLL
Spr AMST1600CS01 25461 MW 12:00-12:50(05) (E. Shih)

### AMST 1600D. Sports in American Society.
This course seeks to understand, analyze, and criticize sport—seen here as one of the primary institutions in the lives of Americans. Working from the basis of sporting events in the Durkheimian sense of symbolic community, we will elevate them to the status of religious and educational institutions in our everyday lives. Using the primary lenses of gender and race this class examines sports at five different levels—professional, Olympic, NCAA, scholastic, and youth—and uses the "Big 3" sports of baseball, basketball, and football to understand how athletics have impacted, and will continue to impact, American Society.
Spr AMST1600DS01 25775 MF 1:00-1:50(08) (H. Levy Friedman)

### AMST 1600E. Performance, Politics, and Engagement (TAPS 1680).
Interested students must register for TAPS 1680.
Fall AMST1600ES01 17244 Arranged "To Be Arranged"

### AMST 1601. Health and Healing in American History.
Surveys the history of American medicine in its social and political contexts, including changing understandings of disease, treatment practices, and medical institutions. Focuses on how gender and race have informed how patients and healers have made sense out of pain and disease. WRIT
Spr AMST1601S01 24635 MF 11:00-11:50(04) (D. Weinstein)

### AMST 1612V. Sinner, Saints, and Heretics: Religion in Early America (HIST 1511).
Interested students must register for HIST 1511.
Fall AMST1612VS01 17299 Arranged "To Be Arranged"

### AMST 1700D. Race and Remembering.
This junior seminar engages debates in Ethnic Studies, History, Gender Studies, and the Public Humanities that grapple with the relationship between historical narratives, memory, and social relations of power. Students will examine current tensions in national memory. Each year the topic of this course will change to consider racial formation through alternating social and cultural institutions. This semester we will consider the history of racial formation through encounters with the judicial system, with policing practices, with detention, and incarceration. Students will collaborate to make these histories publicly accessible using methods in public humanities. DPLL LILE WRIT
Fall AMST1700DS01 16265 W 3:00-5:30(17) (M. Martinez)
Fall AMST1700DS01 16265 W 3:00-5:20(17) (M. Martinez)

### AMST 1700I. Community Engagement with Health and the Environment.
This junior seminar explores how local community organizations are taking up issues of health and the environment in culturally relevant contexts. We will examine issues of environmental justice, health disparities and the basic tenets of community based participatory research. We will then partner with a local community organization and, depending on need, assist in the design, implementation, and/or evaluation of a program designed to improve the local environment and/or health status of the community. Enrollment limited to 20 junior and senior American Studies concentrators. WRIT
Spr AMST1700IS01 24144 W 3:00-5:30(14) (E. Hoover)

### 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 AMST1800S01 25798 F 3:00-5:30(15) (D. Weinstein)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Instructor(s)</th>
<th>Section</th>
<th>Days</th>
<th>Time</th>
<th>CRN</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMST 1900P</td>
<td>Essaying Culture</td>
<td>(R. Rodriguez)</td>
<td>Spr</td>
<td>25776</td>
<td>2:30-3:50(11)</td>
<td>(R. Rodriguez)</td>
</tr>
<tr>
<td>AMST 1903Z</td>
<td>Shrine, House or Home: Rethinking the House Museum Paradigm</td>
<td>(R. Potvin)</td>
<td>W</td>
<td>24161</td>
<td>3:00-5:30(14)</td>
<td>(R. Potvin)</td>
</tr>
<tr>
<td>AMST 1904B</td>
<td>Henry James Goes to the Movies</td>
<td>(B. Haviland)</td>
<td>Th</td>
<td>15013</td>
<td>4:00-6:30(02)</td>
<td>(B. Haviland)</td>
</tr>
<tr>
<td>AMST 1904N</td>
<td>The Korean War in Color (ENGL 1761V)</td>
<td>(R. Lee)</td>
<td>W</td>
<td>25322</td>
<td>16253</td>
<td>3:00-5:30(17)</td>
</tr>
<tr>
<td>AMST 1905L</td>
<td>Transpacific Popular Culture</td>
<td>(N. Shibusawa)</td>
<td>W</td>
<td>25443</td>
<td>25776</td>
<td>15013</td>
</tr>
<tr>
<td>AMST 1905N</td>
<td>War and the Mind in Modern America</td>
<td>(D. Weinstein)</td>
<td>M</td>
<td>15643</td>
<td>26078</td>
<td>15013</td>
</tr>
<tr>
<td>AMST 1906J</td>
<td>Race, Gentrification, and the Policing of Urban Space (PLCY 1701W)</td>
<td>(M. Martinez)</td>
<td>Th</td>
<td>25274</td>
<td>25776</td>
<td>26045</td>
</tr>
<tr>
<td>AMST 1906L</td>
<td>Decolonizing Minds: A People's History of the World.</td>
<td>(N. Shibusawa)</td>
<td>M</td>
<td>21585</td>
<td>26078</td>
<td>15643</td>
</tr>
<tr>
<td>AMST 1906J</td>
<td>Reading and Righting Histories of Violence</td>
<td>(D. Weinstein)</td>
<td>M</td>
<td>15643</td>
<td>25274</td>
<td>26045</td>
</tr>
<tr>
<td>AMST 1907J</td>
<td>Introduction to Interdisciplinary Methods</td>
<td>(M. Martinez)</td>
<td>T</td>
<td>15012</td>
<td>26045</td>
<td>15101</td>
</tr>
<tr>
<td>AMST 1907E</td>
<td>Introduction to Interdisciplinary American Studies</td>
<td>(C. Frank)</td>
<td>Th</td>
<td>15013</td>
<td>26045</td>
<td>15101</td>
</tr>
<tr>
<td>AMST 1908L</td>
<td>Aesthetics Theory and Visual Culture: From Disinterest to Dissipate</td>
<td>(L. Alvarado)</td>
<td>Th</td>
<td>15012</td>
<td>26045</td>
<td>15101</td>
</tr>
<tr>
<td>AMST 1908L</td>
<td>Reading Race, Reading Form.</td>
<td>(D. Weinstein)</td>
<td>M</td>
<td>15643</td>
<td>26045</td>
<td>15101</td>
</tr>
</tbody>
</table>

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
language/form/aesthetics of race. The seminar will divide between reading histories/theories of race (obsession with physical variation as race and technologies of seeing that we use to read race) working through a range of post-nationalist works of literature/sharpening our understanding of reading as a meaning-making event. Limited to Grad Students and seniors.

Fall AMST2220 S01 16643 W 3:00-5:30 (17) (R. Rodriguez)

**AMST 2450. Exchange Scholar Program.**

Fall AMST2450 S01 14534 Arranged "To Be Arranged"

**AMST 2520. American Studies: Professional Issues in American Studies.**

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

Fall AMST2520 S01 15014 T 1:00-3:30 (L. Alvarado)

**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.

Spr AMST2540 S01 25463 TTh 9:00-10:20 (08) (S. Smulyan)

**AMST 2560. Introduction to Public Humanities.**

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

Fall AMST2560 S01 15016 W 3:00-5:30 (17) (S. Lubar)

**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. It is both a seminar and a studio; students work individually and together on research, presentations, proposals and public projects. Contact the instructor Janet Zweig (janetzweig@earthlink.net). Enrollment limited to 12 seniors and graduate students. Instructor permission required.

Fall AMST2653 S01 16252 M 1:30-5:30 (06) (J. Zweig)

**AMST 2655. Against Invisibility: Asian America/s, Collective Memory and the Public Humanities.**

This seminar confronts the problem of Asian American invisibility in U.S. public culture. The popular “model minority” narrative about (primarily East) Asian Americans has effaced radically different trajectories of migration, community formation and racializations as well as sharp contradictions of class, gender, and sexuality. We will study different strategies and projects deployed by Asian American communities to confront, remember and memorialize collective memories of these struggles. Students will draw on their research and work with community groups to design exhibits, memorials, and arts projects that will help change this dynamic.

Fall AMST2655 S01 16884 TTh 10:30-11:50 (09) (R. Lee)

**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 2670. Practicum in Public Humanities.**

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

Fall AMST2670 S01 16889 Arranged (S. Smulyan)

Spr AMST2670 S01 25655 Arranged (S. Smulyan)

**AMST 2680. Practicum in Public Humanities.**

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

Fall AMST2680 S01 16888 Arranged (S. Smulyan)

Spr AMST2680 S01 25656 Arranged (S. Smulyan)

**AMST 2690. Management of Cultural Institutions.**

This course explores public humanities institutions as an organizational system interacting with broader community systems. Students gain an understanding of the managerial, governance and financial structures of public humanities organizations and how those structures relate to management, programming and audience. The course is designed to help those who work on the program side of public humanities and cultural nonprofits (as educators, librarians, curators, interpreters, exhibit designers, public programming coordinators, and/or grant makers) engage more strategically with planning, organizational behavior, revenue generation, finance, marketing, and governance.

Spr AMST2690 S01 26081 M 3:00-5:30 (13) "To Be Arranged"

**AMST 2696. The Promise of Informal Learning.**

The course will take as its focus “Facilitated informal learning” - learning that happens outside of formal learning environments but is facilitated by an educator. It will explore facilitated informal learning within cultural institutions - museums, historic houses, zoos, libraries, science centers, children's museums. The course will explore the pedagogical methods, underlying philosophies and learning theories, audience, debates, and goals of facilitated informal learning today.

Fall AMST2696 S01 17180 T 2:30-4:50 (J. DeLamatre)

**AMST 2697. Museum Interpretation Practices.**

This course examines current interpretive practices and offers students the opportunity to participate in creating gallery interpretation for the museum context. Questions of material and form; models of attention and perception, the relationship between language and vision; the role of description in interpretation; and what constitutes learning through visual experience will be considered. Throughout the semester students will develop their interpretive practice through a series of workshops, exercises, site visits, and critical discussions. Enrollment limited to 15.

Spr AMST2697 S01 26053 F 10:00-12:30 (03) "To Be Arranged"

**AMST 2920. Independent Reading and Research.**

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

**AMST 2921. Independent Reading and Research.**

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

**AMST 2922. Independent Reading and Research.**

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

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

AMST 2990. Thesis Preparation. For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. Fall AMST2990 S01 14535 Arranged "To Be Arranged" Spr AMST2990 S01 23746 Arranged "To Be Arranged"

Ethnic Studies

ETHN 0500. Introduction to American/Ethnic Studies. Considers the U.S. as a society whose unifying identity is rooted in ethnic and racial diversity. Explores the historical and contemporary experiences of racial and ethnic groups in this country and analyzes different forms of representation of those experiences, as well as representations of the racial and ethnic stratification in the U.S. imagination. Fall ETHN0500 S01 15916 MWF 11:00-11:50(04) (E. Hoover)

ETHN 0512. Introduction to Latina/o Cultural Studies. This course serves as an introduction to the many discourses that structure and challenge Latinidad -- the feeling of being Latina/o. Through historically situated critical analysis of Latina/o cultural production, including theoretical essays, literature, and film, we will meditate on the major issues that shape the Latino/a U.S. experience. We will study how Latinidad is constructed as an identity and how that identity varies across origin, place, and time. Major themes we will explore include the legacies of U.S. colonialism; cultural nationalism, citizenship, immigration and exile; labor and race; and gender and sexuality. Spr ETHN0512 S01 25452 M 3:00-5:30(13) (L. Alvarado)

ETHN 0790A. Latina/o Literature. This course will introduce students to a broad array of Latina/o literature-fiction, poetry, drama, and graphic novels. While there is a long tradition of Latina/o literature in the United States, we will focus primarily on a period from 1970 to the present. Aimed to familiarize students with debates in the field, the readings will also include critical essays. Enrollment limited to 20. Spr ETHN0790A S01 25451 Thh 1:00-2:20(10) (R. Rodriguez)

ETHN 1761V. The Korean War in Color (ENGL 1761V). Interested students must register for ENGL 1761V. Spr ETHN1761VS01 25323 Arranged "To Be Arranged"

ETHN 1890E. Johnny, Are You Queer: Narratives of Race and Sexuality. This course is intended as a wide-ranging romp through the fields of queer theory and narratives of race and sexuality. It will move from the 1980s through the present looking at representations of queerness and race in poetry, fiction, creative non-fiction, music, etc. We will investigate the convergences and divergences in the discourses of race and sexuality. Fall ETHN1890ES01 15915 MWF 1:00-1:50(06) (R. Rodriguez)

ETHN 1890H. Introduction to American Indian Studies. Introduces students to both historical and contemporary issues in North America. Issues of identity, sovereignty, representation and self-representation are key components. Because this course is interdisciplinary, we will use texts from anthropology, cultural studies, history, film and literature as tools to understand and appreciate the ways in which American Indian cultures survive, flourish and shape the United States. No special background is required. All students are welcome. Enrollment limited to 30. Spr ETHN1890H-S01 25449 Thh 10:30-11:50(09) (E. Hoover)

ETHN 1890M. Treaty Rights and Food Fights: Eating Local in Indian Country. In many Native American communities the push to "eat local" is often based on reviving a traditional food culture as well as a way of promoting better health. This class explores the disparate health conditions faced by Native communities, and the efforts by many groups to address these health problems through increasing community access to traditional foods, whether by gardening projects or a revival of hunting and fishing traditions. We will examine the ways in which Native food movements have converged and diverged from general American local food movements, and the struggles they often face in reviving treaty-guaranteed food ways. Fall ETHN1890M S01 15918 Thh 2:30-3:50(11) (E. Hoover)

ETHN 1890R. Latina Feminisms. This course will serve as a focused and rigorous exploration of Latina feminist cultural production. Our analysis driven seminar discussions will include critical consideration of novels, short stories, film, and performance and visual art largely by an about Latina women. Their work will address topics that include: gendered expectations, non-normative sexuality, race hierarchies, labor, reproductive justice, and gendered violence. Together we will query how cultural objects come to function as salient social and political texts in order to ascertain the contributions and challenges that Latina feminists bring to dominant discourses of race, gender, sexuality, and nationalism, among others. Fall ETHN1890R S01 15919 M 3:00-5:30(15) (L. Alvarado)

ETHN 1890T. Race, Gentrification, and the Policing of Urban Space (PLCY 1701W). Interested students must register for PLCY 1701W. Spr ETHN1890T S01 26046 Arranged "To Be Arranged"

ETHN 1900E. Senior Seminar in Ethnic Studies. No description available. Spr ETHN1900ES01 25450 W 3:00-5:30(14) (M. Martinez)

ETHN 1900N. Transpacific Asian American Studies. This is an advanced undergraduate seminar that is also open to American Studies and other graduate students for graduate credit. It is designed to help us think about the Pacific as a historical space where the Asian American formation is constructed, as goods, people and ideas circulate across the Pacific. We will explore ways which these historical circuits and exchanges have shaped questions of identity and belonging, taking China and the Americas as our principal points of connection. We will read across a number of fields, including Asian Studies, American Studies, Asian American Studies, Latin American and Caribbean Studies. Fall ETHN1900N S01 16904 Thh 7:00-9:30PM (R. Lee)

ETHN 1910. Independent Study. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

ETHN 1920. Senior Thesis. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Anthropology

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 compelling 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 20 first year students. FYSS DPLL Spr ANTH0066ES01 26095 Arranged (P. Rubertone)

ANTH 0066J. So You Want to Change the World?. Examines from an anthropological perspective efforts to address global poverty that are typically labeled as "development." The enterprise of development is considered critically, both with regard to the intentions and purposes that underlie the actions of wealthy countries, donor organizations, and expatriate development workers and with regard to the outcomes for the people who are the intended beneficiaries. Privileging the perspectives of ordinary people in developing countries, but also looking carefully at the institutions involved in development, the course relies heavily on ethnographic case studies that will draw students into the
complexity of one of the greatest contemporary global problems: social inequality. Enrollment limited to 20 first year students. FYS DPLL LILE Fall ANTH0066S S01 16880 T 2:00-3:50(11) (A. Flores) ANTH 0066N. Peoples and Cultures of Greater Mexico. This course will focus on the cultural area known as Greater Mexico, incorporating Mexicans resident south of the Rio Grande, as well as the approximately 25 million Mexicans living permanently or for a time in the United States. Specific topics to be covered in the class include: urban peasants and rural proletarians, recent challenges to gender conventions, national and international migration, nationalism and the changing meanings of the Conquest and colonial periods, land and indigenous rights, everyday violence, machismo, popular culture, and protest and rebellion. Limited to first-year students. DPLL FYS LILE Spr ANTH0066N S01 25701 W 3:00-5:50(14) (M. Gutmann) ANTH 0066W. What Does It Mean To Be Green?. What does it mean to be green? From saving energy to recycling to eating organic food, in recent years the idea of going green has gained increasing attention. But green is not solely a proxy for environmentalism: it encompasses competing, and at times contradictory meanings. This seminar places contemporary green debates in historical and cross-cultural contexts. We will examine multiple paradigms of greenness in the Global South as well as the Global North. Topics range from imperial visions of tropical landscapes to the green revolution emphasis on agrochemicals, from conservation to climate change. Enrollment limited to 20 first year students. DPLL FYS Fall ANTH0066W S01 17018 Th 4:00-6:30(02) (D. Graef) ANTH 0100. Introduction to Cultural Anthropology. This course provides an introduction to cultural anthropology, surveying its defining questions, methods, and findings. We will examine the history and utility of anthropology's hallmark method, ethnography, the long-term immersion of the researcher in the culture under study. We will compare cultural anthropology's findings and comportment in other cultures to its conclusions and conduct in our own. No prerequisites. WRIT DPLL LILE Spr ANTH0100 S01 25143 MWF 10:00-10:50(03) (A. Flores) ANTH 0110. Anthropology and Global Social Problems: Environment, Development, and Governance. This course offers students an opportunity to examine and analyze a range of contemporary global social problems from an anthropological perspective. We will explore human-environment entanglements with particular attention to intersecting issues of capitalism, international development, and state and non-state governance. Course materials will look at various kinds of work in, on, and with the environment, asking questions about the possibilities of over-working our landscapes, while addressing the potentials for social and environment justice and sustainability. LILE Fall ANTH0110 S01 16208 MWF 2:00-2:50(07) (S. Besky) ANTH 0130. Myths Alive. Myths is an important part of the architecture that sustains human culture and society. This course begins w/an account of the principal theoretical positions that've shaped anthropological understandings of myth as a living and guiding force in human communities in ancient times and in the present day. We'll examine the expressions of myth in senses of place, social harmony, inequality, conflict, religious experience, and radical social change in a wide variety of historical and ethnographic settings. We'll draw upon objects from Brown's Haffenreffer Museum to recognize them as materialized representations from mythical worlds. DPLL LILE Spr ANTH0130 S01 25872 MWF 10:00-10:50(03) (W. Simmons) 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. DPLL LILE WRIT Spr ANTH0300 S01 25148 MWF 1:00-1:50(06) (S. Hamdy) ANTH 0310. Human Evolution. Examination of theory and evidence on human evolution in the past, present and future. Topics include evolution and adaptation, biocultural adaptation, fossil evidence, behavioral evolution in primates, human genetic variation and contemporary human biological variation. WRIT Fall ANTH0310 S01 16190 Th 2:30-3:50(11) (A. Scherer) ANTH 0450. Inequality, Sustainability, and Mobility in a Car-Clogged World. The global car population is predicted to reach two billion by the year 2020. The social, political, health, and environmental consequences are immense. These, as well as the cultural and political economic explanations for the car population explosion, will be explored in this class, as well alternative futures for transit. Fall ANTH0450 S01 16191 Th 2:30-3:50(11) (C. Lutz) ANTH 0500. Past Forward: Discovering Anthropological Archaeology. This course offers a broad journey through the human past, from material culture crafted by our evolutionary ancestors to the remnants of the recent historic past. To facilitate this journey, the class explores the methods, concepts, and theories that anthropologists employ in the study of past peoples, places, and things. Case studies stretch across the globe. As a hands-on endeavor, archaeology focuses on tangible evidence. In the course, small-group discussion, hikes, and field excursions will complement lectures, leading to an understanding of how anthropologists study the past and how that knowledge affects the present. LILE Spr ANTH0500 S01 25168 Th 9:00-10:20(08) (P. Van Valkenburgh) ANTH 0600. Of Beauty and Violence. What is the place of beauty in human experience and how does it find articulation in words? Using an interdisciplinary approach, this course explores the unexpected expressions and uses of beauty in a variety of social and ethnographic contexts marked by violence. We trace the potential of beauty to act at times as a counterweight to violence, sociopolitical crises, and marginalization, but also how it may be used to deepen already existing power structures. This is a writing-intensive course aimed at developing students' ethnographic writing skills. No prerequisites. DPLL Fall ANTH0600 S01 17024 Th 1:00-2:20(10) (Y. Stainova) 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. DPLL LILE Fall ANTH0800 S01 16192 MWF 1:00-1:50(06) (P. Faudree) ANTH 1030. Pre-Columbian Art and Architecture: A World That Matters. 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. DPLL LILE Spr ANTH1030 S01 25604 Th 1:00-2:20(10) (S. Houston) ANTH 1111. Anthropology of China. This course introduces students to contemporary Chinese culture and society, w/a focus on the rapid changes that have taken place during the post-Mao reform era in the People's Republic of China (1978- present). Emphasis will be placed on the importance of historical and global context in developing an understanding of contemporary Chinese culture. Readings and lectures will draw primarily upon recent ethnographic work conducted in the PRC, but readings from the disciplines of history, political science, public health, and contemporary Chinese literature (in
ANTH 1151. Ethnographies of the Muslim Middle East.
An introduction to ethnographic studies of Middle East, focus on: religion, language, modernity, gender, and political culture. Students will engage in critical examination which anthropologists sought to capture Middle Eastern life, and problems that have pervaded anthropological representation, methodologically and theoretically. You will learn, through the ways anthropologists approach the peoples, ideas, and cultures of the region in ways that complement and contradict the knowledge production of other disciplines, the processes we come to understand cultural difference, and ways this encounter sheds light on our selves and practices. Previous course in Anthropology/ Middle East studies is suggested. Enrollment limited to 25. DPLL LILE Fall ANTH1151 S01 16593 MW 10:00-11:20(03) (K. Mason)

ANTH 1201. An Introduction to GIS and Spatial Analysis for Anthropologists and Archaeologists.
This course serves as an introduction to the concepts, techniques, and (to a lesser extent, the histories) that motivate geographic information systems and their employment in anthropological and archaeological scholarship. GIS brings together traditional cartographic principles, computer-assisted analytical cartography, relational database design, and digital image processing and analysis to enable people to develop geospatial databases, analyze those databases, and use maps and other visual representations as part of this analysis. No previous work in GIS or computer programming is necessary. Previous computer experience with MS Windows operating systems is helpful. DPLL LILE Fall ANTH1201 S01 16730 TTh 9:00-10:20(08) (P. Van Valkenburgh)

ANTH 1221. Anthropology of Masculinity.
Contemporary anthropological and historical study of masculine identities and practices throughout the world, focusing on topics such as the cultural economies of masculinity, cultural regions and images of manhood, male friendship, machismo, embodied masculinity, violence, power, and sexual fault lines. Prerequisite: Prior course in Social Science or instructor's permission required. LILE Fall ANTH1221 S01 16195 TTh 2:30-3:50(11) (G. Gutmann)

Designed to give students an opportunity to engage in transnational research on social issues through an extended case study of a new generation of international norms that identify and combat "human trafficking." The course format combines seminar discussions, lectures, and small group exercises. Students will learn by doing. As we consider legal instruments, UN and U.S. documentary archives, anti-trafficking media such as films and websites, and the prosecution of criminal networks, we will experiment with alternative methodologies for analyzing them. We will study the relation of texts to the social and political contexts of their production and circulation. Enrollment limited to 30. DPLL LILE WRIT Fall ANTH1224 S01 16196 TTh 9:00-10:20(08) (K. Warren)

ANTH 1236. Urban Life: Anthropology in and of the City.
This course examines how anthropologists have worked in the city -- to understand dwelling and lived experience from the center to the margins of society; as well as how anthropologists have contributed to the study of the city -- conceptualizing the city itself in relation to its inhabitants, and working to understand how cities develop, decline, or are sustained. Anchored in key theory, classic texts, and contemporary ethnography, the course traces also the history, present, and possible futures of the discipline. Students learn the methods of urban ethnography, and gain hands-on experience through local field exercises and related writing assignments. Fall ANTH1236 S01 16198 TTh 1:00-2:20(10) (R. Carter)

ANTH 1251. Violence and the Media.
The role of media in shaping perceptions of violent conflict. Analysis of constructions of the "violent other", "victims", and "suffering", the use of culture, ethnicity, and psychopathology as tropes for articulating the motivations of violent perpetrators. Multiple subject positions and political interests will be considered. Case studies include the Cold War, conflicts, insurgencies urban riots, the genocide, and terrorism. Pre-requisite: a previous course in Anthropology, or permission of the instructor. Spr ANTH1251 S01 25152 MW 2:00-2:50(07) (K. Warren)

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. LILE WRIT Fall ANTH1300 S01 16199 W 3:00-5:30(17) (L. Glasser)

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 people, we will unpack 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. LILE Spr ANTH1301 S01 25156 T 4:00-6:30(16) (L. Glasser)

ANTH 1310. International Health: Anthropological Perspectives.
This upper-level medical anthropology course focuses on the social and cultural complexity of health problems in developing nations, employing anthropological approaches to public health. International health issues such as HIV/AIDS, malaria, tuberculosis, leprosy, reproductive health, violence, and mental illness will be examined. The historical, political and socio-cultural dimensions of international health problems will be explored through reading ethnographic case studies. WRIT DPLL LILE Fall ANTH1310 S01 16189 MW 1:00-5:10(06) (K. Mason)

ANTH 1311. Language and Medicine in Practice.
This course is part of the Engaged Scholars Program and provides a foundation through which to think about how people's use of language shapes and is shaped by the medical sphere. Team taught by a linguistic anthropologist (Faudree) and medical anthropologist (Hamdy), this course provides foundations to understanding the scholarly intersections between language, medicine, and society. At the same time, the course offers a strong pragmatic dimension, as students will engage in volunteer and participant-observation work in clinical settings. Throughout the course we will be bringing our insight and observations of clinical practice to bear on anthropological tools of analysis. DPLL LILE WRIT Spr ANTH1311 S01 25873 W 3:00-5:30(14) (P. Faudree)

Economic activities take place within cultural contexts which define appropriate values and goals, and in societies varying in scale, technology, and organization. Looking cross-culturally, and at economic activities in societies such as the United States, this course examines the production, distribution, and consumption of material goods, analyzing these as essentially social activities - properly understood only when we take account of social relations and cultural values. Consequently, the course also investigates the extent to which the words commonly used to describe economic life, such as "market", "wealth", "price", "profit", "work", and "money", are culturally specific rather than universally applicable. At least one previous course in Anthropology or another social science is strongly recommended. WRIT Spr ANTH1324 S01 25959 Th 4:00-6:30(17) (S. Besky)

ANTH 1623. Archaeology of Death.
Examines death, burial, and memorials using comparative archaeological evidence from prehistory and historical periods. The course asks: What insights 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. DPLL LILE
Spr ANTH1623 S01 25158 MWF 11:00-11:50(04) (P. Rubertone)

ANTH 1650. Ancient Maya Writing
Nature and content of Mayan hieroglyphic writing, from 100 to 1600 CE. Methods of decipherment, introduction to textual study, and application to interpretations of Mayan language, imagery, world view, and society. Literacy and Mesoamerican background of script. LILE
Fall ANTH1650 S01 16201 MWF 11:00-11:50(04) (S. Houston)

ANTH 1692. Southwestern Archaeology
This course is an introduction to the archaeology of the native peoples of the Southwestern United States and Northern Mexico. It discusses the history of the field and examines how it is currently re-engaging with contemporary native peoples. It emphasizes past and present cultural diversity and traces out long-term continuities in beliefs and practices. Special attention is given to comparing and contrasting three formative cultural systems - Chaco, Hohokam, and Paquiln - that linked the Southwest into a series of broad social, political, and ideological networks. Students will be introduced to the Southwestern collections of the Haffenreffer Museum of Anthropology. DPLL
Spr ANTH1692 S01 25743 TTh 10:30-11:50 (R. Preucel)

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. LILE
Fall ANTH1720 S01 16202 TTh 6:40-8:00PM(05) (A. Scherer)
Spr ANTH1720 S01 25600 MW 3:00-4:20(14) (A. Scherer)

ANTH 1910G. Senior Seminar: Politics and Symbols
Examination of key role played by symbols, myth, and ritual in politics. We examine symbols, myths, and rituals used to win support, create political reality, and form political groups, whether in defense of the status quo or creating movements seeking to overthrow it. The 2014 U.S. congressional, state, and local political campaigns receive attention. Students, in part working in groups, will engage in original research both on the 2014 American elections and a wide variety of historical and contemporary political developments, from the Arab Spring to the Occupy Wall Street movement. Prerequisites: ANTH 1621 or 1900; and either ANTH 1940 or 1950
Spr ANTH1910G S01 25162 TTh 6:40-8:00PM(12) (C. Lutz)

ANTH 1910H. Anthropological Approaches to World Issues: Locating Migration
Migration is a main way that not only populations change, but also economies, landscapes, cultures, and identities. Drawing on cases from across the globe and through time, we will examine migration through both the global flows of capital and culture and through migrants' lives as they build families, fight for belonging, and transform the built environment. This capstone seminar is designed to further concentrators' engagement with anthropology, its methods, subfields, and its contributions to our knowledge of human experience. Particular emphasis will be on how anthropology aids in understanding the interrelation of global political and economic systems and local experiences. DPLL LILE
Fall ANTH1910H S01 16800 M 3:00-5:30(15) (A. Flores)

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 16204 Th 4:00-6:30(02) (L. Fruzzetti)
Fall ANTH1940 S02 17282 T 4:00-6:30(18) (L. Fruzzetti)

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

ANTH 2000. History of Ethnological Theory
A seminar investigating some themes in the history of anthropological theory. Starting with the delineations of the scope and nature of social science by Marx, Durkheim, and Weber, the seminar then considers various explorations of the concepts of structure, function, and agency, concluding with Bourdieu's reformulation of social anthropology for a new generation in the form of practice theory.
Fall ANTH2000 S01 16205 M 3:00-5:30(15) (W. Simmons)

ANTH 2005. Ethnography and Literature: Representations of "Woman, Native, Other"
This interdisciplinary graduate seminar addresses the cultural construction of subaltern groups under the signs of "woman", "native" and "other". As part of critical endeavor, the seminar will raise questions about "truth" genres, the interpretive anthropological project of "writing culture" and the production of a hegemonic discourses on "woman, native, other". Using texts and counter discourses of the subalterns, we will discuss and produce issues of empowerment and authority as they relate to self-representations by the dis-empowered, the production of cultural fictions-auto ethnographies by such groups as political acts of self-empowerment, and to explore the possibilities for ethnographies of "fiction".
Fall ANTH2005 S01 16801 M 12:00-2:30(12) (L. Fruzzetti)

ANTH 2010. Principles of Cultural Anthropology
A seminar exploring fundamental theoretical and ethnographic currents in 20th-century cultural anthropology.
Spr ANTH2010 S01 25163 W 9:30-12:00(02) (J. Leinaweaver)

ANTH 2020. Methods of Anthropological Research
A seminar on the methodological problems associated with field research in social and cultural anthropology. Designed to help students prepare for both summer and dissertation research.
Spr ANTH2020 S01 25164 Th 1:00-3:30(10) (R. Carter)

ANTH 2050. Ethnography
Each week this class will study classic and contemporary ethnographies - as well as studies from sociology, journalism, and history - that achieve ethnographic results, but will require discussion to determine what they "are". We will carefully examine the methods involved in research for the books and how the ethnographies were written. Ethnographies will be chosen for their importance in anthropology and other fields, and will cover a broad range of topical and geographic contexts.
Spr ANTH2050 S01 25702 Th 4:00-6:30(17) (M. Gutmann)

ANTH 2060. Anthropology Dissertators' Seminar
This seminar is for post-field graduate students in residence at Brown who are at any stage of writing their dissertations. It is intended to support dissertators by providing a structured community, providing a setting for sharing goals, and workshop writing.
Fall ANTH2060 S01 17212 Arranged (J. Leinaweaver)
Spr ANTH2060 S01 26115 Arranged (J. Leinaweaver)

ANTH 2255. Gender, Liberalism, and Postcolonial Theory
What makes the concept of gender useful to think with, both within academia and beyond? How does gender relate to the political projects of feminism and liberalism? What explanatory potential do gender and liberalism hold for addressing (or obfuscating) social inequalities, racism, and other forms of oppression? Drawing on multiple disciplines in the social sciences, this course offers students analytical tools to theorize gender, sexuality, and liberalism in the contemporary world. Building on critical interventions of post-colonial theorists, we will explore anthropological contributions to the study of gender, sexuality and liberalism through ethnographic writings. Open to graduate students and seniors.
Fall ANTH2255 S01 17211 T 4:00-6:30(18) (A. Daulatzi)

ANTH 2300. Anthropological Demography
A seminar devoted to the investigation of the interface of anthropology (especially sociocultural anthropology) and demography. A wide variety of demographic topics-fertility, mortality, marriage, migration-are considered.
and the links between anthropological and demographic writings on war and violence, and approaches to these areas are examined.

**ANTH 2310A. Violence, Governance, and Transnationalism.**

This seminar deals with contemporary anthropological approaches to violence, governance, and transnationalism. As faculty and graduate students, we have worked together to identify important ethnographic experiments that provide novel anthropological framings of major global issues. Our goal is to interrogate anthropological writing, explore its relation to field research, and trace anthropological appropriations of contemporary social theory from a variety of sources. Prerequisites: three previous courses in Anthropology.

Fall ANTH2310A S01 16217 T 11:30-2:00(15) (K. Warren)

**ANTH 2450. Exchange Scholar Program.**

Fall ANTH2450 S01 14536 Arranged 'To Be Arranged'

Spr ANTH2450 S01 23747 Arranged 'To Be Arranged'

**ANTH 2501. Principles of Archaeology.**

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

Fall ANTH2501 S01 16206 F 9:00-11:30(16) (R. Preucel)

**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.

Fall ANTH2520 S01 16878 W 3:00-5:30(15) (S. Houston)

**ANTH 2540. Historical Archaeology: From Colony to City.**

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

Fall ANTH2540 S01 16879 W 6:00-8:30PM(17) (P. Rubetone)

**ANTH 2580. Anthropology of War and Violence in the Archaeological Past.**

This course is an overview of anthropological archaeological approaches to war, violence, and peace. We will begin by reviewing past and current social scientific thinking on the past six million years of human war and violence. We will consider in greater detail how anthropological archaeologists conduct research regarding ancient war and violence. Special attention will be given to the role of war and violence in statecraft and the (de)construction of society. We will consider some of the methodologies employed in the study of ancient violence including, landscape archaeology, art and iconography, and bioarchaeology.

Spr ANTH2580 S01 25822 T 6:00-8:30PM(05) (A. Scherer)

**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 25167 T 1:30-3:50(10) (P. Faudree)

**ANTH 2970. Preliminary Examination Preparation.**

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

Fall ANTH2970 S01 14537 Arranged 'To Be Arranged'

Spr ANTH2970 S01 23748 Arranged 'To Be Arranged'

**ANTH 2980. Reading and Research.**

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

**ANTH 2990. Thesis Preparation.**

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

Fall ANTH2990 S01 14538 Arranged 'To Be Arranged'

Spr ANTH2990 S01 23749 Arranged 'To Be Arranged'

**ANTH XLIST. Courses of Interest to Students Concentrating in Anthropology.**

**Applied Mathematics**

**APMA 0160. Introduction to Scientific Computing.**

For student in any discipline that may involve numerical computations. Introduction 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.

Spr APMA0160 S01 24775 MWF 9:00-9:50(02) (J. Guzman)

**APMA 0200. Introduction to Modelling.**

This course provides an introduction to the mathematical modeling of selected biological, chemical, engineering, and physical processes. The goal is to illustrate the typical way in which applied mathematicians approach practical applications, from understanding the underlying problem, creating a model, analyzing the model using mathematical techniques, and interpreting the findings in terms of the original problem. Single-variable calculus is the only requirement; all other techniques from differential equations, linear algebra, and numerical methods, to probability and statistics will be introduced in class. Prerequisites: MATH 0100 or equivalent.

Fall APMA0200 S01 16661 MWF 10:00-10:50(03) (J. Gemmer)

**APMA 0330. 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. Prerequisites: MATH 0100 or its equivalent.

Fall APMA0330 S01 15787 MWF 12:00-12:50(12) (V. Dobrushkin)

Spr APMA0330 S01 24776 MWF 12:00-12:50(05) (C. Dafermos)

**APMA 0340. Methods of Applied Mathematics II, III.**

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: APMA 0330 or Math 0100, 0170, 0180, 0190, 0200, or 0350, or advanced placement.

Fall APMA0340 S01 15792 MWF 12:00-12:50(12) (J. Mallet-Paret)

Spr APMA0340 S01 24777 MWF 12:00-12:50(05) (V. Dobrushkin)

**APMA 0350. Applied Ordinary Differential Equations.**

This course gives a comprehensive introduction to the qualitative and quantitative theory of ordinary differential equations and their applications. Specific topics covered in the course are applications of differential equations in biology, chemistry, economics, and physics; integrating factors and separable equations; techniques for solving linear systems of differential equations; numerical approaches to solving differential equations; phase-plane analysis of planar nonlinear systems; rigorous theoretical foundations of differential equations. Format: Three hours of lectures, and one hour of recitation. Prerequisites: MATH 0100, 0170, 0180, 0190, 0200, 0350 or advanced placement. MATH 0520 (can be taken concurrently).
Fall APMA0350 S01 16567 MWF 9:00-9:50(16) (B. Sandstedt)
Spr APMA0350 S01 24778 MWF 10:00-10:50(03) (D. Kaspar)

APMA 0350. Methods of Applied Mathematics I, II. Covers the same material as APMA 0340, albeit of greater depth. Intended primarily for students who desire a rigorous development of the mathematical foundations of the methods used, for those students considering one of the applied mathematics concentrations, and for all students in the sciences who will be taking advanced courses in applied mathematics, mathematics, physics, engineering, etc. Three hours lecture and one hour recitation. Prerequisite: MATH 0100, 0170, 0180, 0190, 0200, or 0350, or advanced placement.
Fall APMA0360 S01 15794 MWF 1:00-1:50(06) (D. Lipshutz)
Spr APMA0360 S01 24779 MWF 10:30-11:50(09) (J. Gemmer)

APMA 0640. Data Analysis Big and Small. A first course in statistics emphasizing a principled approach to data analysis through the use of probabilistic simulations. The focus is on the fundamental concepts of statistical inference and probability, and their application in modern data analysis. The premise of this course is that stochastic simulations provide an alternative to calculus for learning the fundamental concepts of statistical inference and probability theory that are typically covered in more advanced courses. From this foundation we will explore how big data impact both the questions and answers in data science. Suitable alternative to APMA0650. No prerequisites are required.
Fall APMA0640 S01 16594 MWF 11:00-11:50(04) (C. Lawrence)

APMA 0650. Essential Statistics. A first course in probability and statistics emphasizing statistical reasoning and basic concepts. Topics include visualization 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 24780 TTh 9:00-10:20(08) (M. Harrison)

APMA 1070. Quantitative Models of Biological Systems. Quantitative dynamic models help understand problems in biology and there has been rapid progress in recent years. The course provides an introduction to the concepts and techniques, with applications to population dynamics, infectious diseases, enzyme kinetics, aspects of cellular biology. Additional topics covered will vary. Mathematical techniques will be discussed as they arise in the context of biological problems. Prerequisites: APMA 0330, 0340 or 0350, 0360, or written permission.
Spr APMA1070 S01 25554 MWF 9:00-9:50(02) (M. Maxey)

APMA 1080. Inference in Genomics and Molecular Biology. Sequencing of genomes has generated a massive quantity of fundamental biological data. Focus is on drawing traditional and Bayesian statistical inferences from these data, including: motif finding; hidden Markov models; other probabilistic models, significance in high dimensions; and functional genomics. Emphasis - application of probability theory to inferences on data sequence, the goal of enabling students to construct prob models. Statistical topics: Bayesian inferences, estimation, hypothesis testing and false discovery rates, statistical decision theory. Enroll in 2080 for more in depth coverage of the class. Prerequisite: APMA 1650 or MATH 1610 or CSCI 1450; BIOL 0200 recommended, programming skills required.
Spr APMA1080 S01 24781 TTh 10:30-11:50(09) (C. Lawrence)

APMA 1170. Introduction to Computational Linear Algebra. Focuses on fundamental algorithms in computational linear algebra with relevance to all science concentrators. Basic linear algebra and matrix decompositions (Cholesky, LU, QR, etc.), round-off errors and numerical analysis of errors and convergence. Iterative methods and conjugate gradient techniques. Computation of eigenvalues and eigenvectors, and an introduction to least squares methods.
Fall APMA1170 S01 15798 TTh 10:30-11:50(13) (G. Kamiadakis)

APMA 1190. Finite Volume Method for CFD: A Survey. This course will provide students with an overview of the subjects necessary to perform robust simulations of computational fluid dynamics (CFD) problems. After an initial overview of the finite volume method and fluid mechanics, students will use the finite volume library OpenFOAM to explore the different components that make up a modern CFD code (discretization, linear algebra, timestepping, boundary conditions, splitting schemes, and multiphysics) and learn how to navigate a production scale software library.
Spr APMA1190 S01 25791 M 3:00-5:30(13) (N. Trask)

Spr APMA1200 S01 24782 MWF 2:00-5:20(07) (H. Wang)

APMA 1210. Operations Research: Deterministic Models. An introduction to the basic mathematical ideas and computational methods of optimizing allocation of effort or resources, with or without constraints. Linear programming, network models, dynamic programming, and integer programming.
Fall APMA1210 S01 15798 TTh 9:00-10:20(08) (B. Rozovskiy)

Fall APMA1330 S01 15800 MWF 1:00-1:50(06) (B. Kunsberg)

APMA 1360. Topics in Chaotic Dynamics. Overview and introduction to dynamical systems. Local and global theory of maps. Attractors and limit sets. Lyapunov exponents and dimensions. Fractals: definition and examples. Lorenz attractor, Hamiltonian systems, homoclinic orbits and Smale horseshoe orbits. Chaos in finite dimensions and in PDEs. Can be used to fulfill the senior seminar requirement in applied mathematics. Prerequisites: differential equations and linear algebra.
Spr APMA1360 S01 24783 MWF 1:00-1:50(06) (J. Mallet-Paret)

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.
Students may opt to enroll in 1655 for more in depth coverage of the above topics. 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 APMA1650 S01 15801 TTh 1:00-2:20(10) (C. Klivans)
Spr APMA1650 S01 24784 MWF 11:00-11:50(04) (B. Kunsberg)

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 16660 TTh 1:00-2:20(10) (C. Klivans)

APMA 1660. Statistical Inference II. APMA 1660 is designed as a sequel to APMA 1650 to form one of the alternative tracks for an integrated year’s course in mathematical statistics. The main topic is linear models in statistics. Specific topics include likelihood-ratio tests, nonparametric tests, introduction to statistical computing, matrix approach to simple-linear and multiple regression, analysis of variance, and design of experiments. Prerequisite: APMA 1650 or equivalent, basic linear algebra.
### APMA 1690. Computational Probability and Statistics

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 15802 MWF 2:00-2:50(07) | (N. Garcia Trillos) |

### 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 15805 MWF 9:00-9:50(16) | (P. Nyquist) |

### 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.

| Spr | APMA1740 S01 24786 MWF 11:00-11:50(04) | (M. Harrison) |

### APMA 1930N. Stochastic Models of Neuronal Networks

Senior seminar on stochastic models of neuronal network dynamics. Topics will include: dynamics of sparsely connected networks; various regimes and phase transitions; role of network structure and network motifs; spike-timing-dependent plasticity. Some of the tools: mean-field approach; eigenvalue spectra of random matrices; numerical simulation. Required background: calculus, basic probability. Background in neuroscience is helpful but not required. We will start with a few lectures to set up the stage.

| Fall | APMA1930N S01 16595 F 3:00-5:40(08) | (L. Bienenstock) |

### APMA 1930O. Probabilities in Quantum and Statistical Mechanics

I will teach (just) enough quantum and statistical mechanics (QM, SM) to enable a mathematically and physically informed discussion of some of the enduring mysteries surrounding these subjects. Examples: Schrödinger's equation and the abrupt transition from (weird) quantum worlds to classical worlds; the general uncertainty principle; quantum teleportation; the impossibility of a local hidden variable theory for QM (Bell's Theorem) and Einstein's objections; Conway's no-free-will theorem; quantum erasure; Boltzmann's "local chaos," "transport" equation, and exchangeability; Poincare recurrence; the (possible) irrelevance of the ergodic theorem in SM (are measurements really akin to time averages?).

| Fall | APMA1930C S01 17168 M 3:00-5:50(15) | (S. Geman) |

### APMA 1940L. Mathematical Models in Biophysics

Development mathematical descriptions of biological systems aid in understanding cell function and physiology. The course will explore a range of topics including: biomechanics of blood flow in arteries and capillaries, motile cells and chemotaxis, cell signaling and quorum sensing, and additional topics. Formulating and using numerical simulations will be a further component. Students will develop individual projects. Prerequisites: APMA 0360, or APMA 0340, or written permission.

| Spr | APMA1940L S01 25540 TTh 9:00-10:20(08) | (M. Majeau) |

### APMA 1970. Independent Study

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

### APMA 2080. Inference in Genomics and Molecular Biology

Sequencing of genomes has generated a massive quantity of fundamental biological data. We focus on drawing traditional and Bayesian statistical inferences from these data, including: motif finding; hidden Markov models; other probabilistic models, significant in high dimensions; and functional genomics. Emphasis is on the application of probability theory to inferences on data sequence with the goal of enabling students to independently construct probabilistic models in setting novel to them. Statistical topics: Bayesian inference, estimation, hypothesis testing and false discovery rates, statistical decision theory. For 2,000-level credit enroll in 2080; for 1,000-level credit enroll in 1080. Prerequisite: APMA 1650 or MATH 1610 or CSCI 1450; BIOL 0200 recommended; programming skills required.

| Spr | APMA2080 S01 25698 TTh 10:30-11:50 | (C. Lawrence) |

### APMA 2110. Real Function Theory (MATH 2210)

Interested students must register for MATH 2210.

| Fall | APMA2110 S01 16369 Arranged | To Be Arranged |

### APMA 2120. Real Function Theory (MATH 2220)

Interested students must register for MATH 2220.

| Spr | APMA2120 S01 25236 Arranged | To Be Arranged |

### APMA 2190. Nonlinear Dynamical Systems: Theory and Applications


| Fall | APMA2190 S01 15806 Th 2:30-3:50(11) | (A. Matzavinos) |

### APMA 2200. Nonlinear Dynamical Systems: Theory and Applications


| Spr | APMA2200 S01 24787 TTh 2:30-3:50(11) | (G. Menon) |

### APMA 2230. Partial Differential Equations

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 15807 TTh 10:30-11:50(15) | (C. Dafanos) |

### APMA 2240. Partial Differential Equations

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.

| Spr | APMA2240 S01 24788 MWF 10:00-11:50(03) | (H. Dong) |

### APMA 2410. Fluid Dynamics 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.

Fall APMA2410 S01 15808 MWF 2:00-2:50(07) (M. Maxey)

APMA 2450. Exchange Scholar Program.
Fall APMA2450 S01 14539 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 is expected.
Fall APMA2550 S01 15809 W 3:00-5:30(17) (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 and finite element methods, and solution techniques. Homework will include both theoretical and computational problems.
Spr APMA2560 S01 24789 W 3:00-5:30(07) (M. Ainsworth)

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.
Fall APMA2570E S01 17216 Th 4:00-6:30(02) (J. Guzman)
Fall APMA2570BS S01 17216 Th 4:00-6:20(02) (J. Guzman)

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.
Spr APMA2610 S01 24792 MWF 11:00-11:50(04) (M. Harrison)

A one-semester course that provides an introduction to probability theory based on measure theory. The course covers the following topics: probability spaces, random variables and measurable functions, independence and infinite product spaces, expectation and conditional expectation, weak convergence of measures, laws of large numbers and the Central Limit Theorem, discrete time martingale theory and applications.
Fall APMA2630 S01 15811 TTh 1:00-2:20(10) (H. Wang)

A one-semester course in probability that provides an introduction to stochastic processes. The course covers the following subjects: Markov chains, Poisson process, birth and death processes, continuous-time martingales, optional sampling theorem, martingale convergence theorem, Brownian motion, introduction to stochastic calculus and Itô’s formula, stochastic differential equations, the Feynman-Kac formula, Girsanov’s theorem, the Black-Scholes formula, basics of Gaussian and stationary processes. Prerequisite: APMA 2630 or equivalent course.
Spr APMA2640 S01 24793 TTh 1:00-2:20(10) (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 (E-M Algorithm, Markov Chain Monte Carlo, Bootstrap). Prerequisite: APMA 2630 or equivalent.
Fall APMA2670 S01 15812 Th 4:00-6:30(02) (B. Gidas)

APMA 2680. Mathematical Statistics II.
The course covers modern non-parametric statistical methods. Topics include: density estimation, multiple regression, adaptive smoothing, cross-validation, bootstrap, classification and regression trees, nonlinear discriminant analysis, projection pursuit, the ACE algorithm for time series prediction, support vector machines, and neural networks. The course will provide the mathematical underpinnings, but it will also touch upon some applications in computer vision/speech recognition, and biological, neural, and cognitive sciences. Prerequisite: APMA 2670.
Spr APMA2680 S01 24795 Th 4:00-6:30(17) (B. Gidas)

APMA 28110. Dynamics and Stochastics.
This course provides a synthesis of mathematical problems at the interface between stochastic problems and dynamical systems. It provides an introduction to random matrix theory, and in particular on aspects of the theory that are amenable to exact calculations. This approach will allow us to make contact with ideas from dynamical systems, in particular the theory of completely integrable Hamiltonian systems. Prerequisites: one semester each of graduate analysis (APMA 2110), dynamical systems (APMA 2190) and probability theory (APMA 2630).
Spr APMA2811C S01 24801 MWF 1:00-1:50(06) (D. Lipshutz)

APMA 2811S. Levy Processes.
Lévy processes are the continuous-time analogues of random walks, and include Brownian motion, compound Poisson processes, and square-integrable pure-jump martingales with many small jumps. In this course we will develop the basic theory of general Lévy processes and subordinators, and discuss topics including local time, excursions, and fluctuations. Time permitting we will finish with selected applications which are of mutual interest to the instructor and students enrolled in the class. Prerequisite: APMA 2640 or equivalent.
Fall APMA2811S S01 16651 MWF 11:00-11:50(04) (A. Kaspar)

APMA 2821V. Neural Dynamics: Theory and Modeling.
Our thoughts and actions are mediated by the dynamic activity of the brain’s neurons. This course will use mathematics and computational modeling as a tool to study neural dynamics at the level of signal neurons and in more complicated networks. We will focus on relevance to modern day neuroscience problems with a goal of linking dynamics to function. Topics will include biophysically detailed and reduced representations of neurons, bifurcation and phase plane analysis of neural activity, neural rhythms and coupled oscillator theory. Audience: advanced undergraduate or graduate students. Prerequisite: APMA 0350-0360 and Matlab programming course. Instructor permission required.
Fall APMA2821V S01 16649 W 3:00-5:30(17) (S. Jones)

We will discuss numerical solutions of hyperbolic conservation laws. Schemes to be considered include finite volume, finite difference, and discontinuous Galerkin finite element methods. Theoretical background about the underlying partial differential equations will also be covered. Computational projects will be required.
Spr APMA2821W S01 25170 W 3:00-5:30(14) (C. Shu)

APMA 2821X. Statistical Theories of Turbulence.
We consider three areas in statistical hydrodynamics:
(a) Burgers-KPZ models.
(b) The vortex gas and 2D turbulence.
(c) The Onsager conjecture and 3D turbulence.
In each case, we discuss well-posedness of the PDE (conservation laws and Euler equations), and statistical ensembles of solutions. The treatment is rigorous, though the balance between techniques from PDE and probability varies. Problems (a) and (b) rely equally on PDE and probability. There is no real stochastic understanding of (c), though there is a rich analytic theory.
Spr APMA2821X S01 25471 Th 4:00-6:30(17) (G. Menon)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
ARCH 1057. Southwestern Archaeology (ANTH 1692). Interested students must register for ANTH 1692. 
   Fall ARCH1057 S01 25860 Arranged 'To Be Arranged'

ARCH 1101. Age of Augustus: Topography, Architecture, and Politics (CLAS 1120T). Interested students must register for CLAS 1120T. 
   Fall ARCH1101 S01 16367 Arranged 'To Be Arranged'

ARCH 1128. The Long Fall of the Roman Empire (HIST 1205). Interested students must register for HIST 1205. 
   Fall ARCH1128 S01 16363 Arranged 'To Be Arranged'

ARCH 1140. The Death of the Ancient City? Roman Cities After the Fall of Rome. As in our own increasingly urban-based world, cities were the engines driving the political and economic success of the Roman empire. But what happened to such places after the empire disintegrated and "fell"? This course will explore this and other transformations in the West Mediterranean during the first half of the first millennium BC. Enrollment limited to 20. 
   Spr ARCH1140 S01 17103 TTh 1:00-2:20(10) (M. Andrews)

ARCH 1155. Cities, Colonies and Global Networks in the Western Mediterranean. Urban life as we know it in the Mediterranean began in the Iron Age, a period that witnessed the rise of long-distance networks and the foundation of colonies by several Mediterranean powers. What happened when new settlers, visiting traders, and local inhabitants came into direct and unprecedented contact? This course will explore this and other transformations in the West Mediterranean during the first half of the first millennium BC. Enrollment limited to 20. 
   Spr ARCH1155 S01 25088 TTh 10:30-11:50(11) (P. van Dommelen)

ARCH 1175. Archaeology Matters! Past Perspectives on Modern Problems. This is not the first era to face many of today’s global problems – rising temperatures, sea-level change, sustainability, pollution, fire, water scarcity, urban blight, social violence, and more. Archaeology is more than the understanding of peoples long ago and far away, but a discipline whose long-term perspective could offer potential solutions to current crises. Through case studies and discussion of key issues, this class asks how archaeology – and archaeologists – might just change the world. LILER 
   WRIT Spr ARCH1175 S01 25804 TTh 2:30-3:50(11) (J. Cherry)

ARCH 1233. Ancient Maya Writing (ANTH 1650). Interested students must register for ANTH 1650. 

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Instructor</th>
<th>Days</th>
<th>Time</th>
<th>CRN</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 1237</td>
<td>Pre-Columbian Art and Architecture: A World That Matters (ANTH 1030)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARCH 1518</td>
<td>Women and Families in the Ancient Mediterranean (HIAA 1302)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARCH 1525</td>
<td>Struggle and Domination in the Prehistoric Mediterranean: Sex Power God(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARCH 1618</td>
<td>Barbarians, Byzantines, and Berbers: Early Medieval North Africa, AD 300-1050 (HIST 1963L)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARCH 1621</td>
<td>History of Egypt I (EGYT 1430)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARCH 1625</td>
<td>Temples and Tombs: Egyptian Religion and Culture</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARCH 1707</td>
<td>Seven Wonders of the Ancient World (CLAS 1120Q)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARCH 1768</td>
<td>The Culture of Death in Ancient Rome (CLAS 1420)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARCH 1769</td>
<td>Unearthing the Body: History, Archaeology, and Biology at the End of Antiquity (HIST 1835A)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARCH 1772</td>
<td>The Human Skeleton (ANTH 1720)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARCH 1857</td>
<td>Metals and Engineering Design in the Ancient World</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARCH 1870</td>
<td>Environmental Archaeology</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARCH 1881</td>
<td>An Introduction to GIS and Spatial Analysis for Anthropologists and Archaeologists (ANTH 1201)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARCH 1900</td>
<td>The Archaeology of College Hill</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARCH 1970</td>
<td>Individual Study Project in Old World Archaeology and Art</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARCH 1990</td>
<td>Senior Honors Thesis in Archaeology and the Ancient World</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARCH 2010G</td>
<td>Ethical Issues in Archaeology</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARCH 2110F</td>
<td>Greek Palaeography and Premodern Book Cultures (GREK 2110F)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARCH 2114</td>
<td>Archaeologies of Text (ASYR 2800)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARCH 2245</td>
<td>Rural Landscapes and Peasant Communities in the Mediterranean</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARCH 2250</td>
<td>Island Archaeology in the Mediterranean</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
of insularity itself, in cross-cultural archaeological, anthropological, and historical perspectives. We will then turn to the rich, specifically Mediterranean literature on island archaeology (exploring issues of colonization, settlement, interaction).

**ARCH 2250. Introduction to Public Humanities (AMST 2650).**
Interested students must register for AMST 2650.

**ARCH 2425. In Ruins: Traces of the Past in the Present.**
Ruins -- the debris and skeletons of monuments from the past -- constitute the leftovers of people and places that once were. Yet archaeologists have not thought critically about this seemingly essential concept. Ruins and ruination are fundamental to deeper understandings of contact, the rise and fall of civilizations, state power and political factionalism, urbanism, colonialism, capitalism, and deindustrialization. This course will examine, across a broad geographic and temporal scope, ruins as things, as well as ongoing processes, that affect the landscape.

**BIOL 0030. Principles of Nutrition.**
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. LILE

**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.

**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.

**BIOL 0140A. Topics in Science Communications: Science Journalism Practicum.**
Participants will understand how to read scientific research papers to interpret their findings and communicate these to a broader lay audience; analyze and understand best practices in science writing and the challenges of covering science for mass media; interviewing; fair and balanced coverage in reporting; give and receive peer feedback. Not for concentration credit in Biological Sciences programs. Enrollment limited to 10. Instructor permission required. S/NC

**BIOL 0140C. Communicating Science: Animating Science.**
Taught by RISD/Brown professors with the Science Ctr and Creative Mind Initiative, this course explores the pedagogy of using visual media to convey scientific concepts. The goal is to assess the quality of existing material and design new material that fill an educational need and makes science engaging and accessible. Lectures, labs, discussions, critiques and speakers. Teams collaborate on a series of short exercises leading to the creation of videos/animations explaining scientific concepts. Projects evaluated on accuracy, clarity of explanation, educational value, viewer engagement and creativity. Not for concentration credit in Biological Sciences programs. Enrollment limited to 12; instructor permission.

**BIOL 0140K. Conservation Medicine.**
How have fruit bats contributed to the emergence of Nipah virus in Malaysia? Is an infectious cancer going to drive the Tasmanian Devil to extinction? Will a warmer world be a sicker world? We will consider these and additional topics at the intersection of global change biology and infectious disease emergence in this course. The course should be of interest to pre-med, general biology and environmental studies concentrators seeking interdisciplinary learning classroom experience. This will satisfy "Area 3" organismal biology concentration requirement for Biology/Health-Human Biology. Expected background: BIOL 0200 or equivalent placement. Enrollment limited to 15 sophomores. Instructor permission required. SOPH

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

**BIOL 0150C. Methods for Extraction and Analyzing Secondary Metabolites of Medicinal Plants.**
Plant secondary metabolites are currently the subject of much research interest when investigating new target compounds for potential medicine from natural products. New leads for drugs and phytomedicines from plants and plant parts have been increasing at a rapid rate especially by the pharmaceutical industry. Many plants have been selected and collected for their specific secondary compounds and healing powers by
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 proficiency in basic cell culture techniques, early stage tissue regeneration strategies and histochemical characterization of mammalian cell constructs. Enrollment limited to 10 first year students. Instructor permission required. Half-credit course. S/NC. FYS
Fall BIOL0150D S01 14775 Arranged (B. Zielinski-Habershaw)

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. LILE
Spr BIOL0160 S01 23986 MW 3:00-4:30(14) (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 prosthesis 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 14771 MWF 12:00-12:50(12) (B. Zielinski-Habershaw)

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 smallpox 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 made 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 24080 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, observing, identifying and growing these plants. Enrollment limited to 20. Students MUST register for the lecture section and the lab. FYS
Fall BIOL0190E S01 14734 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 20 first year students. FYS
Fall BIOL0190F S01 14840 TTh 1:00-2:20(10) (M. Tatar)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
BIOL 0280. Introductory Biochemistry.
Lectures and recitation sections explore the mechanisms involved in the principles of macromolecular structure and function, and 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.
Fall: BIOL0280 S01 23897 TTh 1:00-2:20(10) (A. Salomon)
Spr: BIOL0280 S01 23897 TTh 1:00-2:20(10) (A. Salomon)

BIOL 0285. Introductory Biochemistry Laboratory.
Working in small groups, students will examine enzymatic reactions in bacterial metabolic pathways. They will gather information from online databases, define a working model and test this model by purifying a target enzyme and characterizing its biochemical function. They will then propose a hypothesis for the enzymatic reaction mechanism and test this hypothesis by designing mutations in the enzyme active site and characterizing these mutant enzymes experimentally. Priority given to sophomore and junior students planning to enter research careers. Expected: Students have previously taken or are concurrently enrolled in BIOL 0280; preference given to students concurrently enrolled. Instructor permission required. Course credit 0.5; final grade determined for BIOL 0285.
Spr: BIOL0285 S01 25565 Arranged (G. Jogl)

BIOL 0300. Endocrinology.
A basic examination of endocrinology with emphasis on hormone biosynthesis, mechanism of action, physiological roles, and endocrine pathology. Topics include: mechanism of action of steroid, amine, and peptide hormones; neuroendocrinology; reproductive endocrinology; and endocrinology of metabolism and calcium homeostasis. It is expected that students have taken BIOL 0200 (or equivalent) and CHEM 0350.
Spr: BIOL0300 S01 25623 TTh 1:00-2:20(10) (G. Messerlian)

BIOL 0350. The Fossil Record: Life through Time on Earth.
Course is designed for students with prior background in geology or evolutionary biology and who want to learn more about the fossil record, the origins of modern biodiversity and ecosystem structure, and interaction between organisms, and the geological and chemical cycles on the Earth. Lectures will cover major time periods during which animals and plants lived, as well as focusing on major transitions in the evolution of life on Earth. This course will fulfill requirements in both the biology/geology and evolutionary biology concentrations. Expected: BIOL 0210, GEOL 0240 or equivalent. Instructor permission, enrollment limited to 20 sophomores/juniors; register for course/lab.
Spr: BIOL0350 S01 24070 MWF 10:00-10:50(03) (A. Leslie)

BIOL 0380. The Ecology and Evolution of Infectious Disease.
We will survey the diverse biology of microbes responsible for human infectious disease, develop and apply ecological and evolutionary theory to infectious microbes, and provide practical experience interpreting and synthesizing the latest reviewed scientific literature. The discovery of infectious microbes, the role of genetic novelty, population structure and transmission mode, and the influence of clinical therapies and host immune response will be considered. Evaluation will be based on preparation, participation, weekly student presentations, brief weekly written assignments, a midterm and a final. Expected: BIOL 0200 or equivalent. Enrollment limited to 25 first year students and sophomores.
LILE Fall: BIOL0380 S01 14746 MWF 10:00-10:50(03) (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.
WRIT Fall: BIOL0400 S01 16727 MWF 2:00-2:50(07) (J. Allen)

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 14739 MW 11:00-11:50(04) (C. Dunn)
Fall: BIOL0410 S01 14739 F 11:00-11:50(04) (C. Dunn)

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 23918 TTh 9:00-10:20(08) (J. Wiltman)

BIOL 0430. The Evolution of Plant Diversity.
Examines the evolutionary history of plants from a phylogenetic perspective. Introduces the science of phylogenetics - 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). WRIT Fall: BIOL0430 S01 14741 TTh 9:00-10:20(08) (E. Edwards)

BIOL 0440. Plant Organism.
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 organismal responses to key stimuli. Examines physiological, reproductive and developmental strategies throughout the plant life cycle and in relation to environmental challenges. Discusses the significance of various plant model systems for genetic research and understanding of mechanisms controlling plant growth and development. Prerequisites: BIOL 0200 (or equivalent placement). Students MUST register for the lecture section and a lab.
Spr: BIOL0440 S01 25733 TF 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 14703 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 14743 MWF 9:00-9:50(16) (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 10 sophomores, and 10 for seniors requiring permission of instructor.
Spr: BIOL0495 S01 23920 TTh 10:30-11:50(09) (S. Ramachandran)

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

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 108.

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.

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.

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

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. SOPH.

BIOL 0940D. Rhode Island Flora: Understanding and Documenting Local Plant Diversity. This Sophomore Seminar focuses on species level identification of plants in Rhode Island and will cover the dominant plant species in each of the state’s main habitats including coastal wetlands and uplands, freshwater wetlands, peatlands, upland forests, and disturbed areas. Students will learn to identify plants using online interactive keys as well as more technical dichotomous keys and will also cover basic ecological processes in each habitat including the interaction of soils, geology, and hydrology. Materials related to plant morphology, plant taxonomy, plant evolution, understanding phylogenetic trees, and botanical illustration. Pre-requisites: BIOL 0200. Instructor permission required. SOPH.

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

BIOL 0980. Introduction to Computational Biology. A technological revolution has exponentially increased our ability to gather biological data. A host of new methods and types of analysis have arisen to accommodate this dramatic shift in data collection. This course develops the tools necessary to perform research in the post-genomic era. We will learn the programming language, Python, to automate data analysis on whole genome scale data. We will cover common statistical tests used in biology with an emphasis on biological applications. Finally the course will conclude with an interactive approach that teaches bioinformatic/genomic theory and practice. Pre-Requisites: BIOL 0200 plus one additional biology course (BIOL 0470 recommended), or permission from instructors.

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

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

BIOL 1100. Cell Physiology and Biophysics. Current topics in cell physiology, with an emphasis on membrane-mediated interactions between cells and their environment. Topics may include: ion channel structure, function and regulation; intracellular regulatory molecules; mechanisms of sensory transduction; membrane receptors and second messenger systems; vesicle secretion; and cytoskeletal regulation of cell function. Lectures, discussion, and student presentations of the current literature. Expected: BIOL 0800 or NEUR 0010. Instructor permission required. Registration overrides will not be given out until after the first one or two classes. Enrollment limited to 30, and admission is based on seniority -- graduate students, seniors, then juniors. (Not for first and second-year undergraduates.)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
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 BIOL 1110 S01 14777 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. Fall BIOL 1120 S01 14780 Th 4:00-6:30(02) (B. Zielinski-Habershaw)

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 BIOL 1140 S01 14778 Th 3:00-5:30(02) (D. Hoffman-Kim)

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 BIOL 1160 S01 14779 MWF 1:00-1:50(06) (C. Hai)

BIOL 1190. Synaptic Transmission and Plasticity.
Synapses are the means by which the nervous system communicates. In this seminar-style course, we will explore the molecular and physiological underpinnings of synaptic transmission. We will then examine ways in which synapses can modulate their strength during development, learning, and other adaptive processes. Expected: BIOL 0800 or NEUR 1020. Enrollment limited to 20. Instructor’s permission required, WRIT Spr BIOL 1190 S01 23959 TTh 1:00-2:20(10) (J. Kauer)

BIOL 1200. Protein Biophysics and Structure.
Structural Biology is the science to determine 3-dimensional structures of biomacromolecules (i.e. proteins, RNA, and DNA). These structures enable biologists to understand and explore their function. Since proteins, RNA, and DNA are the primary molecules of life, structural biology enables us to understand and influence these molecular machineries which form the basis of all biological processes. Throughout the class, the students will see examples of biologically important proteins and protein complexes that will allow them to correlate structure and biological function. Prerequisite: BIOL 0280. Spr BIOL 1200 S01 23938 W 4:00-6:30(14) (W. Pet}

BIOL 1210. Synthetic Biological Systems.
A multidisciplinary course that combines science and engineering providing a solid foundation in a cutting edge field of biological engineering. Synthetic biology is a mixture of biology, chemistry, engineering, genetic engineering and biophysics. It builds on recent work in systems biology which involves the modeling of biological systems, but goes further in that it involves the construction and standardization of biological parts, that fit together to form more complex systems. Expected: at least four courses beyond BIOL 0200, CHEM 0330, PHYS 0300, ENGN 0300, MATH 0900, or CSCI 0040. Fall BIOL 1210 S01 14782 M 3:00-5:30(15) (G. Wessel)

BIOL 1260. Physiological Pharmacology.
Covers the physiology of human disease (e.g., heart failure and arrhythmia; cancer signaling pathways with a focus on breast cancer; neurological disorders such as schizophrenia and Parkinson’s disease) and discusses the pharmacology of the drugs used to treat disease. A group of the most commonly prescribed drugs is discussed in terms of their fundamental modes of action and clinical importance. Expected: BIOL 0800. Fall BIOL 1260 S01 14783 TTh 10:30-11:50(13) (J. Marshall) Fall BIOL 1260 S02 17015 TTh 10:30-11:50(13) (J. Marshall)

BIOL 1270. Advanced Biochemistry.
An advanced course in biochemistry, biochemical methods, and reading of the primary literature, featuring systematic coverage of the biochemistry of the central dogma, including DNA (replication, repair, recombination), RNA (regulation and mechanism of transcription, processing, turnover), and proteins structure, synthesis, modification, degradation, mechanisms of action, function). Expected: BIOL 0280, CHEM 0350, 0360. Graduate students register for BIOL 2270. Fall BIOL 1270 S01 14719 TTh 2:30-3:50(11) (R. Page)

Provides a conceptual understanding of molecular events underlying development of human cancer. Focused on genetic changes leading to malignant transformation of cells. Covers cell cycle control, DNA damage, mutagenesis, cancer predisposition syndromes, oncogenic viruses, tumor immunology, metastasis, cancer chemotherapy and drug resistance. Lecture plus discussion of primary literature. Prerequisites: BIOL 0280, 0470 or 0500. Fall BIOL 1290 S01 14731 MW 3:00-4:20(17) (A. Zhiltovich)

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 0280). Enrollment limited to 20; instructor permission. Fall BIOL 1300 S01 14838 M 3:00-5:30(15) (F. Fawzi)

BIOL 1310. Developmental Biology.
Covers the molecular and cellular events of development from fertilized egg to adult. Genetic basis of body form, cell fate specification and differentiation, processes controlling morphogenesis, growth, stem cells and regeneration will be examined. Differential gene regulation, intercellular signaling and their evolutionary conservation will be central to discussion of mechanisms governing developmental processes. Additional topics: developmental plasticity, impact of epigenetic and environmental factors, and basis of disease gleaned from developmental biology research. Live embryos will complement and reinforce concepts covered in class. Enrollment limited to 36. Expected: BIOL 0200 (or equivalent), and one course in genetics, cell biology or embryology. Fall BIOL 1310 S01 14721 TTh 9:00-10:20(08) (K. Wharton)

This course is an advanced, seminar-based course. Primary literature is emphasized to complement the format of extensive student seminar presentations. It is essential that students have a strong background in biology in order to gain the most from this course. The emphasis of the course is student seminar presentation and extensive discussion on the material. This is often the first opportunity for students to present/discuss science in a seminar format. Expected background: a course in Cell Biology (e.g. BIOL 0500 or 1050), and two additional Biology courses above the introductory (BIOL 0200) level. Enrollment limited to 20. Spr BIOL 1330 S01 23908 M 3:00-5:30(13) (G. Wessel)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
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 14747 W 3:00-5:30(17) (J. Witman)

BIOL 1425. Phylogenetic Biology. This course is the study of the evolutionary relationships between organisms, and the use of evolutionary relationships to understand other aspects of organism biology. This course will provide a detailed picture of the statistical, mathematical, and computational tools for building phylogenies and using them to study evolution. Enrollment is by instructor permission. Students will present scientific papers in class and complete a final project consisting of their own phylogenetic analysis. Expected Background: Evolutionary Biology and quantitative methods (such as statistics, computation, or math). Open to juniors, seniors, and graduate students. Enrollment limited to 16. Fall BIOL1425 S01 23922 TTh 10:30-11:50(09) (C. Dunn)

BIOL 1430. Computational Theory of Molecular Evolution and Population Genetics. Population genetics is the study of how biological processes such as mutation, natural selection, population size, and subdivision drive evolution over the timescale of generations. The past 20 years have seen a flowering in our understanding of this process from both theoretical and experimental perspectives. This course will present a rigorous introduction to modern population genetics, with particular emphasis on the complementary interplay between theory and experiment. Students will also gain extensive experience with the primary literature of the field. Prerequisites: MATH 0100 and one of BIOL 0470 or 0480, or permission. LILE Fall BIOL1430 S01 14749 MWF 11:00-11:50(04) (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 23961 MWF 10:00-10:50(03) (J. Kellner)

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 14745 TTh 9:00-10:20(08) (D. Sax)

BIOL 1475. Biogeography. Will provide an overview of the field of biogeography—the study of geography of living organisms. Class meetings will be split between lectures and discussions. Each discussion will expose students to foundational papers which set the context for the field's development, and more recent papers, which show where the field is headed. Each student will conduct a short (but time consuming) original research project on some topic in biogeography. Prerequisites: BIOL 0420 and 0480. Expected: one taxonomy-based course (e.g., BIOL 0410, 0430, or 0460). Enrollment limited to 15 juniors, seniors, and graduate students. Instructor permission required. Spr BIOL1475 S01 23927 TTh 1:00-2:20(10) (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. Fall BIOL1495 S01 14793 MWF 9:00-9:50(16) (A. Leslie)

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 14691 MW 8:30-9:50(16) (L. Brossay)

BIOL 1540. Molecular Genetics. Covers advanced genetic and molecular methods and their use in analysis of complex biological phenomena such as development, signaling, behavior, and disease. Discusses how these techniques are applied in various organisms, with emphasis on the major Eukaryotic genetic model systems (Drosophila, nematodes, mouse, yeast, Arabidopsis) and on human genetics. Uses primary literature to analyze the design of forward- and reverse-genetic approaches to discover novel gene function. For advanced undergraduates and beginning graduate students. Prerequisite for undergraduates: BIOL 0470 or instructor permission. Expected background: any of BIOL 0280, 0500, 1050, or 1310. Graduate students should register for BIOL 2540. Spr BIOL1540 S01 23909 TTh 2:30-3:50(11) (E. Larchan)

BIOL 1550. Biology of Emerging Microbial Diseases. Emerging diseases influence the health of human populations in less developed countries and are expected to have similar effects worldwide. Rising incidence of "new" diseases underscores the need for knowledge of infection mechanisms and their outcomes. Focuses on biochemical, genetic, cellular and immunological events of emerging pathogens and host responses. Expected: BIOL 0470 or BIOL 0530. Spr BIOL1550 S01 23893 MWF 1:00-1:50(06) (A. Campbell)

BIOL 1560. Virology. Emphasizes the understanding of molecular mechanisms of viral pathogenesis. Begins with a general introduction to the field of virology and then focuses on the molecular biology of specific viruses that are associated with human disease. Lectures based on current literature. Prerequisite: BIOL 0280, 0470, or 0530, or instructor permission. Spr BIOL1560 S01 23894 MWF 9:00-9:50(02) (A. Jamieson)

BIOL 1585. The Biology of Desert Plants. Upper-level seminar with one-week field excursion to deserts of southwestern Peru during Spring Break. Focus on the biology of desert plants and intensive survey of primary literature, design and implementation of a group field project, and analysis/synthesis of collected data. Primary goals to learn the ecology/evolution of desert plants, collect new data on species turnover and plant functional types along an elevation gradient, opportunities for cultural exchange with biologists, and students to analyze/present their data. Basic foundation in plant biology/evolution, with moderate level of fluency with scientific literature. Prerequisite: BIOL 0430 or 1500. Enrollment 10 students; instructor permission. Spr BIOL1585 S01 24221 W 3:00-5:30(14) (E. Edwards)

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.

<table>
<thead>
<tr>
<th>Code</th>
<th>Section</th>
<th>Type</th>
<th>Credits</th>
<th>Days</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL1820</td>
<td>S01</td>
<td>W</td>
<td>3.00</td>
<td>04</td>
<td>12:00-12:50</td>
<td>(K. Mowry)</td>
</tr>
<tr>
<td>BIOL2030</td>
<td>S01</td>
<td>TTh</td>
<td>3.00</td>
<td>03</td>
<td>10:00-10:50</td>
<td>(E. Mathiowt)</td>
</tr>
</tbody>
</table>

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

Advanced students have priority.

<table>
<thead>
<tr>
<th>Code</th>
<th>Section</th>
<th>Type</th>
<th>Credits</th>
<th>Days</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL1870</td>
<td>S01</td>
<td>T</td>
<td>3.00</td>
<td>02</td>
<td>1:00-2:00</td>
<td>(C. Jackson)</td>
</tr>
</tbody>
</table>

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 concentrations, but should do so using their Department's own Independent Study course number.

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.

<table>
<thead>
<tr>
<th>Code</th>
<th>Section</th>
<th>Type</th>
<th>Credits</th>
<th>Days</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL2110</td>
<td>S01</td>
<td>T</td>
<td>3.00</td>
<td>07</td>
<td>1:00-2:00</td>
<td>(S. Gerbi)</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Section</th>
<th>Type</th>
<th>Credits</th>
<th>Days</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL2135</td>
<td>S01</td>
<td>W</td>
<td>3.00</td>
<td>06</td>
<td>3:00-5:30</td>
<td>(K. Harnett)</td>
</tr>
</tbody>
</table>

BIOL 1920D. 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 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.

<table>
<thead>
<tr>
<th>Code</th>
<th>Section</th>
<th>Type</th>
<th>Credits</th>
<th>Days</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL2050</td>
<td>S01</td>
<td>TTh</td>
<td>3.00</td>
<td>03</td>
<td>9:00-10:20</td>
<td>(K. Mowry)</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Code</th>
<th>Section</th>
<th>Type</th>
<th>Credits</th>
<th>Days</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL2110</td>
<td>S01</td>
<td>T</td>
<td>3.00</td>
<td>03</td>
<td>1:00-2:20</td>
<td>(E. Mathiowt)</td>
</tr>
<tr>
<td>BIOL2110</td>
<td>S01</td>
<td>M</td>
<td>3.00</td>
<td>02</td>
<td>3:00-4:50</td>
<td>(E. Mathiowt)</td>
</tr>
</tbody>
</table>

BIOL 2035. Pharmacokinetics and Drug Design.
Consists of the absorption, distribution, metabolism, and elimination of drugs. These factors, including dosage, determine the concentration of drugs at its sites of action, and intensity of effects. Will examine models describing the relationship between plasma drug concentrations and therapeutic drug effect. Will acquire biologic sampling techniques, analytic methods for measurement of drugs and metabolites, and procedures facilitating data used in designing drugs and dosage regimens. Prerequisite: BIOL 0800 or equivalent. Enrollment limited to 20. Preference given to graduate students in Biotechnology and BME, especially Masters students. Graduate students (PhD and ScM) from other programs enroll if permission of instructor is granted.

<table>
<thead>
<tr>
<th>Code</th>
<th>Section</th>
<th>Type</th>
<th>Credits</th>
<th>Days</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL2135</td>
<td>S01</td>
<td>W</td>
<td>3.00</td>
<td>03</td>
<td>1:00-3:30</td>
<td>(K. Harnett)</td>
</tr>
</tbody>
</table>

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 developing a target to the development of drugs, 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.

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

Focused on the effective dissemination of scientific information. Through practical examples of activities common to the profession (writing a grant proposal, presenting research work orally, and preparing a critical review of a submitted scientific manuscript), students will develop the skills necessary to effectively communicate scientific ideas, experiments and results. Each of the activities will be dissected into key sets that will be individually developed with the aid of interactive discussions and peer review. Enrollment limited to 12 graduate students.

Fall  BIOL2150  S01  14729  F  12:00-3:00(12)  (J. Bender)

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 mentor 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.

Fall  BIOL2156  S01  14790  Arranged  (E. Mathiowitz)
Spr  BIOL2156  S01  23951  Arranged  (E. Mathiowitz)


This course will cover principles and practical applications of important analytical tools used in the field of Biotechnology. Topics covered include spectroscopy, chromatography, and physical and chemical methods of characterization of a variety of molecules used for therapeutic applications.

The molecules will range in size from traditional drugs with molecular weights of less than 1000, peptides and proteins as well as SiRNA and industrial polymers. This course is suitable for students intending on pursuing a career in biomedical research in academia or industry. Prerequisites: BIOL 0280, BIOL 1120, CHEM 0350/0360, or equivalent course. Enrollment limited to 20 Masters students in Biotechnology and BME.

Spr  BIOL2160  S01  23952  T  9:00-11:50(08)  (A. Comeau)

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  23953  T  1:30-3:20(10)  (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  14791  MWF  10:00-11:30(03)  (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  14804  Arranged  (B. Zielinski-Habershaw)

BIOL 2190. MPPB 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  14792  M  12:00-1:30  (D. Horrigan)

BIOL 2230. Biomedical Engineering and Biotechnology Seminar.

Required of all first- and second-year graduate students in the Biomedical Engineering and Biotechnology Seminar graduate program, and open to others. Concepts of drug delivery and tissue engineering, implantation biology, and cellular therapy, as well as the research projects directed by program faculty. Students present research seminars and participate in presentations by outside speakers. Includes Journal Club activities. Open to graduate students only.

Fall  BIOL2230  S01  14770  T  4:30-7:00(18)  (D. Hoffman-Kim)

BIOL 2240. Biomedical Engineering and Biotechnology Seminar.

See Biomedical Engineering and Biotechnology Seminar (BIOL 2230) for course description.

Spr  BIOL2240  S01  23939  T  4:30-7:10(16)  (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 who meet the pre-requisites BIOL 0800 and BIOL 0280 or with instructor’s permission.

Fall  BIOL2245  S01  18362  MW  10:30-11:50(03)  (H. Kim)
Spr  BIOL2245  S01  24262  MW  10:30-11:50(03)  (H. Kim)

BIOL 2260. Physiological Pharmacology.

The objective of this course is to present drugs in the context of the diseases they are used to treat. A list of the Common medically prescribed drugs will be discussed in terms of their fundamental modes of action and clinical importance. Pertinent background biochemistry, physiology, and pathology is provided, e.g., the electrophysiology of the heart is discussed as a background to anti-arrhythmic drugs. Course is relevant for students interested in medicine journalism, law, government, precollege teaching, biomedical research, and pharmacy. Expected: background in physiology.

For graduate students ONLY register for BIOL 2260 (enrollment limit 15); all others BIOL 1260.

Fall  BIOL2260  S01  14784  TTh  10:30-11:50(13)  (J. Marshall)

BIOL 2270. Advanced Biochemistry.

(Undergraduate students should register for BIOL 1270.)

Fall  BIOL2270  S01  14720  TTh  2:30-3:50(11)  (R. Page)

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 examined. 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: BIOL0200 (or equivalent), and one course in genetics, embryology, cell biology or molecular biology. Enrollment limited to 36. (Undergraduate students register for BIOL 1310.)

Fall  BIOL2310  S01  14723  TTh  9:00-10:20(08)  (K. Wharton)
BIOL 2340. Neurogenetics and Disease.
Genetic mutations provide a powerful approach to dissect complex biologic problems. We will focus on fascinating discoveries from "forward genetic" studies – moving from nervous system phenotype to genetic mutation discovery. There will be an emphasis of neurologic disease phenotypes and the use of novel genomic methods to elucidate the central molecular and cellular causes for these conditions. The course will emphasize the use of "reverse genetics" – engineered mutations in model systems – to dissect nervous system function and disease mechanisms. Disorders to be covered include autism, intellectual disability, schizophrenia, epilepsy. Enrollment limited to 20. Instructor permission required.

Fall BIOL2340 S01 14730 W 4:00-5:50(17) (E. Morrow)

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

Spr BIOL2350 S01 23912 Th 2:00-5:00(11) (S. Helfand)

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, biogeography, ecology, and evolution of biology. Learn current literature and ideas in ecology and evolutionary biology. Enrollment limited to 20. Instructor permission required.

Fall BIOL2430 S01 14750 W 3:00-5:30(17) (D. Rand)
Fall BIOL2430 S02 14751 M 3:00-5:30(15) (S. Ramachandran)
Fall BIOL2430 S03 14753 Arranged (D. Weinreich)
Fall BIOL2430 S04 14763 F 1:00-2:50(06) (C. Dunn)
Fall BIOL2430 S05 17373 Arranged (J. Witman)

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

Spr BIOL2440 S01 23928 Arranged (D. Rand)
Spr BIOL2440 S02 23929 Arranged "To Be Arranged"
Spr BIOL2440 S03 24047 Arranged (S. Gatesy)

BIOL 2450. Exchange Scholar Program.
This course is designed for graduate students and focuses on the genetic and environmental basis 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. A discussion of cystic fibrosis, using this disease to explore basic principles of molecular biology, genetics, physiology and pathology. Then the course centers on the genetic and environmental basis of disease and carcinogenesis. Will lecture individual student presentations and experimental planning exercises. Emphasis will be placed on the development of presentation skills and research design. Undergraduates require instructor permission.

Fall BIOL2450 S01 14732 M 11:00-12:50(04) (T. Bartnikas)
Fall BIOL2450 S01 14732 W 9:00-10:50(04) (T. Bartnikas)

BIOL 2540. Molecular Genetics.
This course explores interdisciplinary approaches to environmental safety and health drawing from faculty and other affiliated experts. Topics include history of environmental regulation and waste management; origin and chemistry of pollutants; biological impacts of exposure and risk assessment; pollutant dispersion, transport and bioaccumulation; remediation technologies. Emphasis is placed on how scientific research impacts regulatory and engineering decisions regarding cleanup and management of contaminated sites. The target audience is graduate students and advanced undergraduates, permission required, with prior coursework or research in engineering, biology, or environmental studies. Enrollment limited to 30.

Spr BIOL2540 S01 25745 M 3:00-5:30(13) (R. Hurt)

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 14543 Arranged "To Be Arranged"
Spr BIOL2970 S01 23752 Arranged "To Be Arranged"

BIOL 2985. Graduate Seminar.
Independent study projects at the graduate level. Course numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Fall BIOL2985 S01 15544 Arranged "To Be Arranged"

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

BIOL 2995. Thesis.
Independent study projects at the graduate level. Course numbers vary by instructor. Please check Banner for the correct section number to use when registering for this course.

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

Fall BIOL2990 S01 14544 Arranged "To Be Arranged"
Spr BIOL2990 S01 23753 Arranged "To Be Arranged"

BIOL 2640A. Microbial Pathogenesis.
This course explores interdisciplinary approaches to environmental safety and health drawing from faculty and other affiliated experts. Topics include history of environmental regulation and waste management; origin and chemistry of pollutants; biological impacts of exposure and risk assessment; pollutant dispersion, transport and bioaccumulation; remediation technologies. Emphasis is placed on how scientific research impacts regulatory and engineering decisions regarding cleanup and management of contaminated sites. The target audience is graduate students and advanced undergraduates, permission required, with prior coursework or research in engineering, biology, or environmental studies. Enrollment limited to 30.

Spring BIOL2640A S01 23910 Th 2:30-5:30(11) (E. Lanshans)

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 pathologies 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.

Spr BIOL2640A S01 25537 W 2:00-5:00(07) (C. Biron)

BIOL 2640B. Microbial Pathogenesis.
Examines microbial pathogens and the underlying mechanisms by which infectious organisms cause diseases. Bacterial, fungal, protozoal and viral pathogens will be studied using tools of modern biology. Also examined are the host's immune responses to infection and disease. Areas covered include mechanisms of pathogen internationalization and survival, immune responses, signal transduction and pathophysiology. Expected: BIOL 0510, 0530, or 1550.

Fall BIOL2640B S01 14692 M 1:00-3:50 (A. Campbell)

BIOL 2860. Molecular Mechanisms of Disease.
This course 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. A discussion of cystic fibrosis, using this disease to explore basic principles of molecular biology, genetics, physiology and pathology. Then the course centers on the genetic and environmental basis of disease and carcinogenesis. Will lecture individual student presentations and experimental planning exercises. Emphasis will be placed on the development of presentation skills and research design. Undergraduates require instructor permission.

Fall BIOL2860 S01 14732 M 11:00-12:50(04) (T. Bartnikas)
Fall BIOL2860 S01 14732 W 9:00-10:50(04) (T. Bartnikas)

BIOL 2920D. Environmental Technologies and Human Health.
This course explores interdisciplinary approaches to environmental safety and health drawing from faculty and other affiliated experts. Topics include history of environmental regulation and waste management; origin and chemistry of pollutants; biological impacts of exposure and risk assessment; pollutant dispersion, transport and bioaccumulation; remediation technologies. Emphasis is placed on how scientific research impacts regulatory and engineering decisions regarding cleanup and management of contaminated sites. The target audience is graduate students and advanced undergraduates, permission required, with prior coursework or research in engineering, biology, or environmental studies. Enrollment limited to 30.

Fall BIOL2920D S01 25745 M 3:00-5:30(13) (R. Hurt)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
knowledge of biology and chemistry at the high school level is assumed. LILE

Fall NEUR0010 S01 15814 TTh 1:00-2:20(10) (M. Paradiso)

NEUR 0650. Biology of Hearing. 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 24855 MWF 1:00-1:50(06) (J. Simmons)

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

Spr NEUR0700 S01 24851 Arranged (R. Patrick)

NEUR 1020. Principles of Neurobiology. A lecture course on 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 24859 TTh 9:00-10:20(08) (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 students require instructor approval.

Fall NEUR1030 S01 15897 TTh 2:30-3:50(11) (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 24849 TTh 10:30-11:50(09) (K. Kau)

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

Fall NEUR1440 S01 15898 MW 12:30-1:50 (C. Moore)

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. WRIT

Spr NEUR1600 S01 24857 W 1:00-5:50(06) (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, 1020, and 1030. Sign-up sheet in Sidney Frank Hall, Room 315 beginning on the first day of registration. Instructor permission required.

Fall NEUR1650 S01 15899 TTh 2:30-3:50(11) (D. Berson)

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

Fall NEUR1670 S01 15815 TTh 9:00-10:20(08) (R. Patrick)

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

Spr NEUR1680 S01 24852 TTh 1:00-2:20(10) (L. Bienenstock)

NEUR 1930C. Development of the Nervous System. 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. Sign-up sheet in Sidney Frank Hall, Room 315 beginning on the first day of registration.

Spr NEUR1930C S01 24798 Arranged (A. Jaworski)

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

Spr NEUR1940E S01 24856 M 3:00-5:30(13) (J. Simmons)

NEUR 1940G. Drugs and the Brain. This is a seminar course devoted to the reading and analyzing of original research articles dealing with the interaction between drugs and the brain. This will include drugs used to analyze normal brain function, as well as drugs of abuse and drugs used for therapeutic purposes. This course is intended for undergraduate and graduate students with a strong background in neuropharmacology. Sign-up sheet in Sidney Frank Hall, Room 315 beginning on the first day of registration. Prerequisite: NEUR 0010, 1020, and 1030. Enrollment limited to 15. Instructor permission required.

Spr NEUR1940C S01 24860 Arranged (R. Patrick)

NEUR 1970. Independent Study. 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.

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

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 16590 Th 4:00-4:50 (D. Sheinberg)

See Graduate Pro-Seminar In Neuroscience (NEUR 2010) for course description.
Spr NEUR2020 S01 25484 Arranged (D. Sheinberg)

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 15852 MF 9:30-12:20 (A. Hart)

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.
Fall NEUR2040 S01 25000 Arranged

Focuses on systems 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 sensory, regulatory, and motor systems. Enrollment limited to graduate students.
Fall NEUR2050 S01 16080 TTh 10:30-11:50 (M. Linden)

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 25001 Arranged

NEUR 2110. Statistical Neuroscience.
A lecture and computing lab course for senior undergraduate and graduate students with background in either systems neuroscience or applied math/biomedical engineering on the statistical analysis and modeling of neural data, with hands-on Matlab/Octave/Python-based applications to real and simulated data. Topics will include signal processing, hypothesis testing and statistical inference, modeling of multivariate time series and stochastic processes in neuroscience and neuroengineering, neural point processes, time and spectral domain analyses, and state-space models. Example datasets include neuronal spike trains, local field potentials, ECoG/EEG, and fMRI. Sign-up sheet in Sidney Frank Hall, Room 315 beginning on the first day of registration. Instructor permission required.
Spr NEUR2110 S01 24858 Arranged (W. Truccolo)

NEUR 2300E. Bench to Bedside: Unraveling Diseases of the Nervous System.
Enrollment restricted to graduate students.
Fall NEUR2300ES01 16591 Th 4:00-4:50 (B. Connors)
Spr NEUR2300ES01 25485 Arranged (B. Connors)

NEUR 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 NEUR2970 S01 14597 Arranged (D. Sheinberg)
Spr NEUR2970 S01 23802 Arranged (D. Sheinberg)

NEUR 2980. Graduate Independent Study.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. S/NC

NEUR 2990. Thesis Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.
Fall NEUR2990 S01 14598 Arranged (D. Lipscombe)
Spr NEUR2990 S01 23803 Arranged (D. Lipscombe)

Program in Liberal Medical Education
PLME 1000. PLME Senior Seminar in Scientific Medicine.
This course is an interdisciplinary and integrative science course that will supplement the preparation of both PLME and pre-medical students for the study of medicine in the 21st century. The course will use a case-based approach to relevant and contemporary subjects in medicine and health care, such as: biological systems and their interactions; diagnosis and therapy optimization; and the humanistic aspects of patient care. The course is intended for seniors interested in attending medical school but will preferentially enroll PLME students. Prerequisite: PLME competency in Biology, Chemistry (inorganic and organic), Physics, and introductory calculus. Enrollment limited to 40. S/NC
Fall PLME1000 S01 16305 MW 8:30-9:50(16) (J. Ip)

Business, Entrepreneurship and Organizations
BEO 1930A. BEO Capstone I: Organizational Studies Track.
The first in a two-semester Capstone for BEO Organizational Studies track seniors, open to all BEO seniors. Capstone builds upon concepts covered in BEO courses, specifically concepts from SOC 1311 and 1315. Students will synthesize knowledge at several levels: across disciplines, across theoretical understanding and practical application, and across private and public sector experiences of entrepreneurship and innovation. Students will be organized into client mentored teams for social entrepreneurship and social innovation projects. BEO 1930A (fall) required; 1940A (spring) strongly advised for all Organizational Studies track seniors. Application required to match students to projects. Project team meetings required outside scheduled lectures. WRIT
Fall BEO1930A S01 15104 TTh 2:30-3:50(11) (M. Fennell)

BEO 1930B. BEO Capstone I: Entrepreneurship and Technology Management Track.
The first in a two-semester Capstone required of BEO Tech track seniors. Student teams from Engineering, BEO and other technical and non-technical disciplines form simulated high tech start-up companies working on mentor-defined opportunities. Concepts reviewed in class include: product commercialization, intellectual property, marketing, product requirements documentation, team building, safety, environmental and legal requirements. BEO Tech track concentrators should complete ENGN 1010 prior to course. Enrollment is limited. Students must complete formal application (BEO Tech track seniors automatically approved). Project team meetings required outside scheduled lectures. Non-BEO concentrators require instructor permission. WRIT
Fall BEO1930B S01 15105 TTh 2:30-3:50(11) (S. Petterut)

BEO 1930C. BEO Capstone I: Business Economics Track.
Designed for BEO Business Economics track seniors, this capstone is open to all BEO students, and builds upon BEO concepts in economics, finance, strategy and markets. Students form teams to solve existing business problems, simulating groups of consultants. Projects range from recommending appropriate finance for new investments to project evaluation and pricing of new services. Student teams have client mentors. Students apply analytical frameworks of BEO disciplines to home writing, presentational, leadership and organizational skills. Application required to match students to projects. Project team meetings required outside scheduled lectures. WRIT
Fall BEO1930C S01 15106 TTh 2:30-3:50(11) (T. Nguyen)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
CHEM 0100. Introductory Chemistry.
Explores stoichiometry, atomic and molecular structure, chemical bonding, solutions, gases, chemical reactions, equilibria, and thermodynamics. Three hours of lecture, one conference per week, no laboratory section. S/NC.

CHEM 0330. Equilibrium, Rate, and Structure.
Explores the electronic structure of atoms and molecules, thermodynamics, solution equilibrium, electrochemistry, chemical kinetics, 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 0350. Organic Chemistry.
Sequel to CHEM 0330. Investigates the constitution and properties of the different classes of organic compounds, with considerable attention to reaction mechanisms. The laboratory work involves an introduction to micropreparative and analytical techniques of organic chemistry and the preparation of representative organic compounds. Three hours of lecture and five hours of prelaboratory and laboratory. Prerequisite: CHEM 0330.

Students MUST register for a common meeting, a lecture section, a lab and a conference.

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

Students MUST register for a lecture section, a lab and a conference.

CHEM 0400. Biophysical and Bioinorganic Chemistry.
Examines aspects of physical and inorganic chemistry relevant to biochemistry: thermodynamics of hydrophobic and hydrophilic interactions, electrically charged membranes, coordination chemistry, active and passive transport, enzyme kinetics and mechanisms, metal-based drugs, and physical methods. Three hours of lecture and five hours of laboratory. Prerequisite: CHEM 0360 and MATH 0100 or 0170. Prerequisite or corequisite: PHYS 0040 or 0060.

Students MUST register for a lecture section and a lab.

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

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

CHEM 1140. Physical Chemistry: Quantum Chemistry.
An introduction to the quantum theory of chemical systems. Elements of quantum mechanics; electronic structure of atoms and molecules; study of molecular structure and behavior by spectroscopy; chemical bonding are explored. Prerequisites: CHEM 0330, MATH 0180 or equivalent, PHYS 0040 or 0060 or equivalent. Recommended but not required: MATH 0520 or equivalent.

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 0350, CHEM 0360, and BIOL 0280. If enrollment exceeds the limit, permission to enroll will be allotted in the order: 1) first year graduate students, 2) senior concentrators in Chemistry or Biochemistry 3) junior concentrators 4) other students. Students who have registered or have permission to enroll must
CHEM 1240. Biochemistry. 
Examines the chemical, mechanistic, and structural basis for enzymatic catalysis. Uses examples from the recent literature to examine how the experimental and conceptual tools of chemical synthesis, isotopic labeling, stereochemistry, enzymology, kinetics, and protein structure can be brought to bear to unravel the chemical and physical principles underlying the enormous catalytic acceleration and exquisite structural specificity of enzyme-catalyzed reactions. Prerequisites: Strong background in organic chemistry (CHEM 0350-0360), A or B performance preferable plus at least one semester of Biochemistry (BIOL 0280, BIOL 1270). Enrollment limited to: 25 students, written permission required. If enrollments exceed the limit of 25 students, permission to enroll for students who meet the course prerequisites will be allotted in the order: a) first year Chemistry graduate students, b) undergraduate senior concentrators in Chemistry, Biochemistry or Chemical Biology, c) junior concentrators in Chemistry, Biochemistry or Chemical Biology, d) other students. Students who have permission to enroll must attend the first three classes or risk losing their places to someone on the waiting list.

Fall CHEM1230 S01 14832 MW 8:30-9:50(16)  
(J. Selio)

CHEM 1240. Biochemistry. 
Examines the chemical, mechanistic, and structural basis for enzymatic catalysis. Uses examples from the recent literature to examine how the experimental and conceptual tools of chemical synthesis, isotopic labeling, stereochemistry, enzymology, kinetics, and protein structure can be brought to bear to unravel the chemical and physical principles underlying the enormous catalytic acceleration and exquisite structural specificity of enzyme-catalyzed reactions. Prerequisites: Strong background in organic chemistry (CHEM 0350-0360), A or B performance preferable plus at least one semester of Biochemistry (BIOL 0280, BIOL 1270). Enrollment limited to: 25 students, written permission required. If enrollments exceed the limit of 25 students, permission to enroll for students who meet the course prerequisites will be allotted in the order: a) first year Chemistry graduate students, b) undergraduate senior concentrators in Chemistry, Biochemistry or Chemical Biology, c) junior concentrators in Chemistry, Biochemistry or Chemical Biology, d) other students. Students who have permission to enroll must attend the first three classes or risk losing their places to someone on the waiting list.

Fall CHEM1230 S01 14832 MW 8:30-9:50(16)  
(J. Selio)

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. WRIT

Students MUST register for a lecture section and a lab.  
Spr CHEM1450 S01 24050 MW 8:30-9:50(02)  
(C. Seto)

CHEM 150G. Nuclear Magnetic Resonance. 
These special topics courses cover the basics of modern NMR spectroscopy. Topics to be included are as follows: modern Fourier transform methodology, modern NMR instrumentation, and a comprehensive discussion of one and two dimensional experiments that are routinely performed. Topics such as coherence transfer and pulsed field gradients will also be included. Experimental methods covered in detail include COSY, TOCSY, HSQC, HMBC, NOSEY, ROESE, EXSY and DOSY methodology. This course will not focus on structure determination or spectral interpretation but rather on experimental methodology.

Spr CHEM150GS S01 24052 MWF 10:00-10:50(03)  
(To Be Arranged)

CHEM 150M. Applied Materials Chemistry. 
Materials chemistry is the study of the synthesis, structure, properties, and application of solid materials. Our technology-driven world is fueled by advances in materials chemistry with examples of application in areas such as microelectronics, polymers, and energy technology. This course will explain how application of materials chemistry through the materials properties and characterization, detailing how the crystalline and molecular structure of materials can be related to electronic, optical, thermal, and mechanical properties. WRIT

Spr CHEM150MS S01 24078 TTh 9:00-10:20(08)  
(K. Koski)

CHEM 1660. Instrumental Analysis with Environmental Applications. 
This course covers the principles and practical applications of important analytical chemistry tools used to study environmental problems, including discussions of method selection and statistical treatment of data. Students will strategize and implement a study of a field site. Includes lab sessions with hands-on experience of instrumental analysis using atomic and molecular spectroscopic techniques, separations by gas and liquid chromatography, and electrochemical methods. Prerequisite: CHEM 0330 or GEOL 1370. Enrollment limited to 20. Instructor permission required.

Spr CHEM1660 S01 24053 TTh 10:30-11:50(09)  
(To Be Arranged)

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.

Fall CHEM1700 S01 14833 MWF 11:00-11:50(04)  
(S. Sun)

CHEM 2010. Advanced Thermodynamics. 
Fundamental principles of macroscopic equilibrium thermodynamics. The three laws of thermodynamics, the thermodynamic potentials, temperature scales, heat engines and refrigerators, entropy, kinetic theory, and transport phenomena. Applications to solids, fluids, and magnetic systems; Gibbs relations, first and second order phase transitions, thermal radiation, gas expansions.

Fall CHEM2010 S01 14834 TTh 9:00-10:20(08)  
(C. Rose-Petruck)

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 24055 MWF 9:00-9:50(02)  
(To Be Arranged)

CHEM 2310. Advanced Inorganic Chemistry. 
Comprehensive survey of topics in synthetic and mechanistic organometallic chemistry.

Fall CHEM2310 S01 14835 TTh 10:30-11:50(13)  
(E. Victor)

CHEM 2320. Physical Inorganic Chemistry. 
The bonding and structures of inorganic compounds, including transition metal containing compounds and organometals, and their spectroscopic properties are covered along with the group theoretical, quantum chemical, and physical methods employed. Prerequisites: CHEM 0500 and 1140 or equivalents or written permission. Recommended for seniors and first-year graduate students.

Spr CHEM2320 S01 24056 TTh 10:30-11:50(09)  
(To Be Arranged)

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, carboxations, carbanions, and carbones. Prerequisites: CHEM 0500, CHEM 1140.

Fall CHEM2410 S01 14909 MWF 10:00-10:50(03)  
(C. Seto)

CHEM 2420. Organic Reactions. 
Study of organic reactions and reaction mechanisms. Discussion and analysis of organic transformations. Topics can include arrow pushing strategies and synthetic methods.

Fall CHEM2420 S01 14910 TTh 9:00-10:20(08)  
(P. Williard)

CHEM 2430. Synthetic Organic Chemistry. 
Methods, strategies, and mechanisms. Topics may include the chemistry of anions, cations, and radicals, concerted reactions, conformational analysis, and stereochemistry.

Spr CHEM2430 S01 24057 MWF 9:00-9:50(02)  
(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 14911 TTh 10:30-11:50(09)  
(G. Diebold)

CHEM 2780. Quantum Mechanics. 
Semester II: Lectures consider the theory and application of time-dependent quantum mechanical methods in chemical physics. Both few and many-body methods are described and discussions include the correlation function formulation of chemical dynamics. Numerical path integral methods for equilibrium and dynamical problems are introduced. Prerequisite: CHEM 2770.

Spr CHEM2780 S01 24058 MWF 11:00-11:50(04)  
(To Be Arranged)

CHEM 2870. Departmental Colloquia. 
No description available. Open to graduate students only.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
CHEM 2870. Departmental Colloquia.
No description available. Open to graduate students only.
Fall CHEM2880 S01 14912 F 4:00-5:50(14) "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 11454 Arranged "To Be Arranged"
Spr CHEM2970 S01 23754 Arranged "To Be Arranged"
CHEM 2980. Research.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.
CHEM 2990. Thesis Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.
Fall CHEM2990 S01 14548 Arranged "To Be Arranged"
Spr CHEM2990 S01 23755 Arranged "To Be Arranged"
CHEM XLIST. Courses of Interest to Students wishing to Study Chemistry.

Classics

CLAS 0210B. Death in Ancient Greece.
Examines how ancient Greeks understood, described, and experienced death. Making use of sources in translation, considers how death is anticipated, imagined, feared, and sometimes sought. Also contrasts classical ideas with current experiences in our own society in order to see whether and how our assumptions concerning death are culturally determined. Enrollment limited to 20 first year students. FYS LILE WRIT
Fall CLAS0210B S01 24882 TTh 1:00-2:20(10) (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 weary 'westerner'. WRIT FYS
Fall CLAS0210T S01 17004 TTh 9:00-10:20(08) (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. WRIT Fall CLAS0660 S01 15929 MWF 11:00-11:50(04) (E. Papalaioullou)

CLAS 0780. From Antiquity to the Humanities (via Humanism) and the History of Ideas.
This course looks at the origins of several subjects in the Humanities in order to explain, question, and sometimes challenge the ways in which those subjects are studied or understood today. Consideration of sources for the Humanities today – in the educational practices of classical antiquity, in the 'humanism' of the Renaissance and in the 17th-20th centuries – will throw new light on ideas and categories which are central to western education. Topics include grammar/language, persuasive argument, scholarship; theory/practice of history, literature, poetry, fiction, fantasy, and the novel; relationship between words and images, and connections between studying the Humanities and being human.
Fall CLAS0780 S01 16583 TTh 2:30-3:50(11) (A. Laird)

CLAS 0820. Epics of India.
An introduction to Indian epic literature with reading and analysis of one or more of India’s grand and powerful epics, such as the Mahabharata, the Rāmāyana, the Cilappadikaram, and others. DPLL
Fall CLAS0820 S01 15925 MWF 10:00-10:50(03) (J. Fitzgerald)

CLAS 0850. Mythology of India.
Reviews major myths from religions of India in order to understand how the peoples of India imagined their relation to the divine world, to nature, and to other human beings. Considers connections between myths and religious practices, social structures, historical events, and psychological and aesthetic dimensions of Indian cultural life. Reading of mythic narratives will be accompanied by analysis from selected theoretical perspectives. DPLL
Spr CLAS0850 S01 24915 TTh 2:30-3:50(11) (J. Fitzgerald)

CLAS 0995. The Performing Arts in Classical South Asia.
South Asia is home to rich classical traditions in the performing arts – drama, dance, music – which continue to this day. These performative traditions are accompanied by theoretical analyses going back to the Nāṭyāṣāstra attributed to the sage Bharata. This course introduces students to these traditions and theories to allow for an informed appreciation of the arts of classical South Asia. This course will include reading classical texts in translation and experiencing, analyzing, and discussing recorded performances. The final portion of the course will examine Bollywood film against the background knowledge gained throughout the course. DPLL LILE
Fall CLAS0995 S01 16105 TTh 1:00-2:20(10) (D. Buchta)

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. LILE WRIT
Fall CLAS1120G S01 15934 MWF 1:00-1:50(06) (J. Pucci)

CLAS 1120M. Plato.
A close reading of Plato's major dialogues from a philosophical perspective. Topics may include his ethics, politics, metaphysics, epistemology, philosophy of mind, philosophy of language, or aesthetics. Readings are from original sources (in translation) and contemporary secondary literature. Students wishing to read the texts in the original Greek should make arrangements with the instructor. Spr CLAS1120M S01 24937 TTh 6:40-8:00PM(12) (M. Gili)

CLAS 1120Q. Seven Wonders of the Ancient World.
"Everyone has heard of the Seven Wonders of the World," wrote Philo of Byzantium two millennia ago, and it's still true today. But what's a "Wonder"? And why seven of them? Why make such a list anyway, then or now? This class will use ancient texts, explorers' accounts, and archaeological investigations to travel through several thousand years of history in the Mediterranean and Near Eastern world. We will consider how the Seven Wonders captured past imaginations; the aura of technological achievements; the intersections of history, memory, invention, and myth; and how members of one culture view another culture's monuments. LILE WRIT
Fall CLAS1120Q S01 16026 MWF 12:00-12:50(12) (J. Cherry)

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 (CS-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 24875 MWF 11:00-11:50(04) (L. Mignone)

Brown University
CLAS 1120T. Age of Augustus: Topography, Architecture, and Politics.
Augustus Caesar boasted that he had found Rome a city in brick, but left it in marble. This course explores the transformation of Rome from an unadorned village to the capital of an empire. Was Rome’s first emperor trying to fashion himself a Hellenistic monarch on the model of Alexander and his successors? Was he simply operating within republican traditions, which had been established through centuries of aristocratic competition at Rome? Our source materials will include ancient works of art and architecture, literary accounts, maps, and critical urban theory.
Fall CLAS1120T S01 15941 TTh 10:30-11:50(13) (L. Mignone)

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 humanitarian expression in the western tradition. It is organized around five categories: memory, language, consolation, farewell, and self-reflection. Our work involves reading and viewing/listening to various materials, including videos and original documents. The words we study, both by and about presidents, will be compared to various masterworks of Greco-Roman antiquity and the western Middle Ages. LILE WRIT Spr CLAS1120U S01 24881 MWF 1:00-1:50(06) (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. DPLL Spr CLAS1160 S01 24911 TTh 10:30-11:50(09) (J. Fitzgerald)

CLAS 1210. The History of Greece from Archaic Times to the Death of Alexander.
A detailed examination of the history of the Greeks-political, economic, and social-from Homer’s time to the establishment of the Hellenistic monarchies by the successors of Alexander the Great. The ancient sources are closely and critically studied (in translation).
Fall CLAS1210 S01 16175 MWF 10:00-10:50(03) (G. Oliver)

CLAS 1220. The Fall of Empires and Rise of Kings: Greek History 479 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, explores life-changing events that affected the people of the eastern Mediterranean and through these transformations, offers deep insights into the common pressures that ordinary people and their communities confronted.
Fall CLAS1220 S01 25088 MWF 10:00-10:50(03) (G. Oliver)

CLAS 1420. The Culture of Death in Ancient Rome.
This course examines the way that death and dying were perceived and managed in ancient Roman culture. Primary source readings will include selections from philosophers, poets, inscriptions, and a variety of prose literature (consolations, epitaphigraphy, historiography, novels). Secondary literature will focus on demography and social relations, the anthropology of funerary ritual, and material culture, which will be integrated systematically throughout the course, and which will include consideration of artistic representations and iconography, as well as the archaeology of Roman mortuary practices.
Spr CLAS1420 S01 25199 MWF 2:00-2:50(07) (J. Bodei)

CLAS 1750H. Heroes and Heroism in Graeco - Roman Antiquity and Beyond.
Examines the concept of hero, an ancient Greek word, which had a wide variety of meanings and was employed to designate a series of diverse characters of myth. We will trace the evolution of this idea through a detailed analysis of its uses in Greek and Roman texts, and also contrast its ancient sense with present day conceptions of the hero and heroism.
All readings will be in English. The course is open to all undergraduates, but preference will be given to juniors and seniors. Enrollment limited to 25.
Fall CLAS1750H S01 15945 TTh 2:30-3:50(11) (P. Nieto Hernandez)

CLAS 1750L. Erotic Desire in the Premodern Mediterranean.
Erotic desire may be a universal human phenomenon. How we explain, depict, express, or experience desire is, however, not a universal, uniform matter. The premmodern Mediterranean (from roughly the fifth century BCE to the fifteenth century CE) gives us a variety of forms of sexual experience and expression. We will study the history of these forms through texts, images, and objects: from Platonic love or eros to Roman tales of romance, from Judeo-Christian mysticism to Islamic literature, from sexual diets to erotic amulets. Enrollment limited to 25.
Spr CLAS1750L S01 24884 TTh 1:00-2:20(10) (E. Papaloannou)

CLAS 1750P. Staging the Law: Classical Literature and Renaissance Drama.
(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 25774 TTh 10:30-11:50 (A. Scafuro)

CLAS 1750R. Holy Places and Sacred Spaces in Ancient Greece.
For thousands of years, travelers have been astonished at the physical beauty of Ancient Greek sites such as Olympia, Delphi, and Delos. For anyone who visits these numinous sites, it’s easy to see why the Greeks believed that the gods loved them, too. In this course we will be exploring the notion of sacred space in Greek, with emphasis on sanctuaries, topography, archaeological phenomenology, and pilgrimage. We will research and discuss sites and sanctuaries from literary, archaeological, and other material and theoretical perspectives; we will also ask what about certain spaces and places leads us to regard them as ‘sacred’.
WRIT

CLAS 1750S. 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.

CLAS 2010B. Roman Topography.
That actions occur in place is obvious, but does place define action, and how do actions define place? How does the accretion of meanings assigned to a place through repeated use provide significance to the current actions, affect reinterpretations of past events, and effect future uses? Topography explores not only the history of monuments but also the constellation of meanings shaped by the interaction of monuments with each other in the cultural landscape. Topographical relationships serve as an imprint of a particular community’s social, political, economic, and religious behavior within and across space and time. Ancient Roman case studies.
Fall CLAS2010B S01 16810 Th 4:00-5:30(02) (L. Mignone)

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 14548 Approved 
Spr CLAS2970 S01 23756 Approved 
To Be Arranged
CLAS 2980. Reading and Research.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Instructor permission required.

CLAS 2990. Thesis Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.
Fall CLAS2990 S01 14549 Arranged "To Be Arranged"
Spr CLAS2990 S01 23757 Arranged "To Be Arranged"

CLAS XLIST. Courses of Interest to Classics Concentrators.
Spring 2016
The following courses may be taken for concentration credit. Please see the sponsoring department for the time and location of each course.

Religious Studies
RELS 0325 How the Bible Became Holy

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 15935 MWF 1:00-1:50(08) (W. Jacobs)
Fall GREK0100 S01 15935 TTh 12:00-12:50(06) (W. Jacobs)

GREK 0110. Introduction to Ancient Greek.
Intensive, one-semester introduction to Greek. No previous knowledge of Greek is required.
Spr GREK0110 S01 24876 TTh 12:00-12:50(10) "To Be Arranged"
Spr GREK0110 S01 24876 MWF 11:00-11:50(10) "To Be Arranged"

GREK 0200. Essentials of the Greek Language.
Second half of a two-semester approach to ancient Greek with special emphasis on developing facility in rapid reading of Greek literature. Selections from Attic Greek authors. No previous knowledge of Greek is required.
Spr GREK0200 S01 24880 TTh 12:00-12:50(10) "To Be Arranged"
Spr GREK0200 S01 24880 MWF 12:00-12:50(10) "To Be Arranged"

GREK 0300. Introduction to Greek Literature.
Introduction to Greek literature through intensive reading. Prerequisite: GREK 0200, GREK 0110, or the equivalent. We will work on grammar skills while reading extensively in the Histories of Herodotus, who is not only the "father of history" but also a great (and delightful) artist in prose.
Fall GREK0300 S01 15923 MWF 9:00-9:50(16) (M. van Veldhuizen)

GREK 0400. Introduction to Greek Literature.
Prerequisite: GREK 0300 (or the equivalent). Review of grammar of the Attic dialect through rapid reading of texts by Lysias, Plato, or Xenophon. Emphasis on syntax and style.
Spr GREK0400 S01 24883 MWF 1:00-1:50(06) "To Be Arranged"

GREK 1010. Introduction to Greek Drama.
Both for students who have recently finished GREK 0300 and 0400 and for those who have little or no experience of translating Greek drama. Begins with a brief review of Attic grammar with readings in Plato. Then turns to Greek drama with students reading a play of one of the dramatists and focusing on philological analysis and meters.
Spr GREK1010 S01 24916 TTh 2:30-3:50(11) (A. Scafuro)

GREK 1080. Attic Orators.
No description available.
Fall GREK1080 S01 15943 TTh 1:00-2:20(10) (J. Hanink)

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 vocabulary, and find great pleasure in immersing themselves in this thrilling masterpiece.
Fall GREK1100 S01 24910 TTh 9:00-10:20(08) (P. Nieto Hernandez)

GREK 1100B. Greek Bucolic Poetry.
Ancient Greek bucolic (or pastoral) poetry offers a fascinating look into the development of a genre out of the literary experiments of the early Hellenistic period. True to its name, the tradition centers around Theocritus’ colorful, often ironically humorous dialogues between herdsmen and other rural characters; but it encompasses a variety of themes, among them mythology, lamentation, and melodramatic narratives of unrequited love. We will read a broad selection of this body of poetry, by Theocritus and others, with the original Greek with attention to its linguistic and stylistic features and its place in the wider literary tradition.
Fall GREK1100B S01 16106 TTh 10:30-11:50(13) (J. Reed)

GREK 1110Z. Greek Texts in the Postclassical Tradition.
A treasure of unedited or insufficiently edited as well as untraslated or little studied Greek texts exists in the postclassical tradition (especially from the Roman period onward). The course will introduce graduate and qualified undergraduate students into this large body of later Greek literature as well as provide training in the study of manuscripts and the preparation of critical editions, translations, and commentaries. Participation in a joint publication project is possible.
Fall GREK1110Z S01 16258 MWF 2:00-2:50(07) (E. Papaioannou)

GREK 1820. Fifth Century Survey.
We begin with Pindar and read poetry and prose literature composed throughout the fifth century, with attention to its historical developments and the intellectual ideas that drive it.
Fall GREK1820 S01 15947 TTh 2:30-3:50(11) (A. Scafuro)

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

GREK 1930B. Greek Epigraphy.
Practical (making and reading squeezes, identifying letters, locating inscriptions, etc.) and analytical aspects of epigraphy will be pursued. The major focus will be legal inscriptions from the Greek world.
Spr GREK1930B S01 24955 MWF 2:00-2:50(07) (G. Oliver)

GREK 1930E. Advanced Greek Reading: Plato’s Timeaus.
Plato’s Timeaus, with its colorful story of Atlantis and its account of the creation of the cosmos, is perhaps the most influential Platonic work in the subsequent philosophical and scientific tradition and in early Christianity. It is a fascinating work in its own right, with science conceived as a mere “likely story,” use of mathematics and teleological explanation, appeal to a divine creator, and metaphysics of separate immaterial forms and Receptacle (space or matter?) in which things around us, modeled on forms, come to be and perish. We will read the Timeaus in Greek and discuss its key ideas.
Spr GREK1930E S01 25093 TTh 1:00-2:20(10) (M. Gill)

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

GREK 2070B. Seminar: Hellenistic Poetry.
In this seminar we will read in their original Greek version extended portions of three major Alexandrian poets’ works: Apollonius of Rhodes, Callimachus, and Theocritus, supplemented by readings in Hellenistic epigrams and other texts as well as secondary literature. We will pay attention to the social, political and literary environment of third century Alexandria, where –under very special conditions– these works were produced and received for the first time. We shall investigate the nature of the Hellenistic aesthetic, the relation of Hellenistic to archaic and classical poetry, and the way Hellenistic poetry is a reflection of its time and place.
Fall GREK2070B S01 15948 W 3:00-5:30(17) (P. Nieto Hernandez)

GREK 2110F. Greek Palaeography and Premodern Book Cultures.
Introduction to pre-modern Greek book culture and the study of Greek literary scripts from classical antiquity to the Renaissance. Students become acquainted with the history of books, the context and agents of their production, and the transmission of Greek (classical as well as post...

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
classical) literature. Training is provided in reading and dating different scripts and in editing ancient texts.

Spr GREK2110F S01 24936 Th 4:00-6:30(17) (E. Papaoiannu)

Grek 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 GREK2970 S01 14572 Arranged "To Be Arranged"
Spr GREK2970 S01 23779 Arranged "To Be Arranged"

Grek 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.

Grek 2990. Thesis Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.
Fall GREK2990 S01 14573 Arranged "To Be Arranged"
Spr GREK2990 S01 23780 Arranged "To Be Arranged"

Latin

Latin 0100. Essentials of the Latin Language.
An intensive two-semester approach to Latin with special emphasis on developing facility in the rapid reading of Latin literature. No previous knowledge of Latin is required.
Fall LATN0100 S01 15924 Tth 12:00-12:50(10) (L. Karper)
Fall LATN0100 S01 15924 MWF 9:00-9:50(10) (L. Karper)

Latin 0110. Introduction to Latin.
Intensive, one-semester introduction to Latin. No previous knowledge of Latin is required.
Spr LATN0110 S01 24870 TTh 12:00-12:50(10) "To Be Arranged"
Spr LATN0110 S01 24870 MWF 9:00-9:50(10) "To Be Arranged"

Latin 0200. Essentials of the Latin Language.
Second course in an intensive two-semester approach to Latin. Special emphasis on developing facility in the rapid reading of Latin literature. No previous knowledge of Latin is required.
Spr LATN0200 S01 24869 TTh 12:00-12:50(10) "To Be Arranged"
Spr LATN0200 S01 24869 MWF 9:00-9:50(10) "To Be Arranged"

Latin 0300. Introduction to Latin Literature.
Introduction to Latin literature through intensive reading of major authors in prose and poetry with careful attention to grammar and style. Prerequisite: LATN 0100, 0200 or 0110 (or equivalent).
Fall LATN0300 S01 15930 MWF 11:00-11:50(4) (T. Settle)

Latin 0400. Introduction to Latin Literature.
Introduction to Latin literature through intensive reading of major authors in prose and poetry with careful attention to grammar and style. Prerequisite: LATN 0100, 0200 or 0110 (or equivalent).
Spr LATN0400 S01 24874 MWF 10:00-10:50(3) "To Be Arranged"

Latin 1060E. Livy.
Close readings of Livy's history of Rome, From the Foundation of the City. As we read selections from Books 1, 5, and 21, we will explore several historiographical aspects of Livy's text. We will consider both the historical tradition Livy was adapting and the influence and intrusion of the Augustan regime upon Livy's particular construction of the past. We will pay special attention to the roles played by myth, legend, and history. We will also discuss the text as literature and examine how the historian structures and crafts his work into individual books, sets of books, and a coherent multi-volume whole.
Spr LATN1060E S01 24868 MWF 9:00-9:50(2) (L. Migneone)

Latin 1060J. Ovid. Heroines.
Ovid's collection of "Heroines" is comprised of fifteen elegiac "letters" from mythological heroines to the lovers who have mistreated or abandoned them, as well as three pairs of letters between heroic lovers and their beloveds. We will read selected Heroines in Latin and the remaining poems in English translation. Emphasis will be placed on close reading of the Latin and on the poems' engagement both with poetic issues (e.g., genre and allusion) and with the wider political, social, and cultural discourses of Augustan Rome. DPLL LILE WRIT
Spr LATN1060J S01 25200 TTh 10:30-11:50(9) (J. Debrouhun)

Latin 1110E. Comedy.
No description available.
Fall LATN1110E S01 15942 TTh 10:30-11:50(13) (A. Scafuro)

Latin 1110H. Literature at the Court of Charlemagne.
We will read widely in the Latin literature of the eighth and ninth centuries, paying attention to genre, meter, patronage, and the shifting usages put to poetry in the decades in which Charlemagne ruled.
Spr LATN1110H S01 24917 MWF 2:00-2:50(7) (J. Pucci)

Latin 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 15939 MWF 2:00-2:50(7) (J. Debrouhun)

Latin 1120C. Survey of Late and Medieval Latin.
A study of the masterworks of the Latin language written between 350 C.E. and 1300 C.E., with special emphasis on the 4th, 8th, and 12th centuries. The historical development of Latin literature; changes in Latin grammar, syntax, and morphology; innovations in genre, prosody, and stylistics; and the relationship of writings (manuscripts) to art and music.
Fall LATN1120C S01 15931 MWF 11:00-11:50(4) (J. Pucci)

Latin 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 15944 TTh 1:00-2:20(10) (J. Reed)

Latin 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 24877 MWF 11:00-11:50(4) (J. Reed)

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.

Latin 2080F. Latin in America.
Exploration of some of the rich and extensive 'neo-Latin' writing from colonial Spanish America, with particular emphasis on poetry and literary prose from sixteenth-century Mexico, much of which has never been studied or translated. Latin satires, epigrams, bucolic poems, literary epistles and dialogues will be examined in relation to their classical models and influences – and in the context of the multicultural environment in which they were produced. As well as opening a new world of Latin, this course will familiarize you with the format of some early modern books and manuscripts, and offer a unique perspective on traditional classical literature.
Fall LATN2080F S01 16907 M 3:00-5:30(15) (A. Laird)

Latin 2120C. Graduate Seminar: Apuleius.
No description available.
Spr LATN2120C S01 24935 W 3:00-5:30(14) (J. Bodel)

Latin 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.

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

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

Fall MGRK0100 S01 15932 MWF 12:00-12:50(12) (D. Resh)

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 24879 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 15951 TTh 10:30-11:50 (V. Calotychos)

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 24920 Arranged (E. Amanatidou)

MGRK 0600. Advanced Modern Greek.
A continuation of MGRK 0500. Students who have not taken the previous sequence may take a placement test, after consultation with the instructor. The course aims to promote range, accuracy and fluency and enable students to develop ease and spontaneity with the language. Authentic materials drawn from a range of sources inform the content of the course and include films, literature, media, testimonies, music and internet based sources. The development of transcultural competence will be an essential component of the course.

Spr MGRK0600 S01 24918 TTh 9:00-10:20(08) (E. Amanatidou)

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

Sanskrit

SANS 0100. Elementary Sanskrit I.
This course introduces Sanskrit to students who have no prior knowledge of any language other than English. Students quickly learn to read the Devanāgari script and study the basics of the sound-system of Sanskrit. The course rapidly surveys the basics of Sanskrit grammar while using adaptions of classical Indian myths and stories as reading exercises.

Fall SANS0100 S01 15933 TTh 12:00-12:50(12) (D. Buchta)

SANS 0200. Elementary Sanskrit II.
This course continues the survey of grammar and the reading exercises of SANS 0100. The second half of this course reads selected passages of the Bhagavad Gītā and the beginning of the classic story of Naïla and Damayanti from the Mahābhārata. Prerequisite: SANS 0100.

Spr SANS0200 S01 24878 TTh 12:00-12:50(10) (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 15928 MWF 3:00-3:50 (D. Buchta)

SANS 0400. Classical Sanskrit Story Literature.
Introduces students to the more challenging Sanskrit of classical story literature and continues to extend the knowledge of Sanskrit grammar introduced in first year Sanskrit and developed in SANS 0300, as well as present basic Indian cultural themes. Prerequisite: SANS 0300.

Spr SANS0400 S01 24923 Arranged (D. Buchta)

SANS 1100. Vedic Sanskrit.
Introduction to reading the Rig Veda and later Vedic literature, with particular attention to the grammar of Vedic Sanskrit.

Fall SANS1100 S01 15936 MWF 1:00-1:50(06) (J. Fitzgerald)

SANS 1400. The Sanskrit Grammatical Tradition.
Introduction to the Sanskrit tradition of vyākaraṇa (grammatical derivation and analysis) through reading Pāṇini's Aṣṭādhyāyī and commentaries upon it.

Spr SANS1400 S01 24921 Arranged (D. Buchta)

Cognitive, Linguistic and Psychological Sciences

Cognitive, Linguistic and Psychological Sciences

CLPS 0010. Elementary Psychology: An Introduction to Mind and Behavior.
A survey covering the roles of inherited and environmental determinants of human behavior. Topics include sensation, perception, learning, memory, motivation, emotion, neural processes, language, social development, personality assessment, obedience, interpersonal attraction, and the diagnosis, origins, and treatment of mental illness. Laboratory sections illustrate methodologies used to study these issues. Topic selection varies with instructor.

Fall CLPS0010 S01 15719 MWF 1:00-1:50(06) (E. Festa)

Cognitive science is the study of the mind from an interdisciplinary perspective. It focuses on such questions as how do we process...
information to recognize objects and faces, to know that a cup is not a bowl, to remember and learn, and to speak and understand? How can studying the brain inform us about the mind? This course will examine the above questions and discuss major themes in cognitive science including nature-nurture, categories and representations, and the nature of computations. WRIT

Fall CLPS0030 S01 15725 MWF 12:00-12:50(12) (S. Blumstein)

CLPS 0030. Introduction to Linguistic Theory.
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 which govern how sounds are put together), syntax (the rule system governing sentence structure), and semantics (the system which relates sentences to meanings). LILE

Fall CLPS0030 S01 15759 TTh 10:30-11:50(13) (S. Anderbois)

CLPS 0040. Mind and Brain: Introduction to 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.

Fall CLPS0040 S01 24702 TTh 9:00-10:20(08) (D. Amso)

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. FYS

Fall CLPS0050A S01 15723 MWF 2:00-2:50(07) (J. Anderson)

In a series of theoretical articles, Melvyn Goodale and his collaborators have proposed that separate, but interacting visual systems have evolved for the perception of objects on the one hand and the control of actions directed at those objects on the other hand. This seminar will cover the basic literature addressing this problem with studies involving human and animal studies. Enrollment limited to 20 first year students. FYS

Spr CLPS0050B S01 24865 TTh 1:00-2:20(10) (F. Domini)

CLPS 0100. Learning and Conditioning.
Preserves 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 24696 MWF 1:00-1:50(06) (R. Colwill)

An examination of physiological and evolutionary mechanisms underlying species-specific behavior in both vertebrate and invertebrate animals. Topics include: evolution and mechanisms of sensory systems, modes of locomotion, orientation and navigation, communication, and cognitive capacities of animals.

Spr CLPS0110 S01 24692 MWF 11:00-11:50(04) (A. Simmons)

CLPS 0120. Introduction to Sleep.
Uses sleep as the focal point for describing complex behavioral phenomena. How is sleep measured and defined? How does sleep differ across species? What accounts for the timing of sleep? How does sleep change with age? What are the behavioral, physiological, and cognitive concomitants of different states of sleep? How can dreaming be understood? What can go wrong with sleep? Recommended prerequisite: CLPS 0010, CLPS 0020 or NEUR 0010; or an AP course in psychology or physiology.

Fall CLPS0120 S01 17086 M 3:00-5:30(15) (M. Canskadan)

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. LILE

Spr CLPS0200 S01 24709 TTh 1:00-2:20(10) (J. Austerweil)

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.

Fall CLPS0500 S01 15756 TTh 9:00-10:20(08) (J. Song)

An examination of children's thinking and cognitive development from infancy to middle childhood. Considers a range of topics including memory, reasoning, categorization, perception, and children's understanding of concepts such as space, time, number, mind, and biology. Major theories of cognitive development are described and evaluated in light of the available psychological data. LILE

Fall CLPS0610 S01 15724 MWF 11:00-11:50(04) (D. Sobel)

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.

Spr CLPS0700 S01 24711 TTh 2:30-3:50(11) (B. Maile)

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 15757 TTh 9:00-10:20(08) (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. LILE

Spr CLPS0800 S01 24698 MWF 2:00-2:50(07) (J. Morgan)

CLPS 0900. Quantitative Methods in Psychology.
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 15720 MWF 10:30-11:50(03) (L. Welch)

Fall CLPS0900 S02 15764 TTh 10:30-11:50(13) (K. Speeher)

Spr CLPS0900 S01 24689 MWF 10:00-10:50(03) (J. Wright)

CLPS 1091. 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.

Fall CLPS1091 S01 16912 MWF 10:00-10:50(03) (R. Church)
CLPS 1100. Animal Cognition.
A seminar focusing on the experimental analysis of animal mental processes such as perception, attention, learning, memory, and decision-making. Some specific topics include navigation, visual search, working memory, time perception and memory, song learning in birds, and concept formation. Prerequisite: advanced lab.

Fall CLPS1100 S01 15726 F 3:00-5:30(14) (R. Colwill)
Fall CLPS1100 S01 15726 F 3:00-5:20(14) (R. Colwill)

CLPS 1130. Psychology of Timing.
Topics include temporal perception, memory, and preferences; cognitive, biological, and quantitative theories of timing; biological rhythms; pharmacological influences on time perception and timed performance; altered timing in abnormal states; and timing in sports and music. Enrollment limited to 20.

Spr CLPS1130 S01 24701 MW 8:30-9:50(2) (R. Church)

CLPS 1150. Memory and the Brain.
This class is for undergraduate and beginning graduate students of psychology, cognitive neuroscience, and biology interested in to biological research on memory. There are four parts: 1) how neurons are connected and communicate, 2) fundamental issues in the psychology of memory, 3) memory localization in the brain, and 4) consolidation of memory into a permanent store. The course is designed to be accessible to students in a variety of disciplines, but requires background in psychology, cognitive science, or neuroscience. The class will include lecture, writing assignments, and presentations of primary research articles. Prerequisite: CLPS 0010, 0020, 0040, 0200, or NEUR 0010.

Fall CLPS1150 S01 15764 TTh 1:00-2:20(10) (R. Burwell)

CLPS 1160. Evolution and Development of the Brain.
What is unique about the human brain? In this course, we will investigate this question from an evolutionary, comparative perspective. Drawing upon research from many disciplines including psychology, neurobiology, cognitive science, biology, biological anthropology, and neuroscience, we will identify changes in the nervous system that have occurred over phylogeny and over ontogeny to allow the development of complex social behaviors, cognition, language, and consciousness.

Spr CLPS1160 S01 25079 TTh 1:00-2:20(10) (A. Simmons)

CLPS 1191. Animal Behavior Laboratory.
This course is designed for students with a serious interest in animal behavior research. Topics include methods in lab and field research, enrichment programs for captive species and conditioning procedures for managing zoo and shelter animals. Prerequisites: CLPS 0900 (COGS/PSYC 0090). Enrollment limited to 12; not open to first year students.

Fall CLPS1191 S01 15754 M 1:00-1:50(6) (R. Colwill)

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. WRIT

Spr CLPS1193 S01 24714 TTh 3:00-5:30(16) (K. Bath)

CLPS 1200. Thinking.
An investigation of conceptual structure, judgment, and inferential processes. The focus is on the relation between empirical evidence, theories, and models of cognitive process and structure. Prerequisite: CLPS 0200 (COGS 0420).

Spr CLPS1200 S01 24707 TTh 1:00-2:20(10) (S. Sloman)

How is human memory like a search engine? Is human knowledge like the internet? What can artificial intelligence and machine learning tell us about the mind? How can studying the mind help machine learning? This seminar explores parallels between human cognition and contemporary research in computer science, emphasizing common problems. In addition to the above, topics include simplicity, object recognition, categorization, and causality.

Fall CLPS1211 S01 15765 TTh 2:30-3:50(11) (J. Austenweil)

CLPS 1241. Causal Reasoning.
This seminar will concern the principles and processes by which people learn causal knowledge and engage in causal inference, including prediction, explanation, and counterfactual reasoning. Some emphasis will be on probabilistic models of causal inference and on the development of causal reasoning in young children. Enrollment limited to 20 juniors, seniors, and graduate students.

Fall CLPS1241 S01 15717 M 3:00-5:30(15) (D. Sobel)

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 24897 MWF 1:00-1:50(6) (K. Speeh)

CLPS 1290. Laboratory in Cognitive Processes.
Provides an introduction to computational modeling of cognition, summarizing traditional approaches and providing experience with state-of-the-art methods. Covers pattern recognition and connectionist networks as well as Bayesian probabilistic models, and illustrates how they have been applied in several key areas in cognitive science, including visual perception and attention, object and face recognition, learning and memory as well as decision-making and reasoning. Focuses on modeling simple laboratory tasks from cognitive psychology. Connections to contemporary research will be emphasized highlighting how computational models may motivate the development of new hypothesis for experiment design in cognitive psychology. Prerequisite: comfort with basic linear algebra.

Spr CLPS1291 S01 24704 TTh 10:30-11:50(9) (T. Serre)

CLPS 1310. Introduction to Phonological Theory.
Examines some of the classic and current issues regarding sound structure in the world's languages and introduces the theoretical tools needed to solve them. After an introduction to articulatory phonetics and phonemic analysis, it focuses on phonological analysis of different languages, and discusses rule-based and constraint-based approaches to phonology. Implications for language learning and language change are discussed. Prerequisite: CLPS 0030.

Fall CLPS1310 S01 15758 TTh 10:30-11:50(17) (U. Cohen Priva)

CLPS 1330. Introduction to Syntax.
An in-depth investigation of natural language syntax, an intricate yet highly organized human cognitive system. Focuses primarily on the syntax of English as a means of illustrating the structured nature of a grammatical system, but the broader question at issue is the nature of the rule system in natural language syntax. Prerequisite: CLPS 0030 (COGS 0410).

Spr CLPS1330 S01 24693 MWF 12:00-12:50(5) (P. Hofmeister)

CLPS 1332. Issues in Syntactic Theory.
This course will explore a variety of domains in (primarily) English syntax which have played a key role in the construction of syntactic theories. We will consider two major competing syntactic theories - the 'mainstream' current theory within the US ('Minimalism') and a competing view (Categorial Grammar) which maintains that the syntax can be simplified with more attention to semantics and pragmatics. The course will show how theory construction proceeds and how the various domains interact in intricate and interesting ways, and how evidence from one domain can be brought to bear on the analysis of other domains.
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.

CLPS 1360. Introduction to Corpus Linguistics.
The study of Linguistics relies on language production data. Language corpora contain various sources of such data, often annotated to include additional information such as syntactic, semantic and phonological properties. Such databases often complement or even replace data sources used in other disciplines. This class aims to train students in the use of some of the tools that are commonly used to access and evaluate data in linguistic corpora. Prerequisite: CLPS 0030. Enrollment limited to 25.

CLPS 1370. Introduction to Pragmatics.
Any time we utter a sentence in conversation, the perceived meaning of that sentence involves interaction with the context of its use. Conversation is a two-way street: people act on each other's utterances, and conversational partners shape the future of the conversation in various ways too. This course is an introduction to the scientific study of such phenomena. Specific topics include: presupposition, implicature, speech acts, deixis, anaphora, (in)definiteness, and information structure. LILE Spr CLPS1370 S01 25191 TTh 2:30-3:50(11) (S. Anderbois)

CLPS 1381B. Topics in Phonology: Information Theory in Language. Information theory is used to study the abstract properties of communication systems. Can it improve our ability to understand language? We will examine how the need to communicate predicts several linguistic phenomena. We will focus on phonetic and phonological aspects such as phonetic reduction and sound change and also extend the approach to other levels of linguistic analysis. We will contrast concepts such as frequency, predictability, informativity, and functional load, and see how they can each apply to existing linguistic questions.

CLPS 1383A. The Boundary of Semantics and Pragmatics. This course will examine some recent controversies regarding the question of just what is accounted for by grammatical apparatus as opposed to what can be accounted for by "Gricean" pragmatics (i.e., inferences that listeners draw that are not encoded in the grammar). Particular attention will be paid to some topics surrounding negation, including the distribution of "Negative Polarity Items". Prerequisite: CLPS 1330, 1340, or 1341. Enrollment limited to 40.

CLPS 1385. Topics in Language Acquisition: Language Acquisition and Cognitive Development. What is the relationship between how we think and how we speak? This course explores the concurrent development of children's linguistic and cognitive abilities. Topics include the relationship between word meanings and concepts, the structure of the mental lexicon, pragmatic development, and the Whorfian hypothesis (whether speakers of different languages think differently). Students will read and discuss empirical and theoretical articles, and complete a set of writing assignments and problem sets. Prerequisite: CLPS 0610 or equivalent, or permission of the instructor. Appropriate for students interested in developmental psychology, linguistics, and applied fields such as speech-language pathology.

CLPS 1400. The Neural Bases of Cognition. Research using animal models has informed and guided many of the recent advances in our understanding of the brain mechanisms underlying cognition. This seminar will address topics related to animal models of human cognition. Students will learn how different aspects of the neural bases of cognition are modeled in animals by reviewing the primary research literature. The course is divided into three sections, each addressing a different topic. Topics vary each year, but may include, for example, learning, memory, attention, decision-making, or cognitive impairment associated with neuropathology or aging. Enrollment limited to 20. Not open to first year students.

CLPS 1420. Cognitive Neuropsychology. This seminar will explore the effects of brain damage on cognitive function. The goal of cognitive neuropsychology is to understand the effects of brain pathology within the context of modern theories of cognition, and to draw inferences about normal or intact cognitive function from patterns of dysfunction observed with brain pathology. Selected papers will focus on research investigations of brain damaged populations within one or more areas of cognition (e.g., perception, memory, or attention) that address topics of current relevance. Pre Requisites: CLPS0040 or CLPS0200 or CLPS0400. CLPS0900 is strongly recommended.

CLPS 1480B. Cognitive Aging and Dementia. This seminar examines the cognitive changes associated with normal aging and age-related dementia (e.g., Alzheimer's Disease). Topics covered may include changes in the neurocognitive systems underlying memory, perception, and attention. The course is primarily intended as an advanced seminar for junior and senior concentrators in Psychology, but is also intended for other students interested in aging and the neuropsychology of cognition. Recommended prerequisites: An introductory course in cognitive neuroscience (CLPS 0040 (COGS 0720), CLPS 0400 (PSYC 0470)) or permission of the instructor. Preference will be given to senior concentrators in Psychology and related areas. Enrollment limited to 20.

CLPS 1491. Neural Modeling Laboratory. Numerical simulations of cognitively oriented nervous system models. Discussion of parallel, distributed, associative models: construction, simulation, implications, and use. Prerequisites: MATH 0090, 0100, or equivalent; knowledge of a computer language; some background in neuroscience or cognitive science is helpful.

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 0020 (COGS 0010) or CLPS 0200 (COGS 0420); and CLPS 0410 (PSYC 0750) or NEUR 0010.

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 0200 (COGS 0010), CLPS 0500 (COGS/PSYC 0440), or CLPS 0510 (COGS 0110).

CLPS 1510. Psychology of Hearing. How do we hear the world around us? In this course, we will examine basic phenomena underlying human auditory perception, focusing on topics such as masking, pitch perception, sound localization, and auditory scene analysis. We will discuss theories of hearing, experimental techniques to evaluate hearing, and the impact of age-related declines in hearing on human psychology. Open to juniors and seniors. Prerequisite: CLPS 0500, NEUR 0650, or instructor permission.
CLPS 1520. Computational Vision.
An introduction to computational models of biological vision summarizing traditional approaches and providing experience with state-of-the-art methods. We will sample topics from low- and mid-level vision including fundamental aspects of image, stereo, motion, surface and color processing to high-level vision including object and action recognition as well as scene understanding. Connections to contemporary research in computer vision and computational neuroscience will be emphasized highlighting how computational models may motivate the development of new hypothesis for the design of experiments in visual perception. Prerequisite: comfort with basic linear algebra and at least one introductory course in Computer Science or programming, or instructor permission.

Fall CLPS1520 S01 15713 TTh 10:30-11:50(13) (T. Serre)

CLPS 1530. 3D Shape Perception.
Our ability to move in the environment, recognize and grasp objects, depends enormously on the capacity that the brain has in organizing the visual stimulation in the perceived 3D layout. 3D objects in the world project on the human retina flat images. How does the brain re-transform these flat images into a 3D representation? Enrollment limited to 40.

Fall CLPS1530 S01 15749 T 4:00-6:30(18) (F. Domini)

One of the main purposes of encoding visual information is to perform visually-guided actions to directly interact with the external world. This seminar will shed light on the behavioral and underlying neural mechanisms involved in integrating perception and cognitive processes, and converting them into action. We will also explore how visuo-motor behavior can provide a useful tool to study a wide range of conscious and unconscious cognitive processes including the current focus of attention, the nature of language representation, spatial representation of number, and high-level decision-making. Prerequisite: CLPS 0010, CLPS 0020, or NEUR 0010. Enrollment limited to 40.

Spr CLPS1560 S01 24746 M 3:00-5:30(13) (J. Song)

CLPS 1570. Perceptual Learning.
This course will focus on perceptual learning and visual plasticity. The goal of this course is to understand the mechanisms of visual perceptual learning and visual and brain plasticity. Perceptual learning is defined as long-term performance improvement as a result of visual experiences. Enrollment limited to 20. Recommended prerequisites: CLPS 1291, 1500, and 1520.

Fall CLPS1570 S02 17031 F 3:00-5:30(14) (T. Watanabe)

CLPS 1572. Visual Consciousness.
This lecture course will focus on consciousness related to visual perception. The goal of this course is to understand the neural correlates of visual consciousness. We will examine: 1) basic neural mechanisms of visual processing and other brain functions, 2) philosophical and neuroscientific models of visual consciousness, 3) the roles of attention, reward, and memory in visual consciousness, 4) recent advancements in research of consciousness by neuroscientific experiments with animals and humans.

Spr CLPS1572 S01 25787 F 3:00-5:30(15) (W. Warren)

CLPS 1580D. Seminar in Spatial Cognition.
How do we perceive, learn, remember, and interact with space? This seminar explores spatial knowledge in humans, animals, and robots, its sensory and neural basis, and how it is used to navigate and think spatially. We will investigate how desert ants find their way home, Nobel prize-winning ‘place’ and ‘grid’ cells, what your cognitive map of campus is really like, differences in spatial ability, and the effects of GPS on human wayfinding.

Fall CLPS1580D S01 16836 M 3:00-5:30(15) (W. Warren)

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 function in biological systems. Labs will rely on matlab and several computer graphics packages (e.g. Lightwave). Enrollment limited to 20.

Spr CLPS1590 S01 24713 TTh 2:30-3:50(11) (F. Domini)

The acquisition of knowledge during the first year of life. Special attention to the infant's emerging concepts of space, objects, intermodal sensory connections, and speech as well as to such issues as the role of innate knowledge and the nature of the infant's concepts and categories.

Spr CLPS1611 S01 24694 MWF 12:00-12:50(05) (J. Morgan)

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 15718 M 9:00-11:20(16) (D. Amso)

CLPS 1680C. Topics in Development: Theory of Mind.
How do we understand others' mental states? How do we acquire our knowledge of mental states at all? This course will focus on how human beings acquire knowledge of our own and others' mental states. Emphasis will be placed on integrating empirical data with particular theories of cognitive development.

Spr CLPS1680C S01 26039 Th 4:00-6:30(17) (D. Sobel)

CLPS 1700. Abnormal Psychology.
The study of anxiety, stress, and neurotic 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 24705 TTh 10:30-11:50(09) (B. Hayden)

This course explores answers to the question of what enables some individuals to escape the worst psychological consequences of extreme personal disaster 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 24710 TTh 2:30-3:50(11) (J. Wright)

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 0900) or equivalent. Enrollment limited to 27.

Fall CLPS1790 S01 15712 WF 2:00-3:20(07) (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 0110), CLPS 0700 (PSYC 0210), and CLPS 0900 (PSYC/COGS 0090). Enrollment limited to 27.

Fall CLPS1791 S01 15714 TTh 1:00-2:20(10) (J. Krueger)

CLPS 1820. Language and the Brain.
This course will examine the neural systems underlying language processing. Major focus will be on effects of brain injury on speaking and understanding in left hemisphere-damaged patients who have aphasia, right hemisphere-damaged patients, and split-brain patients. Behavioral, electrophysiological and neuroimaging evidence will be investigated.

Spr CLPS1820 S01 24690 MWF 11:00-11:50(04) (S. Blumstein)
CLPS 1880D. Topics in Psycholinguistics: Language + Memory. Memory is an integral part of language comprehension. Research suggests that memory follows various divisions (time, modality, task, etc), and this course examines whether language processing follows the same divisions and to what extent it overlaps qualitatively with memory in different cognitive contexts and timescales. Students will read and discuss research on language comprehension, classic memory tasks, and computational models of memory.

Spr CLPS1880D S01 25559 T 4:00-6:30(16) (P. Hofmeister)

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 0900), or equivalent.

Fall CLPS1890 S01 16016 MWF 12:00-12:50(12) (P. Hofmeister)

CLPS 1900. Senior Seminar in Cognitive Science. Examines general philosophical and theoretical issues that cut across cognitive science. Each student writes a substantial paper on a topic in cognitive science. Required of cognitive science concentrators. Enrollment limited to concentrators in the 7th semester or beyond, and, by permission, to others who have significant prior background in cognitive science.

Spr CLPS1900 S01 24695 MWF 1:00-1:50(06) (J. Anderson)

CLPS 1970. Directed Reading in Cognitive, Linguistic and Psychological Sciences. 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.

CLPS 1980. Directed Research in Cognitive, Linguistic and Psychological Sciences. 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.

CLPS 2000. Graduate Proseminar. Introduces students to the CLPS Department and the University; provides a brief history of the disciplines, philosophical foundations, and ethical treatment of human subjects; provides professional training, such as preparation of CV and research statement, practice in grant writing, and foundations in scientific writing and presentation; and supports students' early stages of developing a first-year project.

Fall CLPS2000 S01 15727 Th 4:00-6:30(02) (S. Sloman)

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 2200. Core Topics in Cognition. No description available.

Spr CLPS2200 S01 24715 M 3:00-5:30(13) (J. Austerweil)

CLPS 2400. Biological Foundations of the Mind. The goal of this course is to introduce students to the study of the biological foundations of cognitive science and psychology. We will use readings from neuroanatomy, cell and molecular biology, genetics, evolutionary biology, neuroethology, and behavioral neuroscience to elucidate principles and to understand methods for exploring the neural control of complex behaviors.

Fall CLPS2400 S01 15768 TTh 10:30-11:50(13) (A. Simmons)

CLPS 2450. Exchange Scholar Program. Fall CLPS2450 S01 17294 Arranged 'To Be Arranged'

CLPS 2500. Core Topics in Perception. No description available. Open to graduate students only.

Fall CLPS2500 S01 15769 MWF 1:00-2:50(06) (L. Welch)

CLPS 2906. Experimental Design. The course designed for students at the intermediate level or above and will cover t-tests, power analysis, correlation, simple and multiple linear regression, logistic regression, analysis or variance, non-parametric tests, randomization and bootstrapping, among others. Instructor permission required. Open to graduate students only.

Fall CLPS2906 S01 15770 TTh 9:00-10:20(08) (W. Heindel)

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 14550 Arranged 'To Be Arranged'

Spr CLPS2970 S01 23758 Arranged 'To Be Arranged'

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

Fall CLPS2990 S01 14551 Arranged 'To Be Arranged'

Spr CLPS2990 S01 23759 Arranged 'To Be Arranged'

Linguistics

LING 0030. Introduction to Linguistic Theory (CLPS 0030). Interested students must register for CLPS 0030.

Fall LING0030 S01 16821 Arranged 'To Be Arranged'

LING 1310. Introduction to Phonological Theory (CLPS 1310). Interested students must register for CLPS 1310.

Fall LING1310 S01 16822 Arranged 'To Be Arranged'

LING 1332. Issues in Syntactic Theory (CLPS 1332). Interested students must register for CLPS 1332.

Fall LING1332 S01 16825 Arranged 'To Be Arranged'

LING 1342. Formal Semantics (CLPS 1342). Interested students must register for CLPS 1342.

Fall LING1342 S01 16823 Arranged 'To Be Arranged'

LING 1385. Topics in Language Acquisition (CLPS 1385). Interested students must register for CLPS 1385.

Fall LING1385 S01 16824 Arranged 'To Be Arranged'

Humanities

HMAN 1970K. Law and Religion. In an arguably "post-secular" age, conflicts over the relationship between religion and law have moved to the forefront of international debate. In our multicultural/globalized world, such conflicts often provoke contestation over the very possibility of universal definitions of either "religion" or "law," let alone their proper relationship. Our interdisciplinary inquiries on these questions will include concrete legal disputes in domestic/international courts; theoretical debates over the construction of "religion" in fields such as anthropology, religious studies, and philosophy; and historiographical controversies about the relationship between "secularization" and sovereignty, particularly in light of the legacy of colonialism. Enrollment limited to 20 juniors, seniors, and graduate students.

Spr HMAN1970K S01 26019 Arranged 'To Be Arranged'

HMAN 1971E. Cross-Cultural Approaches to Death and Dying. Despite the universality of death, human responses are incredibly varied. This course situates biological, medical, and psychological conceptions of death and dying in conversation with the religious and ethical perspectives that have also informed human responses to death and dying in cultural contexts. This course—team-taught by a psychologist, a scholar of religion, and two end-of-life care physicians—facilitates a more informed understanding of death-related cultural practices and a more skilled response to death-related decisions arising in the practice of medicine.
and in life. Limited to 20 students in Medical Humanities and graduate Humanities fields. Honors undergraduates and PLMEs may enroll with permission.

Fall HMAN1971S01 16669 W 3:00-5:30(17) (W. Britton)

**HMAN 1971M. African American Religion and Politics.** This seminar places a theological lens on Black life in North America. Its general premise is that implicit spiritual strivings for political equality can be found in everyday black life, that they suffuse black cultural expression, and that they have been seminal for conceptions of black self-assertion in the US. We shall raise questions regarding the black "religion," the role of the "black church," Black Religious Studies versus Africana Religious Studies, and the variety of ways that African Americans have used "religion" (broadly speaking) to support their quest for citizenship (recognition, inclusion and membership in the American family).

Fall HMAN1971S01 16606 Th 4:00-6:30(02) (A. Willis)

**HMAN 1971N. Music, Nature, Ecology.** This course explores how music mediates human relations to the natural world. Via case studies drawn from Western music history and from non-Western societies, we will examine how theorists use sound to think through the difference between humans and non-humans, particularly birds and whales; how composers like Grieg, Ives, and John Luther Adams seek to shape listeners' perceptions of natural worlds and ecological systems; how people in Papua New Guinea, Mongolia, and the Peruvian Andes use sound to communicate ecological knowledge and to coordinate environmental relationships; and how instrument making forces practitioners to contend with resource extraction and climatological concerns.

Fall HMAN1971S01 16709 Th 4:00-6:30(02) (C. Tucker)

**HMAN 1971P. Research Seminar: Advanced Topics in the Theory and History of Property.** In an era of global land grabs and water wars, this seminar invites students of history, other social sciences, and the digital humanities to participate in an experimental, research-based colloquium about the right to a home, a farm, and other meanings of property. We will spend our first few meetings examining a dozen keywords, including "land grab," "rent strike," "water war," and "property rights" itself, coming to understand how institutions, rights, activism, and economic needs have changed. Readings will include new conceptual interventions and archival material alongside Ricard, Marx, and Mill; as well as Irish radicals and followers of Gandhi.

Fall HMAN1971S01 16609 M 12:20-2:50(15) (J. Guidi)

**HMAN 1971Q. Killing Times: The Temporal Technology of the Death Penalty.** The death penalty continues to be a question in the US, as well as on the international scene, many years after the 20th century trend toward abolition that saw a majority of nations outlaw it by the turn of the millennium. This seminar will examine a series of contemporary questions relating to the death penalty; the instant of death, execution by drone, self-execution (suicide bombing), technics and blood, confessionals, and particular temporalities that the death penalty introduces as a result of its manufacturing a precise moment of death.

Fall HMAN1971S01 16710 M 3:00-5:30(15) (D. Willis)

**HMAN 1971R. The First Scientific Americans: Exploring Nature in Latin America, 1500-1800 (SCSO 1701C).** Interested students must register for SCSO 1701C.

Fall HMAN1971S01 16840 Arranged "To Be Arranged"

**HMAN 1971S. Introduction to iPhone/iPad Moviemaking Using 3-D and 4K Comparisons.** Mobile Devices are democratizing movie-making by lowering barriers to entry, enabling students to become full-fledged members of the film industry virtually overnight. This pioneering course provides the basic tools for students to create and distribute no- and low-budget live-action motion pictures with professional production values utilizing only their personal smartphones. Students will acquire the skills to plan, capture and edit short motion pictures through hands-on instruction and experimentation with low-cost accessories, including selfie-sticks, lens adapters, directional microphones and iPhone apps like Filmic Pro, iZiggwig and iMovie. Limited to junior, senior and graduate students.

Fall HMAN1971S01 17179 T 4:00-6:30(18) 
Spr HMAN1971S01 26016 Arranged (T. Bogosian)

**HMAN 2970F. Law, Nationalism, and Colonialism.** This seminar explores the internationalism of the past century in terms of its relationship to separatist nationalism, anti-colonialism, and religious radicalism. It takes as its point of departure the dramatic political, cultural, and intellectual transformations that followed in the wake of World War I. A guiding hypothesis of the seminar is that internationalism cannot be understood apart from its complex relationship to "identity" broadly conceived — identity of local/transnational groups as well as the identity of internationalists themselves. Readings will be drawn from law/cultural studies/politics/postcolonial theory. Enrollment limited to 20 graduate students. Advanced juniors/seniors by permission only.

Fall HMAN2970F S01 16750 W 3:00-5:30(17) 

**HMAN 2970P. Art and Philosophy in the Nineteenth Century.** An excessively cognitivist approach to aesthetics in German Idealism led to Hegel's thesis of the "end of art" (who had himself redefined aesthetics as philosophy of art). During the remainder of the century, philosophers searched for more complex approaches to the experience of art that would not have this consequence. We will explore this narrative. Authors to be studied include Hegel, Schopenhauer, Emerson, Nietzsche, Ruskin, Dilthey, and Santayana.

Fall HMAN2970F S01 15191 W 3:00-5:30(17) (P. Guyer)

**HMAN 2970Q. Latin in America (LATN 2080F).** Interested students must register for LATN 2080F.

Fall HMAN2970X S01 16937 Arranged "To Be Arranged"

**HMAN 2970T. And What About the Human? Black/Anti-Colonial Thought, Human Freedom and Emancipation?**. This course will examine the figure of the human posed in radical anti-colonial thought as a distinct mode of thinking. Reviewing some major 20th century thinkers, Foucault, Derrida, Arendt alongside Fanon, Cesaire and Wnyter, the course will also examine the complex relationships between the figure of the human, freedom and emancipation. Graduate and undergraduate senior students only. Enrollment limited to 20.

Spr HMAN2970S01 26089 W 3:00-5:30 (B. Bogues)

**Comparative Literature**

**COLT 0510C. The World of Lyric Poetry.** Lyric poetry is the prime mode for conveying emotion in many cultures, from ancient times to the present day. This course will survey the variety of forms and themes from the earliest texts from Greece, Rome, China and India, then the glories of the Renaissance and the Tang Dynasty, then move to the challenges for lyric expression in the modern world. Enrollment limited to 20 first year students. FYS

Spr COLT0510C S01 24222 TTh 9:00-10:20(08) (D. Levy)

**COLT 0510O. Twentieth-Century Experiments.** In this course, we will read some of the most experimental and adventurous literature of the 20th century. Instead of understanding texts as mirrors of social reality, we will consider them as laboratories—spaces for testing out, working through, or mixing up new ideas, categories, and ways of seeing and feeling. We will pay special attention to 20th-century international avant-garde movements, including Futurism, Dadaism, and Surrealism, and we will explore the relation of the literary avant-garde to the avant-garde in painting, cinema, and music.

Spr COLT0510C S01 24814 MW 11:00-11:50(04) (H. Freed-Thall)

**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 Chrétién de Troyes, Quevedo, Prévost, Balzac, Brontë, Twain, Faulkner, Vesaas, Rhy, Satrapi and Foer. Enrollment limited to 20 first year students. FYS

Fall COLT0610D S01 15879 Th 1:00-2:20(10) (A. Weinstein)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
COLT 0610L. Murder Ink: Narratives of Crime, Discovery, and Identity. Examines the narrative of detection, beginning with the great dramatic whodunit (and mystery of identity) Oedipus Rex. Literary texts which follow a trail of knowledge, whether to establish a fact (who killed Laius?) or reveal an identity (who is Oedipus?) follow in Sophocles’ footsteps. We read Sophocles’ intellectual children. Readings include: Hamlet, The Murders in the Rue Morgue, The Woman in White, and other classic novels and plays. We also analyse seminal films of the genre, including Laura and Vertigo. Will include the 20th-century detective story, with particular attention to women writers and the genre of the female private eye. Fall COLT0610L S01 15064 MWF 1:00-1:50(06) (M. Ierulli)

COLT 0610N. Being There: Bearing Witness in Modern Times (ENGL 0710F).
Interested students must register for ENGL 0710F.
Spr COLT0610NS01 25294 Arranged "To Be Arranged"

COLT 0610U. Altered Cinema: The Cultural Politics of Film Revision (MCM 0901R).
Interested students must register for MCM 0901R.
Spr COLT0610US01 25299 Arranged "To Be Arranged"

COLT 0610V. Claims of Fiction (ENGL 0150X).
Interested students must register for ENGL 0150X.
Spr COLT0610VS01 25300 Arranged "To Be Arranged"

COLT 0610W. Getting Emotional: Passionate Theories (ENGL 0500Q).
Interested students must register for ENGL 0500Q.
Spr COLT0610WS01 25301 Arranged "To Be Arranged"

COLT 0610X. Convulsive Beauty: Hysteria and the Arts.
Hysteria marks the presence of a traumatic memory that awakens wild bodily symptoms, treated psychologically by putting feeling into words. Often considered a particularly female ailment, hysteria has been read by feminist scholars as a deviant, desirous language of the female body. This course considers the boundaries of pain and pleasure, madness and lucidity, and the personal and the political. Spr COLT0610XS01 25773 MWF 12:00-12:50(05) (N. Adler)

COLT 0710Q. Odysseus in Literature.
Examines the reincarnations of the Homeric figure of Odysseus in contemporary literatures. It approaches the texts historically, culturally and literary. How is the Odysseus myth altered from culture to culture (Greece, Rome, Ireland, the Caribbean), how is it re-adapted in different historical periods, how does Odysseus change as the genre changes (epic, poetry, the novel, film, drama)? Fall COLT0710QS01 17173 MWF 12:00-12:50(12) (V. Calcychos)

COLT 0710Z. Comedy from Athens to Hollywood.
This course will look at ancient comedy from its birth in Athens and Rome through Renaissance incarnations to the 19th and 20th century, including novels and films as well as plays. We will survey the main topics of comedy, from Aristophanes’ focus on the absurdities of daily and political life in Athens to the Roman codification of a genre of everyman in love and in trouble. We will also examine how later writers and filmmakers use both traditions to give comedy its subversive power of social commentary. Spr COLT0710ZS01 25176 MWF 1:00-1:50(06) (M. Ierulli)

COLT 0711A. Epics of India (CLAS 0820).
Interested students must register for CLAS 0820.
Fall COLT0711AS01 16339 Arranged "To Be Arranged"

COLT 0711B. Ishiguro, Amongst Others (ENGL 0710L).
Interested students must register for ENGL 0710L.
Fall COLT0711BS01 16340 Arranged "To Be Arranged"

COLT 0711C. Postcolonial Tales of Transition (ENGL 0710E).
Interested students must register for ENGL 0710E.
Spr COLT0711CS01 25302 Arranged "To Be Arranged"

COLT 0711D. Comparative Approaches to the Literatures of Brazil and the United States (POBS 0850).
Interested students must register for POBS 0850.
Fall COLT0711DS01 16537 Arranged "To Be Arranged"

COLT 0711E. Reading and Writing African Gender.
In this course, we will examine ways that gender and literary genre figure in postcolonial African writing, and in its reception. We will closely read novels by four significant women authors: Mariama Bâ (Senegal), Zoe Wicomb (South Africa), Tisitsi Dangarembga (Zimbabwe), and Chimamanda Ngozi Adichie (Nigeria). We will also read short, lesser-known texts, such as Richard Rive’s “Riva” and Binyavanga Wainaina’s “The Missing Chapter,” that question boundaries of gender, genre, and sexuality. Fall COLT0711ES01 17003 MWF 9:00-9:50(16) (C. Goldblatt)

COLT 0711F. Arabic Literature: The Qur’an to Darwish.
The course offers an introduction to Arabic literature from ancient Arabic poetry to contemporary Palestinian novels. Topics include desert poetry, the Qur’an, medieval Muslim court literature, popular literature, Arabic literary theory, and the emergence of modern Western genres, with a focus on Palestinian literature as a test-case. We will engage first-hand with Imru’ al-Qays’ Qifa Nabki, al-Jahiz’s Books of Miser, Ibn Hazm’s theories about love, Mahmoud Darwish’s I Come from There, and Emile Habiby’s The Pessoptimist. All readings are in English. Spr COLT0711FS01 25767 T 4:00-6:30(16) "To Be Arranged"

COLT 0810G. Equity Law Literature Philosophy.
Justice, rigorously applied, yields injustice. This paradox haunted Western aspirations toward legal and political justice from antiquity to the Renaissance. It necessitated the formulation of a complementary principle, equity, whose job it was to correct or supplement the law in cases where the strict application of it would lead to unfairness. In England, equity was enforced by a separate system of law, and it was a weighty, ambiguous term of great emotional force, with a particular appeal to Shakespeare. After its decline, Dickens and Kafka wrote two of the greatest literary works set in a world without equity. Fall COLT0810GS01 15065 TTh 9:00-10:20(08) (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. DPLL LILE Fall COLT0810LS01 15066 MWF 10:00-10:50(03) (D. Levy)

COLT 0810M. Uncanny Tales: Narratives of Repetition and Interruption.
What makes stories creepy? Close readings of short narratives with special attention to how formal and thematic elements interact to produce the effects of uncertainty, anxiety and incoherence peculiar to "the uncanny." Topics include: the representation of the self in images of the arts; the representation of speech; instabilities of identity and spatial and temporal boundaries; doubles, monsters, automata and hybrids. Texts selected from: Walpole, Shelley, Hoffmann, Kleist, Poe, Dostoyevsky, Freud, Wilde, Cortazar, Kafka, Lovecraft. LILE Fall COLT0810MS01 16746 MWF 2:00-2:50(07) (S. Bernstein)

COLT 0812A. Hamlet Post-Hamlet.
Shakespeare’s Hamlet is perhaps the most widely read, performed, adapted, parodied and imitated literary text of the western tradition. In this seminar we will begin by reading/re-reading the play before turning to a number of appropriations of Shakespeare, both in the west and non-west, in order to address social and aesthetic issues including questions of meaning and interpretation, intertextuality and cultural translation. First Year Seminar. Enrollment limited to 20. FYS Fall COLT0812AS01 15880 T 1:00-3:30(10) (K. Newman)

COLT 0812B. What is Colonialism? - Archives, Texts and Images.
Through a close reading of a variety of texts and images from 16th-19th century we will study the transformation of lands and people into appropriable objects and the formation of political regimes in and through different colonial projects. We will follow the encoding of slavery in literary works, in the corpus of laws, in travelers’ visual renditions and in the bodies of people. We will use the archive as a source and a site for the production of knowledge. Students will create small textual and visual
archives around different topics, and will use them in writing their final
work.

COLT 0812C. From the Earth: Landscape, Ethnicity and the Question of Autochthony in Literature.
What does it mean to spring from the soil, to be indigenous, autochthonous? How do we understand and represent the relationship between a specific environment and those inhabiting it? As some kind of mystical bond? As a function of Darwinian adaptation? Does it entitle us to ownership? Can we possess land? Can land possess us? This course will explore questions such as these through readings from Herodotus, Marco Polo, Ibn Fadlan, Lady Mary Wortley Montagu and others.
Fall COLT0812C S01 15881 MWF 12:00-12:50(12) (M. Viswanathan)

COLT 0812D. Mythology of India (CLAS 0850).
Interested students must register for CLAS 0850.
Spr COLT0812D S01 25303 Arranged 'To Be Arranged'

COLT 0812E. God and Poetry (JUDS 0820).
Interested students must register for JUDS 0820.
Fall COLT0812E S01 16538 Arranged 'To Be Arranged'

COLT 0812F. Exotic Encounters: Travel Literature in the Age of Exploration.
This course will examine narratives of real and fictional encounters with foreign and exotic lands and peoples. We will study the ways in which writers, explorers, missionaries and scientists responded to their experiences of travel to America, Asia, and Europe and how their writings shaped a certain vision of the world. Among topics to be studied: voyages of exploration and discovery, the Grand Tour and its avatars, and colonial travel. We will read novels, diaries, correspondence and essays by Behn, Defoe, Swift, Graffigny, Voltaire, Sterne and Goethe and modern critical thinkers, including Rousseau, Lévi-Strauss, Todorov, Bhabha, and Pratt.
Spr COLT0812F S01 25611 MWF 11:00-11:50(04) (O. Mostefai)

COLT 0812G. The Palestinian-Israeli Conflict in History, Literature, Film.
An examination of the Palestinian-Israeli conflict through the lens of cultural production. The course will explore the history of the conflict, from the 1947 partition of Palestine to the second Intifada in 2005, through major literary works and films juxtaposed with cultural and historical texts. We will discuss the way that literature and film provide us with humanistic and counterhegemonic narratives, interrogating issues such as nationalism, ethnicity, gender, colonialism, collective trauma and cultural resistance. Exploring the tension between historic and aesthetic production, we will look at how literary and cinematic works challenge, re-imagine and supplement political accounts of the conflict.
Fall COLT0812G S01 17169 F 3:00-5:30(14) (C. Morgenstern)

COLT 1210. Introduction to the Theory of Literature.
An historical introduction to problems of literary theory from the classical to the postmodern. Issues to be examined include mimesis, rhetoric, hermeneutics, history, psychoanalysis, formalism and ideological criticism (questions of race, gender, sexuality, postcolonialism). Primarily for advanced undergraduates. Lectures, discussions; several short papers.
Fall COLT1210 S01 15074 MWF 11:00-11:50(04) (S. Bernstein)

COLT 1310H. Classics of Indian Literature (CLAS 1160).
Interested students must register for CLAS 1160.
Spr COLT1310H S01 25304 Arranged 'To Be Arranged'

COLT 1310I. Modern African Literature (ENGL1710J).
Interested students must register for ENGL 1710J.
Fall COLT1310I S01 16341 Arranged 'To Be Arranged'

COLT 1410L. Philosophy and Tragedy.
Explores the intersection of philosophy and tragedy in western literature. Readings may include Sophocles, Plato, Aristotle, Shakespeare, Hegel, and Nietzsche.
Spr COLT1410L S01 24229 TTh 10:30-11:50(09) (P. Saval)

COLT 1410N. Found in Translation: The Adaptation of Literature to Film in Japan.
Contrasting the demands of the text versus the screen, we will read eight to ten works of modern Japanese literature and view the film versions
of each in order to discuss the problem of translation from one medium to another. Possible works for inclusion are Rashomon, Harp of Burma, Woman in the Dunes, and The Makioka Sisters. Finally, we will consider manga (the graphic novel) and its adaptation into anime.
Spr COLT1410N S01 24985 TTh 2:30-3:50(11) (M. Viswanathan)

COLT 1410U. Shakespeare in Perspective.
We study Shakespeare together with selections from other writers or thinkers, including those who have written about Shakespeare (e.g. Nietzsche, Emerson, Coleridge), and those who can illuminate interpretive problems in Shakespeare (e.g. Plato, Melville).
Fall COLT1410U S01 15882 TTh 10:30-11:50(13) (P. Saval)

In East Asian Buddhist culture, the mirror is a symbol of the mind in both its intellectual and emotional aspects. These masterworks detail the lives and loves of Prince Genji, cynosure of the medieval Japanese court, and Jia Baoyu, the last hope of an influential Chinese clan during the reign of Manchus. We examine both works as well as the sources of Genji and literary aesthetics of the Tang dynasty.
Fall COLT1420B S01 15068 W 3:00-5:30(17) (D. Levy)

COLT 1420Y. Gigantic Fictions.
Terms such as 'epic,' 'mammoth,' 'gigantic,' and even 'loose, baggy monster' have been coined to describe examples of literary discourse that inordinately exceed the normative boundaries of fiction. How are we to understand these narratives? What is the relation between literary gigantism and mimesis? How do 'gigantic fictions' threaten to break their literary bounds? What holds these mammoth narratives together? What impels authors to elect such a grand scope for literary representation? We explore these questions and others through close reading of several works deemed to be among the most gargantuan from authors such as Rabelais, Murasaki Shikibu, Tolstoy and Joyce.
Fall COLT1420Y S01 15883 MWF 2:00-2:50(07) (M. Viswanathan)

COLT 1421K. Faulkner (ENGL1710G).
Interested students must register for ENGL 1710G.
Fall COLT1421K S01 16765 Arranged 'To Be Arranged'

COLT 1421Q. Word and Image: Ekphrasis, the Iconic Narrative, and the Graphic Novel.
An examination of the tradition of illustrated narratives from the premodern to the modern periods: the ancient Indian epic the Ramayana, the early eleventh-century Japanese Genji Monogatari, the medieval English Canterbury Tales, the late eighteenth century Marriage of Heaven and Hell, as well as the contemporary graphic novel Persepolis and examples of Japanese manga. Discussion will focus on the nature of iconography and symbology; the historical privileging of text over image; the significance of parallel visual and verbal representation and its implications for culturally-specific theories of reading. Instructor permission required.
Spr COLT1421Q S01 24986 TTh 6:40-8:00PM(12) (M. Viswanathan)

COLT 1422C. Proust and Woolf.
When Virginia Woolf began reading Proust's In Search of Lost Time in the spring of 1922, she was astonished. As she put it at the time, "scarcely anyone so stimulates the nerves of language in me." Declaring the book a "miracle," Woolf describes the experience of reading Proust as a nearly physical pleasure: "one has to put the book down and gasp." This course will explore the major works of these two eminent modernists, focusing on the surprising ways in which Proust and Woolf play on the "nerves of language," renewing the novel's capacity to represent sensation, imagination, and environment.
Fall COLT1422C S01 15884 TTh 6:40-8:00PM(05) (H. Freed-Thall)

COLT 1422D. Short Forms: Major Works in a Minor Key (HISP 1330Q).
Interested students must register for HISP 1330Q.
Fall COLT1422D S01 16747 Arranged 'To Be Arranged'

COLT 1430D. Critical Approaches to Chinese Poetry.
Examination of works of Chinese poetry of several forms and periods in the context of Chinese poetic criticism. Knowledge of Chinese not required, but provisions for working with original texts will be made for students of Chinese language.

COLT 1810B. Holocaust Literature (JUDS 1820).
Interested students must register for JUDS 1820.
Fall COLT1710P S01 16539 Arranged 'To Be Arranged'

COLT 1710G. Fiction and History.
How the historical fiction that has flourished over the past four decades challenges the notions of objectivity and totalization, while providing alternative viewpoints for the reconstruction and reinterpretation of the past. Authors considered include Grass, Doctorow, Delillo, Garcia-Márquez, Allende, Dantiact and Gordimer. Theoretical texts by White, Lacapra, Benjamin, Ricoeur, and Chartier. Films such as Márquez, Allende, Danticat and Gordimer. Theoretical texts by White, Metz and Barthes are also covered. No previous knowledge of literature or history is required. Prerequisite: at least one foreign-language course in literature at 1000-level (or equivalent).
Fall COLT1710G S01 15886 Th 2:30-3:50(11) (K. Haynes)

COLT 1810D. Ecological Thought.
This course will serve as an introduction to the new interdisciplinary field of the environmental humanities. Discussing an exciting range of texts and films—from Mary Shelley, Virginia Woolf, and Arundati Roy to Ridley Scott and Werner Herzog—we will investigate how literary and cinematic works make ecological crisis perceptible. The following topics will be central to our discussions: the environment as a subject of literature, the relationship between science and poetry; “slow violence” and postcolonial environmentalism; queer ecology; biopolitics; the representation of non-human animals; the effects of 24/7 consumerism; and the political uses of ecological nostalgia, disgust, grief, and wonder.
Spring COLT1610N S01 24817 MWF 2:00-2:50(07) (H. Freed-Thall)

COLT 1812G. Repetition: Kierkegaard, Nietzsche and Freud (GRMN 1200D).
Interested students must register for GRMN 1200D.
Spring COLT1812G S01 25639 Arranged 'To Be Arranged'

COLT 1814D. Erotic Desire in the Premodern Mediterranean (CLAS 1750L).
Interested students must register for CLAS 1750L.
Spring COLT1814D S01 25640 Arranged 'To Be Arranged'

COLT 1814G. Political Commitment in Arabic Literature.
This course addresses the relationship among language, war and the arts from the mid-twentieth century on. Even as armies engage in combat around the globe, the term “war” legitimates a much broader spectrum of situations, lending them the structure of organized hostility and the moral opposition of right to wrong. From the “Cold War” to the “War on Terror”, to Argentina’s “Dirty War” and Cuba’s “War on Imperialism”, literature, cinema, visual arts and community-based projects have responded to real and rhetorical declarations of “war.” Drawing from U.S. and Latin American contexts, we will explore a range of responses and challenges.
Spring COLT1812V S01 16882 Th 10:30-11:50(13) (E. Whifford)
literature, alienation, self-criticism, and responses to colonialism and censorship. No knowledge of Arabic required.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Instructor(s)</th>
<th>Notes</th>
<th>CRN</th>
<th>Section</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>COLT 1814H</td>
<td>Two Artwork Essays: Martin Heidegger and Walter Benjamin (GRMN 1890).</td>
<td>(G. Halaby)</td>
<td></td>
<td></td>
<td>Fall COLT1814G S01 16922 T 4:00-6:30(18)</td>
<td></td>
</tr>
<tr>
<td>COLT 1970</td>
<td>Individual Independent Study.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COLT 1980</td>
<td>Group Independent Study.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COLT 1990</td>
<td>Senior Thesis Preparation.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

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 15978 MWF 10:00-10:50(03) (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.

Spr CSCI0180 S01 25250 MWF 11:00-11:50(04) (A. Greenwald)

CSCI 0190. Accelerated Introduction to Computer Science. This is a one-semester introduction to computer science covering core data structures, algorithms, and analysis techniques similar to those of the two-course introductory sequences (CSCI 0150-0160 and CSCI 0170-0180), integrated with programming. Students who wish to take CSCI 0190 must begin in CSCI 0170 and complete additional work in that course. CSCI 0190 will branch off from CSCI 0170 after a month. Whether or not you come in with a computer science background, you can generally determine your level of ability and pick the course that is best for you. See http://cs.brown.edu/courses/csci0190/2015/AFQ.html for more information.

Fall CSCI0190 S01 15979 MWF 10:00-10:50(03) (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 25251 MWF 1:00-1:50(12) (C. Klivans)

CSCI 0320. Introduction to Software Engineering. Advanced programming techniques including Java, threads, web-applications, user interfaces and XML. Covers software design including object-oriented design, systems design, web application design and user interface design. Software engineering including modeling, analysis, testing, debugger reuse, the software lifecycle, tools and project management. Prerequisite: CSCI 0160, CSCI 0180 or CSCI 0190. CSCI 0220 is recommended.

Spr CSCI0320 S01 25252 TTh 1:00-2:20(10) (J. Jannotti)

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 learn the basics of how computers work and will be introduced to the functions of operating systems. Prerequisite: CSCI 0150, 0180, or 0190.

Fall CSCI0330 S01 15980 MWF 2:00-2:50(07) (T. Doepnner)

CSCI 0510. Models of Computation. The course introduces basic models of computation including languages, finite-state automata and Turing machines. Proves fundamental limits on computation (incomputability, the halting problem). Provides the tools to compare the hardness of computational problems (reductions). Introduces computational complexity classes (P, NP, PSPACE and others). Prerequisite: CSCI 0220 or 0450.

Fall CSCI0510 S01 15981 TTh 1:00-2:20(10) (A. Lysyanskaya)

CSCI 0931. Introduction to Computation for the Humanities and Social Sciences. Introduces students to the use of computation for solving problems in the social sciences and the humanities. We will investigate a series of real-world problems taken from the news, from books such as Freakonomics, from philosophy, and from current research topics. Topics covered include data gathering, analysis, and visualization; web-based interfaces; algorithms; and scripting. Enrollment limited to 20. Instructor permission required. LILE Please go to https://docs.google.com/a/brown.edu/forms/d/1qjv983_KmB_YePSSWbdYLCiLyX_nC27hx3-J9U-W4/viewform to be added to the waitlist. You must use your Brown login to access the waitlist; requests to give access to non-Brown addresses will be ignored.

Fall CSCI0931 S01 16549 TTh 9:00-10:20(08) (A. Papoutsaki)

Spr CSCI0931 S01 25494 TTh 9:00-10:20(08) (A. Greenwald)

CSCI 1230. Introduction to Computer Graphics. Fundamental concepts in 2D and 3D computer graphics, e.g., 2D raster graphics techniques, simple image processing, and user interface design. Focuses on geometric transformations, and 3D modeling, viewing and rendering. A sequence of assignments in C++ culminates in a simple geometric modeler and ray tracer. Prerequisite: CSCI 0160, CSCI 0180, or CSCI 0190. 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 15982 Th 10:30-11:50(13) (A. van Dam)

CSCI 1234. Computer Graphics Lab. CSCI 1234 is a half-credit course intended to be taken concurrently with CSCI 1230 and provides students with a greater understanding of the material by having them extend each of 1230’s assignments to greater depth.

Fall CSCI1234 S01 15983 Arranged (A. van Dam)

CSCI 1250. Introduction to Computer Animation. Introduction to 3D computer animation production including story writing, production planning, modeling, shading, animation, lighting, and compositing. Students work independently to learn basic skills, then in groups to create a polished short animation. Emphasis is on in-class critique of ongoing work, which is essential for learning the cycle of evaluating work, determining improvements, and implementing them for further evaluation. Students should attend first class to receive instructor’s written permission.

Fall CSCI1250 S01 15984 WF 12:00-1:50(12) (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 16533 MWF 9:00-9:50(16) (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 16290 MW Th 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.

Fall CSCI1280 S01 25253 TTh 10:00-10:50(03) (S. Reiss)

CSCI 1300. Designing, Developing and Evaluating User Interfaces.
Covers fundamental concepts in human-computer interaction that focus on designing user interfaces. 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. Classroom time will be spent on lectures and hands-on activities; students will complete assignments, design labs, and readings outside the classroom.

Students interested in learning the theoretical underpinnings of user interfaces, and the process behind designing, prototyping, and evaluating a user interface should take this course. You will see user interfaces everywhere differently after this course! Fall CSCI1300 S01 16559 TTh 6:40-8:00PM(05) (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 web technologies and to incorporate the technologies needed in modern web applications. Project teams will consist of students with both backgrounds. Spr CSCI1320 S01 25254 MWF 10:00-10:50(03) (S. Reiss)

Explores the virtual 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 16292 TTh 10:00-12:00(13) (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 25754 TTh 10:30-11:50(09) (R. Fonseca)

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 either CSCI 0220 or one of CSCI 0450 or CSCI 1450.

Fall CSCI1410 S01 16293 TTh 1:00-2:20(10) (S. Tellex)

We explore the theory and practice of statistical machine learning, focusing on computational methods for supervised and unsupervised data analysis. Specific topics include Bayesian and maximum likelihood parameter estimation, regularization and sparsity-promoting priors, kernel methods, the expectation maximization algorithm, and models for data with temporal or hierarchical structure. Applications to regression, categorization, clustering, and dimensionality reduction problems are illustrated by examples from vision, language, bioinformatics, and information retrieval. Prerequisites: CSCI 0140 or CSCI 0150 or CSCI 0180 or CSCI 0450 or CSCI 1450 or APMA 1650 or MATH 1610; and CSCI 0530 or MATH 0520 or 0540; or instructor permission.

Fall CSCI1420 S01 16294 TTh 2:30-3:50(11) (E. Sudderth)

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 statistical inference. Spr CSCI1450 S01 25255 TTh 2:30-3:50(11) (E. Sudderth)

Introduction to computational linguistics (also known as natural-language processing) including the related mathematics and several programming projects. Topics include language modeling (as used in e.g., speech recognition, machine translation), machine translation, part-of-speech labeling, syntactic parsing, and pronoun resolution. Mathematical techniques include basic probability, noisy channel models, the EM (Expectation-Maximization) algorithm, hidden Markov models, probabilistic context-free grammars, and the forward-backward algorithm. Not open to first year students.

Spr CSCI1460 S01 25256 MWF 2:00-2:50(07) (E. Charniak)

CSCI 1510. Introduction to Cryptography and Computer Security.
This course studies the tools for guaranteeing safe communication and computation in an adversarial setting. We develop notions of security and give provably secure constructions for such cryptographic objects as cryptosystems, signature schemes and pseudorandom generators. We also review the principles for secure system design. Prerequisites: CSCI 0220 and CSCI 0510.

Spr CSCI1510 S01 25258 TTh 10:30-11:50(09) (A. Lysyanskaya)

This course introduces students to applications of probabilistic and statistical methods to the design and analysis of algorithms, in particular randomized algorithms and probabilistic analysis of algorithms. The course covers basic probabilistic techniques such as tail bounds, martingales, coupling, etc., and presents applications of randomized and probabilistic analysis techniques in areas such as graph algorithms, data structures, communication, and Monte Carlo simulations. No prior knowledge of probability theory is assumed. CSCI 1570 recommended but not required. Spr CSCI1550 S01 25259 TTh 2:30-3:50(11) (E. Upfal)

CSCI 1570. Design and Analysis of Algorithms.
A single algorithmic improvement can have a greater impact on our ability to solve a problem than ten years of incremental improvements in CPU speed. We study techniques for designing and analyzing algorithms. Typical problem areas addressed include hashing, searching, dynamic programming, graph algorithms, network flow, and optimization algorithms including linear programming. Prerequisites: CSCI 0160, CSCI 0180, or CSCI 0190, and one of CSCI 0220 or CSCI 1450.

Fall CSCI1570 S01 16295 MWF 1:00-1:50(06) (P. Valiant)

CSCI 1600. Real-Time and Embedded Software.
Comprehensive introduction to the design and implementation of software for programmable embedded computing systems, those enclosed in devices such as cellular phones, game consoles, and car engines.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Includes the overall embedded real-time software design and development processes, as well as aspects of embedded hardware and real-time, small-footprint operating systems. Major project component. Prerequisites: CSCI 0320 or 0360.

Fall CSCI1600 S01 16296 MWF 11:00-11:50(04) (S. Reiss)

This course teaches principles of computer security from an applied viewpoint and provides hands-on experience on security threats and countermeasures. Topics include code execution vulnerabilities (buffer overflow, sandboxing, mobile code), malware (trojans, viruses, and worms), access control (users, roles, policies), cryptosystems (hashing, signatures, certificates), network security (firewalls, TLS, intrusion detection, VPN), and human and social issues. Prerequisites: one of CSCI 0160 or CSCI 0180 or CSCI 0190; and CSCI 0330.

Spr CSCI1660 S01 25260 MWF 1:00-1:50(06) (R. Tamassia)

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 0310 or 0330.

Spr CSCI1670 S01 25261 MWF 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 16297 TTh 10:30-11:50(13) (J. Jannotti)

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 25262 TTh 6:40-8:00PM(05) (T. Doepner)

CSCI 1730. Design and Implementation of Programming Languages.
Explores the principles of modern programming languages by implementation. Examines linguistic features, especially context-free operators such as first-class functions, exceptions, and continuations. Studies data and their types, including polymorphism, type inference, and type soundness. Examines compiler and run-time system topics: continuation-passing style and garbage collection. Prerequisite: CSCI 0160, CSCI 0180 or CSCI 0190. Preferred: CSCI 0220, either CSCI 0320 or CSCI 0330, and CSCI 0510.

Fall CSCI1730 S01 16542 MWF 11:00-11:50(04) (S. Krishnamurthi)

CSCI 1760. Multiprocessor Synchronization.
This course examines the theory and practice of multiprocessor synchronization. Subjects covered include multiprocessor architecture, mutual exclusion, wait-free and lock-free synchronization, spin locks, monitors, load balancing, concurrent data structures, and transactional synchronization. Prerequisites: CSCI 0330.

Fall CSCI1760 S01 16299 TTh 1:00-2:20(10) (M. Herlihy)

CSCI 1800. Cybersecurity and International Relations.
The global Internet shortens distances, makes businesses more efficient and facilitates greater social interaction. At the same time, it exposes vital national resources to exploitation and makes it easier for the international criminal element to prey on innocent Internet users. Cybersecurity is concerned with making the Internet a more secure and trustworthy environment. In this course we study this topic from the technological and policy points of view. The goal is to facilitate communication across the divide that normally characterizes the technological and policy communities. LILE WRT

Spr CSCI1800 S01 25263 MW 3:00-4:20(14) (J. Savage)

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 16300 TTh 10:30-11:50(13) (B. Raphael)

We will study various algorithmic problems that arise in the study of topological phenomena, such as winding number, turning number, knot polynomials, topology of covering spaces (especially Riemann surfaces), and discrete Morse theory. The mathematical topics will be briefly introduced before we move to computations, but some prior mathematical sophistication will make the course more valuable to the student. Prerequisite: CSCI 0160, 0180, or 0190.

Spr CSCI1950H S01 25264 TTh 1:00-2:20(10) (J. Hughes)

The course will focus on proving properties about systems and programs. We will study the distinction between programs and specifications, and check for whether the former obey the latter. We will work with tools that have extensive automation such as model constructors, model checkers, and proof assistants. Problems and projects will apply to real-world systems. Prerequisite: CSCI 0180. CSCI 0190. Preferred but not required: CSCI 0220 and CSCI 0510, or instructor’s permission.

Spr CSCI1950Y S01 25491 MWF 11:00-11:50(04) (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 160, CSCI 180, or CSCI 190. One of CSCI 330 or CSCI 320 strongly recommended.

Spr CSCI1951A S01 25265 TTh 9:00-10:20(08) (T. Kraska)

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_i_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 16694 TTh 9:00-12:00(08) (M. Littman)

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 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.

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.

Essential. Enrollment limited to 12. Instructor permission required.

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. Spr CSCI2240 S01 26084 MWF 11:00-11:50(04) "To Be Arranged"

CSCI 2270. Topics in Database Management.
In-depth treatment of advanced issues in database management systems. Topics vary from year to year and may include distributed databases, mobile data management, data stream processing and web-based data management. Prerequisite: CSCI 1270. Spr CSCI2270 S01 25266 M 3:00-5:30(13) (S. Zdonik)

CSCI 2450. Exchange Scholar Program.

Advanced topics in applications of probabilistic methods in design and analysis of algorithms, in particular to randomized algorithms and probabilistic analysis of algorithms. Topics include the Markov chains Monte Carlo method, martingales, entropy as a measure for information and randomness, and more. Prerequisite: CSCI 1550. Recommended but not required: CSCI 1570. Spr CSCI2540 S01 25816 TTh 2:30-3:50(11) (E. Upfal)

CSCI 2890. Comprehensive Examination Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination. Fall CSCI2890 S01 14554 Arranged "To Be Arranged" Spr CSCI2890 S01 23762 Arranged "To Be Arranged"

CSCI 2950T. Topics in Distributed Databases and Systems.
This course explores data and resource management issues that arise in the design, implementation, and deployment of distributed computing systems by covering the state of the art in research and industry. Typical topics include cloud computing and sensor networks. Strongly recommended: CSCI 0320, CSCI 1270, or CSCI 1951A. Fall CSCI2950T S01 16886 W 3:00-5:30(17) (U. Cetin)email

CSCI 2951E. Topics in Computer Systems Security.
This course explores advanced topics and highlights current research in computer security from a systems perspective. Topics include vulnerabilities and defenses for automotive, computing, medical, and industrial control devices, intrusion detection, botnets, secure network protocols, web spam, tracking of web users, JavaScript sandboxing, attacks and defenses for web applications, and security and privacy issues in cloud computing. Research papers and industry reports will be presented and discussed. Also, hands-on experiments and system demonstrations will be performed. CSCI 1660 or equivalent background is essential. Enrollment limited to 12. Instructor permission required. Fall CSCI2951E S01 16544 M 3:00-5:30(15) (R. Tamassia)

CSCI 2951F. Learning and Sequential Decision Making.
The course explores automated decision making from a computer-science perspective. It examines efficient algorithms, where they exist, for single agent and multiagent planning as well as approaches to learning near-optimal decisions from experience. Topics will include Markov decision processes, stochastic and repeated games, partially observable Markov decision processes, and reinforcement learning. Of particular interest will be issues of generalization, exploration, and representation. Each student will be expected to present a published research paper and will participate in a group programming project. Prerequisite: a graduate-level computer science course and some exposure to reinforcement learning from a previous computer-science class or seminar. Fall CSCI2951F S01 16302 TTh 2:30-3:50(11) (M. Littman)

CSCI 2951K. Topics in Grounded Language for 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 1420, 1460, 1480, or 1950F; or instructor permission. Spr CSCI2951K S01 25269 TTh 1:00-2:20(10) (S. Teller)

CSCI 2951N. Advanced Algorithms in Computational Biology.
This is a full-lecture, graduate course on algorithms and biomedical applications. The Foundations lectures are an introduction to the biological and medical genomics application areas. Each Algorithm section is devoted to an algorithmic method presented in rigorous depth, followed by an important open problem in the application area, together with the current most effective algorithmic solutions to the problem. Graduate students and advanced undergraduates in computational and mathematical sciences and engineering are welcome. Biological, life sciences and medical students and faculty are welcome as well and will be able to participate more in the applications areas. Fall CSCI2951N S01 17217 TTh 2:30-3:50 (S. Istrail)

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

CSCI 2990. Thesis Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. Fall CSCI2990 S01 14555 Arranged "To Be Arranged" Spr CSCI2990 S01 23763 Arranged "To Be Arranged"

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

Development Studies

DEVL 1550. The Political Economy of African Development.
This course takes an interdisciplinary approach to introduce contemporary development issues in Africa. Drawing on literatures from political sciences, economics, sociology, it explores the challenges of development in the continent since independence. It investigates the influences of governance, institutions, conflicts and external forces in African development trajectories. This is an applied course that uses theoretical and policy analytical approaches to examine the political and socioeconomic dynamism in contemporary Africa. Fall DEVL1550 S01 16701 TTh 1:00-2:20(10) (P. Agupusi)

DEVL 1810. Information Technology and Governance.
The use of information and technology in governance is a vexed subject. Civil society clamors for release of information about the state (openness) while the State wants more information about its citizens (surveillance). Technology plays a role in amplifying these respective intentions resulting in an unprecedented gathering and release of information, thereby bringing the issue of information, technology and its role in governance to sharp focus. This course provides an intensive introduction to the field of information technology and global development. Enrollment limited to 20. Preference given to DS juniors and Seniors. WRIT Fall DEVL1810 S01 16877 W 3:00-5:30(17) (R. Veeraraghavan)

DEVL 1890. Thesis Writing in Development Studies.
An integrative seminar designed for concentrators working on senior theses. Others with comparable backgrounds may enroll with written permission. Begins with a review of theoretical and methodological literature on development studies. Written and oral presentations of thesis research will be the central focus of the latter part of the course. Reserved for Development Studies seniors. WRIT Fall DEVL1890 S01 16876 F 3:00-5:30(14) (F. Ferwerda)
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Reserved for Development Studies seniors.

Explores a range of substantive debates in development by drawing on empirical and theoretical work from the disciplines of economics, political science, sociology and anthropology. The course aims to provide students with a broad understanding of current debates and research on development, evaluate both the differences and complementarities in disciplinary perspectives and develop a toolkit of interdisciplinary analytic skills that can be applied to concrete research questions.
Fall DEVL2000 S01 16858 Th 2:00-5:00(11) (P. Heller)

DEVL 2990. Thesis Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.
Fall DEVL2990 S01 14556 Arranged "To Be Arranged"
Spr DEVL2990 S01 23764 Arranged "To Be Arranged"

DEV LIST. 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.

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 14932 TTh 8:00-8:50(15) (Y. Wang)
Fall CHIN0100 S02 14932 MWF 9:00-9:50(15) (Y. Wang)
Fall CHIN0100 S03 14953 TTh 9:00-10:20(15) (Y. Wang)
Fall CHIN0100 S02 14953 MWF 8:00-9:50(15) (Y. Wang)
Fall CHIN0100 S03 14973 MWF 10:00-10:50(15) (Y. Wang)
Fall CHIN0100 S03 14973 TTh 10:00-12:20(15) (Y. Wang)
Fall CHIN0100 S04 14976 TTh 9:00-11:50(15) (Y. Wang)
Fall CHIN0100 S04 14976 TTh 2:30-3:30(15) (Y. Wang)

CHIN 0150. Advanced Beginning Chinese.
A year-long intensive course designed for students with some prior knowledge of Chinese. Designed to enhance listening, speaking, reading, and writing skills. Five classroom meetings weekly. Placement interview required. This is the second half of a year-long course. Students must have taken CHIN 0150 to receive credit for this course. The final grade for this course will become the final grade for CHIN 0150. If CHIN 0150 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 24083 TTh 8:00-8:50(15) (Y. Wang)
Spr CHIN0200 S01 24083 MWF 9:00-9:50(15) (Y. Wang)
Spr CHIN0200 S02 24089 TTh 9:00-10:20(15) (Y. Wang)
Spr CHIN0200 S02 24089 MWF 10:00-10:50(15) (Y. Wang)
Spr CHIN0200 S03 24109 MWF 1:00-1:50(15) (Y. Wang)
Spr CHIN0200 S03 24109 TTh 1:00-2:20(15) (Y. Wang)
Spr CHIN0200 S04 24113 MWF 2:00-2:50(15) (Y. Wang)
Spr CHIN0200 S04 24113 TTh 2:30-3:30(15) (Y. Wang)

CHIN 0250. Advanced Beginning Chinese.
A year-long intensive course designed for students with some prior knowledge of Chinese. Designed to enhance listening, speaking, reading, and writing skills. Five classroom meetings weekly. Placement interview required. This is the second half of a year-long course. Students must have taken CHIN 0150 to receive credit for this course. The final grade for this course will become the final grade for CHIN 0150. If CHIN 0150 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 CHIN0250 S01 25545 MWTh 10:00-10:50(03) (J. Huang Hsieh)

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 14969 MWF 12:00-12:50(09) (H. Tseng)
Fall CHIN0300 S01 14969 TTh 12:00-12:50(09) (H. Tseng)
Fall CHIN0300 S02 14977 MWF 1:00-1:50(09) (H. Tseng)
Fall CHIN0300 S02 14977 TTh 1:00-2:20(09) (H. Tseng)
Fall CHIN0300 S03 14978 MWF 2:00-2:50(09) (H. Tseng)
Fall CHIN0300 S03 14978 TTh 2:30-3:30(09) (H. Tseng)

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 24102 MWF 12:00-12:50(17) (H. Tseng)
Spr CHIN0400 S01 24102 TTh 12:00-12:50(17) (H. Tseng)
Spr CHIN0400 S02 24110 MWF 1:00-1:50(17) (H. Tseng)
Spr CHIN0400 S02 24110 TTh 1:00-2:20(17) (H. Tseng)
Spr CHIN0400 S03 24114 MWF 2:00-2:50(17) (H. Tseng)
Spr CHIN0400 S03 24114 TTh 2:30-3:30(17) (H. Tseng)

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 14950 MWF 9:00-9:50(15) (W. Chen)
Fall CHIN0500 S01 14950 TTh 9:00-10:20(15) (W. Chen)
Fall CHIN0500 S02 14964 TTh 10:30-11:50(15) (W. Chen)
Fall CHIN0500 S02 14964 MWF 11:00-11:50(15) (W. Chen)
Fall CHIN0500 S03 14970 MWF 12:00-12:50(15) (W. Chen)
Fall CHIN0500 S03 14970 TTh 12:00-12:50(15) (W. Chen)

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 24084 MWF 9:00-9:50(13) (W. Chen)
Spr CHIN0600 S01 24084 TTh 9:00-10:20(13) (W. Chen)
Spr CHIN0600 S02 24095 TTh 10:30-11:50(13) (W. Chen)
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? In what ways has the relationship between the marketplace and childhood evolved over the past hundred years? How have class, gender, ethnicity and sexuality inflected the ways childhood has been experienced in Japan? Students will analyze different texts for and about children (early fairy tales, comic books, propaganda, animation) in relation to critical essays drawn from the disciplines of literature, history, anthropology, film, and social development. SOPH DPLL LILE WRIT
Fall EAST0500 S01 16283 W 3:00-5:30(17)  
(S. Perry)

EAST 0950B. The Floating World.
An exploration of selected literary, artistic, and religious works with an eye to understanding Japanese culture and thought of the early modern period (1600-1868). Materials include merchant tracts, samurai codes, Buddhist sermons, Confucian disquisitions, woodblock prints, drama, and fiction. No prerequisites. Enrollment limited to 20 first year students. FYS
Spr EAST0950B S01 24126 W 3:00-5:30(14)  
(J. Sawada)

EAST 1050. The Chinese Novel.
The purpose of this course is to help us see how the Chinese novel took shape from popular sources, such as storytelling and drama, how the novel drew on history as well as legend, and how its authors and editors express a distinct world view. The class will cover the "masterworks" of the Chinese novel. Through intensive reading, students can explore notions of the hero and heroism, moral action and, more broadly, history and literature from a comparative perspective. All readings are in English translation. Limited to 20 freshmen and sophomores, or by instructor permission.
Spr EAST1050 S01 24125 MW 8:30-9:50(02)  
'To Be Arranged'

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 14992 TTh 1:00-2:20(10)  
(L. Wang)

EAST 1500. Returnees in China's Modernization.
This course examines the impact on contemporary China of returnees, people who having left China to study abroad have now returned home and become reintegrated into society. Focusing on a series of in-depth studies of returnees who have carved out professional identities in the commercial world, the state, and civil society. The returnee experience will be examined from 2 angles: the manner by which contemporary returnees negotiate Chinese tradition and Western learning, and the differences between this cohort's experience and that of previous generations of returnees in China's now century and a half long period of modernization.
Spr EAST1500 S01 24118 M 3:00-5:30(16)  
(Z. Li)

This course traces the historical evolution of modern Chinese, commonly known as Mandarin. We will examine the uniqueness of Chinese characters, and explore their relationship to other features of the language, including word formation, phonology, grammar, and dialects. The goal will be to understand the manner by which the written script has become so central to the development of Chinese civilization.
Fall EAST1510 S01 14986 W 3:00-5:30(17)  
(Z. Li)

EAST 1910. Independent Study.
Sections numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

EAST 1930. Reading and Writing of the Honors Thesis.
Prior admission to honors candidacy required. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.
EAST 1940. Reading and Writing of the Honors Thesis.
Prior admission to honors candidacy required. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

EAST 1950B. Chinese Women, Gender and Feminism from Historical and Transnational Perspectives.
This seminar course is designed to critically re-evaluate (re)presentations of Chinese women, gender, and feminism in historical, literary, and academic discourses. It examines a diverse body of texts produced through different historical periods and in different geopolitical locations. It emphasizes gender as both a historical construct(s) among competing discourses and as a material process of individual embodiment and disembodiment. The goal of the course is to help advanced students understand Chinese history from a distinctly gendered perspective, to recognize women's roles in history and writing, and to develop a reflective, cross-cultural approach to gender, politics, and the self.

Spr EAST1950B S01 24127 W 3:00-5:30(14) "To Be Arranged"

Course focuses on mainland Chinese cultural and media production since the mid 1980's, when China began transforming itself culturally and economically into a capitalist society with socialist characteristics. Traditional values, socialist legacy, commercial forces, and globalization have all played significant roles in the ongoing transformation. The goal of the course is to examine the complex interactions among diverse historical forces in a rapidly changing China. Course taught in Mandarin Chinese.
Spr EAST1950G S01 24119 T 4:00-6:30(13) "To Be Arranged"

This seminar/workshop discusses a broad range of narrative arts produced over the past 100 years in Japan, and practices the art of translating them. Drawing rigor from the field of linguistics and translation theory, we shall make central to our effort of analyzing Japanese cultural productions an attentiveness to the historicity of language and a self-consciousness of our roles as cultural interpreters. While the course will focus on mid-20th century Japanese short fiction, we will also work on poetry, music, manga, animation, and film, depending on the interests of enrolled students. Pre-requisites: JAPN 0600 or equivalent. Instructor permission required.
Spr EAST1950HS01 24130 Th 4:00-6:30(17) (S. Perry)

A survey of the evolution of major forms of Chinese lyric poetry beginning with the Shijing (Book of Songs), the breakthrough to 5-character verse in the Han Dynasty, landscape (shanshui) and field and garden (tianyuan) poetry of the 6 Dynasties, and the flowering of the shi form during the Tang Dynasty. Readings will be in Chinese, discussions in English. Previous study of classical Chinese or permission of the instructor required.
Spr EAST1950Q S01 24129 Th 4:00-6:30(17) "To Be Arranged"

This course 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. Advanced learners of the Korean language as well as native speakers of Korean are welcome.
DPLL Fall EAST1950WS01 15306 Th 4:00-6:30(02) (S. Perry)

EAST 1950X. Queer Japan: Culture, History and Sexuality.
This seminar investigates cultural practices enacted by Japanese gays and lesbians, or otherwise related to same-sex attraction. How have sexual identities traditionally been constructed in Japan, and how has the modern period transformed them? How has same-sex sexuality become figured in the Japanese art, literature and popular culture of the 20th century; and how have the forces of a global LGBT culture interacted with the specific experiences of a same-sex community in Japan? This class explores questions about queer history, writing and cultural practice by looking at particular moments in the Japanese past and present.
Spr EAST1950XX S01 26064 Th 2:30-3:50(11) (S. Perry)

EAST 1990. Senior Reading and Research: Selected Topics.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

EAST 2450. Exchange Scholar Program.

EAST XLIST: Courses of Interest to Concentrators.

Fall 2015 East Asian Studies is a highly interdisciplinary concentration. The following courses in other departments can be taken for concentration credit. Please check the listing of the appropriate department for the time and location of each course.

Religious Studies
RELS 0290E Engaged Buddhism
RELS 1440 Themes in Japanese Buddhism

Japanese

JAPN 0100. Basic Japanese.
Introduction to Japanese language. Emphasizes the attainment of good spoken control of Japanese and develops a foundation of literacy. No prerequisites. This is the first half of a year-long course whose first semester grade is normally a temporary one. Neither semester may be elected independently without special written permission. The final grade submitted at the end of the course work in JAPN 0250 covers the entire year and is recorded as the final grade for both semesters. The East Asian Studies department wishes to provide language instruction to all interested students. If you are unable to register for this course due to enrollment limits but are dedicated to learning Japanese, please contact the instructor via email.
Fall JAPN0100 S01 14942 MWF 9:00-9:50(02) (Y. Jackson)
Fall JAPN0100 S01 14942 Th 9:00-10:20(02) (Y. Jackson)
Fall JAPN0100 S02 14955 MWF 10:00-10:50(02) (Y. Jackson)
Fall JAPN0100 S02 14955 Th 10:30-11:50(02) (Y. Jackson)
Fall JAPN0100 S03 14974 MWF 1:00-1:50(02) (Y. Jackson)
Fall JAPN0100 S03 14974 Th 1:00-2:20(02) (Y. Jackson)

Designed for those who have had high-school Japanese or other Japanese language experience. An opportunity to organize previous knowledge of Japanese and develop a firm basis of spoken and written Japanese. Prerequisite: Reading and writing knowledge of Hiragana, Katakana, and some Kanji. Placement test required. This is the first half of a year-long course whose first semester grade is normally a temporary one. Neither semester may be elected independently without special written permission. The final grade submitted at the end of the course work in JAPN 0250 covers the entire year and is recorded as the final grade for both semesters. The East Asian Studies department wishes to provide language instruction to all interested students. If you are unable to register for this course due to enrollment limits but are dedicated to learning Japanese, please contact the instructor via email.
Fall JAPN0150 S01 14966 MWF 11:00-11:50(04) (K. Yamashita)
Fall JAPN0150 S01 14966 Th 9:00-10:20(04) (K. Yamashita)

JAPN 0200. Basic Japanese.
Introduction to Japanese language. Emphasizes the attainment of good spoken control of Japanese and develops a foundation of literacy. This is the second half of a year-long course. Students must have taken JAPN 0100 to receive credit for this course. The final grade for this course will become the final grade for JAPN 0100. If JAPN 0100 was taken for credit then this course must be taken for credit; if taken as an audit, this course must also be taken as an audit. Exceptions to this policy must be approved by both the academic department and the Committee on Academic Standing. The East Asian Studies department wishes to provide language instruction to all interested students. If you are unable to register for this course due to enrollment limits but are dedicated to learning Japanese, please contact the instructor via email.
Fall JAPN0200 S01 24087 MWF 9:00-9:50(16) (Y. Jackson)
Spr JAPN0200 S01 24087 Th 9:00-10:20(16) (Y. Jackson)
Spr JAPN0200 S02 24091 MWF 10:00-10:50(16) (Y. Jackson)
Spr JAPN0200 S02 24091 Th 10:30-11:50(16) (Y. Jackson)
Designed for those who have had high-school Japanese or other Japanese language experience. An opportunity to organize previous knowledge of Japanese and develop a firm basis of spoken and written Japanese. Prerequisite: Reading and writing knowledge of Hiragana, Katakana and some Kanji. Placement test required. This is the second half of a year-long course. Students must have taken JAPN 0150 to receive credit for this course. The final grade for this course will become the final grade for JAPN 0150. If JAPN 0150 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 I.
See Advanced Japanese I (JAPN 0500) for course description.

JAPN 0700. 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 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 Musashi'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.

The goal of this course is to develop the ability to use Japanese source materials for research in social sciences. Course covers lifestyles in two contrasting cities, Tokyo and Kyoto. Topics include topography, environmental issues, houses, urban life-styles, and natural habitation. We will ask questions: why houses are so compact in cities; why crows and boars pick on garbage, etc. Information sources are films, videos, and websites in addition to textbooks. Prerequisite: JAPN 0600 or equivalent. Enrollment limited to 20.

KOREAN
KREA 0100. Korean.
Begins with an introduction to the Korean writing system (Hangul) and focuses on building communicative competence in modern Korean in the four language modalities (listening, speaking, reading, writing). Provides a foundation for later work in spoken and written Korean. Six classroom hours per week. No prerequisite. Enrollment limited to 18. This is the first half of a year-long course whose first semester grade is normally a temporary one. Neither semester may be elected independently without special written permission. The final grade submitted at the end of the course work in KREA 0200 covers the entire year and is recorded as the final grade for both semesters.

KREA 0200. Korean.
Begins with an introduction to the Korean writing system (Hangul) and focuses on building communicative competence in modern Korean in the four language modalities (listening, speaking, reading, writing). Provides a foundation for later work in spoken and written Korean. Six classroom hours per week. Enrollment limited to 18. This is the second half of a year-long course. Students must have taken KREA 0100 to receive credit for this course. The final grade for this course will become the final grade for KREA 0100. If KREA 0100 was taken for credit then this course must be taken for credit; if taken as an audit, this course must also be taken as an audit. Exceptions to this policy must be approved by both the academic department and the Committee on Academic Standing.
and society. Four classroom hours per week. Prerequisite: KREA 0200 or instructor permission.
Fall KREA0300 S01 14968 MWF 11:00-11:50(04) (H. Ha)
Fall KREA0300 S01 14968 TTh 10:30-11:50(04) (H. Ha)

See Intermediate Korean (KREA 0300) for course description.
Prerequisite: KREA 0100-0200 or equivalent.
Spr KREA0400 S01 24097 MWF 11:00-11:50(04) (H. Ha)
Spr KREA0400 S01 24097 TTh 10:30-11:50(04) (H. Ha)

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.
Fall KREA0500 S01 14975 MWF 1:00-1:50(06) (H. Lee)

KREA 0600. Advanced Korean.
See Advanced Korean (KREA 0500) for course description. Prerequisite: KREA 0500 or equivalent or permission of instructor.
Spr KREA0600 S01 24112 MWF 1:00-1:50(06) (H. Lee)

KREA 0910B. Media Korean.
Develop linguistic competence and deepen cultural understanding through exposure to a variety of media sources. Built on the Content-based Instruction model and Genre-based Approach. Discuss current Korean affairs and core issues of culture based on assigned materials. Develop reading and listening comprehension skills through pre-class activities, oral proficiency through in-class discussion and presentation, and writing proficiency through assigned essays writings, in addition to various integrative tasks. Tuesday classes will focus on comprehending the text and source materials, Thursday classes will focus on related tasks and activities. Enrollment limited to 20. Conducted entirely in Korean.
Fall KREA0910B S01 15055 TTh 10:30-11:50(10) (H. Wang)

KREA 0920A. Korean Culture and Society.
Develops oral proficiency in Korean language through a variety of readings on Korean culture and society. By reading about and discussing important aspects and core issues of Korean culture, students enhance their speaking competence and cultural understanding. Prerequisites: KREA 0300 and 0400 or permission of instructor. Enrollment limited to: 15.
Spr KREA0920A S01 24120 TTh 1:00-2:20(10) (H. Wang)

KREA 1910. Independent Study.
Reading materials for research in Korean. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Interested students must register for EAST 1950W.
Fall KREA1950W S01 16831 Arranged "To Be Arranged"

Economics

ECON 0110. Principles of Economics.
Extensive coverage of economic issues, institutions, and vocabulary, plus an introduction to economic analysis and its application to current social problems. Required for all economics concentrators. Prerequisite for ECON 1110, 1130, 1210 and 1620. Serves as a general course for students who will take no other economics courses and want a broad introduction to the discipline. Weekly one-hour conference required (conferences are not held during the summer session).
Fall ECON0110 S01 15126 MWF 9:00-9:50(16) (R. Friedberg)
Spr ECON0110 S01 24437 MWF 9:00-9:50(02) (R. Friedberg)

A course designed primarily for students who do not plan to concentrate in economics but who seek a basic understanding of the economics of less developed countries, including savings and investment, health and education, agriculture and employment, and interactions with the world economy, including trade, international capital flows, aid, and migration. Prerequisite: ECON 0110 or advanced placement. Enrollment limited to 100.
Spr ECON0510 S01 24810 MWF 8:30-9:50(02) (E. McGuirk)

Basic accounting theory and practice. Accounting procedures for various forms of business organizations.
Fall ECON0710 S01 15147 MWF 6:00-7:20(15) (R. D’Andrea)
Fall ECON0710 S02 15148 TTh 6:00-7:20 (05) (T. Lonardo)
Spr ECON0710 S01 24458 MWF 6:00-7:30(13) (R. D’Andrea)
Spr ECON0710 S02 24459 TTh 6:00-7:30(12) (T. Lonardo)

ECON 1110. Intermediate Microeconomics.
Tools for use in microeconomic analysis, with some public policy applications. Theory of consumer demand, theories of the firm, market behavior, welfare economics, and general equilibrium. Prerequisite: MATH 0060, 0070, 0090, 0100, 0170, 0180, 0190, 0200, or 0350; and ECON 0110; or advanced placement.
Fall ECON1110 S01 15149 TTh 9:00-10:20(08) (J. Campbell)
Fall ECON1110 S02 15150 MWF 8:00-9:50(01) (A. Serrano)
Fall ECON1110 S03 15151 MWF 9:00-9:50(16) (P. DaBo)
Spr ECON1110 S01 24460 TTh 2:30-3:50(14) (R. Vohra)
Spr ECON1110 S02 24461 TTh 9:00-10:20 (14) (R. Vohra)
Spr ECON1110 S03 24462 MWF 2:00-2:50(07) (J. Campbell)

ECON 1130. Intermediate Microeconomics (Mathematical).
Microeconomic theory: Theories of the consumer and firm, competitive equilibrium, factor markets, imperfect competition, game theory, welfare economics, general equilibrium. May not be taken in addition to ECON 1110. Prerequisite: MATH 0100, 0170, 0180, 0190, 0200, or 0350; and ECON 0110; or advanced placement.
Fall ECON1130 S01 15152 MWF 10:00-10:50(03) (M. Gradstein)
Spr ECON1130 S01 24811 TTh 10:30-11:50(09) (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 expecting students to carefully develop techniques in order to understand and produce logical proofs. Topics include the efficiency and coalition 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 15183 MWF 8:00-9:50(16) (R. Serrano)

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 15153 TTh 9:00-10:20(08) (G. Casey)
Fall ECON1210 S02 15154 MWF 11:00-11:50(04) (K. Proulx)
Fall ECON1210 S03 15155 MWF 10:00-10:50(03) (V. Garga)
Spr ECON1210 S01 24463 TTh 2:30-3:50(08) (S. Michalopoulos)
Spr ECON1210 S02 24464 MWF 10:00-10:50(03) "To Be Arranged"
Spr ECON1210 S03 24465 MWF 1:00-1:50(08) (A. Sarid)

ECON 1301. Economics of Education I.
This course teaches students how to use microeconomics to analyze a broad array of education policy issues. The departure of this course from ECON 1110 is the emphasis on studying microeconomics in applied settings, and in particular, using microeconomic concepts to think about, analyze, and solve policy questions in education. Prerequisite: ECON 1110 or 1130.
Fall ECON1301 S01 16801 MWF 12:00-12:50(12) (J. Tyler)
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. DPLL
Spr ECON1310 S01 25239 TTh 9:00-10:20(08) (K. Chay)

The goal of the course is to help students to use economic theory and modern empirical methodology to think critically about the relative costs and benefits of health and education policies. By the end of the course students should feel comfortable critically evaluating proposals meant to increase human capital through school reforms, increased access to health care, or improved health environments. Fall ECON1315 S01 17032 M 3:00-5:30(15) (B. Steinberg)

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 by characterizing the optimal climate/consumption path suggested by the model, and finally, investigating policies to achieve the optimal path. Spr ECON1340 S01 25695 Assigned (M. Turner)

Interested students must register for ENVS 1350. Fall ECON1350 S01 16348 Assigned "To Be Arranged"

ECON 1355. Environmental Issues in Development Economics (ENVS 1355).
Interested students must register for ENVS 1355. Spr ECON1355 S01 25307 Assigned "To Be Arranged"

ECON 1360. Health Economics.
This course introduces students to the issues, theory and practice of health economics in the US. Topics include the economic determinants of health, the market for medical care, the market for health insurance and the role of the government in health care. Course work includes data analyses using the program STATA. Prerequisites: ECON 1110 or 1130; and ECON 1620, 1630, or APMA 1650 or CSCI 1450 or other statistics background. Enrollment limited to 24. DPLL Spr ECON1360 S01 24820 M 3:00-5:30(13) "To Be Arranged"

ECON 1375. Inequality of Opportunity in the US.
This course examines empirical evidence on inequality of opportunity in the US. We cover recent work in economics that measures the importance of parents, schools, health care, neighborhoods, income, and race in determining children's long-term labor market success, and implications of these findings for US public policy. We will also place the empirical work in historical and philosophical context and cover a variety of statistical issues. Prerequisites: ECON 1110 or 1130; and ECON 1620, 1629, or 1630. Enrollment limited to 30 seniors. Fall ECON1375 S01 15857 W 3:00-5:30(17) (N. Hilger)
Fall ECON1375 S01 15857 W 3:00-5:20(17) (N. Hilger)

Examines the economic basis for legal decisions. Cost-benefit analysis, social costs, the Coase Theorem, and the assignment of property rights. The economics of property and contracts, tort law, and criminal law. Prerequisite: ECON 1110 or 1130. Enrollment limited to 100. Spr ECON1380 S01 25694 MWF 10:00-10:50(03) (R. Singh)

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. WRIT Fall ECON1400 S01 15164 MW 8:30-9:50(16) (J. Shapiro)

Positive and normative study of the organizations that comprise and the institutional structures that characterize a modern mixed market economy. Theoretical efficiency and potential limitations of private enterprises and markets including (a) why some market actors are organizations (e.g., companies), (b) effort elicitation problems in organizations, (c) the problem of cooperation in traditional versus behavioral economics, and (d) alternative kinds of organization (including proprietorships, corporations, nonprofits, government agencies). Roles of government, and problems of government failure, including the collective action problem of democracy. State-market balance and contemporary controversies over the economic system in light of the 2008 financial crisis. Enrollment limited to 100 juniors and seniors. Prerequisite: ECON 1110 or 1130. Spr ECON1450 S01 25558 MWF 2:00-2:50(07) (L. Putterman)

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 applications to competitive markets, strikes, etc. Prerequisite: ECON 1110 or 1130. Enrollment limited to 100. Fall ECON1470 S01 16585 MWF 2:00-2:50(07) (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. DPLL Spr ECON1480 S01 24822 TTh 1:00-2:20(10) (N. Hilger)

The course looks at the economics of social security reform with particular focus on possible policy responses to the increasing fraction of the population that is elderly in OECD countries. Among the topics that will be considered are pay as you go funding, defined benefits versus defined contributions, privatization, labor market effects of pensions, retirement decisions, labor supply by couples, and macroeconomic effects. Prerequisite: ECON 1110 or 1130. Enrollment limited to 30. Not open to first-year students. DPLL Fall ECON1485 S01 16708 Th 4:00-6:30(02) (E. Sheshinski)

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. WRIT Spr ECON1486 S01 25975 W 3:00-5:30(14) "To Be Arranged"

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. Fall ECON1500 S01 15858 TTh 2:30-3:50(11) (D. Wyss)

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. DPLL

Spr ECON1510 S01 24809 TTh 10:30-11:50(09) (A. Sautmann)

ECON 1525. Privatization of State Owned Enterprises.
After world war II, many western economies (foremost the U.K and France) nationalized major industries, including the infrastructure sector (e.g. Electricity, Telecommunication and Rail. Thirty years later, due to miserable performance, an apposite trend started to shift ownership of state owned enterprises (SOE) to private ownership. We shall discuss the following major topics:

The Record on Performance and Reform of State-Owned Enterprises
The Rationale for and problems of Public Ownership
Privatization of natural Monopolies: Theory and Evidence Regulation: Structure and Methods
Deregulation and Competition Policy
Labor and Privatization
Methods of Privatization: Auctions, Share Flotations, Concessions and Strategic Investors

Fall ECON1525 S01 17033 T 4:00-6:30(18) (E. Sheshinski)

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 15869 W 3:00-5:30(17) (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 imperfection competition. Strategic trade policy. Trade, labor markets, preferential trade agreements, and the world trading systems. Prerequisite: ECON 1110 or 1130. Enrollment limited to 100.

Fall ECON1540 S01 15860 MWF 10:00-10:50(03) (L. Costa Scottini)

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 24823 MW 1:00-1:50(06) "To Be Arranged"

ECON 1560. Economic Growth.
A theoretical and empirical examination of economic growth and income differences among countries. Focuses on both the historical experience of countries that are currently rich and the process of catch-up among poor countries. Topics include population growth, accumulation of physical and human capital, technological change, natural resources, income distribution, geography, government, and culture. Prerequisite: ECON 1110 or 1130; and MATH 0060, 0070, 0090, 0100, 0170, 0180, 0190, 0200 or 0350; or advanced placement. Enrollment limited to 100.

Spr ECON1560 S01 24824 MW 11:00-11:50(04) (D. Weil)

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. DPLL

Fall ECON1590 S01 15176 MWF 1:00-1:50(06) (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 1130. Weekly one-hour computer conference required.

Fall ECON1620 S01 15157 TTh 9:00-10:20(08) (M. Bedard)
Spr ECON1620 S01 24466 TTh 1:00-2:20(10) (B. Knight)

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 (eg, health, labor, political economy, urban economics, development, etc) that can be explored in greater detail in more advanced classes.

Students will read and discuss papers published in professional journals and perform data analysis as part of the course requirements. Prerequisites: ECON 0110 or advanced placement, and ECON 1110 or 1630.

Fall ECON1629 S01 15177 TTh 9:00-10:20(08) (D. Bjorkegren)
Spr ECON1629 S01 24825 TTh 10:30-11:50(09) (A. Aizer)

ECON 1630. Econometrics I.
Advanced introduction to econometrics with applications in finance and economics. How to formulate and test economic questions of interest. The multivariate linear regression model is treated in detail, including tests of the model’s underlying assumptions. Other topics include: asymptotic analysis, instrumental variable estimation, and likelihood analysis. Convergence concepts and matrix algebra are used extensively. Prerequisites: ECON 0110 or 1130; and APMA 1650 or CSCI 1450, MATH 1620, or ECON 1620; or equivalent.

Fall ECON1630 S01 15186 TTh 1:00-2:20(10) (F. Gunissilus)
Spr ECON1630 S01 24830 MW 3:00-4:20(14) (A. Norets)

ECON 1660. Big Data.
The spread of information technology had led to the generation of vast amounts of data on human behavior. This course explores ways to use this data to better understand the societies in which we live. The course weaves together methods from machine learning (OLS, LASSO, tree-based and ensemble methods, etc) to answer real-world questions in a sequence of projects. We will use projects as a backdrop to weigh the importance of causality, precision, and computational efficiency. Knowledge of basic econometrics and programming is assumed.

Spr ECON1660 S01 25692 Arranged (D. Bjorkegren)

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 CSCI 1450.

Fall ECON1710 S01 15171 MWF 11:00-11:50(02) (S. Kuo)
Fall ECON1710 S02 15172 MWF 1:00-1:50(02) (S. Kuo)
Spr ECON1710 S01 24806 MWF 11:00-11:50(13) (S. Kuo)
Spr ECON1710 S02 24807 MWF 1:00-1:50(13) (S. Kuo)

ECON 1720. Corporate Finance.
A study of theories of decision-making within corporations, with empirical evidence as background. Topics include capital budgeting, risk, securities issuance, capital structure, dividend policy, compensation policy, mergers and acquisitions, real options, financial engineering, securitization. Prerequisite: ECON 1110 or 1130; and ECON 1620 or 1630 or APMA 1650 or CSCI 1450; ECON 1710.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
**ECON 1760. Financial Institutions.** This course analyzes the role of financial institutions in allocating resources, managing risk, and exerting corporate governance over firms. After studying interest rate determination, the risk and term structure of interest rates, derivatives, and the role of central banks, it takes an international perspective in examining the emergence, operation, and regulation of financial institutions, especially banks. Prerequisites: ECON 1110 or 1130; and 1210. Enrollment limited to 100.

Fall ECON1760 S01 15863 TTh 10:30-11:50(13) (D. Wyss)

**ECON 1765. Finance, Regulation, and the Economy: Research.** Analyzes the role of financial markets and institutions in allocating resources and exerting governance over firms, how regulation shapes finance, and how finance influences the enactment and impact of financial regulation. The class will use: economic theory to develop a solid conceptual framework for understanding how finance affects economic growth, income distribution, and stability; empirical evidence to assess theory; and history to put the role of finance into a long-term framework. Current events will be continuously used to keep the class relevant. Prerequisites: ECON 1110 or 1130; and ECON 1210; and ECON 1630; and ECON 1720 or 1760. Enrollment limited to 30 senior concentrators in Economics, BEO, Applied Math-Economics, Computer Science-Economics, and Math-Economics.

Spr ECON1765 S01 26101 F 3:00-5:30(15) (T. Nguyen)

**ECON 1790. Corporate Governance and Management.** A corporation's economic success depends on access to human capital and other resources, effective management of these resources, and a governance system that ensures effective decision making. The course offers policy prescriptions in economic incentives and regulatory rules that attempt to align management with investors. Prerequisites: ECON 1110 or 1130; and ECON 1620 or 1630 or APMA 1650 or CSCI 1450; and ECON 1720; and ECON 0710. Enrollment limited to 40.

Fall ECON1790 S01 15864 TTh 6:40-8:00PM(05) (T. Nguyen)

**ECON 1820. Behavioral Economics.** This course provides a grounding in the main areas of study within behavioral economics, including temptation and self control, fairness and reciprocity, reference dependence, bounded rationality, happiness and neuroeconomics. For each area of study we begin with the standard model of rational decision making, and discuss what behavior this model can explain. We then discuss the experimental evidence that indicates that the standard model is missing something important, and the models that have sprung up to account for these violations. Finally, we will look at the implications of these new models for our understanding of how the economy operates. Prerequisite: ECON 1110 or 1130; and MATH 0060, 0070, 0090, 0100, 0170, 0180, 0190, 0200, 0200, 0350, or advanced placement. Enrollment limited to 100.

Spr ECON1820 S01 24834 TTh 1:00-2:20(10) "To Be Arranged"

**ECON 1850. Theory of Economic Growth.** Analysis of the fundamental elements that determine economic growth. It examines the role of technological progress, population growth, income inequality, and government policy in the determination of (a) the pattern of economic development within a country, and (b) sustainable differences in per capita income and growth rates across countries. Prerequisites: ECON 1210 and either APMA 0330, 0350 (or equivalent), MATH 0180, 0200, or 0350 (or equivalent). Enrollment limited to 100.

Fall ECON1850 S01 15187 F 3:00-5:30(14) (O. Galor)

**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 CSCI 1450, or MATH 1610. Enrollment limited to 100.

Spr ECON1870 S01 24835 TTh 2:30-3:50(11) (G. DeClippel)

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


Fall ECON2010 S01 15169 TTh 1:00-2:20(10) (J. Campbell)

**ECON 2020. Applied Economics Analysis.** 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 24837 TTh 10:30-11:50(09) (A. Saumann)

**ECON 2030. Introduction to Econometrics I.** The probabilistic and statistical basis of inference in econometrics.

Fall ECON2030 S01 15173 TTh 2:30-3:50(11) (E. Renaud)

**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 24838 TTh 9:00-10:20(08) (S. Schennach)

**ECON 2050. Microeconomics I.** Decision theory: consumer's and producer's theory; general competitive equilibrium and welfare economics: the Arrow-Debreu-McKenzie model; social choice and implementation.

Fall ECON2050 S01 15174 MW 1:00-2:20(06) (R. Vohra)

**ECON 2060. Microeconomics II.** Economics of imperfect information: expected utility, risk and risk aversion, optimization under uncertainty, moral hazard, and self-selection problems. Economics of imperfect competition: monopoly; price discrimination; monopolistic competition; market structure in single shot, repeated and stage games; and vertical differentiation.

Spr ECON2060 S01 24839 MW 10:30-11:50(03) (K. Rozen)

**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 15175 MW 9:00-10:20(16) (O. Galor)

**ECON 2080. Macroeconomics II.** Money, inflation, economic fluctuations and nominal rigidities, monetary and fiscal policy, investment, unemployment, and search and coordination failure.

Spr ECON2080 S01 24840 MW 1:00-2:20(06) (G. Eggertsson)

**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 25473 F 9:00-11:50(02) (G. DeClippel)


Fall ECON2180 S01 16586 M 9:00-11:50(16) (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
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 26090 W 1:00-3:50(6) (P. Dal Bo)

ECON 2320. Economics of Labor and Population. This course examines identification issues in empirical microeconomics. Focus on the sensible application of econometric methods to empirical problems in economics and policy research -- particularly labor and population economics. The course examines issues that arise when analyzing non-experimental data and provides a guide for tools that are useful for applied research. The course also emphasizes how a basic understanding of theory and institutions can help inform the analysis. By the end of the course, students should have a firm grasp of the types of research questions and methods that can lead to convincing analysis and be comfortable working with large-scale data sets.

Fall ECON2320 S01 15865 TTh 1:00-2:20(10) (E. Oster)

ECON 2380. The Economics of Children and Families. We will consider the current research in economic behavior related to children, childhood, and child economic and social well-being. We begin with the model of human capital development and the technology of skill formation and then proceed to empirical work. Individual topics covered will include: models of human capital and the technology of skill formation, the fetal origins of disease, non-marital and teen fertility, the evolution of gaps in human capital, models of parental investment, pre-school environments, the impact of income and in-kind transfer programs on child health and well-being, neighborhood influences, adolescent risky behavior.

Spr ECON2380 S01 26102 Th 1:00-4:50(10) (A. Aizer)

ECON 2410. Urbanization. The first part of the course covers social interactions, productivity spillovers, systems of cities models, urban growth, and rural-urban migration. The second part of the course covers topics such as durable housing, land market regulation and exclusion, and local political economy. Besides covering basic theoretical models, emphasis is placed on working through recent empirical papers on both the USA and developing countries. Prerequisites: ECON 2050 and 2060.

Spr ECON2410 S01 25141 F 9:00-5:50(11) (M. Turner)

ECON 2450. Exchange Scholar Program. "To Be Arranged"

ECON 2470. Industrial Organization. Monopolistic competition, market structure and entry, nonprice competition, economics of information.

Spr ECON2470 S01 25472 T 1:00-3:50(10) (J. Shapiro)

ECON 2485. Public Economics I. 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 16646 TTh 10:30-11:50(13) (J. Friedman)

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, migration, self-employment, and the informal sector; rental market frictions and sharecropping arrangements; and environmental externalities (e.g., pollution, water usage, etc.), and sustainable development.

Fall ECON2510 S01 15180 TTh 2:30-3:50(11) (A. Saumann)

ECON 2520. Economic Development II. This course deals with the economic analysis of institutions, with a particular focus on community-based institutions in developing countries. Institutions covered in this course includes cooperatives, ROSCAS, networks, marriage and the family.

Spr ECON2520 S01 25146 TTh 9:00-10:20(8) (D. Bjorkgren)

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.

Spr ECON2530 S01 25483 MW 9:00-10:20(2)

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.

Spr ECON2600 S01 25730 TTh 10:30-11:50 (A. Norets)


Fall ECON2660 S01 15185 MW 2:30-3:50(3) (E. Renault)


Fall ECON2830 S01 15184 F 9:30-12:00(16) (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.

Spr ECON2860 S01 25893 M 1:00-3:50(6) (S. Michalopoulos)

ECON 2890A. Topics in Macroeconomics, Development and Trade. This is a graduate class that covers selected topics at the intersection of macroeconomics, economic development and trade, for students in the second year of the PhD and above. The leading theme of the class is the determinants of the observed cross-country differences in income per capita and growth rates, with a focus on the long run. We start by reviewing theories where factor markets function perfectly and only aggregates matter. We then move to non-aggregative theories, placing special emphasis on theories of financial frictions. We spend some time studying the stochastic growth model with partially uninsurable idiosyncratic risk.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Fall ECON2930 S01 16572 Th 4:00-5:30(02) (J. Shapiro)
Spr ECON2930 S01 25474 Th 4:00-5:30(17) (B. Knight)

ECON 2950. Workshop in Econometrics.  No description available.
Fall ECON2950 S01 16573 T 4:00-5:30(18) (E. Renault)
Spr ECON2950 S01 25475 T 4:00-5:30(16) (A. Norelli)

ECON 2960. Workshop in Macroeconomics and Related Topics.  No description available.
Fall ECON2960 S01 16574 W 4:00-5:30(17) (O. Galor)
Spr ECON2960 S01 25476 W 4:00-5:30(14) (G. Eggertsson)

Fall ECON2970 S01 16575 M 4:00-5:30(15) (R. Serrano)
Spr ECON2970 S01 25477 M 4:00-5:30(13) (G. DeClippel)

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.

ECON 2990. Thesis Preparation.  For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.
Fall ECON2990 S01 14558 Arranged "To Be Arranged"
Spr ECON2990 S01 23768 Arranged "To Be Arranged"

Education

EDUC 0400. The Campus on Fire: American Colleges and Universities in the 1960's
Ole Miss, Berkeley, Columbia, and Kent State: just a few of the campus battlegrounds where conflicts over civil rights, the Vietnam War, and other major issues were fought in the 1960's. Students consult primary and secondary sources about higher education's role in these conflicts, and why the consequences of its involvement still linger today. Enrollment limited to 20 first year students. FYS WRIT
Fall EDUC0400 S01 14625 MWF 11:00-11:50(04) (L. Spoehr)

EDUC 0410E. Empowering Youth: Insights from Research on Urban Adolescents.
Together, we consider the design, analysis, and interpretation of research on youth in urban settings. In doing so, we examine the roles of power, privilege, and multiculturalism in research. In the experiential component of the course, students engage in fieldwork in a local school or community-based youth organization. As part of their fieldwork, students design and undertake a research project, thereby bridging theory with practice. Reserved for First Year students. Enrollment limited to 20 first year students. Instructor permission required. FYS DPLL WRIT
Spr EDUC0410E S01 23838 MWF 12:00-12:50(03) (M. Martin)

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. DPLL WRIT LILE SOPH
Spr EDUC0610 S01 23847 Th 4:00-5:30(17) (T. Steffes)

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 on developmental theories and empirical research. The educational implications of research on human development are discussed.
Fall EDUC0800 S01 14632 MWF 1:00-1:50(06) (M. Abo-Zena)

EDUC 0850. History of Intercollegiate Athletics.
This team-taught course traces the changing place of intercollegiate athletics on the American college campus over the past 150 years. Topics examined include, among others, the historical relationship between academic and athletic pursuits; commercialization and professionalism; the role of the NCAA and of the media; the cult of the coach; and the significance of race, gender, and class. Emphasis on critical reading, active participation in discussion, and developing research and writing skills. The course will meet twice weekly, sometimes as a whole and sometimes in smaller groups, to discuss readings, films, and guest presentations. Enrollment limited to 30.
Spr EDUC0850 S01 23828 TTh 10:30-11:50(09) (L. Spoehr)

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 14629 M 3:00-5:30(15) (B. Bisaccio)

EDUC 0950. Learning About Learning: Classrooms in Context.
This course aims to provide a pedagogical and sociopolitical context for Brown students as they work as volunteers in the Providence Public Schools. Through sharing of volunteer placement experiences, the in-class practice of methods, academic inquiry, analysis and reflection, students will develop their understanding of strategies and perspectives that will both improve their effectiveness as volunteers and develop their ability to thoughtfully enter the national dialogue on improving urban schools.
Spr EDUC0950 S01 25885 T 4:00-6:30(16) "To Be Arranged"

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.
Fall EDUC1010 S01 14649 Th 4:00-6:30(02) (M. Gross)

EDUC 1020. The History of American Education.
This course is an introduction to the history of American education with an emphasis on K-12 public schooling. Using primary and secondary sources, we will explore the development of public schools and school systems, debates over aims and curriculum, conflicts over school governance and funding, and struggles for equity and inclusion over time. We will analyze the relationship between schooling, capitalism, and democracy. Finally, in exploring how different generations have defined and tried to solve educational dilemmas, we'll consider how this history might help us approach education today.
Fall EDUC1020 S01 14643 Th 1:00-2:20(10) (T. Steffes)

EDUC 1030. Comparative Education.
National systems of formal education, over the past two centuries, have proliferated massively. International organizations, governmental and nongovernmental, have long promoted the universal provision of mass education as central goals in the modern way of life. At the same time, the way children are raised, and the kinds of adults they become, varies considerably. Comparative education seeks to explore this interplay of variety and uniformity. Enrollment limited to 40.
Fall EDUC1030 S01 16807 MW 9:00-9:50(16) (R. Kandtowicz)

EDUC 1040. Sociology of Education.
The eclectic sociological imagination is turned upon that crucial modern institution: education. Considers formal education as a contemporary institution and schools as organizations both in comparative perspective and in more microscopic ways. Asks what schools and schooling means to society and to children from different social and economic circumstances. Enrollment limited to 50.
EDUC 1060. Politics and Public Education.
Who exercises power in public education? This course examines the key institutions (e.g. school districts, states, Congress, and the courts) and actors (e.g. parents, teachers, interest groups, and the general public) shaping American K-12 education in order to understand recent policy trends and their consequences for students. Major policies discussed include school finance, textbook adoption, school accountability, and school choice. Particular attention is given to the federal No Child Left Behind Act of 2001 and debates over its reauthorization. Previous coursework in American politics or public policy is suggested but not required.

Fall EDUC1060 S01 14647 TTh 10:30-11:50(13) (J. Papay)

EDUC 1070A. Student Teaching: English.
S/NC.
Fall EDUC1070F S01 14641 Arranged (L. Snyder)
Spr EDUC1070A S01 23842 Arranged (L. Snyder)

EDUC 1070B. Student Teaching: History and Social Studies.
S/NC.
Fall EDUC1070ES S01 14653 Arranged (M. Gross)
Spr EDUC1070BS S01 23855 Arranged (M. Gross)

EDUC 1070C. Student Teaching: Science.
S/NC.
Fall EDUC1070CS S01 14655 Arranged (D. Bisaccio)
Spr EDUC1070C S01 23853 Arranged (D. Bisaccio)

EDUC 1080A. Analysis of Teaching: English.
S/NC.
Fall EDUC1080FS S01 14639 W 4:30-6:50(15) (L. Snyder)
Spr EDUC1080AS S01 23841 W 4:30-6:50(14) (L. Snyder)

EDUC 1080B. Analysis of Teaching: History and Social Studies.
S/NC.
Fall EDUC1080ES S01 14650 W 4:30-6:50(15) (M. Gross)
Spr EDUC1080BS S01 23856 W 4:30-6:50(14) (M. Gross)

EDUC 1080C. Analysis of Teaching: Science.
S/NC.
Fall EDUC1080CS S01 14657 W 4:30-6:50(15) (D. Bisaccio)
Spr EDUC1080CS S01 23854 W 4:30-6:50(14) (D. Bisaccio)

EDUC 1100. Introduction to Qualitative Research Methods.
Designed for sophomores or juniors concentrating in education studies, but also open to other undergraduates interested in qualitative research methods. Through readings, class exercises and discussions, and written assignments, examines issues related to the nature of the qualitative research methods that are commonly used in education, psychology, anthropology, and sociology. Enrollment limited to 20.
Spr EDUC1100 S01 23837 M 3:00-5:30(17) (J. Gujarati)

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.
Spr EDUC1110 S01 23830 TTh 2:30-3:50(11) (M. Kraft)

EDUC 1130. Economics of Education I.
How do we attract good teachers to public schools? What are the economic returns to early-childhood intervention programs? These are just two examples of important education policy questions. This course introduces key concepts of microeconomic theory and uses them to analyze these and other policy questions. Organized around a structured sequence of readings. First year students require instructor permission.

Fall EDUC1130 S01 16940 T 4:00-6:30(18) (A. Moffit)
EDUC 1650. 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 bargaining model, the organizational-bureaucratic model, and the "consumer choice" perspective. Enrollment limited to 20. WRIT Fall EDUC1650 S01 23865 W 3:00-5:30(14) (K. Wong)

EDUC 1690. Literacy, Community, and the Arts: Theory into Practice. An exploration of ways to improve student literacy skills through the performing arts in area schools. Students read about the theory and practice of literacy and the arts, research national and local initiatives, engage in arts activities, and spend time in area classrooms working with local teachers and artists to draft curriculum materials to be used in summer and school-year programs. Spr EDUC1690 S01 23845 M 3:00-5:30(13) (L. Snyder)

EDUC 1700. The Asian American Experience in Higher Education. This course is an inter-disciplinary exploration of Asian Americans in higher education and the impact of their participation on the broader academic landscape. It considers the historical roots of Asian American collective identity; the evolution of Asian American Studies programs; consequences of the model minority myth; and the psychosocial and structural barriers to participation and academic achievement across different Asian American groups as compared to other racial/ethnic minority groups. Enrollment limited to 20. DPLL LILE Fall EDUC1700 S01 14752 MW 8:30-9:50(16) (L. Cariaga-Lo)

EDUC 1720. Urban Schools in Historical Perspective. Why did urban schools, widely viewed as the best in the nation in the early twentieth century, become a "problem" to be solved by its end? How have urban schools been shaped by social, economic, and political transformations in cities and by other public policies? How have urban schools changed over time? This course will ask those and other questions to explore how historical perspective can help us better understand urban schools today. We will analyze the impact of changes in demographics, urban renewal and suburban development, the political economy of cities, educational expectations, and demands for equity. Spr EDUC1720 S01 23846 TTh 1:00-2:20(10) (T. Steffes)

EDUC 1730. American Higher Education in Historical Context. A study of 350 years of American higher education. The first part traces the growth and development of American higher education from premodern college to the modern research university. The second part examines issues facing higher education today and places them in historical context. Particular attention is given to: the evolution of curriculum; professionalization; student life; and the often competing priorities of teaching, research and service. WRIT Fall EDUC1730 S01 14626 MWF 2:00-2:50(07) (L. Spoehr)

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 1703, CLPS 0610 (COGS 0610), or equivalent. Enrollment limited to 30. WRIT Spr EDUC1860 S01 23836 F 3:00-5:30(15) (Y. Yamamoto)

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 1991. Independent Reading and Research. Supervised reading and/or research for education concentrators who are preparing an honors thesis. Written permission from the honors advisor required. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

EDUC 2070A. Student Teaching: English. S/NC. Fall EDUC2070AS01 23859 Arranged (L. Snyder)

EDUC 2070B. Student Teaching: History and Social Studies. S/NC. Fall EDUC2070BS01 23860 Arranged (M. Gross)

EDUC 2070C. Student Teaching: Science. S/NC. Fall EDUC2070CS01 23861 Arranged (D. Bisaccio)

EDUC 2080A. Analysis of Teaching: English. No credit course. Fall EDUC2080AS01 23844 W 4:30-6:50(14) (L. Snyder)

EDUC 2080B. Analysis of Teaching: History and Social Studies. No credit course. Fall EDUC2080BS01 23859 W 4:30-6:50(14) (M. Gross)

EDUC 2080C. Analysis of Teaching: Science. No credit course. Fall EDUC2080CS01 23833 W 4:30-6:50(14) (D. Bisaccio)

EDUC 2120. Practicum and Seminar in Elementary Education. Students participate in an elementary classroom for 2 1/2 days a week for 12 weeks, participating in all aspects of the school day. Students assume responsibility for individualized instruction, small groups and some daily routines. Examines topics in child development; race, class, ethnic and linguistic diversity; assessment; teaching and learning as well as topics arising from the experiences in classrooms. S/NC. Fall EDUC2120 S01 14659 Th 4:00-6:30(02) (J. Gujarati)

EDUC 2140. Methods and Materials of Math, Science, and Technology. Using a developmental approach, students are introduced to the major concepts and teaching methods used in elementary math and science classrooms. S/NC. Fall EDUC2140 S01 14630 F 1:30-4:00(06) (D. Bisaccio)

EDUC 2150. Language and Literacy in the Elementary School Classroom. An introduction to comprehensive literacy curriculum in reading and writing, including strategies for teaching interactive read alouds; shared reading and shared writing; phonics and word work; independent reading workshop; guided reading; writer's notebooks; writing workshop; and children's literature via an author study. S/NC. Fall EDUC2150 S01 14636 M 4:00-6:30(15) (J. Gujarati)

EDUC 2270. Student Teaching. Provides no fewer than 180 hours of student teaching and observation-equivalent to six semester hours of credit in institutions operating on a semester-hour basis and fulfills the supervised student teaching requirements for elementary school teaching certification in Rhode Island and in ICC member states. S/NC. Spr EDUC2270 S01 23886 Arranged (J. Gujarati)

EDUC 2280. Seminar: Principles of Learning and Teaching. A critical analysis of the activity of teaching, restricted to and required of students taking EDUC 2270. The course requires curriculum and lesson planning, reflective analyses of student learning and classroom teaching,
and places learning and teaching in context with attention to issues of diversity of schools and their student bodies. S/N/NC.
Spr EDUC2280 S01 23863 Th 4:00-6:30(17) (J. Gujarati)

EDUC 2320. Quantitative Research Methods and Data Analysis.
The goal of this course is to provide students in the Urban Education Policy course with a foundation and understanding of basic statistical analyses so that they will be able to design and carry out their own research and will be able to use data to inform education policy and practice.
Fall EDUC2320 S01 14628 M 4:00-6:30(15) (M. Kraft)

This course is a requirement for students of the MA in Urban Education Policy program. It deals with the political science and public policy central question of: How can public institutions be redesigned to improve accountability? Particular attention will be given to the governance and politics in urban public school systems.
Fall EDUC2330 S01 14645 W 4:00-6:30(17) (K. Wong)

EDUC 2340. Human Development and Urban Education.
In this course we will learn relevant theories and research in the academic field of Human Development to urban education practice and policy from preschools to high schools. Special emphasis will be placed in areas where there is research convergence and that are relevant to urban populations and settings. Recommended prerequisites: EDUC 0800 or EDUC 1710 or EDUC 1750.
Fall EDUC2340 S01 14634 T 4:00-6:30(18) (M. Martin)

EDUC 2350. Economics of Education II.
Introduces students to the main economic theories and related applied work that inform education policy analysis. In so doing, the course combines economic theory, econometric studies, and education and institutional literature in an examination of current issues in U.S. education, particularly those issues that are most relevant to urban education. The course begins with examinations of key concepts and theories from microeconomics, labor economics, and public economics that are most relevant for studying questions in education. After laying theoretical foundation the course then examines how these theories can illuminate and aid policy analysis around key topics in U.S. education. Open to graduate students only.
Spr EDUC2350 S01 23849 W 4:00-6:30(14) (J. Tyler)

EDUC 2360. Policy Analysis and Program Evaluation for Education.
Informed education policymaking requires reliable information about the causal effects of government programs and other factors shaping educational outcomes. This course offers an overview of education policy analysis with an emphasis on econometric strategies for measuring program impacts. It aims to make students critical consumers of policy evaluations and to equip them with tools to conduct their own research. Topics covered include the political context for policy research, social experiments, alternative strategies for making causal inferences, and cost-benefit analysis. Prerequisites: EDUC 1110, POLS 1600, SOC 1100, or written permission of the instructor.
Spr EDUC2360 S01 23850 M 4:00-6:30(13) (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 14646 Arranged (K. Wong)

EDUC 2380. Internship.
Students in the Urban Education Policy Master's Program participate in year-long internships in organizations that focus on urban education policy. Each student works with his or her site supervisor to develop a job description for the internship that allows the student to learn from and contribute to the work of the host organization.
Spr EDUC2380 S01 23851 Arranged (K. Wong)

EDUC 2450. Exchange Scholar Program.

EDUC 2980. Studies in Education.
Independent study; must be arranged in advance. Section numbers vary by instructor. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

EDUC 2990. Thesis Preparation.
No description available.
Fall EDUC2990 S01 14559 Arranged "To Be Arranged"
Spr EDUC2990 S01 23767 Arranged "To Be Arranged"

EDUC XLIST. Courses of Interest to Concentrators in Education.

Egyptology and Assyriology

ASSY 1000. Introduction to Akkadian.
An intensive introduction to the cuneiform writing system and the basic grammar and vocabulary of Akkadian, a language first attested over four thousand years ago in Mesopotamia (modern Iraq). The earliest known member of the Semitic family of languages (like Arabic and Hebrew), Akkadian was in use for over two thousand years across a wide expanse of the ancient Near East. Students will learn the classical Old Babylonian dialect of Akkadian (ca. 1800 BCE) and read Mesopotamian texts in the original, including selections from the Laws of Hammurabi, as well as excerpts from myths, hymns, prayers, historical documents, and letters.
Fall ASYR1000 S01 16890 W 5:40-8:10PM(11) (Z. Wainer)

ASSY 1010. Intermediate Akkadian.
This course is the second semester of an intensive, yearlong introduction to the Akkadian (Babylonian/Assyrian) language. Students will deepen their knowledge of the cuneiform writing system and continue to develop their grasp of Akkadian grammar. Readings from Mesopotamian texts in the original language and script will include, among others, selections from the Laws of Hammurapi, Assyrian historical texts (such as the accounts of Sennacherib's siege of Jerusalem), and the story of the Flood from the Standard Babylonian Epic of Gilgamesh. Prerequisite: Introduction to Akkadian (ASYR 0200 or ASYR 1000) or permission of the instructor.
Spr ASYR1010 S01 25783 Arranged (Z. Wainer)

ASSY 1700. Astronomy, Divination and Politics in the Ancient World.
This course will explore the relationship between astronomy, divination and politics in the ancient world. The sky provided ancient cultures with many possibilities for observing occurrences that could be interpreted as omens. In many cultures, celestial omens were directed towards the king and his government. As a result, interpreting and controlling celestial omens became an important political activity. In this course, we will explore how and why astronomical events were used politically in ancient Mesopotamia, the Greco-Roman world, and ancient and medieval China. No prior knowledge of astronomy is necessary for this course. WRIT
Fall ASYR1700 S01 14845 TTh 10:30-11:50(13) (J. Steele)

ASSY 1725. Scientific Thought in Ancient Iraq.
This course will investigate a variety of ancient scientific disciplines using primary sources from ancient Mesopotamia (modern Iraq). By reading the original texts and studying the secondary literature we will explore the notion of scientific thought in the ancient world and critique our own modern interpretation of what “science” is and how different traditions have practiced scientific methods towards a variety of aims. Looking at a range of disciplines will allow us to compare and contrast the different ways in which scientific thinking is transmitted in the historical record. DPLL LILE WRIT
Spr ASYR1725 S01 25782 Arranged "To Be Arranged"

Nineveh (now in present-day Mosul, Iraq) was the Assyrian empire’s last capital and home to one of the earliest large-scale collections of ancient literature: Assurbanipal’s library. Remembered in Greek tradition as Sardanapalus, this 7th-century king is credited with amassing thousands of clay tablets and wooden writing boards in a state-sponsored institution that included myths, hymns, rituals, medical and divinatory lore, and ancient dictionaries. This course will explore the contents and significance of Assurbanipal’s library, looking in a comparative way at its antecedents.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
and heirs across the ancient world. Additional topics include: colophons; royal literacy; court scribes; libraries, museums, and heritage. DPLL
Spr ASYR1850 S01 25607 M 3:00-5:30(13) (M. Rutz)

ASYR 2120. Historiography of Exact Sciences.
Introduces graduate students to the sources, problems, and methodologies of the history of astronomy and mathematics from Babylon to Kepler. Prerequisite: AWAS 0200. Open to graduate students only.
Fall ASYR2120 S01 14846 Arranged (J. Steele)

ASYR 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.
Spr ASYR2310A S01 23963 Arranged (J. Steele)

ASYR 2450. Akkadian Texts of the Late Bronze Age.
Readings in late-second millennium cuneiform sources found at sites such as Nuzi, Alalakh, Amarna, Hatthusa, Emar, Ugarit, and elsewhere. Particular emphasis will be placed on understanding the representative genres of this period (administrative, epistolary, legal, literary, ritual, and scholastic texts) as well as grappling with the historical and interpretive problems associated with a particular archive or group of archives. Additional topics include: Akkadian as a lingua franca; linguistic interference; corpus-specific problems in lexicography, paleography, orthography, grammar, prosopography, and the material aspects of textual production. A reading knowledge of Akkadian cuneiform is required.
Fall ASYR2450 S02 15197 F 1:00-3:30(15) (M. Rutz)

ASYR 2800. Archaeologies of Text.
An interdisciplinary seminar that examines the interplay between ancient texts and archaeology in the study of the ancient world. Emphasis will be placed on articulating and analyzing the research methods and assumptions found in case studies set in the ancient Near East, Mediterranean, East Asia, and the Americas. Topics will include: canons of literature as/versus ancient inscriptions; materiality of text; texts on display, in deposits, in archives, in libraries, as refuse; literacy and education; practices of documentation and analysis; writing, language, and ethnicity; historical geography; fakes and forgeries; ancient texts and archaeological ethics. No prerequisites. Intended primarily for graduate students.
Fall ASYR2800 S01 14847 W 3:00-5:30(17) (M. Rutz)

This seminar will explore the development of written traditions among the cuneiform scribes of ancient Babylonia and Assyria. Topics covered include the mechanics of writing on clay tablets, the training of scribes and the structure of the curriculum, the status of scribes in society, the development of literary and scholarly traditions, the creation of tablet archives, the circulation of scholarly knowledge, and the range of scholarship (e.g. science, medicine, ritual, literature) found in Babylonia and Assyria.
Spr ASYR2950 S01 23964 W 3:00-5:30(14) (J. Steele)

ASYR 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 tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.
Fall ASYR2990 S01 16887 Arranged "To Be Arranged"
Spr ASYR2990 S01 25653 Arranged "To Be Arranged"

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

Egyptology

EGYT 0300. In the Beginning: Cosmos and Creation in the Ancient World.
As in every human society, the people of ancient Mesopotamia (Iraq) and Egypt wondered about the universe, their world, and how it came about in the first place. Preserved for us in ancient texts and images, their ideas share some things in common with more familiar ancient traditions, such as the creation account in the Bible. In this course, you will look at these ancient texts and images and learn how to dissect them to find what their authors were thinking. In the process, you will discover some surprisingly sophisticated concepts that are still present in our own culture. DPLL FYS
Spr EGYT0300 S01 25605 TTh 10:30-11:50(09) (M. Rutz)

EGYT 1310. Introduction to Classical Hieroglyphic Egyptian Writing and Language (Middle Egyptian I).
Much of this two-semester sequence is spent learning the signs, vocabulary, and grammar of one of the oldest languages known. By the end of this introductory year, students read authentic texts of biographical, historical, and literary significance. The cornerstone course in the Department of Egyptology - essential for any serious work in this field and particularly recommended for students in archaeology, history, classics, and religious studies. No prerequisites.
Fall EGYT1310 S01 14846 MWF 10:00-10:50(03) (L. Depuydt)

EGYT 1320. Introduction to Classical Hieroglyphic Egyptian Writing and Language (Middle Egyptian II).
Continuation of a two-semester sequence spent learning the signs, vocabulary, and grammar of one of the oldest languages known. By the end of this introductory year, students read authentic texts of biographical, historical, and literary significance. The cornerstone course in the Department of Egyptology - essential for any serious work in this field and particularly recommended for students in archaeology, history, classics, and religious studies. No prerequisites.
Spr EGYT1320 S01 23965 MWF 10:00-10:50(03) (L. Depuydt)

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 14849 TTh 9:00-10:20(08) (J. Allen)

EGYT 1430. History of Egypt I.
A survey of the history and society of ancient Egypt from prehistoric times to the end of the Eighteenth Dynasty (ca. 5000-1300 BC). Readings include translations from the original documents that serve as primary sources for the reconstruction of ancient Egyptian history. WRIT
Fall EGYT1430 S02 15199 MWF 11:00-11:50(04) (L. Bestock)

EGYT 1440. History of Egypt II.
A survey of the history and society of ancient Egypt from the Ramesside Period to the Roman conquest (ca. 1300-30 BC). Readings include translations from the original documents that serve as primary sources for the reconstruction of ancient Egyptian history.
Spr EGYT1440 S01 23966 MWF 12:00-12:50(05) (L. Depuydt)

EGYT 1525. Living, Creating, Believing and Dying in the Village of the Royal Tomb Builders.
The site of Deir el-Medina was home to a community of skilled workmen in charge of digging and decorating the tombs of both the Valley of the Kings and Valley of the Queens during the New Kingdom (ca. 1550-1069 B.C.). Deir el-Medina is usually considered the paradigmatic site-witness for studies of Egyptian daily life and benefits from a substantial material record. Through a multi-perspective analysis drawing on both tangible (archaeological structures) and intangible (textual/iconographical) sources, ancient and modern (excavation diaries and new discoveries recently on the spot!), this course aims at discovering the lifestyle, practices and culture of this community. DPLL
Fall EGYT1525 S01 17059 F 2:00-4:50(02) (A. Salmas)

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 2210. Introduction to Coptic.
Coptic, the last stage of the ancient Egyptian language, was written with essentially Greek alphabetic characters. An introduction to Sahidic, which is perhaps the best represented of the Coptic dialects. Sahidic grammar is explained, and some texts, mainly of a biblical and patristic nature, are read. Open to undergraduates with the consent of the instructor. No
prerequisites, but a knowledge of Middle Egyptian or Greek would be helpful.

Fall EGYT2210 S01 14850 Arranged (L. Depuydt)

EGYT 2310. History of the Ancient Egyptian Language.
Diachronic survey of ancient Egyptian from Old Egyptian through Coptic, covering changes in phonology and grammar and analyzing the processes through which these changes took place. Course requirements are short research papers to be presented in class and a final examination. Previous course work in at least one stage of the Egyptian language required; knowledge of Late Egyptian, Demotic (grammatic) or Coptic preferable. Prerequisites: EGYT 1310 and EGYT 1520, plus either EGYT 2210, EGYT 2410 or EGYT 2610.

Fall EGYT2310 S01 16751 Th 1:00-3:50 (J. Allen)

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

Fall EGYT2970 S01 14560 Arranged "To Be Arranged"
Spr EGYT2970 S01 23768 Arranged "To Be Arranged"

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

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

Fall EGYT2990 S01 14561 Arranged "To Be Arranged"
Spr EGYT2990 S01 23769 Arranged "To Be Arranged"

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

Engineering
This course will address the impact that technology has on society, the central role of technology on many political issues, and the need for further study of the role of technology in society. The course will begin with a brief history of technology. Prerequisite: ENGN 0030. Corequisite: MATH 0200 or 0180.

ENGN 0030. Introduction to Engineering.
An introduction to various engineering disciplines, thought processes, and issues. Topics include computing in engineering, engineering design, optimization, and estimation. Case studies in engineering are used to illustrate engineering fields and scientific principles, including in-depth studies of statics and optics. Laboratories and design projects are included. Prerequisite: one of the following: APMA 0330, 0340, 0350, 0360, MATH 0100, 0170, 0180, 0190, 0200, 0350, 0520, 0540, which may be taken concurrently.

Students MUST register for the course lecture (M01) and one of the sections during the SAME registration session. Banner will not allow a student to register for one component without registering for the other at the same time. Further, if you drop one component of the course on Banner, both components will be dropped.

Fall ENGN0030 M01 16580 MWF 1:00-1:50 (C. Briant)
Fall ENGN0030 S01 16571 T 9:00-10:20(06) (C. Briant)
Fall ENGN0030 S02 16576 T 2:30-3:50(06) (C. Briant)
Fall ENGN0030 S03 16577 Th 9:00-10:20(06) (C. Briant)
Fall ENGN0030 S04 16578 Th 2:30-3:50(06) (C. Briant)

ENGN 0040. Dynamics and Vibrations.
Study of the kinematics and dynamics of particles and rigid bodies. Principles of motion of mechanical systems. Concepts of inertia, work, kinetic energy, linear momentum, angular momentum, and impact. Applications to engineering systems, satellite orbits, harmonic vibrations of one and two degree of freedom systems. Lectures, recitations, and laboratory. Prerequisite: ENGN 0030. Corequisite: MATH 0200 or 0180.

Spr ENGN0040 S01 25357 TTh 9:00-10:20(08) (A. Bower)

ENGN 0090. Management of Industrial and Nonprofit Organizations.
Exposes students to the concepts and techniques of management. Topics include marketing, strategy, finance, operations, organizational structure, and human relations. Guest lecturers describe aspects of actual organizations. Lectures and discussions.

Fall ENGN0090 S01 16412 TTh 1:00-2:20(17) (B. Hazeltine)
Fall ENGN0090 S02 16413 TTh 2:30-3:50(17) (B. Hazeltine)

ENGN 0120A. Crossing the Consumer Chasm by Design.
Technologies have shaped human life since tools were sticks and flints to today's hydrocarbon powered, silicon managed era. Some spread throughout society; bread, cell phones, airlines, but most never do; personal jet packs, Apple Newton, freeze dried ice cream.

Space Tourism, the Segway, electric cars: Can we predict which ones will 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. FY5 WRIT
Spr ENGN0120 S01 25365 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. FY5 WRIT
Spr ENGN0120B S01 25364 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 16945 MWF 9:00-9:50(16) (B. Hazeltine)

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 16425 Arranged (C. Bull)
Spr ENGN0260 S01 25365 Arranged (C. Bull)

Mechanical behavior of materials and analysis of stress and deformation in engineering structures and continuous media. Topics include concepts of stress and strain; the elastic, plastic, and time-dependent response of...
materials; principles of structural analysis and application to simple bar structures, beam theory, instability and buckling, torsion of shafts; general three-dimensional states of stress; Mohr's circle; stress concentrations. Lectures, recitations, and laboratory. Prerequisite: ENGN 0030.

Fall ENGN0310 S01 16426 MWF 9:00-9:50(16) (C. Franck)

ENGN 0410. Materials Science.
Relationship between the structure of matter and its engineering properties. Topics: primary and secondary bonding; crystal structure; atomic transport in solids; defects in crystals; mechanical behavior of materials; phase diagrams and their utilization; heat treatment of metals and alloys; electrical, optical, and magnetic properties of materials; strengthening mechanisms in solids and relationships between microstructure and properties; corrosion and oxidation. Lectures, recitations, laboratory.

Fall ENGN0410 S01 16429 TTh 9:00-10:20(15) (B. Sheldon)
Fall ENGN0410 S01 16429 M 3:00-3:50(15) (B. Sheldon)

ENGN 0510. Electricity and Magnetism.
Fundamental laws of electricity and magnetism and their role in engineering applications. Concepts of charge, current, potential, electric field, magnetic field. Resistance, capacitance, and inductance. Electric and magnetic properties of materials. Electromagnetic wave propagation. Lectures, recitation, and laboratory. Prerequisites: ENGN 0030 or PHYS 0070; ENGN 0040 or PHYS 0160 (previously 0080); MATH 0180 or 0200; and APMA 0330 or 0350 (may be taken concurrently).

Fall ENGN0510 S01 16432 MWF 10:00-10:50(03) (A. Zaslavsky)

ENGN 0520. Electrical Circuits and Signals.
An introduction to electrical circuits and signals. Emphasizes the analysis and design of systems described by ordinary linear differential equations. The frequency domain is introduced, including the effects of sampling and windowing in computer simulations. Other topics include transient analysis, Fourier series, and Laplace transform. Laboratories apply concepts to real problems in audio and controls. Lectures, recitation, and laboratory. Prerequisite: MATH 0180 or MATH 0200, courses may be taken concurrent to ENGN 0520.

Spr ENGN0520 S01 25366 MWF 10:00-10:50(03) (H. Silverman)

ENGN 0720. Thermodynamics.
An introduction to macroscopic thermodynamics and some of its engineering applications. Presents basic concepts related to equilibrium, and the zeroth, first and second laws for both closed and open systems. Examples include analysis of engines, turbines, and other engineering cycles, phase equilibrium and separation processes, chemical reactions, surface phenomena, magnetic and dielectric materials. Lectures, recitations, and laboratory. Prerequisites: ENGN 0030 or ENGN 0040. Recommended: ENGN 0410 or CHEM 0330.

Spr ENGN0720 S01 25375 TTh 2:30-3:50(11) (C. Briant)


Fall ENGN0810 S01 16491 MWF 1:00-1:50(06) (K. Breuer)

ENGN 0900. Managerial Decision Making.
Ways of making effective decisions in managerial situations, especially situations with a significant technological component; decision analysis; time value of money; competitive situations; forecasting; planning and scheduling; manufacturing strategy; corporate culture. Lectures and discussions. Prerequisite: ENGN 0090 or MATH 0100.

Spr ENGN0900 S01 25378 TTh 1:00-2:20(10) (B. Hazeltime)
Spr ENGN0900 S02 25379 TTh 2:30-3:50(11) (B. Hazeltime)

ENGN 0930A. Appropriate Technology.
Our goal for this course is that you leave it with the ability to think and act rationally and concretely on issues of technology and the human condition. We will provide background on useful technologies (e.g. wind, solar, hydro), techniques to fabricate them, and an opportunity to explore the obstacles to their implementation.

Spr ENGN0930F S01 25380 MWF 3:00-4:20(14) (B. Hazeltime)

ENGN 0930C. Design Studio.
Design Studio 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 25382 TTh 9:00-11:50(08) (L. Gonsher)

ENGN 0931. Internet of Everything.
The Internet can be visualized as Internet of information, Internet of people, Internet of places and most importantly the Internet of "things." Internet of Everything includes these four paradigms. In this class, we will learn about how these four ideas can come together to make a difference in the world. We will study the underlying infrastructure that supports Internet, the TCP/IP model, addressing and routing. Experiments and projects in the class would include a tree on the Internet communicating with the sprinkler system only when it is thirsty. Privacy and ethical issues will also be addressed.

Spr ENGN0931 S01 25383 TTh 6:40-8:00PM(12) (R. Pendse)

ENGN 1000. Projects in Engineering Design.
Projects in design for concentrators in chemical, electrical, materials, and mechanical engineering. Students generally work in teams on projects that are defined through discussions with the instructor. An assembled product or detailed design description is the goal of the semester's effort. Prerequisite: completion of engineering core program. Written permission required.

Fall ENGN1000 S01 16494 MWF 3:00-5:20(15) (J. Fontaine)
Spr ENGN1000 S01 25384 MWF 3:00-5:30(13) (J. Fontaine)

Entrepreneurship is innovation in practice: transforming ideas into opportunities, and, through a deliberate process, opportunities into commercial realities. These entrepreneurial activities can take place in two contexts: the creation of new organizations; and within existing organizations. This course will present an entrepreneurial framework for these entrepreneurial processes, supported by case studies that illustrate essential elements. Successful entrepreneurs and expert practitioners will be introduced who will highlight practical approaches to entrepreneurial success. Enrollment limited to 35. WRIT

Fall ENGN1010 S01 16552 TTh 10:30-11:50(13) (D. Warshay)
Fall ENGN1010 S02 16553 M 6:00-8:00PM(15) (J. Cohen)
Fall ENGN1010 S03 16844 T 4:00-6:00PM(18) (J. Harry)
Spr ENGN1010 S01 25386 TTh 10:30-11:50(09) (D. Warshay)
Spr ENGN1010 S03 25387 TTh 9:00-10:20(08) 'To Be Arranged'

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; material and experimental and computing techniques; laboratory exercises.

Spr ENGN1110 S01 25389 MWF 1:00-1:50(06) (A. Shukla)

ENGN 1130. Phase and Chemical Equilibria.
Application of the first and second laws of thermodynamics and conservation of mass to the analysis of chemical and environmental processes, phase and chemical equilibria and partitioning of species in multiphase, nonreactive and reactive systems. Thermodynamic properties of fluid mixtures-correlation and estimation. Applications and examples drawn from chemical processing and environmental problems. Prerequisite: ENGN 0720.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
ENGN 1140. Chemical Process Design.
Chemical process synthesis, flow charting, and evaluation of design alternatives. Process equipment sizing as determined by rate phenomena, economics, and thermodynamic limitations. Introduction to optimization theory. Applications of these principles to case studies. Prerequisites: ENGN 1110, 1130; ENGN 1120 (may be taken concurrently).

ENGN 1120. Biomechanics.

ENGN 1200. 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: multiple clinically available and emerging neurotechnologies. Prerequisites: NEUR 0010 and ENGN 0510; or instructor permission, which may be provided after discussion with course faculty.

ENGN 1230. Instrumentation Design.
Sensors for pressure, temperature, blood flow, muscle and neural activity. Amplifiers, filters, and A/D-D/A converters. The use of computers in monitoring and controlling physiological processes. Feedback controllers for temperature, flow rate, and experimental stimuli. Intended as a design course primarily for biomedical engineers. Lab times to be arranged. WRIT

ENGN 1300. Structural Analysis.
A unified study of truss, beam, frame, plate, and shell structures. 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.

Classification and identification of geological materials; mechanical and physical properties and methods of testing. Elements of the analysis of stress and strain in rock and soil masses; theories of failure, theory of seepage. Problems of building foundations; consolidation and settlement; stability of earth slopes and embankments. Includes geotechnical laboratory. Prerequisite: ENGN 0310.

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.

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.

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.

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.

ENGN 1480. Metallic Materials.
The microstructure of metals, microstructural evolution during processing, and the relationships between the microstructure and the physical properties of the material. Crystallography and x-ray diffraction. Crystalline defects, dislocations, grain boundaries, and their effects on mechanical and other properties. Solid state diffusion and solid state phase transformations. Oxidation and corrosion. Laboratory. Prerequisite: ENGN 0410, 1410.

ENGN 1490. Biomaterials.
Biomaterials science, the study of the application of materials to problems in biology and medicine, is characterized by medical needs, basic research, and advanced technological development. Topics covered in this course include materials used in bone and joint replacement, the cardiovascular system, artificial organs, skin and nerve regeneration, implantable electrodes and electronic devices, drug delivery, and opthalmology.

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 pre-clinical regenerative therapies, stem cell ethics, and clinical trials. Prerequisites (all courses completed or concurrent): calculus, differential equations, mechanics of materials, fluid dynamics, and biotransport.

Developing a good understanding of the principles of electromagnetics and applying them to contemporary EM topics, through examples in today's applications: Antenna (from iPhone, to insects, and to RFID); Display optics (from LCD to Peacock feather); Guided waves (from microwave circuits to microwave oven); Diffractions and Interferences (from optical lithography limit to antireflection in solar cell and photodetector); and EM and optical properties of materials and nanostructures. Prerequisite: ENGN 0510 or PHYS 0470, or equivalent.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
ENGN 1570. Linear System Analysis
Analysis of discrete and continuous electrical signals and systems in both time and frequency domains. Modulation, sampling, spectral analysis, analog and digital filtering. Fourier, Laplace and z-transforms, the state-space approach, stability of linear systems. Prerequisite: ENGN 0520. Fall ENGN1570 S01 16448 MWF 1:00-1:50(06) (P. Felzenszwalb)

ENGN 1590. Introduction to Semiconductors and Semiconductor Electronics.
An introduction to the physics of fundamental electronic processes that underlie the operation of semiconductor devices on a microscopic scale. Basic electronic properties of semiconductors and effects at interfaces, heterogeneous media, such as pn junctions and hetero-structure barriers and quantum wells. These junctions, barriers and wells are used as building blocks for devices, focusing on bipolar and field-effect transistors. Modern trends in micro- and opto-electronic devices are discussed. A brief fabrication lab will introduce pn junction fabrication technology. Prerequisites: ENGN 0410 and 0510. Fall ENGN1590 S01 16449 MWF 10:00-10:50(03) (J. Xu)

ENGN 1610. Image Understanding.
Imaging 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. Fall ENGN1610 S01 16451 MWF 2:00-2:50(07) (B. Kimia)

Elementary device physics and circuit characteristics of semiconductor diodes, bipolar junction transistors (BJTs), and field effect transistors (FETs). Analysis and design of practical circuits using discrete semiconductor devices. Constraint on and techniques for linear integrated circuit (IC) design and the use of linear ICs as circuit building blocks. Laboratory. Prerequisites: ENGN 0510, 0520 or equivalent. Spr ENGN1620 S01 25402 MWF 2:00-2:50(07) (W. Patterson)

ENGN 1630. Digital Electronics Systems Design.
Fundamentals of digital logic design including: Boolean algebra, gates, truth tables, logic families, flip-flops, finite state machines, memory, and timing. More advanced topics include A-D conversion, binary arithmetic, CPU organization, programmable logic (CPLDs and FPGAs), and VHDL. Extensive laboratory requirement. Not open to first year students; permission required for sophomores. Fall ENGN1630 S01 16452 WF 3:00-4:20(17) (W. Patterson)

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 description 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. Spr ENGN1640 S01 25403 MWF 10:00-10:50(03) (S. Reda)

ENGN 1650. Embedded Microprocessor Design.
This is a combined lecture and design project course offering experience in the open-ended design of an electronic product or system employing an embedded microprocessor by small-group design teams. Activity includes product specification, circuit design, programming, printed circuit layout, construction, packaging, and economic assessment. Teams are expected to produce functional products. Lecture topics will be adjusted to reflect the chosen design problems. Emphasis is placed on the criteria for choosing processors and on the interfaces and programming requirements of the system. Primarily for senior concentrators. Experience with C programming is helpful but not required. Prerequisite ENGN 1630 or permission of the instructor. Fall ENGN1650 S01 16487 TTh 10:30-11:50(13) (W. Patterson)

ENGN 1690. Photonics and Applications.
Science and engineering principles of photonics and optoelectronics, that provide foundation to a broad range of technologies from internet to lighting, from lasers to DVD, from satellite images to computer display, from solar cells to single molecule detection. Topical content: light as waves in media, on surface, and through holes; interference and waveguiding; light generation by spontaneous emission or by stimulation; LED, Laser, Photodetector, Optical amplifier and modulator, etc. Prerequisite: ENGN 0510 or equivalent. Spr ENGN1690 S01 25405 TTh 2:30-3:50(11) (J. Xu)

Steady 1D and 2D heat conduction with heat generation. Transient heat conduction. Forced convection, heat convection during external and internal flows. Natural convection. Heat Exchangers. Thermal radiation, Kirchoff’s law, the perfect emitter, radiation intensity and surface emissive power, real surface radiation; view factors for black and gray surfaces. Diffusion mass transfer. Lectures and labs. Prerequisite: ENGN 0810. Spr ENGN1710 S01 25407 TTh 12:00-1:20(10) (I. Kulaots)

ENGN 1720. Design of Engines and Turbines.

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 25409 TTh 6:40-8:00PM(12) (B. Burke)


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, altitude 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 25410 MWF 1:00-1:50(06) (R. Fleeter)

Aims to give mechanical engineering students a deeper and more thorough grounding in principles and basic applications. Topics include review of the conservation principles; inviscid flow; viscous flow, including aerodynamics lubrication theory; laminar boundary layers; wave motions and wave drag. Lecture: 3 hrs, lab: 2 hrs. Prerequisites: ENGN 0720 and 0810. Spr ENGN1860 S01 25411 MWF 11:00-11:50(04) (S. Mandre)

ENGN 1930B. Photonics and Biophotonics.
Biophotonics deals with interactions between light and biological matter that combine lasers, photonics, nanotechnology, and biotechnology. The course will introduce the biology/photonics interface and discuss topics like photobiology, biosensors, bioimaging techniques, light activated therapy, microarray technology, tissue engineering with light, and bionanophotonics. Prerequisites: science and engineering background.
ENGN 1930D. Large Scale Engineering Design Project.
Provides a major design experience for civil, mechanical, and, with approval, environmental engineering students. This experience involves an open-ended design problem that requires teamwork and the integration of understanding developed in upper-level courses in the engineering concentrations. Intended for students in their senior year.

ENGN 1930L. Biomedical Engineering Design, Research and Modeling.
This course introduces students to design, modeling and analysis of biological systems. The first portion of the course focuses on linear systems. Research projects in design will be analyzed. The course also introduces students to the Matlab programming language, which allows them to implement the design models discussed in class. For seniors only.

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.

ENGN 1930S. Land Use and Built Environment: An Entrepreneurial View.
Through the use of readings, group discussions, students presentations and guest lectures, students examine and challenge the analytical and structural frameworks which underlie and support public and private land and use the urban and suburban built environments. Students build an understanding and theory of how social, political, governmental and economic forces interact with society's present and future physical space needs.

ENGN 1930U. Renewable Energy Technologies.
Analysis of the thermodynamics, physics, engineering and policy issues associated with renewable and non-renewable energy technologies with applications appropriate to both the developed and the developing world. Specific technologies that will be studied include Fossil fuels, Wind, Solar, Hydro, Biomass and Nuclear. Energy consumption technologies, such as power generation and transportation will also be studied. Some technical background, such as ENGN 0030, 0040 and 0720, is strongly recommended.

ENGN 1931A. Photovoltaics Engineering.
This seminar course will provide an overview of the operation, design, characterization, and manufacturing of photovoltaic solar cells and panels. The course will span a range from the fundamental physics of solar cell operation to highly applied, industrially relevant engineering topics. Recommended prerequisites: Good knowledge of basic physics and electromagnetism concepts; proficiency in ENGN 0510 or PHYS 0470. This course is designed for undergraduate and graduate students in Physics, Chemistry and Engineering interested in the field of alternative energy with a focus in photovoltaics. Enrollment limited to 20.

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.

ENGN 1931E. Writing Science.
This seminar focuses on communicating scientific and technical information to a lay audience in ways that engage and inform. The focus is on writing about new findings, scientific disputes and policy debates, along with producing profiles, feature articles, op-eds and blog posts. Students who complete this seminar will learn how to turn a collection of facts into a story, ways of explaining complex topics in simple terms, and how to differentiate between crucial technical details and clutter. Proficiency in English is assumed. Permission from the instructor is required. Preference will be given to seniors and graduate students. Enrollment limited to 15.

ENGN 1931G. Special Topics: Technology and Development.
This course will focus on engineering design and consider the importance of technology, industrial development, societal need, and societal impact on the design process. Specifically, most of the course will focus on one particular problem that will be chosen, at least partly because of the impact it would have on a community and/or industrial sector. Class time will be spent in discussion, planning, and executing the design during which the class which will function as a team to complete the project. The course is strictly limited to ten students, and registration is by permission of the instructor.

The course will explore where the majority of "useful" energy originates today. Main fossil energy sources (e.g., coal, crude oil, gas, shale oil, tar sands) and their chemical characteristics will be considered. Environmental aspects of fuel production (mining, drilling), fuel conversion technologies, both for delivering heat and power, and why there are limitations on the conversion to the latter. Calculations of "carbon footprint" will be illustrated. Common examples of emissions control technologies, including carbon capture and sequestration, will be presented. Policy and social implications of these energy issues will be discussed. Prerequisites: CHEM 0330 and ENGN 0720.

Independent Study in Engineering. Instructor permission required after submitting online proposal (http://brown.edu/academics/engineering/content/independent-study). Section numbers vary depending on concentration. Please check Banner for the correct section number and CRN to use when registering for this course.

Independent Study in Engineering. Instructor permission required after submitting online proposal (http://brown.edu/academics/engineering/content/independent-study). Section numbers vary depending on concentration. Please check Banner for the correct section number and CRN to use when registering for this course.

An introduction to methods of mathematical analysis in physical science and engineering. The first semester course includes linear algebra and tensor analysis; analytic functions of a complex variable; integration in the complex plane; potential theory. The second semester course includes probability theory; eigenvalue problems; calculus of variations and extremum principles; wave propagation; other partial differential equations of evolution.

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.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
ENGN 2120. Business Engineering Fundamentals II.
The course examines core concepts in distinct areas through three modules: (1) organizations, leadership, and human capital, (2) implementing radical technology change, and (3) engineering ethics. Organization, leadership and human capital focuses on the attributes of effective leadership and the tactical operation of start-up companies. Implementing radical technological change centers on disruptive technologies and their adaptation in the marketplace, and ethics treats the issues that arise in small start-up organizations with an emphasis on the interface of ethics and environmental, health and safety issues.

Fall ENGN2120 S01 25417 W 3:00-5:50(14) (J. Harry)

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 17025 Th 3:00-5:50(02) (J. Harry)

ENGN 2130. Innovation and Technology Management I.
Examines core concepts through four modules: (1) Industry Dynamics of Technological Innovation, (2) Formulating Technological Innovation Strategy, (3) Implementing Technological Innovation Strategy, and (4) Early Commercialization and Deployment. Industry Dynamics of Innovation will explore some of the drivers of technology innovation. Implementing Technological Innovation Strategy explores execution issues concerning the flow of technology and innovation from concept to physical product or service. Early Commercialization and Deployment will focus on more salient strategic and operational issues related to commercial readiness and roll-out of a technology-based product or service. Emphasis will be on technology oriented entrepreneurial enterprises, but exploration will also include larger more established organizations.

Fall ENGN2130 S01 16465 T 3:00-5:50(18) (R. Putteruti)

ENGN 2140. Innovation and Technology Management II.
Explores concepts relevant to the management of operations in industrial enterprises with an emphasis on technology-oriented firms. Topics fall into three basic modules: (1) Capacity Planning, (2) Industrial Engineering, and (3) Materials & Resource Engineering. Capacity Planning will focus on capacity considerations in manufacturing and service organizations. Industrial Engineering will examine optimizing plant and process layouts. Materials & Resource Engineering will cover various aspects of planning and scheduling material, labor, and work center capacity. Inventory management techniques will also be introduced and examined as will concepts such as materials requirements planning and aggregate planning.

Spr ENGN2140 S01 25418 T 3:00-5:50(16) (R. Putteruti)

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 guided two-semester project. Prerequisite: ENGN 2150. Enrollment limited to 30 graduate students in the IMEE program.

Spr ENGN2160 S01 25419 M 3:00-5:50(13) (E. Suuberg)

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.

Spr ENGN2180 S01 26420 Th 3:00-5:50(11) (P. McHugh)

ENGN 2210. Continuum Mechanics.

Fall ENGN2210 S01 16468 MWF 12:00-12:50(12) (K. Kim)


Spr ENGN2220 S01 25421 MW 10:00-10:50(03) (D. Henann)


Fall ENGN2340 S01 16835 MW 8:30-9:50(16) (A. Bower)

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.

Spr ENGN2420 S01 25641 MW 8:30-9:50(02) (B. Sheldon)

The study and experimental analysis of solid structures from crystallography and crystal chemistry viewpoints. Electronic structure of the atom as related to core level chemical analysis techniques in material science, atomic arrangements in solids, form crystallography, crystal symmetry and symmetry of finite objects, and experimental techniques in x-ray diffraction.

Fall ENGN2490 S01 16500 TTh 9:00-10:20(08) (E. Chason)

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.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
ENGN 2760. Heat and Mass Transfer


Fall ENGN2730 S01 16518 TTh 9:00-10:20 (R. Hurt)

ENGN 2770. Atomistic Reaction Engineering

Covers the principles of operation of heterogeneous catalysis and advanced reaction engineering with an emphasis on catalysis theory. Includes electronic structure calculations, linear scaling relations, free energy relations, surface reactivity, rate theory, and electrocatalytic concepts. Applications of study in this course will focus on catalysts for energy conversion. Students should have a background in chemical reactions and thermodynamics.

Fall ENGN2770 S01 16923 TTh 1:00-2:20(10) (A. Peterson)

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.

Fall ENGN2810 S01 16474 MWF 2:00-2:50(07) (M. Maxey)

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 multifluid phase, wave motion, and topics in inviscid and compressible flow.

Fall ENGN2820 S01 25423 MWF 12:00-12:50(05) (K. Breuer)

ENGN 2910A. Advanced Computer Architecture

This course focuses on advanced computer architecture concepts, including super-scalar processor design, out-of-order execution, branch prediction, multi-core processors, memory hierarchy consistency, GPU architectures, and architecture of large-scale systems such as data centers and supercomputers. Class work expected to include HWs, Labs, and projects. Prerequisite: ENGN 1640 or permission of instructor.

Fall ENGN2910F S01 16501 TTh 1:00-2:20(10) (S. Reda)

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, engineers, and entrepreneurs, with case studies focused on topics ranging from value creation, IRB, HIPAA, FDA approval, etc.

Spr ENGN2910F S01 25424 F 3:00-5:30(15) (A. Tripathi)

ENGN 2910Q. Chemical Kinetics and Reactor Engineering

This course covers 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.

Spr ENGN2910K S01 25425 MWF 1:00-1:50(06) (C. Goldsmith)

ENGN 2910S. Cancer Nanotechnology

This course will integrate engineering and biomedical approaches to diagnosing and treating cancer, particularly using nanotechnology and BioMEMS. Topics will include the extracellular matrix and 3D cell culture, cancer cell invasion in microfluidic devices, heterotypic interactions, cancer stem cells and the epithelial-mesenchymal transition, angiogenesis and drug targeting, circulating tumor cells and biomarker detection, as well as molecular imaging and theranostics. Recommended coursework includes ENGN 1110 (Transport and Biotransport), ENGN 1210 (Biomechanics) and ENGN 1490 (Biomaterials) or equivalents.

Spr ENGN2910S S01 25426 MWF 1:00-1:50(06) (I. Wong)

ENGN 2911T. Ultrafast Optical Phenomena

This course covers the generation, propagation, and measurement of short laser pulses, of duration less than one picosecond. Concepts include mode locking, the effects of dispersion, optical pulse amplification, and time-domain non-linear optical phenomena. Intended as an introduction to ultrafast phenomena for graduate students or advanced undergraduates; a basic understanding of electromagnetic waves and of quantum mechanics is assumed.

Fall ENGN2911T S01 17135 TTh 9:00-10:20(08) (D. Mittelman)

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 ENGN2912BS S01 16496 MW 5:40-7:00(15) (G. Taubin)

ENGN 2912F. Soft Matter

This course is a special topics graduate course on soft matter, treating polymers, liquid crystals, surfactants, and colloids. The different topics will be unified by a common approach using statistical mechanics.
ENGN 2912J. Asymptotic and Perturbation Methods.
In this introductory course to perturbation methods, topics covered are inspired by problems in solid mechanics (e.g. ridges and kinks in thin plates), fluid mechanics (e.g. viscous boundary layers), electrical circuits (van der Pol oscillator), and include regular and singular perturbations, methods of strained coordinates, multiple scales, averaging, WKB, Laplace's method and the method of steepest descent for approximating integrals, and solutions of partial differential equations. Prerequisite: ENGN 1620 and 1630, or instructor permission. Enrollment limited to 20.
Fall ENGN2912J S01 17019 M 3:00-5:30(15) (S. Mandre)

ENGN 2912K. Mixed-Signal Electronic Design.
ADCs, DACs, switched-capacitor circuits, noise and distortion. Circuit simulation and system design projects. Examples will be used from various biological sensing and instrumentation applications and recent scientific literature. Prerequisite: ENGN 1620 and 1630, or instructor permission. Enrollment limited to 20.
Fall ENGN2912K S01 16644 TTh 9:00-12:20(08) (J. Rosenstein)

ENGN 2912P. Topics in Optimization.
This course will cover various topics in discrete and continuous optimization. Topics include graph algorithms, dynamic programming, linear programming, convex optimization and coarse-to-fine methods. Prerequisites: basic theory of algorithms (at the level of an undergraduate algorithms course) and linear algebra.
Spr ENGN2912P S01 25859 MWF 11:00-11:50(04) (P. Felzenszwalb)

ENGN 2913Q. 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.
Fall ENGN2913Q S01 17266 Th 12:00-2:30(17) (P. Pacifico)

ENGN 2912R. Implantable Devices.
This course will expose students to topics across the electrical and biological sciences through lecture, design, and laboratory exercises. Students will learn basic governing concepts of implantable device design, including those of tissue interfaces, power delivery, data transmission, hermetic packaging and biocompatibility, and in vivo evaluation through appropriate animal models including design of surgical approach. Teams will be formed early in the course and maintained throughout the semester. Successful teams will invent, design, build, and implant their unique device. Teams will have access and exposure to the Technology Ventures Office through guest lectures and individual meetings.
Spr ENGN2912R S01 26052 MW 3:00-4:20(14) (D. Borton)

ENGN 2920A. Complex Fluids: Particles and Interfaces.
Introduces disperse systems (colloidal suspensions, emulsions, surfactant solutions, blood) with special attention to the thermodynamics and mechanics of interfaces. The course will bridge the physical-chemical and mechanical perspectives in the study of these materials. The intended audience is graduate students in Engineering, Physics, Chemistry, and Applied Mathematics. Prerequisite: We will sometimes use material from ENGN 2010/2020, such as differential equations, Fourier and Laplace transforms, elementary differential geometry, basic probability, vector calculus. Knowledge of basic solid/liquid mechanics will be helpful.
Spr ENGN2920A S01 25644 MW 9:00-10:20(02) (P. Vlahovska)

ENGN 2920D. Environmental Technologies and Human Health.
This course explores interdisciplinary approaches to environmental safety and health drawing from Brown University faculty and other affiliated experts. Topics include history of environmental regulation and waste management; origin and chemistry of pollutants; biological impacts of exposure and resultant human health; and remediation approaches and technologies. Emphasis is placed on how scientific research impacts regulatory and engineering decisions regarding cleanup and management of contaminated sites. The target audience is graduate students and advanced undergraduates (permission required) with prior coursework or research in engineering, biology, or environmental studies. Enrollment limited to 30.
Spr ENGN2920D S01 25738 M 3:00-5:30(13) (R. Hurt)

This class describes the fundamentals of statistical mechanics with a focus on both traditional analytic methods and modern atomistic simulations methods. The class is divided in two parts. (i) Techniques used to calculate interactions at the atomic level are first covered, from simple interatomic potentials to quantum mechanical first-principles methods. (ii) Simulations techniques to sample atomic degrees of freedom for obtaining macroscopic quantities are then discussed, such as Monte Carlo and Molecular Dynamics. The tools presented in class are illustrated with ongoing examples that illustrate how these methods work in concert. Enrollment limited to 40 graduate students.
Spr ENGN2930 S01 26427 M 3:00-5:30(13) (A. van DeWalle)

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 14565 Arranged 'To Be Arranged'
Spr ENGN2970 S01 23772 Arranged 'To Be Arranged'

ENGN 2980. Special Projects, Reading, Research and Design.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.
ENGN 2990. Thesis Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.
Fall ENGN2990 S01 14566 Arranged 'To Be Arranged'
Spr ENGN2990 S01 23773 Arranged 'To Be Arranged'

English

ENGL 0100F. Devils, Demons, and Do Gooders.
Who hasn't struggled with the problem of good and evil? Who hasn't wondered what lurks in the dark recesses of the soul? We will investigate how Milton, Mary Shelley, Melville, Poe, and Hawthorne, among others, grapple with these fundamental questions of judgment.
Fall ENGLG0100F S01 15456 MWF 10:00-10:50(03) (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 until the present. Readings to include Shakespeare, Austen, the Bronte sisters, Fitzgerald, Hemingway, and contemporary short stories.
Fall ENGLG0100P S01 15466 MWF 1:00-1:50(06) (J. Kuzner)

ENGL 0100Q. How Poems See
What makes poems and pictures such powerful forms of life? Why do pictures have so much to tell us? How do we see things in words? How do graphic images, optical images, verbal images, and mental images together constitute ways of understanding the world? Looking at poems and images from Giotto and Shakespeare, Wordsworth and Dickinson and Turner through such modern poets and painters as Stevens, Ashbery, Warhol and Heijinian, we will study sensory and symbolic images, the uses and dangers of likeness, and the baffling confluence of concrete and abstract, literal and figurative, body and mind, matter and spirit.
Spr ENGLG0100C S01 24528 MWF 11:00-11:50(04) (S. Foley)

ENGL 0100R. American Histories, American Novels.
How do novels make readers experience such traumatic American historical events as war, slavery, and race riots? What kind of political or ethical perspective on such divisive and violent events do literary narratives encourage their readers to take? This course explores these questions by examining a number of influential post-1945 works that offer powerful examples of how novels make us think and feel in particularly resonant ways about the histories they depict. The reading list will include works by such authors as: William Faulkner, Ralph Ellison, Toni Morrison,
N. Scott Momaday, Jeffery Eugenides, Chang-rae Lee, Mohsin Hamid and Junot Diaz. DPLL LILE WRIT
Spr ENGL100R S01 25122 TTh 9:00-10:20(08) (D. Kim)

ENGL 0100S. Being Romantic.
"Romantic literature" and "Romantic art" are familiar concepts in the history of culture. But what does "Romantic" actually mean? Were Coleridge and Keats especially dedicated to writing about erotic love? Why would "Romantic" literature emerge during the period of the French Revolution and Industrial Revolution? What does early 19th-century "Romanticism" have to do with the meaning and status of the "Romantic" in our culture today? Readings in British and American writing from Blake and Mary Shelley to Ani DiFranco and Rage Against the Machine.
Fall ENGL100S S01 15464 TTh 10:30-11:50(13) (W. Keach)

ENGL 0100T. The Simple Art of Murder.
A survey of the history of criminal enterprise in American literature. Authors to be considered include Poe, Melville, Hawthorne, Twain, Chandler, Wright, Petry, Highsmith, Millar, Harris, and Mosley. Students who have taken ENGL 0560D may not register for this course. Students should register for ENGL 0100T S01 and may be assigned to conference sections by the instructor during the first week of class.
Fall ENGL100T S01 15465 MWF 1:00-1:50(06) (D. Nabers)

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 20 first-year students. FYS WRIT
Fall ENGL150C S01 15463 TTh 9:00-10:20(08) (E. Bryan)

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 and friendship -- between love that is selfless and friendship 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 20.
FYS WRIT
Spr ENGL150E S01 24537 W 3:00-5:30(14) (J. Kuzner)

ENGL 0150J. Inventing America.
One of the distinguishing features of American literature may be its seemingly constant struggle with the idea of America itself. For what, these authors wonder, does/should America stand? We will examine the rhetorical battles waged in some major works over the meaning and/or meanings of America's national identity. Authors may include Franklin, Hawthorne, and Fitzgerald. Limited to 20 first-year students. Instructor permission required. FYS LILE WRIT
Fall ENGL150J S01 15461 F 3:00-5:30(14) (J. Egan)

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 20 first-year students. Banner registration after classes begin requires instructor approval. FYS LILE
Fall ENGL150Q S01 15460 MWF 11:00-11:50(04) (P. Armstrong)

ENGL 0150S. The Roaring Twenties.
The 1920s helped solidify much of what we consider modern in 20thcentury U.S. culture. This course reads literature of the decade in the context of a broader culture, including film and advertising, to think about the period's important topics: the rise of mass culture and of public relations, changes in women's position, consumerism, nativism and race relations. Writers include Fitzgerald, Hemingway, Larsen, Toomer, Parker.
Spr ENGL100S S01 24535 TTh 10:30-11:50(09) (T. Katz)

ENGL 0150V. James and Wharton.
Friends, rivals, fellow ex-pats, and close correspondents for 15 years, Henry James and Edith Wharton had much in common. Their names are often coupled together in much the manner as Hemingway and Fitzgerald, since their fiction has often thought to deal with the same set of concerns: the societal and emotional ups and downs of well-to-do people in London, Paris, and New York. This class will read James and Wharton side by side in order not only to see in what ways they shed light on each other, but in what ways they differ. Limited to 20 first-year students. FYS WRIT
Spr ENGL150V S01 25123 TTh 10:30-11:50(09) (S. Burrows)

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 likely include Baldwin, Brontë, Condé, Conrad, Faulkner, Greene, Ishiguro, Lessing, Morrison, Naipaul, Salih. Limited to 20 first-year students. DPLL FYS WRIT
Spr ENGL150X S01 25006 F 3:00-5:30(15) (O. George)

ENGL 0200B. Queer and Feminist Poetics: Hybrid Forms, 1969 to Present.
How do queer and feminist text engage formal experiment? This course will explore the political, conceptual, and rhetorical uses of queer and feminist discourses in contemporary hybrid-genre writing. William S. Burroughs, Kathy Acker, Allen Ginsberg, Sylvia Plath, Gloria Anzaldúa, Jack Spicer, Alice Notley, CAConrad, Christian Hawkey, and Ronaldo Wilson. Enrollment limited to 17. WRIT
Fall ENGL200B S01 15600 TTh 9:00-10:20(08) (A. Apps)

ENGL 0200C. The Art of Catastrophe: Crisis and Collapse in the American Literary Landscape.
How have contemporary thinkers grappled with great crises -- environmental, economic, spiritual, terrorist -- in the 20th century? From catastrophic events like 9/11 to volatile conflicts involving race and gender, this course assesses contemporary literary and cinematic representations of crisis by probing their political and aesthetic significance. Authors may include: West, Ward, DeLillo, Hamid, Ozeki; Films include Soylen Green, Dawn of the Dead, The Reluctant Fundamentalist. Enrollment limited to 17. WRIT
Fall ENGL200C S01 15601 MWF 10:00-10:50(03) (C. Gullander-Droit)

ENGL 0200D. Intimate Horrors: Encountering the Uncanny in Literature and Film.
The horrifying is often times uncomfortably close, even familiar. Alongside theoretical discussions of Gothic literature, psychoanalysis, media, and genre, this course examines the unsettling effects and affects of what makes our skin crawl. We will discuss crazed limbs, possessed voices, evil mothers, creaking houses, ghostly doubles, and creepy children. Works by: Freud, Shelley, Poe, Hawthorne, Melville, Wilde, Lovecraft, Cronenberg, Hitchcock, Kubrick, Lynch. Enrollment limited to 17. WRIT
Spr ENGL200D S01 25117 MWF 12:00-12:50(12) (M. Rada)

ENGL 0200E. Fictional Brains: Reading Artificial Intelligence and Cognition.
Reading high and popular literature (e.g. detective fiction and science fiction), this course investigates how we think about and construct fictional characters. This course will introduce students to applying classical and recent philosophical, psychological, and neuroscientific research to the study of literary texts. Possible authors/works: Poe, Melville, Kafka, Asimov, Blade Runner, and Sherlock. Enrollment limited to 17. WRIT
Spr ENGL200E S01 25118 MWF 11:00-11:50(04) (D. Smith)

ENGL 0200F. The Spectacle of War in 20th-Century American Literature and Film.
This course examines the mediated experience of war from Vietnam forward in light of traditional representations beginning with the Civil War. We will consider the ways in which war is made visible (or invisible), and
the position of the reader/spectator as voyeur, consumer, and citizen. Authors: Crane, Herr, O’Brien, Huong, Iraq War veterans, Guantanamo detainees. Directors: Griffith, Kubrick, Coppola, Scott. Enrollment limited to 17. WRIT
Spr ENGL200F S01 25119 MWF 12:00-12:50(05) (J. Snow)

ENGL 0200H. Writing the Black Diaspora: Speaking Truth to Power. How can slave narratives tell us about speech, power, and truth? What are the relationships between self-expression, genre, and questions of truth under conditions of disempowerment? This course introduces contemporary thinking about race and colonial encounters alongside fiction and life-writing by African-American, Canadian, and Caribbean authors from a range of historical periods. Authors: Harriet Jacobs, Audre Lorde, Toni Morrison, Dionne Brand, Lawrence Hill. Enrollment limited to 17. WRIT
Spr ENGL200H S01 25120 MWF 1:00-1:50(06) (A. Thomas)

ENGL 0200J. Violence and Secrecy in Victorian Fiction. How is violence actually depicted in Victorian fiction? Often these novels are oriented around violence but are structured by the figure of the secret, a figure that invites and refuses knowledge. This course examines the relation between violence and secrecy in Victorian fiction and its afterlife. Authors: Brontë, Stevenson, Dickens, Collins, Wilde. Film: The Prestige, Psycho, A History of Violence. Enrollment limited to 17. WRIT
Spr ENGL200J S01 25121 MWF 1:00-1:50(06) (J. Walker)

ENGL 0200K. Race, Dystopia, and Contemporary Fiction. What happens to race after the end of the world as we know it? We will study dystopian literature written by black and Asian North American authors to investigate how they (re)imagine race in relation to questions of the human, citizenship, and state violence. Authors include Colson Whitehead, Chang-rae Lee, Octavia Butler, Karen Tei Yamashita, Nalo Hopkinson, and L. Sprague de Camp. Enrollment limited to 17. WRIT
Spr ENGL200K S01 25128 MWF 2:00-2:50(07) (F. Wang)

ENGL 0200L. Trial and Error: Law in American Literature and Film. What does our cultural fascination with law suggest about the limits of justice in America? From crime to capital punishment, this course investigates law’s fragile relation to personhood and citizenship, examining tensions between the human body and the terms by which it is legislated and disciplined. Authors: Capote, Eggers, Faulkner, Lee, Morrison, Twain. Film/TV: Dead Man Walking, Milk, The Wire. Enrollment limited to 17. WRIT
Spr ENGL200L S01 25129 MWF 2:00-2:50(07) (D. Wasserman)

ENGL 0310A. Shakespeare. We will read a selection of Shakespeare’s plays with attention to both formal and historical questions. Issues to be addressed may include genre, the Shakespearean text, gender, sexuality, consciousness, status and degree, politics and nation. Written work may include a mid-term and two short papers. Students should register for ENGL 0310A S01 and may be assigned to conference sections by the instructor during the first week of class. LILE WRIT
Spr ENGL310A S01 24529 MWF 11:00-11:50(04) (J. Kuzner)

ENGL 0310E. Shakespeare: The Screenplays. It’s been said that if Shakespeare were alive today he’d be working in Hollywood. We will read five or six plays (including at least one representative of each of Shakespeare’s genres: comedy, history, tragedy, romance) and then study film adaptations of them. The course is especially concerned with various approaches to the Shakespeare film: not just the straightforward adaptation, but also the Shakespeare spin-off (“10 Things”; “My Own Private Idaho”), the Shakespeare film as a star-turn (Helen Mirren as “Prospera” in Taymor’s “Tempest”), and the Shakespeare film as an auteur-turn (Orson Welles’s “Chimes at Midnight”; Polanski’s “Macbeth”).
Fall ENGL310E S01 15468 TTh 1:00-2:20(10) (R. Rambuss)

ENGL 0500P. The Examined Self: Lives of the Soul. The literature of spiritual awakening and struggle in fiction, autobiography, and poetry in America and Britain, and over a long historical span. Readings will include travel and religious conversion, slave narrative, lyric poems, and novels like “Huckleberry Finn” and Kerouac’s “On the Road.” There is a transatlantic emphasis on movement and emigration. It attends to close readings of literary works staging the possibilities of redemption and captivity shape personal and collective quest, and pays particular attention to spiritual autobiography as a literary form. Limited to 30 students.
Fall ENGL500P S01 15469 TTh 2:30-3:50(11) (P. Gould)

ENGL 0500Q. Getting Emotional: Passionate Theories. This course examines the connection between emotions, politics, and society through several key texts in eighteenth- and nineteenth-century literature. We will consider how thinking about emotions involves questions of intersubjectivity, art, race, and gender. Special emphasis on the link between violence and feeling. Readings will consist of novels, stories, poetry, and philosophical essays. Authors might include: Wordsworth, Austen, Blake, Coleridge, Keats, Shelley, Occar Wilde, Pater, Kant, Melville, Hofmannsthall, Hume. Enrollment limited to 30. LILE
Spr ENGL500Q S01 25126 TTh 9:00-10:20(08) (J. Khallip)

ENGL 0510G. New Worlds, New Subjects: American Fiction at the Dawn of the Twentieth Century. In 1900, the historian Henry Adams declared, Americans lived in a world so radically transformed that “the new American … must be a sort of God compared with any former creation of nature.” This new world had many progenitors: Darwin’s theory of evolution; Nietzsche’s theory of the will; Freud’s theory of the unconscious; the rise of the mass media; the industrial production line; the triumph of consumerism; mass immigration; Jim Crow; the New Woman. This class reads works of fiction from the turn-of-the-century in the context of these transformations. Writers include: Freud, Nietzsche, Stephen Crane, Henry James, and Edith Wharton.
Fall ENGL510G S01 15470 MWF 11:00-11:50(04) (M. Burrows)

ENGL 0510Q. Unstable Subjects: Race and Meaning in Contemporary (African) American Literature. What are the stakes involved in defining (African) American literature through a racialized authorial framework? Should we adhere to this prescribed and contentious categorization when considering writers who only incidentally identify as “black,” and whose works challenge any critical or aesthetic alignment based upon racial affiliation? More broadly, this course seeks to question the lingering persistence of race as an ontological marker within the literary arts. Writers include but are limited to Fran Ross, Darryl Pinckney, Andrea Lee, David Henry Hwang, Maurice Manning, and Colson Whitehead. DPLL
Spr ENGL510Q S01 25124 TTh 2:30-3:50(11) (R. Clylus)

ENGL 0510X. Cultures of Vision in 19th-Century America. This course investigates the dynamic power of vision and the visual in nineteenth-century American cultural contexts. We will especially consider how technological advancements in the manufacturing of images and the privileging of sight influenced a host of American literary genres and thereby impacted broader concerns involving the formation of U.S. social and political cultures. To this end, we will examine the role of eyewitness observation, the pseudoscience of physiognomy, and scenes of artistic and sartorial spectacularity in travel narratives, novels, children’s textbooks, and abolitionist propaganda.
Fall ENGL510X S01 15471 TTh 10:30-11:50(13) (R. Clylus)

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.
Fall ENGL511A S01 17075 MWF 9:00-9:50(16) (B. Parker)

ENGL 0511B. The Nineteenth-Century British Novel. A study of major novelists of the period, through the question: How did the novel develop as a form of social understanding? We will be looking at novels as bearers of social values, especially around questions of property, class, marriage, work, bureaucracy and the state, and selfhood. Authors studied: Jane Austen, Emily Brontë, Charles Dickens, Anthony Trollope, and Thomas Hardy.
Spr ENGL511B S01 25763 MWF 2:00-2:50(07) (B. Parker)
ENGL 0700J. Contemporary British Fiction.
This course is an introduction to the study of 20th century literature in English. We consider central terms of and approaches to literary criticism by reading some of the most important British writers of the last fifty years. We will also take into account theories of culture, ideology and nationhood, and attempt to bring into focus a Britain defined as much by its ways of looking as by historical and geopolitical situation. Readings include Kingsley Amis, Greene, McEwan, Zadie Smith, Spark, Kelman, Banville, Naipaul and Sebald. Enrollment limited to 30.
Spr ENGL0700J S01 24538 TTh 9:00-10:20(08) (T. Bewes)
ENGL 0700N. City Novels.
This course examines 20th and 21st century novels to consider how these narratives envision the city, its possibilities and limits. How does the city shape how we think, wander, grow up, see and know each other? How does the city divide people? How does the novel imagine ways to bridge those divisions? Readings by Woolf, Wright, Calvino, Adiga, Whitehead. Preference given to English and Urban Studies concentrators. Enrollment limited to 30.
Fall ENGL0700N S01 15472 MWF 10:00-10:50(03) (T. Katz)
ENGL 0700Q. Poetic Cosmologies.
This course will examine how various traditions within modern and contemporary poetry have addressed the question of materiality. Readings will range from poetic explorations of the archaeologies of place by William Carlos Williams and Charles Olson, to the investigations of non-human materialities of crystals, clouds and bacteria by writers such as Clark Coolidge, Christian Bök and Lisa Robertson.
Fall ENGL0700Q S01 16761 MWF 1:00-1:50(06) (A. Smailbegovic)
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. DPLL
Fall ENGL0710B S01 15474 TTh 10:30-11:50(13) (R. Murray)
ENGL 0710E. Postcolonial Tales of Transition.
This course focuses on postcolonial British, Caribbean, and Southern-African works that exemplify, complicate, or refashion the category of the bildungsroman, the "novel of education." Issues to be considered include the ways the texts rework archetypal tropes of initiation, rebellion, development, and the interplay of contradictory passions. We will also think about ways in which issues of race, gender, and sexuality emerge in the texts, and the connections or disjunctions between literature and "the real world." Writers will likely include Dangarembga, CLR James, Ghosh, Ishiguro, Joyce, Kincaid, Lamming, Naipaul, Rhys, Wicomb. DPLL
Spr ENGL0710E S01 24530 MWF 11:00-11:50(04) (O. George)
ENGL 0710F. Being There: Bearing Witness in Modern Times.
This course explores the ethical, literary and historical dimensions of witnessing in an era when traumatic events are increasingly relayed secondhand or recorded in sound and image. Texts include Forster, Woolf, Camus, Freud, Celan, Coetzee; films by Hitchcock and Kurosawa; and readings in law and psychology. WRIT
Spr ENGL0710F S01 25126 MW 10:00-11:20(03) (R. Reichman)
ENGL 0710L. Ishiguro, Amongst Others.
Kazuo Ishiguro is one of the most distinctive and enigmatic voices in contemporary fiction. He has few obvious precursors, and there is little consensus among literary critics about the meanings of his works. This course will try to establish principles for reading Ishiguro's works by seeking alliances for his writing in works of philosophy, literature and cinema. Such interlocutors will include Ozu, Kiarostami, Kierkegaard, Sartre, Hadžihalilović, Dostoevsky, Pasolini.
Fall ENGL0710L S01 15475 MWF 10:00-10:50(03) (T. Bewes)
ENGL 0710M. Impressionism, Consciousness, and Modernism.
This course explores the role of the "literary impressionists" (Cra, James, Conrad, and Ford) in the transformation of the novel from realism to modernism (especially the "post-impressionists" Stein, Joyce, and Woolf). "Impressionism" is defined by its focus on consciousness, the inner life, and the ambiguities of perception. What happens to the novel when writers worry about whether the way they tell their stories is an accurate reflection of how we know the world? Attention will also be paid to how the literary experiments of impressionist and post-impressionist writers relate to simultaneously occurring innovations in the visual arts.
Spr ENGL0710M S01 25127 TTh 10:30-11:50(09) (P. Armstrong)
ENGL 0710P. Home Made: American Modernism.
Modernism was born in the cities of Europe: Paris, Berlin, London. But there was another modernism, one made in America. This class takes a tour through the various scenes of American writing between the wars, both urban and rural: from Harlem to Los Angeles to Chicago to Mississippi. We'll read William Faulkner's fractured narratives of the South, F. Scott Fitzgerald's sardonic portrayal of Hollywood, Zora Neale Hurston's celebration of backwater Florida, and Edith Wharton's nostalgic evocation of Manhattan, as well as the work of a number of other poets and novelists from around the United States.
Spr ENGL0710P S01 24531 TTh 2:30-3:50(11) (S. Burrows)
ENGL 0710R. Poetry and Science.
This course will explore the relationship between the observational procedures and modes of composition employed by twentieth and twenty-first century poets who have worked in more conceptual or avant-garde traditions and the practices of description and experimentation that have emerged out of history of science. Readings will range from Gertrude Stein's poetic taxonomies to recent work in critical science studies.
Spr ENGL0710R S01 25592 MWF 10:00-10:50(03) (A. Smailbegovic)
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 S02 15275 MWF 2:00-2:50(07) (K. Schapira)
Fall ENGL0900 S03 15276 MWF 9:00-9:50(16) (C. Deboer-Langworthy)
Fall ENGL0900 S04 15277 TTh 1:00-2:20(10) (J. Readby)
Fall ENGL0900 S05 15278 MWF 9:00-9:50(16) (R. Ward)
Fall ENGL0900 S06 15279 MWF 9:00-9:50(16) (A. Golaski)
Fall ENGL0900 S07 15280 MWF 12:00-12:50(12) (A. Golaski)
Fall ENGL0900 S10 15283 MWF 12:00-12:50(12) (M. Rada)
Fall ENGL0900 S11 15284 MWF 12:00-12:50(12) (F. Wang)
Fall ENGL0900 S12 15285 MWF 11:00-11:50(04) (D. Smith)
Fall ENGL0900 S13 15286 MWF 1:00-1:50(06) (D. Wasserman)
Spr ENGL0900 S02 24510 MWF 9:00-9:50(02) (C. Guillard-Drolet)
Spr ENGL0900 S03 24511 MWF 2:00-2:50(07) (A. Apps)
Spr ENGL0900 S04 24512 MWF 10:00-10:50(03) (R. Ward)
ENGL 0930. Introduction to Creative Nonfiction.
Designed to familiarize students with the techniques and narrative structures of creative nonfiction. Reading and writing focus on personal essays, memoir, science writing, travel writing, and other related subgenres. May serve as preparation for ENGL 1180. Writing sample may be required. Enrollment limited. Banner registrations after classes begin require instructor approval. S/NC.
Fall ENGL0930 S01 15292 TTh 9:00-10:20(08) (L. Stanley)
Fall ENGL0930 S02 15294 MWF 12:00-12:50(12) (S. Resnick)
Fall ENGL0930 S03 15295 MWF 2:00-2:50(07) (S. Resnick)
Fall ENGL0930 S04 15296 TTh 9:00-10:20(08) (E. Hardy)
Spr ENGL0930 S02 24514 MWF 9:00-9:50(02) (A. Golaski)
Spr ENGL0930 S03 24515 MWF 9:00-9:50(02) (E. Hardy)
Spr ENGL0930 S04 24516 MWF 1:00-1:50(06) (E. Hardy)
Spr ENGL0930 S05 24517 TTh 2:30-3:50(11) (J. Readby)
Spr ENGL0930 S06 24518 MWF 12:00-12:50(05) (S. Resnick)
Spr ENGL0930 S07 24519 MWF 2:00-2:50(07) (S. Resnick)
ENGL 1030A. Research Essay: The Thoughtful Generalist.
This section of "ENGL1030: Critical Reading and Writing II: Research" will prepare you for academic and real world discourse. We will study essays by well-regarded writers as examples of deep research distilled into engaging intellectual journey. In practice you will generate, research, plan, draft, and revise four essays, moving from expository to analytical to persuasive essays, and culminating in a final research project grappling with varied sources to explore a subject, issue, or artist of your choice. Enrollment limited to 17. Writing sample may be required. Banner registrations after classes begin require instructor approval. S/NC.
Fall ENGL1030A S01 15403 MWF 11:00-11:50(04) (E. Taylor)

ENGL 1030B. Research Essay: Investigative Nonfiction.
This class is founded on the idea that research is a creative act in and of itself. Using a series of real-world drills we will explore the local archives, court documents, libraries, and electronic resources that are essential to investigative nonfiction. Additionally, we will look at a number of contemporary texts to examine how scholars, professional writers and journalists have integrated their research into their writing. Enrollment limited to 17. Writing sample may be required. Banner registrations after classes begin require instructor approval. S/NC.
Fall ENGL1030BS S01 15530 MWF 10:00-10:50(03) (M. Stewart)

ENGL 1030C. Research Essay: 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 write 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 ENGL1030C S01 24520 TTh 9:00-10:20(08) (C. Debooer-Langworthy)

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.
Spr ENGL1030D S01 25153 MWF 12:00-12:50(05) (A. Golaski)

ENGL 1030E. Research Essay: Literature.
Discovery is at the heart of research. In this course, we will discover how and why literary texts reflect and illuminate the intellectual and social worlds around them. We will use a variety of primary and theoretical sources and research tools, identify powerful research problems, and craft questions and sophisticated thesis statements. The course will also engage you to refine a critically sensitive, informed, and persuasive writing style that will be key to the success of your scholarly work. Enrollment limited to 17. Writing sample may be required. Banner registrations after classes begin require instructor approval. S/NC.
Spr ENGL1030E S01 25157 MWF 1:00-1:50(06) (R. Ward)

ENGL 1050B. True Stories.
This class will allow confident writers to explore and develop their creative nonfiction writing. We’ll focus on two structures—nonfiction narratives and essays—with occasional forays into other forms. Students will work simultaneously on several small assignments and two larger, self-directed pieces. Readings will include cultural reportage, lyric memoir, science and nature writing, standard and hybrid essays. Enrollment limited to 17. Writing sample required. Banner registrations after classes begin require instructor approval. S/NC.
Fall ENGL1050B S01 15595 MWF 10:00-10:50(03) (K. Schapira)

ENGL 1050G. Journalistic Writing.
This course, taught by a Pulitzer Prize-winning reporter, teaches students how to report and write hard news and feature stories. Students will work under the guidance of a seasoned journalist. Students will 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 ENGL1050G S01 15596 TTh 9:00-10:20(08) (T. Breton)
Fall ENGL1050GS S01 15597 TTh 2:30-3:50(11) (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 ENGL1050H S01 25159 MWF 8:30-9:50(02) (T. Mooney)

ENGL 1050J. Multimedia Nonfiction.
In this class students will write and explore essays that focus on the meaningful integration of images, videos, and web tools with traditional nonfiction subgenres. No previous digital experience is necessary. Enrollment limited to 17. Writing sample required. Banner registrations after classes begin require instructor approval. S/NC.
Fall ENGL1050J S01 15396 MWF 2:00-2:50(07) (M. Stewart)

ENGL 1050K. Flash Nonfiction.
The nonfiction “short” is an old and shape-shifting form, ranging from 250 to 2000 words. You will study and imitate historical and contemporary short forms of the nonfiction list, scene, letter, prose poem, essay, memoir, story, profile, and history. Inspirations will come from international and North American authors—from Jean Toomer, Kenneth Koch, Margaret Atwood, Amy Hempel, Naomi Shihab Nye, John Edgar Wideman, Richard Rodriguez, and Dave Eggers. Enrollment limited to 17. Writing sample required. Banner registrations after classes begin require instructor approval. S/NC.
Fall ENGL1050K S01 15395 MWF 2:00-2:50(07) (E. Taylor)

ENGL 1050L. Writing in Place: Travels, Localities, Ecologies.
To explore the relationships among people, places and language, this course will incorporate science and nature writing, environmental / ecological writing, travel writing, psychogeography and architectural writing. Assignments and practices will include diaries, observational writing, reporting, criticism and more lyrical forms. We may read works by Bhanu Kapil, Amitava Kumar, Katherine Boo, Matsuo Basho, Joe Sacco, Elizabeth Kolbert, June Jordan. Enrollment limited to 17. Writing sample required. Banner registrations after classes begin require instructor approval. S/NC.
Spr ENGL1050L S01 24987 TTh 1:00-2:20(10) (K. Schapira)

ENGL 1140A. The Literary Scholar.
"Literary detective work" aptly describes English literature scholarship. We pick up clues and chase down leads to meet the demands of scholarly yet personally engaged interpretation. We will develop methods of reading sufficiently diverse to read, credibly and richly, a range of literary texts from Susan Howe to Beowulf. Theoretical interpretation will be informed by cognitive poetics. Writing centered. Enrollment limited to 12. Prerequisite: ENGL 0930 or any 1000-level nonfiction writing course. S/NC.
Spr ENGL1140A S01 24521 TTh 2:30-3:50(11) (L. Stanley)
ENGL 1160F. Reporting Crime and Justice.
Crime and justice stories are people stories. The drama of everyday life is played out every day in courtrooms. This advanced journalism course will get students into the courtrooms, case files and archives of Rhode Island’s judicial system and into committee hearings at the State House where they will report on stories that incorporate drama, tension, and narrative storytelling. Prerequisite: ENGL1050G, ENGL1050H or ENGL1160A (Advanced Feature Writing). Enrollment limited to 12. Instructor permission required. Preference will be given to English concentrators. S/NC.
Spr ENGL1140B S01 25005 MWF 3:00-5:30(13) (C. Imbriglio)

ENGL 1160G. Literary Journalism: Writing about Politics and Culture.
Students are introduced to procedures and techniques of cultural journalism through reading and discussing work of notable practitioners and writing their own reviews, profiles, and reportage. Enrollment limited to 12. Prerequisites: ENGL0900, ENGL0930, or any intermediate or advanced nonfiction course. Preference will be given to English concentrators. Banner registrations after classes begin require instructor approval. S/NC.
Fall ENGL1160G S01 15399 TTh 4:00-6:30(18) (B. Sarwar)

ENGL 1180B. Digital Nonfiction.
Digital Nonfiction is an opportunity to explore the fundamental differences between print and digital narratives. Focusing on three short assignments and one longer project, this class encourages students to learn by doing. Additionally, students develop their digital fluency by exploring a variety of platforms and readings. Digital Nonfiction is an advanced creative nonfiction class that requires ENGL 0930 or any 1000-level nonfiction writing course. Enrollment is limited to 17. Instructor permission required. S/NC.
Spr ENGL1180B S01 24523 TTh 10:30-11:50(09) (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. Not open to first year students. Class list will be reduced to 17 after writing samples are reviewed during first week of classes. Preference will be given to English concentrators. Banner registrations after classes begin require instructor approval, S/NC.
Fall ENGL1180C S01 15598 M 3:00-5:30(15) (C. Debooer-Langworthy)

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 24524 MWF 10:00-10:50(03) (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 workshopping in the genre. Prerequisite: ENGL 0930 or any 1000-level nonfiction writing class. 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 25161 Th 4:00-6:30(17) (J. Ready)

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.
Spr ENGL1180I S01 24525 TTh 9:00-10:20(08) (K. Schapira)

ENGL 1180K. The Art of Literary Nonfiction.
For the advanced writer. Based on Roland Barthes’ notion of the fragment, this workshop features an incremental, literary approach to writing nonfiction, in both traditional and experimental formats. In response to daily assignments, students will produce numerous short pieces and three extended “essays,” to be gathered into a chapbook at the end of the course. Writing sample required. Prerequisite: ENGL0930 or any 1000-level nonfiction writing course. Not open to first year students. Class list reduced to 17 after writing samples are reviewed during first week of classes. Preference given to English concentrators. Banner registrations after classes begin require instructor approval, S/NC.
Fall ENGL1180K S01 15398 MWF 1:00-1:50(06) (C. Imbriglio)

ENGL 1180P. Further Adventures in Creative Nonfiction.
For the advanced writer. A workshop course for students who have taken ENGL 0180 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 class. 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 15397 Th 1:00-2:20(10) (E. Hardy)

ENGL 1180Q. Narrating History.
For the advanced writer: the protocols of historical narrative and essay for a general audience. Using the archives of Brown, the Rhode Island Historical Society, and the student’s family (if feasible), each writer will research primary and secondary sources, use interviews and oral histories, to help shape three engaging, instructive true stories of the past. Intensive library work, revisions, and peer editing. Writing sample required. Prerequisite: ENGL0930 or any 1000-level nonfiction writing course. Class list reduced to 17 after writing samples are reviewed during first week of classes. Preference given to English concentrators. Banner registrations after classes begin require instructor approval, S/NC.
Spr ENGL1180Q S01 24526 W 3:00-5:30(14) (E. Taylor)

ENGL 1190C. Advanced Creative Nonfiction: Biography.
Biography, one of the oldest forms of creative nonfiction, tells the life story of a person, idea, place, or thing. We consider old and new forms of biography, experiment with those forms, and practice them as a method of inquiry as well as presentation of self. We also explore biography’s connection to journalism, autobiography, memoir, and history. 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 ENGL1190C S01 25211 TTh 1:00-2:20(10) (C. Debooer-Langworthy)

ENGL 1190M. The Teaching and Practice of Writing: Writing Fellows Program.
For students accepted as Writing Fellows, this course offers the study of literary essays and composition theory to help develop their own writing while increasing awareness of the requirements of an essay. Students will write essays throughout the semester and will confer with each other for every paper, thereby gaining experience in peer tutoring and becoming better writers through the help of an informed peer. They will also respond to the
ENGL 1190P. The Art of Memoir in Theory and Practice.
The course introduces students to the historical and theoretical nuances of memoir. You will critically engage with a variety of readings and develop an appreciation of your creative role as a memoirist. In the process of crafting a portfolio of work you will explore the complexities of remembering and experiment with the style of narrative voice and structure. Writing sample required. Prerequisite: ENGL 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/JC.
Fall ENGL1190P S01 15402 MWF 12:00-12:50(12) (R. Ward)

ENGL 1200. Independent Study in Nonfiction Writing.
Tutorial instruction oriented toward some work in progress by the student. Requires submission of a written proposal to a faculty supervisor. Section numbers vary by instructor. Instructor permission required.
ENGL 1310H. The Origins of American Literature.
Where does American literature begin? Can it be said to have a single point of origin? Can writings by people who did not consider themselves American be the source of our national literary tradition? Does such a tradition even exist and, if so, what are its main characteristics? How does one understand the various diverse traditions that constitute American literature, including African-American, Native American, and many others, into a single object of study—or does one even need to? Authors may include de Vaca, Anne Bradstreet, Benjamin Franklin, and Phillis Wheatley. WRIT
Spr ENGL1310H S01 24532 TTh 1:00-2:20(10) (J. Egan)

ENGL 1310T. Chaucer.
Texts in Middle English by Geoffrey Chaucer including the romance Troilus and Criseyde; dream vision poems Book of the Duchess, House of Fame, and Parliament of Fowls; Chaucer's translation of Boethius's Consolation of Philosophy; his shorter poems; and two Canterbury Tales. Prior knowledge of Middle English not required. Not open to first-year students.
Spr ENGL1310T S01 24539 TTh 2:30-3:50(11) (E. Bryan)

ENGL 1311L. From Mead-Hall to Mordor: The Celtic and Germanic Roots of Tolkien's Fiction.
This course traces the sources used by J.R.R. Tolkien in writing The Hobbit and The Lord of the Rings, which include tales drawn from Old English, Norse, Welsh, and Irish literature. You will be introduced to different medieval genres as you consider how the nature and gender of the hero changes in specific cultural and linguistic moments.
Fall ENGL1311L S01 17039 MWF 10:00-10:50(03) (L. Jacobs)

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.
Fall ENGL1360H S01 17023 MWF 2:00-2:50(07) (L. Jacobs)

ENGL 1360U. Europe in the Vernacular.
Why did a few early medieval European authors write not in Latin or Arabic but in vernacular languages like Castilian, Early Middle English, Old Icelandic, or Old French? We will read primary texts by Layamon, Alfonso X, Dante, troubadours and anonymous others, and assess previous claims about the "rise of the individual" and various proto-nationalisms as we rewrite the story of how, why, and for whom multilingual vernacular writings came to be. Readings in modern English supplemented by medieval languages. Enrollment limited to 20 students. Not open to first-year students. Sophomores require instructor permission to register.
Fall ENGL1360US01 15476 TTh 1:00-2:20(10) (E. Bryan)

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 works by Aphra Behn, Eliza Haywood, Charlotte Lennox, Elizabeth Inchbald, and Mary Wollstonecraft.
Fall ENGL1510AS01 15477 TTh 10:30-11:50(13) (M. Rabb)

ENGL 1511L. On Being Bored.
This course explores texts/films that represent and formally express states of non-productivity or non-desire. Beginning with the Enlightenment and romantic periods, we will reflect on narratives with neither progress nor plot, characters that resist characterization, and poems that deny assertion and revelation. Authors include: Kleist, Kant, Rousseau, Colderidge, de Quincey, Keats, Blanchot, Levinas, Beckett, Ashbery, Schuyler.
Fall ENGL1511L S01 15624 MWF 2:00-2:50(07) (J. Khalip)

ENGL 1511N. Liberalism, Empire, and the American Novel.
An historical consideration of how the novel in the United States addresses the relations between American liberalism and the projection of US sovereign authority into international contexts. Topics to be considered include: Manifest Destiny and the frontier; Reconstruction and the rise of imperial America; World War II and the Cold War; and the United States at the end of History.
Spr ENGL1511NS01 25150 TTh 9:00-10:20(08) (D. Nabers)

The major works of Victorian poetry, spanning from the end of the Romantic period to the beginnings of Modernist poetry: roughly 1840 to 1890. We will be reading Matthew Arnold, Robert Browning, Thomas Hardy, Gerhard Manley Hopkins, and Alfred Tennyson in detail, as well as critical writing and political poetry from the period.
Spr ENGL1511VS01 25765 MWF 9:00-9:50(02) (B. Parker)

ENGL 1560B. Melville.
A seminar looking closely at the relation between the life and literary work of Herman Melville, with an extended reading of his masterpiece, Moby-Dick. The course will look at the history of writing and publishing during Melville’s era and consider some of his contemporaries like Hawthorne and Harriet Beecher Stowe. Enrollment limited to 20.
Spr ENGL1560BS01 25007 Th 4:00-6:30(17) (P. Gould)

ENGL 1561D. Writing and the Ruins of Empire.
An exploration of literary representations of "empire" and "imperialism" from the 18th century to the present. Readings in Gibbon's Decline and Fall of the Roman Empire, Volney's Ruins of Empire, and a wide range of 19th- and 20th-century texts. Some consideration of theories of imperialism and of visual representations of cultures of empire. Enrollment limited to 20. Prior coursework in 18th- and 19th-century literature advised.
WRIT
Fall ENGL1561DS01 15626 T 4:00-6:30(18) (W. Keach)

ENGL 1561G. Swift, Pope, Johnson.
The course provides in-depth study of three major writers of the eighteenth century and will include cultural contexts. Readings include Gulliver's Travels, The Rape of the Lock, and Rasselas. Enrollment limited to 20.
LILE
Spr ENGL1561GS01 24540 TTh 10:30-11:50(09) (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 Etherege, Wycherly, Congreve, Dryden, Behn, Gay, Lillo, Sheridan, and others. Not open to first-year students.
Fall ENGL1561KS01 15495 TTh 2:30-3:50(11) (M. Rabb)
ENGL 1561M. American Literature and the Corporation. A study of the development of the American novel from the Civil War to the present in light of the emergence of the corporation as the principal unit of economic enterprise in the United States. We will survey corporate theory from Lippmann to Collins, and use it to frame the novel's development from realism through modernism to postmodernism. Corporate theorists to be considered: Lippmann, Dewey, Berle, Drucker, Mayo, Demming, Friedman, Coase. Novelist to be considered: Twain, Dreiser, Wharton, Stein, Faulkner, Steinbeck, Wright, Ellison, McCullers, Reed, Gaddis, Morrison. Enrollment limited to 20. Spr ENGL1561M S01 24541 TTh 2:30-3:50(11) (D. Nabers)

ENGL 1561U. Oedipus in Myth, Tragedy, and Theory. This course is an intensive study of Oedipus Rex, as well as an introduction to the debates and responses it has occasioned. It spans several disciplines, from the classics to philosophy to psychoanalysis to literary theory, following the trajectory of this single figure. Readings: Sophocles, Aristotle, Hegel, Rancière, Girard, Foucault, Freud, and Bernard Williams. Enrollment limited to 20. Fall ENGL1561U S01 17076 W 3:00-5:30(17) (B. Parker)

ENGL 1580. Undergraduate Independent Study in the Enlightenment and the Rise of National Literatures. Tutorial instruction oriented toward a literary research topic. Section numbers vary by instructor. Instructor's permission required. ENGL 1710G. Faulkner. In examining Faulkner's major works from the early stream-of-consciousness novels through the history-driven and race-inflected texts of the 30s and 40s, this course will evaluate Faulkner's practice as a writer working both in and against Southern culture, and as Modernist writing within an international context. Issues include narrative experimentation, race, class, gender, and the evolution of Faulkner's work. Students should register for ENGL 1710G S01 and may be assigned to conference sections by the instructor during the first week of class. Fall ENGL1710G S01 15496 TTh 10:30-11:50(13) (A. Weinstein)

ENGL 1710I. Harlem Renaissance: The Politics of Culture. The Harlem Renaissance was a remarkable flowering of culture in postwar New York as well as a social movement that advanced political agendas for the nation. This course takes up the relationship between literature and politics by exploring such matters as the urbanization of black America, the representation of the black poor, the influence of white patronage, and the rise of primitivism. Writers may include Hughes, Hurston, Larsen, Fisher, Locke, and McKay. DPLL Spr ENGL1710I S01 24542 MW 10:00-10:50(03) (R. Murray)

ENGL 1710J. Modern African Literature. This course considers themes, antecedents, and contexts of modern African literature and related forms. Our readings will include fiction in English or in translation, traditional oral forms like panegyric and festival poetry, and some films. We will examine how these diverse materials explore the interplay of ethnicity, nationality, and race. We will also address the issue of "tradition" in contexts where nationalisms of various stripes are becoming stronger, even as the world becomes more interconnected by trade, immigration, and digital technology. Authors include Achebe, Cole, Dangarembga, Farah, Gordimer, Ngugi, Salih, Soyinka, Wicomb. Films by Blomkamp, Loreau, Sembène. DPLL Fall ENGL1710J S01 15511 Th 10:30-11:50(13) (O. George)

ENGL 1710K. Literature and the Problem of Poverty. Explores poverty as a political and aesthetic problem for the American novelist. Examines the ways that writers have imagined the poor as dangerous others, agents of urban decay, bearers of folk culture, and engines of class revolt. Also considers these literary texts in relation to historical debates about economic inequality. Writers may include Crane, Faulkner, Wright, Steinbeck, and Hurston. Fall ENGL1710K S01 15497 TTh 2:30-3:50(11) (R. Murray)

ENGL 1710L. Modernism and Everyday Life. We will examine modernist literature in the context of contemporary art, psychology, and theories of everyday life to ask how this period understood ordinary objects and events. Could they be the proper subject matter of art? In the right circumstances, might they actually be art? Writers may include Woolf, Joyce, Williams, Eliot, Stein, James, Freud, deCerteau. One previous literature class required. Spr ENGL1710L S01 24553 TTh 2:30-3:50(11) (T. Katz)

ENGL 1710Z. Zoopoetics. This course will explore the intersections between the depictions of plants and animals in twentieth and twenty-first century poetry and the theoretical conversations about non-human worlds unfolding in emerging fields, such as animal studies and the environmental humanities. Readings will range from poetic texts by Francis Ponage and Marianne Moore to theoretical texts by figures such as Donna Haraway. Spr ENGL1710Z S01 25593 MWF 1:00-1:50(06) (A. Smallbegovic)

ENGL 1711A. American Poetry II: Modernism. Study of modernist American poetry. Readings include Pound, Eliot, Stevens, Williams, H.D., Moore, Hughes, and others. Spr ENGL1711A S01 24543 TTh 1:20-2:20(10) (M. Blasing)

ENGL 1760U. American Modernism and its Aftermaths. An interdisciplinary study of the rise of modernist aesthetic theory in the United States, its dissemination across various aesthetic (poetry, fiction, various plastic arts) and intellectual (economics, sociology, political theory) fields, and its persistence in United States intellectual life in the various permutations of postmodernism that have succeeded it. Authors to be considered include: poets such as Eliot, Williams, Bishop, Brooks, and Adams; novelists such as Faulkner, Hurston, O'Connor, and Didion; aesthetic theorists such as Greenberg, Rosenberg, Fried, Baraka and Kraus; and social theorists such as von Neuman, Rawls, Cavell, Kuhn, Samuelson, Drucker, and Friedman. Enrollment limited to 20. Fall ENGL1760U S01 15499 W 3:00-5:30(17) (D. Nabers)

ENGL 1761P. Yeats, Pound, Eliot. Readings in the poetry and selected prose of Yeats, Pound, and Eliot. Enrollment limited to 20. LILE Spr ENGL1761P S01 24544 F 3:00-5:30(15) (M. Blasing)

ENGL 1761V. The Korean War in Color. We examine US and South Korean representations of the Korean War. We look at how this event was depicted in US films of the 1950s with a focus on how it occasioned a transformation of American understandings of race, both domestically and transnationally. We then look at how this event has been memorialized by contemporary American authors as well as in South Korean literature and film. Authors we read include: Susan Choi, Ha Jin, Chang-rae Lee, Toni Morrison, Jayne Anne Phillips and Hwang Sok-Yong. Enrollment limited to 20. Not open to first-year students. DPLL LILE WRIT Spr ENGL1761V S01 24534 W 3:00-5:30(14) (D. Kim)

ENGL 1762A. Perverse Cinema. A seminar on movies that pursue and spectacularize the perverse, as well as on how viewing movies is itself a perverse pleasure. We will study film genres that traffic in what's sensational, excessive, uncanny, and transgressive, such as the detective film, thriller, melodrama, sex film, horror, and sci-fi. Special emphasis on the movies of Hitchcock, Kubrick, Lynch, and Cronenberg. Enrollment limited to 20 concentrators in English, Comparative Literature, MCM, Gender and Sexuality Studies, and Theatre and Performance Studies. Not open to first year students. Fall ENGL1762A S01 15501 Th 4:00-6:30(02) (R. Rambuss)

ENGL 1762E. Invisibility and Impersonality in Modern American Fiction. The nineteenth century American novel features identifiable people doing identifiable things: escaping slavery, chasing whales, going to war. The twentieth century American novel, in contrast, depicts anonymous, blank, invisible people who don't do much of anything, bound by economic, political, psychological, and social forces outside of their control. This class reads major works of twentieth century American fiction by Nabokov, Faulkner, Ellison, Pynchon, and Highsmith in the context of various accounts of the death of the subject by Nietzsche, Freud, Benjamin, Foucault, Barthes, Derrida, Butler, Zizek. Enrollment limited to 20 juniors and seniors in English, Comparative Literature, MCM, and Literary Arts. Fall ENGL1762E S01 15502 W 3:00-5:30(17) (S. Burrows)
ENGL 1780. Undergraduate Independent Study in Modern and Contemporary Literatures.
Tutorials instruction oriented toward a literary research topic. Section numbers vary by instructor. Instructor’s permission required.

ENGL 1900R. Queer Relations: Aesthetics and Sexuality.
A study of the relationship between aesthetic thought and sexuality in a variety of literary and cinematic works. We will supplement our readings with ventures into queer theory, emphasizing how art is related to identity, community, race, gender, and ethics. Authors include Wilde, Pater, James, Winterson, Cole, Guibert, Foucault, Bersani, Edelman. Films by Julien and Jarman. DPLL
Fall ENGL1900RS01 15628 MWF 11:00-11:50(04) (J. Khalip)

ENGL 1900Y. Medieval Manuscript Studies: Paleography, Codicology, and Interpretation.
How do you read a medieval manuscript? This course teaches hands-on methodologies for deciphering the material text, including palaeography (history of scripts) and codicology (archeology of the book); contemporary models of interpreting scribal texts, including editorial theory and analysis of readers’ reception; and medieval concepts of textuality and interpretation, including medieval theories of authorship and the arts of memory. Prior course work in Middle English or Latin or other medieval language recommended. Not open to first-year students. Enrollment limited to 20. Instructor permission required.
Spr ENGL1900YS01 25147 M 3:00-5:30(13) (E. Bryan)

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.
Fall ENGL1900ZS01 15503 M 3:00-5:30(15) (P. Armstrong)

ENGL 1901E. Literature and the Digital Humanities.
We will explore the implications of using digital technologies to study literature. How does our understanding of literature and literary study change—if it does—in light of recently developed digital methods for studying such works? How do such methods compare with traditional ways of studying literature? How might literary studies be reconceived in relation to new media studies? Enrollment limited to 20.
Spr ENGL1901ES01 25142 MWF 10:00-10:50(03) (J. Egan)

ENGL 1950G. Reading Narrative Theory.
Narrative is a powerful category of analysis that spans genres, historical periods, media forms, and the distinction between the "fictional" and the "real." This course examines major narrative theorists of the twentieth and twenty-first centuries. We will focus on literary examples, such as theories of the folk tale and novel but will also consider scholars who interrogate the work of narrative in historiography, in cinema and television, and in extra-literary contexts (in the struggle of political campaigners to “control the narrative” or debates on narrative in gaming, medical research, law, and theory itself). Limited to 20 seniors. Preference to English concentrators.
Fall ENGL1950GSC01 15504 TTh 2:30-3:50(11) (E. Rooney)

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/N/C
Fall ENGL1991 S01 15505 W 3:00-5:30(17) (T. Katz)

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 ENGL1992 S01 15506 W 3:00-5:30(17) (T. Katz)
Spr ENGL1992 S01 24988 W 3:00-5:30(17) (T. Katz)

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.
Fall ENGL1993 S01 15300 F 3:00-5:30(14) (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 15421 Arranged (C. Imbriglio)
Spr ENGL1994 S01 24527 Arranged (C. Imbriglio)

ENGL 2360R. Civil Wars, Restoration, and Early Georgian Literature.
The seminar will consider major works from the English Civil Wars to the first years of the eighteenth-century, with attention to cultural and theoretical contexts for understanding important developments such as print culture, war, nation-formation, the marketplace, and public/private spheres. Writers will include Milton, Rochester, Behn, Restoration playwrights, Dryden, Swift, and others. Additional readings will include selections from Adomo, Pocock, Anderson, Zizek, Brown, Johns, and others. Enrollment limited to 15 graduate students.
Spr ENGL2360RS01 24545 M 3:00-5:30(13) (K. Rabb)

ENGL 2360X. Hamlet: Appropriation, Mediation, Theory.
Close study of Shakespeare’s Hamlet in relation to critical and theoretical discourses it has prompted over four centuries including Romantic, psychoanalytic, and deconstructive. Consideration of texts prompted by Hamlet by Goethe, Eliot, Zbigniew Herbert, Stoppard, and Hamlet films including Kozintsev, Olivier, Branagh, Chabrol and Almereyda. The course ends with Hamlet in the Arab world. Enrollment limited to 15.
Fall ENGL2360XS01 15454 M 3:00-5:30(15) (K. Newman)

ENGL 2360Y. Lyric and Ecstasy.
A seminar on ecstatic souls and ecstatic bodies in the lyric poetry of three major English authors—Donne, Crashaw, and Milton—who are rarely read together. (The course may also open out to other historical periods depending on student interests.) We'll consider lyric poetry not only as an apposite medium for rendering ecstatic experience, but also how lyric can itself function as a stimulus for ecstasy. Theoretical readings may include Bataille, Deleuze, Hollywood, Scarry, Culler, and others. We'll also engage the new lyric studies and the revival of aesthetic criticism. Limited to 15 graduate students in English, Comparative Literature, Religion, Literary Arts.
Spr ENGL2360YS01 24546 Th 4:00-6:30(17) (R. Rambuss)

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 14562 Arranged 'To Be Arranged'

ENGL 2561M. Psyche and Ethics in the Nineteenth-Century Novel.
This seminar will explore the relation between psychological and moral frameworks in the nineteenth-century novel. We will also consider how this period of literary and cultural history set the stage for modern and contemporary debates— in ethics, cognitive science, and social psychology—about the nature of selfishness, action, and moral life. Authors to include Eliot, C. Bronte, Trollope, and Hardy. Enrollment limited to 15.
Spr ENGL2561MS01 24547 W 3:00-5:30(14) (A. Anderson)

Section numbers vary by instructor. May be repeated for credit. Instructor's permission required.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
ENGL 2761F. The Racial Lives of Affect.
This course explores both dominant and emergent theoretical paradigms that animate the affective dimensions of racialized subjectivity in the United States from the 19th-century to the present. We begin with African American and Asian American works that render the violence of racism and empire as gendered traumas. We then address works that examine the more quotidian textures of racialized embodied feeling. Enrollment limited to 15.
Fall ENGL2761FS01 15455 W 3:00-5:30(17) (D. Kim)
ENGL 2761G. James Joyce and Literary Theory.
James Joyce has been a monumental figure in the history of modernism, but his work has also been the focus of major theoretical statements that have helped to define the history of literary criticism over the last half century. This seminar will frame analysis of James Joyce's major works (Dubliners, Portrait of the Artist as a Young Man, Ulysses, and Finnegans Wake) with theoretical readings that demonstrate how the debates about interpreting Joyce have shaped and been shaped by the debates about literary theory and modernism. Enrollment limited to 15.
Fall ENGL2761GS01 25008 Th 4:00-6:30(17) (P. Armstrong)
ENGL 2761H. After Blackness: Framing Contemporary African American Literature.
The remarkable aesthetic variety and volume of African American literary art produced since the 1980s seems to outpace intellectual labors to conceptualize this work. Nowhere is this dynamic more evident than in the proliferation of interpretive frames devised to articulate the defining currents of contemporary black expression—postnationalist, postmodern, postsegregation, and post-soul among them. By staging an interplay between these theories and literary works, the seminar provides a broad overview of thought about contemporary black culture and gestures towards the scholarship yet to be done. Literary and theoretical texts by Morrison, Whitehead, Wideman, Beatty, Gilroy, Dubey, and Warren. Enrollment Limited to 15.
Spr ENGL2761HS01 24548 F 3:00-5:30(15) (R. Murray)
ENGL 2761J. Identity and Agency.
Any consideration of identity is bound to run up against the concept of agency. Considering identity and agency as mutually constitutive, this course looks at identity's formation and reformation as a narrative experience and effect, examining its emergence on historical and affective terrains. Approaching identity from a range of vantages (psychoanalytic, gender, history, law), we trace the ways that identities might be consolidated into (or, alternatively, unravel) cultural, political, national, or social arrangements. Works by Plato, James, Woolf, Isherwood, Camus, Orwell, Duras, and Frosst. Critical and theoretical texts by Arendt, Benjamin, Freud, Lacan, Winnicot, Goffman, Levinas, Butler. Enrollment limited to 15.
Spr ENGL2761JS01 24549 W 3:00-5:30(14) (R. Reichman)
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 2900Z. Postcoloniality and Globalism.
Seminar focuses on intersections and disjunctions between two currents in contemporary literary and cultural criticism: “postcolonial theory” and “world literature theory.” We read theoretical statements alongside imaginative literature by writers and critics associated with concepts of postcoloniality, globalization, and diaspora. We thereby stage encounters between theoretical and literary texts in order to explore the varied idioms, genres, and philosophical provocations that the authors present. Themes include: nationalism and “national consciousness”; biopower and “bare life”; historicity and temporality. Texts by Fanon, Ghosh, Hall, Jameson, Laclau, Naipaul, Phillips, Said, Spivak, Walcott. Enrollment limited to 15.
Fall ENGL2900ZS01 15456 Th 4:00-6:30(2) (G. George)
ENGL 2901A. Freedom Without Freedoms.
This seminar, through readings both literary and theoretical, asks why Jean-Luc Nancy would insist that “freedoms”—that is, legal protections and entitlements—cannot grasp the stakes of freedom. What forms can freedom take when it is thought apart from legal provisions? We will consider a wide range of thought on the experience of freedom, from classical practices of the self to liberation from the self, from Christian liberty to liberty realized through love, from self-control to sublime submission to an “event.” We will also think through the contribution that imaginative literature makes to the question of freedom. Enrollment limited to 15.
Fall ENGL2901AS01 15599 F 3:00-5:30(14) (J. Kuzner)
ENGL 2901B. Literary Theory II: Post-Structuralism and the Problem of the Subject.
Conceived as a companion course to COLT 2650M, this seminar will approach the “problem of the subject” as the basis of the 20th-century experiment in critical thinking known as “post-structuralism.” Our focus will be on implications for scholarship in the humanities with a special emphasis on literature and literary criticism. We begin with Marx and Freud, founders of the disciplines (Marxism and psychoanalysis) that most influentially put the subject into question, and go on to consider questions of language, perception, ideology, authorship, desire and sexuality. Readings include Saussure, Bergson, Althusser, Derrida, Deleuze, Foucault, Butler, Malabou. Enrollment limited to 15.
Spr ENGL2901BS01 25003 F 3:00-5:30(15) (T. Bewes)
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. Priority given to students in the English Ph.D. program. Undergraduates admitted only with permission of instructor.
Fall ENGL2950S01 15303 T 4:00-6:30(18) (J. Readey)
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 ENGL2970S01 14563 Arranged "To Be Arranged"
Spr ENGL2970S01 23770 Arranged "To Be Arranged"
ENGL 2990. Thesis Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.
Fall ENGL2990S01 14564 Arranged "To Be Arranged"
Spr ENGL2990S01 23771 Arranged "To Be Arranged"
ENGL XLIST. Courses of Interest to Students Concentrating in English.
Fall 2015
These courses, offered in other departments, are cross listed with the English Department and do not require advisor approval to count toward the concentration for English concentrators. Please refer to the primary department for registration details.
Comparative Literature
COLT 2650M Literary Theory I: Continental Aesthetics and the Question of Politics
Judaic Studies
JUDS 0820 God and Poetry
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 20 first year students. Instructor permission required. FYS LILE WRIT
Fall ENVS0070C S01  15670  TTh  1:00-2:20(10)  (K. Teichert)

Many important political issues hinge on matters of science or technology. But most Americans are ill-equipped to assess these matters. As a result, we are vulnerable to spin when scientific information is distorted, cherry-picked or otherwise misused to advance political, or even religious goals. This course examines ways these phenomena skew public discussion of climate change, vaccine safety, the teaching of evolution, cancer screening, GM food and a host of other issues. Enrollment limited to 20 first year students. FYS LILE WRIT
Fall ENVS0070C S01  15671  TTh  2:30-3:50(11)  (C. Dean)

Offers a survey introduction to contemporary environmental issues and is a “gateway” class for those interested in concentrations in environmental studies/sciences. It is a required course for concentrators. We explore the relationships between human societies and the non-human environment through a survey of topical cases, including: human population growth and consumption, global climate change, toxins, 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. One 90-minute weekly discussion group required, WRIT
Fall ENVS0110 S01  15672  MWF  10:00-10:50(03)  (D. King)

Enables students to master fundamental ecological concepts and explore how this knowledge can be used to inform conservation and management. Students will develop scientific skills and experience the challenges of coastal conservation science through both case studies and field trips, including a mandatory overnight trip. Suitable for students with at least some biology background; the course is aimed at first and second year undergraduates. Expected background: BIOL 0200 or equivalent. Enrollment limited to 15; instructor permission required. WRIT
Fall ENVS0455 S01  15674  TTh  1:00-2:20(10)  (M. Bertness)

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. Enrollment limited to 15; instructor permission required. FYS LILE WRIT
Fall ENVS0490 S01  15675  TTh  10:30-11:50(13)  (S. Porder)

ENVS 0495. Introduction to Environmental Social Science.
This course introduces students to core areas of theory and research in the environmental social sciences. It also challenges students to think carefully about what we learn and don’t learn when we apply different disciplinary lenses to interdisciplinary environmental challenges. Enrollment limited to 15; instructor permission required. FYS LILE WRIT
Spr ENVS0495 S01  24736  TTh  9:00-10:20(08)  (S. Frickel)

Introduces students to principles of international environmental law and examines how international organizations, national governments and non-state actors interact to address human impacts on the global environment. Considers impacts of treaties, trade agreements and foreign aid on resolution of trans-boundary environmental problems including climate change, marine governance, biodiversity loss and trade in endangered species and hazardous waste. Students negotiate a mock treaty (NEWORLD) to mitigate some aspect of human impact on global change from the perspective of different state and non-state actors. Enrollment limited to 15; instructor permission required. FYS LILE WRIT
Fall ENVS0510 S01  15676  MWF  1:00-1:50(06)  (C. Karp)

Economic analysis of environmental issues in industrialized countries with an emphasis on the implications for designing appropriate policy measures. Topics include: the valuation of environmental goods; the basic theory of economic markets, market failure, and the sources of any failure; private and government solutions to market failure; the role of uncertainty in policy-making; and open trade environments and trans-boundary pollution, on a national and global scale. Applications to issues such as climate change, land use, air and water pollution, and alternative energy. Prerequisite: ECON 1110 or 1130.
Fall ENVS1350 S01  15677  TTh  10:30-11:50(13)  (L. Barrage)

ENVS 1355. Environmental Issues in Development Economics.
Examines environmental issues in developing countries, including air and water pollution, land use change, energy use, and the extraction of natural resources. Uses microeconomic models of households and firms, linking household/firm decision-making on environmental issues to choices in labor, land, and product markets. Develops basic empirical techniques through exercises and a project. For readings, relies exclusively on recent research to illustrate the roles of econometrics and economic theory in confronting problems at the nexus of the environment, poverty, and economic development. Suggested background: ECON 1630, and ENVS 1350 or ECON 1480. Prerequisites: ECON 1110 or 1130; and ECON 1620.
Spr ENVS1355 S01  24654  TTh  10:30-11:50(09)  'To Be Arranged'

ENVS 1400. Sustainable Design in the Built Environment.
Provides students with an in-depth understanding of sustainability, as it relates to planning, engineering, architecture, landscape architecture and green buildings. Students conduct economic and environmental analyses to examine planning, design and building problems and opportunities holistically. Interdisciplinary teams work on applied design projects. LILE
Fall ENVS1400 S01  15678  W  3:00-5:30(17)  (K. Teichert)

ENVS 1410. Environmental Law and Policy.
Introduces students to environmental law in the United States. Uses legal decisions and policy frameworks to consider the roles of non-governmental actors in formation and implementation of environmental policy. Students will become familiar with major federal environmental laws and regulatory databases and see how legal precedent, differing understandings of risk and alternative regulatory and market-enlisting strategies have shaped solutions to environmental problems. Provides opportunity to apply legal skills to local environmental legislation or legal problem. Intermediate coursework in Environmental Studies, Political Science, Community Health, Urban Studies or other environmentally-related coursework is recommended. First year students need instructor permission.
Spr ENVS1410 S01  24655  TTh  2:30-3:50(11)  (C. Karp)

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  11020  Arranged  'To Be Arranged'

ENVS 1491. SES-Terrestrial Ecosystem Analysis.
Team-taught course examining the structure of terrestrial ecosystems fundamental biogeochemical processes, physiological ecology, impacts of environmental change on the landscape; 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  11021  Arranged  'To Be Arranged'

ENVS 1492. SES-Aquatic Ecosystem Analysis.
Team-taught course examining the structure of freshwater, estuarine and marine ecosystems; the 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 11022 Arranged “To Be Arranged”

ENVS 1493. SES-Environmental Science Elective.
Two environmental science electives are offered each fall semester as part of the Semester in Environmental Science at the Marine Biological Laboratory, including: aquatic chemistry, mathematical modeling of ecological systems and microbial ecology. Enrollment is limited to students in this program. Instructor permission required.
Fall ENVS1493 S01 11023 Arranged “To Be Arranged”

ENVS 1501. TRI-Lab on Climate Change and Environmental Justice in Rhode Island—Part 2.
The TRI-Lab (Teaching, Research, Impact) on Climate Change and Environmental Justice in Rhode Island will be taught by a team including two experts from the RI state Department of Health. It will investigate ways to reduce the climate change-related public health risks to vulnerable individuals in the West End neighborhood of Providence, and increase the capacities of this neighborhood to respond to climate change threats. Content topics to be covered include: projected climate change impacts in RI; public health risk assessment; risk outreach and communications strategies; state and federal policies, design and evaluation of adaptive responses; community-based research methods.
Fall ENVS1501 S01 15911 T 2:30-4:50(11) (J. Roberts)

ENVS 1555. Urban Agriculture: The Importance of Localized Food Systems.
Urban agriculture and community gardens have a critical function in a small but increasing movement toward more localized and sustainable food economies. This class will explore research and readings from multiple disciplines on the role of urban agriculture in world development and sustainability practices. Further, we will explore current U.S. farm policy, labor practices, and institutions impacting agricultural systems. More importantly, students will learn organic practices and be involved in planning and developing local urban agriculture projects. Enrollment limited to 40. Instructor permission required. E-mail Prof. King to request override (Dawn_King@brown.edu).
Spr ENVS1555 S01 24656 TTh 1:00-2:20(10) (D. King)

ENVS 1575. Engaged Climate Policy at the UN Climate Change Talks.
Twelve undergraduate students will study a group of core readings, conduct independent and group projects, and attend the United Nations Framework Convention on Climate Change’s (UNFCCC) 21st Conference of the Parties (COP21) in Paris, France in early December, 2015. Students will critically analyze contemporary political events; develop and addresses pertinent research questions; engage with and interview experts in the field; craft policy-relevant and empirically grounded publications; and develop experience using social media. Team-based research may be presented at the climate negotiations in Paris at an official side event. Contact J. Timmons Roberts for an application - j_timmons_roberts@brown.edu.
Fall ENVS1575 S01 16254 M 3:00-5:30(15) (J. Roberts)

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 24738 TTh 10:30-11:50(9) (K. Teichert)

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 20. WRIT
Fall ENVS1615 S01 16513 M 3:00-5:30(15) (A. Lynch)

What are the effects of globalization on the environment? Can globalization be greened? Corporations, civil society, international organizations and states are in a race to globalize their rules, sometimes working together, and others times in bitter conflict. This course seeks to understand this set of issues through a mix of examining concrete social/environmental problems and studying theories of globalization and social change. While addressing global issues and the impacts of wealthy nations, this course focuses most on the developing countries, where the impacts of these global issues appear to be worst, and where resources are fewest to address them. Enrollment limited to 20 juniors and seniors. WRIT
Spr ENVS1755 S01 24668 W 3:00-5:30(14) (J. Roberts)

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 VanWey, leah_vanwey@brown.edu.
Fall ENVS1920 S01 15681 TTh 1:00-2:20(10) (L. Vanwey)

From coal power to solar power, energy drives 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 24659 M 3:00-5:30(13) (D. King)

ENVS 1929. The Fate of the Coast: Land Use and Public Policy in an Era of Rising Seas.
For the last few decades, there has been a land-rush on the ocean coasts of the United States. Unfortunately, this swamps the coast at a time when sea levels are on the rise. In some places the rise is natural, in some places the rise is exacerbated by human activities and everywhere it is fueled by climate change. This course will examine the causes of sea level rise, the effects it produces on land, the steps people have taken to deal with these effects and their consequences, and possible remedies. Enrollment limited to 20. Preference given to juniors and seniors. WRIT
Spr ENVS1929 S01 24660 TTh 4:00-5:20(16) (C. Dean)

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.
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.
Brown University

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.

French Studies

FREN 0100. Basic French.
This is the first half of a two-semester course. Four meetings a week for oral practice. One hour of work outside of class is expected every day (grammar/writing, oral practice, reading). Enrollment limited to 18.

FREN 0200. Basic French.
This is the second half of a two-semester course. Four meetings a week for oral practice plus one conversation hour. One hour of work outside of class is expected every day (grammar/writing, oral practice, reading). An accelerated track enables qualified students to go directly to FREN 0500 after FREN 0200. Enrollment limited to 18.

FREN 0300. Intermediate French I.
A semi-intensive elementary review with emphasis on all four skills (listening, speaking, reading and writing). Class activities include drills, small group activities, and skills. Class materials include an audio CD, videos, a French film, short stories, and various other authentic documents. Prerequisite: FREN 0200 or placement (Previous experience with French is required to take this class). Four meetings per week plus a 50-minute conversation section with TAs.

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.

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. 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.

FREN 0500. Writing and Speaking French I.
This is the first half of a two-semester course. Four meetings a week for oral practice plus one conversation hour. One hour of work outside of class is expected every day (grammar/writing, oral practice, reading). Enrollment limited to 18.

FREN 0500. Writing and Speaking French I.
This is the first half of a two-semester course. Four meetings a week for oral practice plus one conversation hour. One hour of work outside of class is expected every day (grammar/writing, oral practice, reading). Enrollment limited to 18.

FREN 0600. Writing and Speaking French II.
This is the second half of a two-semester course. Four meetings a week for oral practice plus one conversation hour. One hour of work outside of class is expected every day (grammar/writing, oral practice, reading). An accelerated track enables qualified students to go directly to FREN 0500 after FREN 0200. Enrollment limited to 18.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
of French colonial identity, and what kind of purchase do these ideas have on contemporary French cultural and political life? In French.
FREN 0760A. Introduction à l'analyse littéraire.
On what terms and with what tools can we "read" a literary text? An introduction to major periods and genres (the short story, the novel, poetry, theater) of French and Francophone literature and to a range of analytical approaches to the text, including narrative theory, poetics, psychoanalysis and gender studies. Taught in French.
Spr FREN0760A S01 25130 MWF 1:00-2:50(07) (O. Mostefai)
FREN 1010A. Littérature et culture: Margins of Modernity.
A survey of French and Francophone works from the 18th century to the present that reflects on a number of cultural shifts, of challenges but also resistances to hierarchies (social, sexual, political); the urban context; legacies of colonization. Various figures of marginality to be studied: vagabonds and parvenus, dandies and courtesans, outcasts and pariahs. Authors to be studied include Prévost, Marivaux, Balzac, Baudelaire, Maupassant, Duras, Camara Laye and Rachid O. Taught in French.
Spr FREN1010A S01 24620 TTh 2:30-3:50(11) (P. Saint-Amand)
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.
Fall FREN1020A S01 16635 TTh 1:00-2:20(10) (J. Lizzio)
Fall FREN1020A S01 16635 TTh 1:00-2:20(10) (J. Lizzio)
FREN 1040B. Pouvoirs de la scène: le théâtre du XVIIe siècle.
This course examines how 17th-century theater both reinforces and undermines the ideologies of absolutism, national identity, the nuclear family, and emerging bourgeois consciousness, among others. Special consideration will be given to the theory and performance of theater in the 17th century and the present. Readings will be supplemented with screenings of videos for the plays studied (as available). In addition to papers and oral presentations, students will stage selections from some of the plays studied. Plays by Rotrou, Corneille, Molière, Racine, and an opera by Quinault/Lully. Taught in French.
Spr FREN1040B S01 25070 MWF 10:00-10:50(03) (O. Mostefai)
FREN 1050J. Le Siècle de Voltaire: naissance du philosophe.
A presentation of various aspects of the French Enlightenment through its principal representative philosopher: Voltaire. This course examines his various preoccupations: with philosophy, the combat against religion, the pursuit of tolerance and freedom, the defense of human rights. Readings in Voltaire's contes, his major plays, various entries from his famous Dictionnaire philosophique, treatises and pamphlets. Taught in French.
Fall FREN1050J S01 16171 MWF 12:00-12:50(12) (J. Lizzio)
FREN 1120F. Scénographies du 20ème siècle.
In this course we will read a selection of plays by notable 20th century French and Francophone writers, and consider how the dramatic form organizes and complicates questions of representation, subjectivity, body, politics and voice. Authors include Sartre, Camus, Genet, Beckett, Césaire, Koltès, Duras, Sarraute, Ndiaye, Redonnet. Secondary readings by Adorno, Deleuze, Kristeva amongst others. Taught in French.
Fall FREN1120F S01 16169 F 3:00-5:30(14) (T. Ravindranathan)
FREN 1210E. Un semestre avec Proust: introduction à la recherche.
The intent of this course is to introduce students to the principal themes of Proust's major novel - time and memory, desire and jealousy, class and war. Other questions to be covered: the depiction of sexuality and identity, the satire of society. We will also introduce some of the major critical approaches of the novel. Taught in French.
Spr FREN1210E S01 25071 Th 4:00-6:30(07) (P. Saint-Amand)
FREN 1320G. Contes et identités francophones.
How do oral traditions define national and ethnic identities in France, Sénégal, the Caribbean, Louisiana, and Canada? How have the study and rewriting of these traditions redefined such identities? We will consider these questions by studying tale-types that are found in all of the above regions, tale-types that are specific to each, and literary reworkings of folktales by writers, including d'Aulnoy, Perrault, Pourrat, Diop, and Chamoiseau. Taught in French.
Fall FREN1320G S01 16167 MWF 11:00-11:50(04) (L. Seifert)
FREN 1109F. Comment peut-on être Français? L'identité française en question.
This course will examine the transformation of cultural identity in contemporary France. What does it mean to be "French" or étranger today? We will investigate this question by reflecting on some of the major changes that have occurred in French society in the past 30 years in the wake of immigration, the emergence of ethnic identity, racism, the construction of Europe, and globalization. We will study contemporary fiction and non-fiction, essays, films, songs, comedy, as well as theoretical texts. Readings will include works by Leila Sebbar, Chadhort Djavann, Faiza Guène, Julie Kristeva, Tzvetan Todorov, Philippe d'Iribarne, and Eric Fassin. In French.
Spr FREN1140F S01 25069 MWF 1:00-1:50(06) (O. Mostefai)
FREN 1510C. Advanced Oral and Written French: A table!.
Thematic units with different approaches to French cuisine and the French meal, such as regional cuisine, meals in literature and at the movies, radio-TV culinary shows, political and economical considerations, and, of course, a practical unit on how to compose, prepare and eat a French meal. Follows FREN 0600 in the sequence of language courses. Development of oral skills via presentations, debates, conversation, and discussion based on the various topics. Writing activities: essays, translations, commentaries, journals, creative descriptions and stories, etc. Taught in French. WRIT
Fall FREN1510C S01 16162 TTh 2:30-3:50(11) (A. Wiart)
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; argentique and digital; your own photos, etc. Taught in French. WRIT
Spr FREN1510J S01 25194 MWF 11:00-11:50(04) (Y. Kervennic)
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. WRIT
Spr FREN1610C S01 25198 TTh 1:00-2:20(10) (A. Wiart)
FREN 1900A. Boulevard du crime.
A study of crime and criminality in relation to French culture and literature from the late-middle ages through the 20th-century. Readings in a variety of sources including poetry (from Villon to Verlaine), theater (Racine), the novel (Zola, Genêt, Duras), trials (Gilles de Raiz, the prototype of Bluebeard), memoirs (Lacenaire, dubbed the "elegant murderer"), and criminological treatises. Film screenings will complement readings. Taught in French.
Spr FREN1900A S01 25072 W 3:00-5:30(14) (G. Schulz)
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 2110A. La Naissance du roman Français.
From the origins of medieval romance in the 12th century, this course traces the history of the genre through the end of the sixteenth century. What was the fate of the knight errant in the modern era and how did the invention of printing transform medieval romance cycles? Did the humanist novel offer a corrective to the vagaries of chivalric romance? Literary works will be read in light of theories of the novel. Readings in Chrétien de Troyes, the prose Lancelot, Rabelais, Bakhtin, Lukács, and others. Taught in French.
Fall FREN2110A S01 16166 W 3:00-5:30(17) (V. Krause)

FREN 2150C. Le Roman libertin: approches critiques.
We will attempt to study the evolution of the different genres of the libertine novel in the 18th century: roman de séduction, the conte, roman de la prostitution. We will also examine how current approaches around issues of gender, sexuality, pornography allow for new contextualization of that novel. Authors to be read are Crébillon fils, Duclos, Godard d'Aucour, La Morlière, Boyer d'Argens, Denon and Laclos. Taught in French.
Fall FREN2150CS01 16185 M 3:00-5:30(15) (P. Saint-Amand)

FREN 2170K. High Culture: Intoxicants in 19th-Century Literature and Society.
This seminar explores the cultural significance of intoxicants in 19th-century France. Between the wine of transcendence and creation and the opiates of degeneration and disease, alcohol and narcotics played a role in antithetical discourses of fulfillment and depletion. Their idealization commonly found witnesses among poets, while the social sciences roundly condemned their deleterious effects on the material and social body. Advances in medicine contributed new intoxicants available for abuse (ether, morphine), even while feeding discourses condemning alcoholism and drug use as social scourges. Primary readings include literature (Gautier, Baudelaire, Rimbaud, Zola, Lorrain), medical treatises, social policy. Taught in English.
Fall FREN2170K S01 16164 F 3:00-5:30(14) (G. Schultz)

FREN 2190F. L'Honneur des poètes.
This course will focus on 20th century narrative attempts to give form to war, as historical and traumatic event and scene of a protagonist/narrativity in crisis. Starting with the paradigmatic battlegrounds of Stendhal's La Chartreuse de Parme and Céline's Voyage au bout de la nuit, we will then consider major post-1945 novels (and films) dealing notably with the second world war and the Vichy years (Perec, Simon, Duras, Resnais, Modiano, Littell, Jenni, Echenoz), along with theoretical writings on war, representation and the military-industrialized present (Baudrillard, Virilio, Chamayou, Scarry, Butler). Taught in French.
Spr FREN2190F S01 25073 F 3:00-5:30(15) (T. Ravindranathan)

FREN 2450. Exchange Scholar Program.
Fall FREN2450 S01 14567 Arranged 'To Be Arranged'
Spr FREN2450 S01 23774 Arranged 'To Be Arranged'

FREN 2600L. Théories du texte.
Seminar on the developments (and relevance) of the literary theory of semiotics to deconstruction. Taught in French.
Spr FREN2600L S01 25074 Th 4:00-6:30(17) (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 S01 14568 Arranged 'To Be Arranged'
Spr FREN2970 S01 23775 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.
Fall FREN2990 S01 14569 10:30-11:50(13) (T. Ravindranathan)

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

FREN XLIST. Courses of Interest to French Concentrators.

Gender and Sexuality Studies

GNSS 0090C. Reproductive Health: Science and Politics.
Reproductive health issues such as contraception, abortion, sexually transmitted infections and gay and lesbian health are some of the most controversial and politically charged issues in the US today. After an introduction to the interpretation of medical literature we will explore scientific, political, religious and cultural aspects of these important public policy issues. Successful national and international programs will be discussed. Although all views are welcome, it is expected that students will be respectful of other's opinions and will incorporate the best available scientific data into their conclusions. Enrollment limited to 20 first year students. Instructor permission required. FYS DPLL WRIT
Spr GNSS0090C S01 25597 M 3:00-5:30(13) (S. Fox)

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. WRIT
Spr GNSS0120 S01 24281 MWF 1:00-1:50(06) (D. Davis)

GNSS 1201. Feminist Utopias and Dystopias.
From the religious overtones and arborhelorex of heterosexuel sex in the all-female world of Millenium Hall (1762), to the need for a new race of cyborg in Octavia Butler's Lilith's Brood Trilogy (1987-89), to the gender-inflected environmental apocalypse of Margaret Atwood's Oryx and Crake, feminist writers have used their utopian and dystopian fiction to imagine worlds where the standard system of male/female (or even human-machine) does not work. This course will examine feminist utopias and dystopias across historical periods and within the context of contemporary feminist and queer theory about gender, "race," sexuality, environmental justice, and interspecies communication. Sophomore seminar. SOPH WRIT
Fall GNSS1201 S01 16304 Thh 10:30-11:50(13) (G. Cohee)

This seminar examines problems that arise in marriage from the failures of couples to speak to each other, and when they do, from their failures to speak openly, honestly, and from a position of social equality. We examine from a metaphysical and moral perspective the agency in men and women as it is reflected in what couples say and think. We look at whether marriages fail when women consciously choose or unconsciously fall into oppressive, subordinate postures and examine whether men take advantage of these postures. Class materials will be primarily novels and films, supplemented with philosophical, sociological, and legal essays.
Fall GNSS1711 S01 16896 M 3:00-5:30(15) (P. Foa)

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 other hybrid figures. Our films 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 merging of technology and body.
Fall GNSS1720 S01 16770 T 4:00-6:30(18) (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 1920. 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.

This course interrogates how psychoanalysis understands the relation between the sexuated body, femininity, knowledge, and desire. We will read texts at the intersection of literature and film, feminist studies, continental philosophy, and postcolonial studies to consider the specific challenges that feminism poses for psychoanalysis, particularly an international feminism that is attentive to class, race, and history. Readings will include texts by Freud, Lacan, Beauvoir, Irigaray, Gallop, Rose, Cornell, Spivak, and Djebar. Films could include: "A Dangerous Method" (Dir. John Kerr), "Her" (Dir. Spike Jonze), and "Fire" (Dir. Deepa Mehta).

Fall  GNS1960Z  S01  16733  W  3:00-5:30(17)  (A. Khan)

"Queer theory" names both a set of reading practices and a series of reflections on the dangers, and the possibilities, of being taught. This course will therefore pair fictions of discipleship with recent queer accounts of why we read and what we read for. As we encounter a range of leaders and followers, fans and teen idols, bad teachers and impressionable students by permission. WRIT of why we read and what we read for. As we encounter a range of leaders and followers, fans and teen idols, bad teachers and impressionable students, we will attend to the place of queer discipleship in the discipline and method, as well as a critical vocabulary for the analysis of modern cultural forms.

Spring 2016

The following courses have a primary focus on women or gender or make significant use of modes of feminist or queer analysis. They may count toward the concentration in Gender and Sexuality Studies. Please check with the sponsoring department for times and locations.

American Studies
AMST 1905N War and the Mind in Modern America
AMST 1906H Pageantry in American Society

Anthropology
ANTH 0600 Of Beauty and Violence

Comparative Literature
COLT 0711E Reading and Writing African Gender

Ethnic Studies
ETHN 1890E Narratives of Race, Sexuality
ETHN 1890R Latin Feminisms

History
HIST 0540F Women in the Middle East, 7th-20th C: Patriarchal Visions, Revolutionary Voices
HIST 1235A Modern European Women + Gender History
HIST 1963Q Sex, Power, God: A Medieval Perspective
HIST 1964D Women in Early Modern England
HIST 1965N "Furies from Hell" to "Femi-Nazi": A History of Modern Anti-Feminism

History of Art and Architecture
HIAA 1302 Women and Families in the Ancient Mediterranean

Modern Culture and Media
MCM 0010 Governing Sex: Citizenship, Violence, Media
MCM 1200G Cinema and Stardom: Image/Industry/Fantasy
MCM 1501O Television, Gender, and Sexuality
MCM 2120H Objects of (and in) Animation

Russian
RUSS 1019 Revolution in Russian Women's Writing

Theatre Arts and Performance Studies
TAPS 1680 Performance, Politics, and Engagement

Geological Sciences
GEOG 0010. Face of the Earth. 
Study of Earth's surface (e.g., mountains, rivers, shorelines) and processes which have created and modify it (e.g., glaciation, floods, volcanism, plate tectonics, earthquakes). The goals are to increase appreciation and enjoyment of our natural surroundings and provide a better understanding of environmental problems, natural resources, land use, and geologic hazards. Four labs, plus a field trip. For nonscience concentrators (science concentrators should take GEOG 0220). Students
MUST register for both components of this course (the lecture and one of the labs) during the SAME registration session. Enrollment limited to 100. Spr GEOL0010 S01 25011 MWF 1:00-1:50(06)  "To Be Arranged"

GEOL 0030. Climate and Climate Change.
This course is designed to provide students with an understanding of the climate system on Earth, changes in Earth's climate over time, and interactions between climate change and human society. Topics will include: global energy balance; the structure, composition and role of the atmosphere and oceans; the influence of the global carbon cycle on climate; the social, economic and political drivers of human perturbations to the carbon cycle; and societal vulnerability, resilience and adaptive capacity in the face of environmental changes. No prerequisites; course open to all levels.
Fall GEOL0030 S01 15956 TTh 1:00-2:20(10)  (M. Hastings)

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 15957 MWF 2:00-2:50(07)  (J. Head)

GEOL 0070. Introduction to Oceanography.
Examines the ocean's role in global (and local) change, emphasizing the ocean as an evolving, dynamically balanced ecosystem. Focus on physical/chemical/biological systems' interconnections needed to understand the natural variability of the ocean on various time and space scales, from El Niño to global warming. Three lectures, one section meeting weekly; written exercises on oceanographic problems; two field trips to study estuarine and coastal processes.
Spr GEOL0070 S01 25016 MWF 2:00-2:50(07)  (S. Clemens)

GEOL 0220. Physical Processes in Geology.
Introduction to the form and origin of interior and surface features of Earth, with emphasis on understanding the physical processes that produced them. Topics include interior processes (plate tectonics, mountain building, volcanism, earthquakes, and flow of solid rocks) and surface processes (atmospheric and oceanic circulation, flow of rivers, glaciers, and groundwater). Laboratory and field trips arranged. Intended for science concentrators or those wishing in-depth treatment. TAP 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 15958 MWF 11:00-11:50(04)  (J. Tullis)

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 isotopes; 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 25017 TTh 2:30-3:50(11)  (R. Cooper)

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 25019 MWF 11:00-11:50(04)  (J. Lee)

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 solids 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 16558 MWF 11:00-11:50(04)  (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 25711 MWF 10:00-10:50(03)  (R. Milliken)

GEOL 1150. Limnology: The Study of Lakes.
This course will provide an interdisciplinary overview of the physics, chemistry, biology, and geology of lakes. Areas of emphasis will include the origin of lake basins, water circulation patterns, heat and water budgets, biogeochemical processes, lake ecosystems, and the stratigraphic record of lakes. We will also discuss human and climatic impacts on lakes. Prerequisites: GEOL 0220 and 0240, or instructor permission. Enrollment limited to 20. WRIT
Spr GEOL1150 S01 25020 MWF 11:00-11:50(04)  (J. Russell)

GEOL 1240. Stratigraphy and Sedimentation.
Introduction to depositional environments and processes responsible for formation of sedimentary rocks. Major sedimentary environments in the Recent are discussed, general models are proposed, and stratigraphic sequences in older sediments are examined in the light of these models. The Phanerzoic stratigraphic record is examined from the perspective of Earth system history. Laboratory arranged. Prerequisites: GEOL 0220 or 0240, or instructor permission. GEOL 0310, 1410 are also recommended. WRIT
Fall GEOL1240 S01 15963 TTh 10:30-11:50(13)  (J. Russell)

GEOL 1320. Introduction to Geographic Information Systems for Environmental Applications.
Introduction to the concepts of geospatial analysis and digital mapping. The principles of spatial data structures, coordinate systems, database development and design, and techniques of spatial analysis are learned. This is an applied course, primarily using ESRI-based geographic information system software. Focal point of class is the completion of student-selected research project employing GIS methods. Enrollment limited to 10 in each section. Permission by application provided by the instructor (to be requested through email): S/N/C.
Fall GEOL1320 S01 15964 TTh 1:00-2:20(10)  (L. Carlson)
Fall GEOL1320 S02 16112 TTh 10:30-11:50(10)  (L. Carlson)

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 25453 TTh 1:00-2:20(10)  (J. Mustard)

GEOL 1350. Weather and Climate.
Weather phenomena occur on short time scales, and form the basis for understanding climate, the study of changes over longer time scales. This course aims to provide an understanding of the processes that drive weather patterns, the general circulation of the atmosphere, and climate on Earth. Topics include: structure and composition of the atmosphere;
souces of energy driving atmospheric processes; weather forecasting; the hydrological cycle; the forces that create severe weather; the influence of humans on the atmosphere; and factors that influence climate, climate variability and climate change. MATH 0090, 0100; PHYS 0050, or equivalent recommended. Enrollment limited to 30. WRIT
Fall GEOL1350 S01 25021 TTh 2:30-3:50(11) (M. Hastings)

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 16109 TTh 9:00-10:20(08) (Y. Huang)

GEOL 1410. Mineralogy.
Introduction to mineralogical processes on Earth's surface and its interior. Topics include crystallography, crystal chemistry, nucleation, crystal growth, biomineralization, environmental mineralogy, and mantle mineralogy. Laboratory study devoted to optical identification of rock-forming minerals. Prerequisites: GEOL 0230, CHEM 0100 or 0330, or equivalent.
Fall GEOL1410 S01 15965 MWF 10:00-10:50(03) (Y. Liang)

GEOL 1420. Petrology.
Introduction to the origin of igneous and metamorphic rocks. Emphasis on principles and understanding rather than facts and memorization. Principles are used to extract information concealed in the rocks about their formation, processes, sources and evolution with time. Laboratory work focuses on rock hand samples and microscopic textures. Field trips, laboratory arranged. Prerequisites: GEOL 1410, or instructor permission.
Spr GEOL1420 S01 25130 TTh 9:00-10:20(08) (A. Saal)

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 16857 TTh 2:30-3:50(11) (J. Lee)

GEOL 1450. Structural Geology.
Introduction to the geometry, kinematics and mechanics of rocks deformed by brittle fracture or faulting and ductile solid state flow, on scales from microscopic to mountain ranges. The emphasis is on using concepts to interpret the formation, strain history and rheology of deformed rocks in terms of the operative grain-scale processes, material properties and environmental conditions. Weekly 2 hour lab involving hands-on experience closely related to class topics. Two field trips. Prerequisites: GEOL 0220 or instructor permission. WRIT
Spr GEOL1450 S01 25131 TTh 10:30-11:50(09) (G. Hirth)

GEOL 1510. Introduction to Atmospheric Dynamics.
The objective of GEOL 1510 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 25132 MWF 10:00-10:50(03) "To Be Arranged"

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 geochanical 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.
Fall GEOL1560 S01 16638 Th 1:00-2:20(10) (A. Saal)

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.
Spr GEOL1610 S01 25579 TTh 1:00-2:20(10) (C. Dalton)

GEOL 1615. The Environmental Policy Process.
The diminishing quantity and quality of the resources 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. WRIT
Fall GEOL1615 S01 16752 M 3:00-5:30(15) (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 25549 MWF 11:00-11:50(04) (E. Parmentier)

GEOL 1660. Instrumental Analysis with Environmental Applications.
This course covers the principles and practical applications of important analytical chemistry tools used to study environmental problems, including discussions of method selection and statistical treatment of data. Students will strategize and implement a study of a field site. Includes lab sessions with hands-on experience of instrumental analysis using atomic and molecular spectroscopic techniques, separations by gas and liquid chromatography, and electrochemical methods. Prerequisite: CHEM 0330 or GEOL 1370. Enrollment limited to 20. Instructor permission required.
Spr GEOL1660 S01 26819 TTh 10:30-11:50 (D. Murray)

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 0060, or equivalent recommended.
Fall GEOL1710 S01 16834 TTh 1:00-2:20(10) (R. Milliken)

GEOL 1950X. Magma Oceans.
Exploring the interplay of chemical and physical processes governing evolvement of magma oceans on terrestrial planets. Topics: phase equilibria, trace element fractionation, isotopic evolution, mantle convection and solid/melt segregation. Using the Moon as a starting point, the geochemical physical observational constraints on magma ocean evolution are reviewed. Evolution models connecting these observations explored. Earth and Mercury will be considered in turn, using the lunar model as a framework. Goal: provide a comprehensive review of the role of magma oceans in the evolution of terrestrial planets, and to develop general principles about how to think about the evolution of magma oceans.
Fall GEOL1950X S01 17197 Arranged (S. Parman)

GEOL 1960J. Reactions and Rheology: Chemical and Mechanical Kinetics in Mineral Systems.
Characterization of atomic diffusion and dislocation motion responsible for chemical and physical reactions and plastic rheology in ionic solids. Topics include: point-defect thermodynamics; atomic diffusion (physical and mathematical); solid-solution formation; solid-state compound formation; dislocation structures; grain boundary structure and chemical segregation; plastic rheology. Recommended three or more of GEOL

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
GEOL 1960J, GEOL 2920C, GEOL 2910L
S01 11:00-11:50(09)
12:00-12:50(09)
9:00-9:50(16)
25138 3:00-5:30(14)
9:00-9:50(09)
Arranged
'To Be Arranged'
16745
14571
MWF
GEOL 2920K. 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 GEOL2920C S01 25712 Arranged 'To Be Arranged'

GEOL 2920K. Special Topics in Geological Sciences: The Hydrological Cycle on Mars.
Evidence for the changing hydrological cycle on Mars, ranging from what appears to be an early warm and wet Mars, through history to the present very cold polar desert Antarctic-like environment will be examined. Ongoing rover exploration of Mars will be followed to assess what these new results are telling us about the hydrological cycle.
Spr GEOL2920K S01 25138 W 3:00-5:30(14) (J. Head)

GEOL 2920N. Problems Antarcitc Dry Valley Geoscience.
The Antarctic Dry Valleys represent an extreme hyperarid polar desert environment. Their geomorphology records the range of processes operating in these environments, preserving a record of climate change over millions of years. Major microenvironments are studied at the micro-, meso-, and macro-scale through literature review, field analyses, and research projects. Exobiological themes and climate change on Mars will be assessed.
Spr GEOL2920N S01 25140 M 3:00-5:30(13) (J. Head)

GEOL 2970. Preliminary Examination Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.
Fall GEOL2970 S01 14570 Arranged 'To Be Arranged'
Spr GEOL2970 S01 23777 Arranged 'To Be Arranged'

GEOL 2980. Research in Geological Sciences.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Enrollment is restricted to graduate students only.

GEOL 2990. Thesis Preparation.
For graduate students who have met the tuition requirements and are paying the registration fee to continue active enrollment while preparing a thesis.
Fall GEOL2990 S01 14571 Arranged 'To Be Arranged'
Spr GEOL2990 S01 23778 Arranged 'To Be Arranged'

German Studies

German Studies

GRMN 0100. Beginning German.
A course in the language and cultures of German-speaking countries. Four hours per week plus regular computer and listening comprehension work. At the end of the year, students will be able to communicate successfully about everyday topics. This is the first half of a year-long course whose first semester grade is normally a temporary one. Neither semester may be elected independently without special written permission. The final grade submitted at the end of the course work in GRMN 0200 covers the entire year and is recorded as the final grade for both semesters.
Fall GRMN0100 S01 15835 MWF 9:00-9:50(09) (J. Sokolosky)
Fall GRMN0100 S01 15835 T 12:00-12:50(09) (J. Sokolosky)
Fall GRMN0100 S02 15836 MWF 11:00-11:50(09) (J. Sokolosky)
Fall GRMN0100 S02 15836 T 12:00-12:50(09) (J. Sokolosky)
Fall GRMN0100 S03 15837 MWF 12:00-12:50(09) (J. Sokolosky)
Fall GRMN0100 S03 15837 T 12:00-12:50(09) (J. Sokolosky)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
GRMN 0100. Intensive Beginning German.
Students who wish to complete the GRMN 0100-0200 sequence in one semester may do so by enrolling in GRMN 0110 for two semester course credits. There are six hours per week in small drill sections conducted by fluent undergraduate teaching apprentices. Another three hours of class will be conducted by the faculty instructor. Students must register for both the lecture section and one conference.
Spr GRMN0110 S01 24747 TTh 9:00-10:20(08) (J. Sokolosky)

GRMN 0200. Beginning German.
A course in the language and cultures of German-speaking countries. Four hours per week plus regular computer and listening comprehension work. At the end of the year, students will be able to communicate 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 24755 MWF 11:00-11:50(13) (J. Sokolosky)
Spr GRMN0200 S01 24755 T 12:00-12:50(13) (J. Sokolosky)
Spr GRMN0200 S02 24756 MWF 12:00-12:50(13) (J. Sokolosky)
Spr GRMN0200 S02 24756 T 12:00-12:50(13) (J. Sokolosky)
Spr GRMN0200 S03 24757 T 12:00-12:50(13) (J. Sokolosky)
Spr GRMN0200 S03 24757 MWF 1:00-1:50(13) (J. Sokolosky)

GRMN 0300. Intermediate German I.
Focuses on deepening students’ understanding of modern German culture by reading texts and viewing films pertinent to Germany today. Intended to provide a thorough review of German grammar and help students develop their writing, reading, listening, and speaking skills. Frequent writing assignments. Four hours per week. Recommended prerequisite: GRMN 0200.
Fall GRMN0300 S01 15839 MWF 10:00-10:50(15) (J. Sokolosky)
Fall GRMN0300 S01 15839 Th 12:00-12:50(15) (J. Sokolosky)
Fall GRMN0300 S02 15840 Th 12:00-12:50(15) (J. Sokolosky)
Fall GRMN0300 S02 15840 MWF 1:00-1:50(15) (J. Sokolosky)

GRMN 0400. Intermediate German II.
An intermediate German course that stresses improvement of the four language skills. Students read short stories and a novel; screen one film; maintain a blog in German. Topics include German art, history, and literature. Frequent writing assignments. Grammar review as needed. Four hours per week. Recommended prerequisite: GRMN 0300. WRIT
Spr GRMN0400 S01 24758 MWF 10:00-10:50(14) (J. Sokolosky)
Spr GRMN0400 S01 24758 Th 12:00-12:50(14) (J. Sokolosky)
Spr GRMN0400 S02 24759 Th 12:00-12:50(14) (J. Sokolosky)
Spr GRMN0400 S02 24759 MWF 1:00-1:50(14) (J. Sokolosky)

GRMN 0500F. Twentieth-Century German Culture.
A broad exploration of twentieth-century German culture using many kinds of written and visual texts (e.g. literature, journalism, film, art). While continuing to work on all four language skills (listening, reading, writing) students will gain more intensive knowledge about German culture, society, and history. In German. Recommended prerequisite: GRMN 0400. WRIT
Fall GRMN0500S01 15813 MWF 11:00-11:50(02) (K. Mendicino)

GRMN 0600B. Was ist Deutsch?.
In this course we will examine some of the ideas and myths that became entangled with the emerging notion of a “German” identity in the eighteenth and nineteenth centuries. Some of the terms that we will discuss include Kultur, “Bildung,” Freiheit and “Gesellschaft,” all of which have rich semantic histories. Conducted in German. Recommended prerequisite: one course in the GRMN 0500 series. WRIT
Spr GRMN0600S01 24751 MWF 10:00-10:50(03) (T. Kniessche)

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. LILE FYS
Fall GRMN0750S01 16241 TTh 10:30-11:50(13) (T. Kniessche)

GRMN 0990F. Introduction to German Poetry.
A survey of some major German-language poets from the 18th century to the present. We will cover some of the important periods and genres, but the emphasis will be on how to combine formal analysis with thematic discussion. Reading knowledge of German recommended but not required. Discussions and writing assignments in English, with original texts made available to those with German reading skills.
Spr GRMN0990S01 25228 TTh 10:30-11:50(09) (Z. Sng)

GRMN 1200D. Repetition: Kierkegaard, Nietzsche and Freud.
A study of the concept and the textual practices of repetition. We will consider the relation between repetition and transcendence, history, memory, and art. The course will focus on how the category and the event of repetition problematize identity, interpretation, and expression. Issues include religion and aesthetics of repetition (Kierkegaard); history and the eternal return (Nietzsche); repetition compulsion and the death drive (Freud). We will especially be interested in how the theme of repetition informs the way these thinkers write and what problems this poses to interpretation and understanding. In English.
Spr GRMN1200D S01 25081 MWF 2:00-2:50(07) (S. Bernstein)

GRMN 1320L. Weimarer Klassik.
The anthropology and aesthetics of Weimar Classicism. Readings of major works by Johann Wolfgang Goethe and Friedrich Schiller, with discussion of selected texts by Herder, Humboldt, and Kant. In German. Prerequisite: GRMN 0600 or permission.
Fall GRMN1320L S01 15971 TTh 2:30-3:50(11) (T. Kniessche)

GRMN 1340D. Political Theater.
Politics and theater share a long and twisted history. For centuries, their relation was dominated by countless reinterpretations of Aristotle’s definitions of tragedy in his Poetics that hinged on three key terms: representation, identification, and purification. This seminar examines the work of four of the 20th century’s most extreme writers of dramatic prose experimenting with non-Aristotelian forms of theater — from the absurd to the epic — and thus dealing with unprecedented notions of political life. Readings include dialogues, sound-recordings, and films by Karl Valentin; Bertolt Brecht’s Die Mahnmaße; Samuel Beckett’s Waiting for Godot; and Heiner Müller’s Mauser. Taught in German.
Fall GRMN1340D S01 15968 TTh 9:00-10:20(08) (T. Schestag)

GRMN 1340P. Franz Kafka.
On 27 April 1915, Franz Kafka writes in his diary: “I have nothing to communicate, never, to no one.” Five years later, in a letter to Milena Jesenská, Kafka modifies this note: “I always try to communicate something incomunicable.” This seminar is an introduction to Kafka’s writings, where language is no longer simply considered a means of communication nor simply an end in itself, but something most dangerous and unavoidable. Readings will include letters, diaries, unpublished notes, short stories, and fragments from Kafka’s unfinished novels. Taught in English; students from all fields welcome.
Fall GRMN1340P S01 15969 TTh 1:00-2:20(10) (T. Schestag)

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

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
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 GRMN1440/S01 16278 MWF 2:00-2:50(7) (K. Mendicino)

GRMN 1450L. The Letter of the Law.
A seminar investigating the relationship between literature and the law, with an emphasis on texts that explore the role of letters, notes, petitions, and other forms of writing’s circulation. Primary authors include Kleist, Hoffmann, Poe, and Kafka, and secondary authors include Freud, Lacan, Benjamin, and Derrida. Taught in English; no knowledge of German required.
Spr GRMN1450L S01 25229 TTh 2:30-3:50(11) (Z. Sng)

GRMN 16600. Contemporary German Crime Fiction.
A “Krimi” in German can refer to a crime novel or an episode in a TV series. In recent years, German crime fiction has caught up to international crime fiction writing, both in terms of quality and quantity. TV productions also have become more sophisticated and innovative. After a brief overview of crime fiction in Germany, we will examine what is being written, read, and watched on TV today. Readings will include novels by Jakob Arjouni, Andrea Maria Schenkel, Wolf Haas, Friedrich Ani, and Uta Maria Heim, among others. We will watch and analyze episodes from Tatort and other TV series. In German, LILE
Spr GRMN16600 S01 25082 MWF 1:00-1:50(8) (T. Kniesche)

GRMN 1770A. Introduction to Yiddish Culture (JUDS 1713).
Interested students must register for JUDS 1713.
Spr GRMN1770A S01 25318 Arranged “To Be Arranged”

GRMN 1890. Two Artwork Essays: Martin Heidegger and Walter Benjamin.
Two of the most important meditations on the fate of art in modernity were written in 1936 by two very different thinkers: Heidegger’s “The Origin of the Work of Art” and Benjamin’s “The Work of Art in the Age of Its Technical Reproducibility.” While Heidegger engages notions of unconcealment and world, Benjamin interrogates the transformative effects of film and the aestheticization of politics. We will examine these two inexhaustible essays closely, comparing their arguments and placing them in conversation with later works such as Derrida’s The Truth in Painting. In English. Motivated undergraduate and graduate students from various fields welcome.
Spr GRMN1890 S01 25698 M 3:00-5:30(13) (G. Richter)

GRMN 1900L. Fin-de-Siècle Literature.
In this course, we will engage intensively with philosophical and literary texts around the fin-de-siècle or “Jahrhundertwende.” Readings by authors such as Friedrich Nietzsche, Sigmund Freud, Frank Wedekind, Rainer Maria Rilke, Hugo von Hofmannsthal, and Stefan George. In German.
Spr GRMN1900L S01 25063 F 3:00-5:30(15) (K. Mendicino)

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 GRMN2450 S01 14574 Arranged “To Be Arranged”
Spr GRMN2450 S01 23781 Arranged “To Be Arranged”

GRMN 2660A. On the Sublime.
Survey of major theories of the sublime from antiquity to modern times, with emphasis on German, British, and French texts from the 18th to 20th centuries. Authors to be read include Longinus, Immanuel Kant, Edmund Burke, Jean-Francois Lyotard, and Neil Hertz. Readings and discussions in English, with optional readings in original languages provided. Open to seniors with instructor’s permission.
Fall GRMN2660A/S01 15818 W 3:00-5:30(17) (Z. Sng)
Fall GRMN2660B/S01 15818 W 3:00-5:20(17) (Z. Sng)

GRMN 2661B. Hölderlin: “Andenken”.
“Andenken” is among Hölderlin’s most famous and enigmatic poems. The poem not only provides the description of a certain place in time – a souvenir. It also poses the question of what memory is, and what memory has to do with poetry. What happens when remembrance takes place (in a poem)? The seminar will consider the ways in which texts written and read by Hölderlin are layered and folded into the poem. We will also discuss some of the diverse and incompatible readings or remembrances of “Andenken” (including Heidegger and Celano). Taught in English.
Spr GRMN2661B S01 25084 Th 4:00-6:30(17) (T. Schestag)

GRMN 2661D. What Is Critique?
Few concepts have enjoyed as much authority and sustained engagement over the past 250 years of Western modernity as the concept of “critique”—from German Idealism to contemporary critical theory. Beginning with the formulation of critique in Kant’s Critique of Pure Reason, we will trace various trajectories and practices of critique in thinkers such as Schlegel, Hegel, Marx, Heidegger, Benjamin, Horkheimer, Adorno, Derrida, and Foucault, who revisits the politics of critique by asking: “How is it possible . . . not to be governed like this and not for that purpose and not by those people?” Taught in English. Students from various fields welcome.
Fall GRMN2661D S01 15973 F 3:00-5:30(14) (G. Richter)

GRMN 2661E. Under the Open Sky.
How does one shoot a film under the open sky? Especially when one is in Sicily with its ever-changing light patterns and refuses to adjust their intensities with color balance like Straub/Huillet in The Death of Empedocles do? Our seminar will question what it means to team up with Hölderlin for a film that thinks about spots – where “the outside” and the hors champs are the sites of interest. We will engage with all five works that result from this collaboration: two feature films (with several original versions), one text edition, one translation, and one radio play. Taught in English.
Spr GRMN2661E S01 26054 W 3:00-5:30(14) (T. Schestag)

GRMN 2970. Preliminary Examination Preparation.
For graduate students who have met the tuition requirement and are paying the Registration Fee to continue active enrollment while preparing for a preliminary examination.
Fall GRMN2970 S01 14575 Arranged “To Be Arranged”
Spr GRMN2970 S01 23782 Arranged “To Be Arranged”

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

GRMN 2990. Thesis Preparation.
For graduate students who have met the tuition requirement and are paying the Registration Fee to continue active enrollment while preparing for a thesis.
Fall GRMN2990 S01 14576 Arranged “To Be Arranged”
Spr GRMN2990 S01 23783 Arranged “To Be Arranged”

GRMN XLIST. Courses of Interest to Students Concentrating in German Studies.

Swedish
SWED 0300. Intermediate Swedish I.
Continuing Swedish.
Fall SWED0300 S01 16613 TTh 4:00-6:20(18) (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
**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 and 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.

Fall HISP0100 S01 15485 MW 9:00-9:50(02) (S. Sobral)
Fall HISP0100 S01 15485 TTh 9:00-10:20(02) (S. Sobral)
Fall HISP0100 S02 15486 MW 10:00-10:50(02) (S. Sobral)
Fall HISP0100 S02 15486 TTh 10:30-11:50(02) (S. Sobral)
Fall HISP0100 S03 15487 MW 1:00-1:50(02) (S. Sobral)
Fall HISP0100 S03 15487 TTh 1:00-2:20(02) (S. Sobral)
Fall HISP0100 S04 15488 MW 8:30-9:50(02) (S. Sobral)
Fall HISP0100 S04 15488 TTh 12:00-12:50(02) (S. Sobral)

**HISP 0200. Basic Spanish.**

A continuation of HISP 0100. This course continues to focus on acquisition of communicative skills (speaking, listening comprehension, reading and writing) as well as cultural awareness. With successful completion of the course students will be able to understand simple texts, carry on short spontaneous conversations involving everyday topics (such as modern day life and its pressures, health, art and culture, nature and the environment, relationships) and write simple texts with good command of grammar and sentence structure. Prerequisite: HISP 0100 or placement: SAT II scores between 400 and 450; Brown Placement Exam scores between 241 and 340. Students with an AP score of 3 or below must take the Brown Placement Exam. Students should check Placement and Course Description in the Undergraduate Program section of the Hispanic Studies Website. Enrollment limited to 18; 15 spaces are available for students during pre-registration. 3 spaces will be available at the start of the semester for incoming or re-admitted students who should attend the first class. Pre-enrolled students must attend the first four days of class to maintain their pre-registered status and notify the instructor in advance if they must miss any day before the 4th class when the composition of the course section is finalized.

Fall HISP0200 S01 15489 MTWThF 9:00-10:50(16) (N. Schuhmacher)

**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 411 and 490, or Brown Placement Exam scores between 345 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.

Fall HISP0300 S01 15490 MW 9:00-9:50(08) (V. Smith)
Fall HISP0300 S01 15490 TTh 9:00-10:20(09) (V. Smith)
Fall HISP0300 S02 15491 MW 10:00-10:50(09) (V. Smith)
Fall HISP0300 S02 15491 TTh 10:30-11:50(09) (V. Smith)
Fall HISP0300 S03 15492 MW 12:00-12:50(09) (V. Smith)
Fall HISP0300 S03 15492 TTh 1:00-2:20(09) (V. Smith)
Fall HISP0300 S04 15493 MW 1:00-1:50(09) (V. Smith)
Fall HISP0300 S04 15493 TTh 1:00-2:20(09) (V. Smith)
Spr HISP0300 S01 24479 MW 10:00-10:50(09) (V. Smith)
Spr HISP0300 S01 24479 TTh 10:30-11:50(09) (V. Smith)

**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 HISP0400 S01 15514 MW 2:00-2:50(15) (V. Smith)
Fall HISP0400 S01 15514 TTh 2:30-3:50(15) (V. Smith)
Fall HISP0400 S02 15515 MW 10:00-10:50(15) (V. Smith)
Fall HISP0400 S02 15515 TTh 10:30-11:50(15) (V. Smith)
Spr HISP0400 S01 24483 MW 9:00-9:50(14) (V. Smith)
Spr HISP0400 S01 24483 TTh 9:00-10:20(14) (V. Smith)
Spr HISP0400 S02 24484 MW 10:00-10:50(14) (V. Smith)
Spr HISP0400 S02 24484 TTh 10:30-11:50(14) (V. Smith)
Spr HISP0400 S03 24485 MW 12:00-12:50(14) (V. Smith)
Spr HISP0400 S03 24485 TTh 1:00-2:20(14) (V. Smith)
Spr HISP0400 S04 24486 MW 1:00-1:50(14) (V. Smith)
Spr HISP0400 S04 24486 TTh 1:00-2:20(14) (V. Smith)

**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...
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: HISPO400 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 or peer-taught courses. 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
HISP0500 S01 15516 TTh 9:00-10:20(02) (N. Villanueva)
HISP0500 S02 15517 MW 10:00-11:20(02) (N. Villanueva)
HISP0500 S03 15518 TTh 10:30-11:50(02) (N. Villanueva)
HISP0500 S04 15519 TTh 1:00-2:20(02) (N. Villanueva)
Spr
HISP0500 S01 24487 TTh 9:00-10:20(15) (N. Schuhmacher)
HISP0500 S02 24488 MW 10:00-11:20(15) (N. Schuhmacher)
HISP0500 S03 24489 MW 10:30-11:50(15) (N. Schuhmacher)
HISP0500 S04 24498 TTh 2:30-3:50(15) (N. Schuhmacher)

HISP 0600. Advanced Spanish II.
Offers continued, advanced-level work in speaking, listening, reading, and writing skills, with focused review of challenging aspects of Spanish grammar. Course materials include films, music, art works, and a variety of written texts (articles, stories, plays, a novella, etc.) chosen to promote class discussion and in-depth literary analysis. Text will be individual and group activities, including in-class presentations and creative writing projects. Prerequisite: HISP0500 or placement: SAT II scores between 670 and 740, Brown Placement Exam scores between 571 and 650, or AP score of 5 in language. Please check Hispanic Studies website (Undergraduate Programs) for course descriptions and placement information. Enrollment limited to 18. Pre-enrolled students must attend the first four days of class to maintain their pre-registered status and notify the instructor in advance if they must miss any day before the 4th class when the composition of the course section is finalized. Students with scores of 750 and above on the SAT II, 551 on the Brown Placement Exam, or 5 in AP Literature should consider offerings in the 4th class when the composition of the course section is finalized.

Fall
HISP0600 S01 15521 MWF 11:00-12:20(16) (B. Bauer)
HISP0600 S02 15522 MWF 12:00-13:20(16) (B. Bauer)
HISP0600 S03 15523 MWF 1:00-2:20(16) (B. Bauer)
HISP0600 S04 15524 MWF 9:00-10:20(16) (B. Bauer)
Spr
HISP0600 S01 24490 MWF 11:00-12:20(16) (B. Bauer)
HISP0600 S02 24491 MWF 12:00-13:20(16) (B. Bauer)
HISP0600 S03 24492 MWF 1:00-2:20(16) (B. Bauer)
Spr
HISP0600 S04 24493 MWF 12:00-12:50(16) (B. Bauer)

HISP 0710B. Hispanic Culture Through Cinema.
This course will examine eleven cinematic works of the contemporary Hispanic world (Argentina, Chile, Mexico, Spain, and the USA) from 1999 until 2012. We will focus on the cultural, thematic, technical and aesthetic aspects of the films, as well as on their socio-historical and political context. Every movie will be discussed in class integrating sociological, historical, political and aesthetic contexts, as well as a critical analysis of the film as artistic expression. This is a course also designed to improve students' speaking abilities while learning about Hispanic cultures and cinema.

Spr
HISP0710B S01 25206 TTh 2:30-3:50(11) (M. Vaquero)

HISP 0710C. Introduction to Hispanic Linguistics.
This course introduces students to the study of language and deepens their knowledge of Spanish in its main linguistic components. After briefly considering the nature of language, we will study the sounds of Spanish (phonology and phonetics), word and sentence structure (morphology and syntax), and the elements and mechanics to express and interpret meaning (semantics and pragmatics). We will then turn our focus to linguistic phenomena such as changes in Spanish over time (historical linguistics), variations in the language according to region and social group (sociolinguistics), and bilingualism, with special attention to Spanish in the U.S.

Fall
HISP0710C S01 16260 TTh 1:00-2:20(10) (S. Sobral)

HISP 0730. Early and Contemporary Writers of Spanish America.
An introduction to major authors, movements, and themes of Spanish American literature from the Discovery to the present. This course also aims to develop students' oral and written expression in Spanish. Students are expected to engage in close reading and discussion of texts, as well as to revise their papers. Prerequisite: HISP 0600, or AP score = 5, or SAT II (Literature) score of 750 or above, or Brown placement score of 651 or above. WRIT DPLL LILE
Fall
HISP0730 S01 16665 MWF 11:00-11:50(04) (F. Martinez-Pinzon)

HISP 0740. Intensive Survey of Spanish Literature.
An introduction to the major authors and literary movements of Spanish literature from the Middle Ages to contemporary times. Focuses on building critical vocabulary. Also aims to develop students' written and oral expression in Spanish. Preparatory course for 1000-level courses for students who achieve the highest placement in Spanish. Prerequisite: HISP 0600, or AP score = 5, or SAT II (Literature) score of 750 or above, or Brown placement score of 651 or above. WRIT
Fall
HISP0740 S01 15560 TTh 9:00-10:20(08) (S. Thomas)

HISP 0750B. Hispanics in the United States.
Designed to bridge academic learning about Hispanic/Latino culture and volunteer work in agencies serving Hispanics in Providence. Readings, films, and guest presentations focus on issues of concern to these groups. Spanish language learning occurs in the classroom and the community, where students have the opportunity to enrich and test course content. Prerequisite: HISP 0600 or placement: SAT II scores of over 750, 5 in AP Literature or 651 and over in the Brown Placement Exam. Instructor permission required.
Spr
HISP0750B S01 24676 MWF 1:00-1:50(06) (B. Bauer)

HISP 0750N. Muslims, Jews, and Christians in Medieval Iberia.
The cultural diversity of medieval Spain and Portugal is proclaimed by their Christian cathedrals, Islamic palaces, and Jewish synagogues. The three distinct cultures that produced these buildings lived together for centuries in medieval Iberia, sometimes in peace, sometimes not. This convivencia of Jews, Muslims, and Christians will be examined from the perspectives of literature, art, architecture, archaeology and history. FYS
Spr
HISP0750N S01 25769 M 3:00-5:30(13) (M. Vaquero)

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
HISP 1240L. Cervantes and Don Quijote in the Context of Golden Age Spain.
This course seeks to understand the first part of Don Quijote (1605)
within the context of the social, literary, and cultural contexts from which it
sprang. We will undertake a close reading of the 1605 text supplemented by
secondary readings that focus on such topics as the vogue for the
romances of chivalry, the role of the oppressed in Spanish Society in the
novel and in Cervantes’s Spain, the place of books and reading in Golden
Age Spain, etc. The point of departure for the course will be an in-depth
consideration of Marcelin Defourneaux’s book, Daily Life in Spain in the
Golden Age (Stanford UP, latest). Taught in Spanish. LILE.
Fall HISP1240L S01 16647 T 4 00:00-6:30(18) (D. Boruchoff)

HISP 1290U. The Spanish Civil War in Visual Culture.
No other event marked contemporary Spain as profoundly as the Spanish
Civil War (1936-39). This course will study the history of the war itself and
trace the multiple ways it has been remembered and represented from its
immediate aftermath through to the present. Materials will include films
and documentaries, paintings and photography, propaganda posters and
newssheets, radio and television, monuments and comics, oral histories and
fiction. In addition, we will read critical and theoretical texts on historical
trauma and individual and collective memory as well as annesia. This
course will be conducted in Spanish. WRIT
Fall HISP1290U S01 15709 TTh 2:30-5:50(11) (S. Thomas)

HISP 1330C. Indigenous Literatures of Latin America.
In this course, we will explore the production literaria, mítica y legendaria
de los pueblos latinoamericanos, las redes locales y escenarios globales en
que se sitúa esta producción cultural popular. Nos detendremos en textos
quechuelas, mapuches, mayas y aztecas, tanto de la tradición oral como
de la escrita. Veremos también las formas híbridas, como son las criollas,
negrioides y mestizas. Nos interesa seguir las sagas populares, su diálogo
con lo moderno, y los grandes autores que han formalizado la conciencia
eñecita y la política plurinacional. Veremos también documentales y
películas que interpretan el mundo indígena. In español.
Spr HISP1330C S01 24808 M 3:00-5:30(13) (J. Ortega)

HISP 1330Q. Short Forms: Major Works in a Minor Key.
This course will explore short masterworks by major Latin American
writers of the twentieth century and beyond (Borges, Onetti, Cortázar,
García Márquez, Bolaño, Aira, Zambra and others) alongside some of
their major influences (e.g. Poe, Conrad Doyle, Hemingway, Faulkner),
with side-trips into the world of contemporary writers on whom they leave
their own imprint. Readings will primarily involve short stories, but will also
include novellas, poems, films, visual art, and music. Reading in Spanish,
with discussion in English.
Fall HISP1330Q S01 16688 MWF 12:00-12:50(12) (M. Clayton)

HISP 1330T. El amor en español.
This course will visit a series of famous, colorful and controversial couples
(novios, esposos y amantes) from the Hispanic culture. From Latin
American we plan to study the relationship between Frida Khalo and Diego
Rivera, Perón y Evita, and also books by Pablo Neruda and contemporary
authors; and we will also discuss the possible influence of the epistolarity
exchange between the ill-fated lovers Abelard and Eloise on late medieval
Spanish sentimental fiction (San Pedro’s Amante y Lucenda, Flores’ Grisel
y Mirabella and Rojas’ Comedia de Calisto y Melibea. Taught in Spanish.
Fall HISP1330T S01 15913 TTh 10:30-11:50(13) (M. Vaqueru)

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-States 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.”
Spr HISP1330U S01 26024 MWF 11:00-11:50(04) (F. Martinez-Pinzon)

HISP 1370A. "One Hundred Years of Solitude": Culture and Politics in
Garcia Marquez’s Work.
This course will focus on Garcia Marquez’s masterpiece in order to
analyze its modes of representation, discursive strategies, and fictional
construction as well as its interactions with history, politics, and literary
and popular traditions. Other related work by the Colombian Nobel Prize
winner will be discussed, as will his journalistic pieces and movies. The
novel may be read in Spanish or English; discussion will be mainly in
Spanish.
Spr HISP1370A S01 24680 TTh 10:30-11:50(09) (J. Ortega)

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 2030C. Medieval Masterpieces.
Examines three medieval Spanish masterpieces: Cantar de Mio Cid,
Libro de buen amor, and Celestina. Other works are read to explore lines
of continuity and discontinuity in these three works and their respective
generes.
Fall HISP2030C S01 15734 M 3:00-5:30(15) (M. Vaqueru)

HISP 2160B. Garcilaso's Poetics.
Spanish poetry has known through its history two great revolutionary
movements: the one formulated by Garcilaso and the other, four
centuries after, by Rubén Darío. This seminar, based on a close reading
of Garcilaso's works, studies the incorporation and assimilation of the
archachan tradition as a source of poetic renewal, consistently
reappropriating his work.
Spr HISP2160B S01 24733 Th 4:00-6:30(17) "To Be Arranged"

HISP 2350G. Teoría y Práctica Poética en Cesar Vallejo.
Seminario dedicado a estudiar en profundidad la poesía hermética de
Vallejo. Analizaremos su práctica poética así como su teoría del poema a
través de la evolución de su obra y pensamiento.
Fall HISP2350G S01 15733 Th 4:00-6:30(02) (J. Ortega)

HISP 2350H. The History of Wonder in Colonial Spanish American
Lettres.
The notion of wonder (asombro, maravilla) played a determining role in the
Spanish and Creole writings of the Spanish American colonial period. The
volatiliy and aesthetic of wonder advances and implicates such important issues
as otherness, exoticism, category crisis, and identity formation. A studies course
evaluating the role of wonder in New World historiographic and literary writings of the 16th and 17th centuries.
Spr HISP2350S S01 24685 F 3:00-5:30(15) (S. Merrim)

HISP 2350S. Contemporary Poetry in Spanish.
This course explores poetry in Spanish from the 1970s to the present,
taking new explorations with language, form, and media, drawing
lines of continuity with earlier poetics, and exploring engagements
with poetics elsewhere. Selections may be drawn from all parts of the
Spanish-speaking world, with particular emphasis on Argentina, Peru, the
Caribbean, and Spain.
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 HIST1015C SO1 15405 TTh 1:00-2:20(10) (A. Remensnyder)

HIST 0150D. Refugees: A Twentieth-Century History. Refugees are arguably the most important social, political and legal category of the twentieth century. This introductory lecture course locates the emergence of the figure of the refugee in histories of border-making, nation-state formation and political conflicts across the twentieth century to understand how displacement and humanitarianism came to be organized as international responses to forms of exclusion, war, disaster and inequality.

Spr HIST1015D SO1 25091 MWF 12:00-12:50(05) (V. Zamindar)

HIST 0218. The Making of Modern East Asia.

This course examines Asia in the shaping of the modern world, from competing definitions of empires circa 1800 to the rise of the notion of the twenty-first as a "Pacific Century." It investigates the definition(s) of Asia as a world region, explores transnational interactions and emphasizes Asian as historical actors via written, visual and aural sources. Events are placed in the context of key historical paradigms, including varying definitions of modernity, the rise of the nation-state, birth of mass politics, new mechanisms of war, the language of self-determination, changing views of gender, shifting types of media and consumption, etc. WRIT

Fall HIST0218 SO1 14893 MWF 1:00-1:50(06) (R. Nedostup)

HIST 0233. Colonial Latin America.

Colonial Latin America, from Columbus's voyage in 1492 to Independence in the nineteenth century, was the creation of three peoples: Europeans, Native Americans, and Africans. Spanish and Portuguese conquerors brought with them the world of the Crusades, the Inquisition, and the Renaissance. Native Americans lived there already, in rich empires and hunter-gatherer bands. Africans came as slaves from Senegal, Nigeria, Congo and Angola, bringing old traditions and creating new ones. These diverse peoples blended together to form a new people. This was a place of violence, slavery and oppression -- but also of art, faith, new societies, new ideas. P WRIT

Fall HIST0233 SO1 15407 TTh 2:30-3:50(11) (J. Mumford)

HIST 0234. Modern Latin America.

This course is an introduction to the history of modern Latin America. Through lectures, discussions, shared readings, we will explore major themes in the past two hundred years of Latin American history, from the early nineteenth-century independence movements to the recent “Left Turn” in Latin American politics. Some of the topics we will examine include: the intersections of race; the political economy; the nature 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. History 0150 courses introduce students to methods of historical analysis, interpretation, and argument. This class presumes no economics background, nor previous history courses.

Fall HIST0150A SO1 15061 MWF 11:00-11:50(04) (S. Rockman)


Alchemy today conjures Harry Potter or Full Metal Alchemist, not the serious scholarly tradition that captivated Isaac Newton and Carl Jung. We will explore alchemy’s long history, examining how it has endured and adapted to different cultural, social, intellectual, economic, and religious contexts. What did alchemists do? How did they explain their art? And why has alchemy come to represent fraud and folly in some circles and wisdom in others? Students will answer these questions by conducting research in the Hay. History 0150 courses introduce students to methods of historical analysis, interpretation, and argument. This class presumes no previous history courses.

Spr HIST0150B SO1 24199 MWF 11:00-11:50(04) (T. Nummedal)


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.
"index to the very complexity, depth, and fundamental significance" of the conflict. In addition to military and political dimensions, we will also examine constructions of Civil War memory (photography, film, and other media) and the dominant narratives that have shaped our understanding of the war since 1865. WRIT

**HIST 0257. Modern American History: New and Different Perspectives.**

Rather than a survey, this course uses specific episodes and events to reveal different modes of analysis. Examples of questions are: What do gender perspectives tell us about men on the frontier and women in dance halls? What is the importance of baseball to American culture? How do a historian and a lawyer differ in their analysis of a sensational crime case? How can we understand why the U.S. dropped two atomic bombs on Japan? How did scandals in television and popular music signal an end to American innocence? How has the Baby Boom generation altered American society? And more. WRIT

Spr: HIST0257 S01 24636 TTh 9:00-10:20(08) (H. Chudacoff)

**HIST 0286A. History of Medicine I: Medical Traditions in the Old World Before 1750.**

People have always attempted to promote health and prolong life, and to ameliorate bodily suffering. Those living in parts of Eurasia also developed textual traditions that, together with material remains, allow historians to explore their medical practices and explanations, including changes in their traditions, sometimes caused by interactions with other peoples of Europe, Asia, and Africa. We’ll introduce students to major medical traditions of the Old World to 1700, with emphasis on Europe, and explore some reasons for change. A knowledge of languages and the social and natural sciences is welcome but not required. P

Fall: HIST0286A S01 14896 MWF 9:00-9:50(16) (H. Cook)

**HIST 0286B. History of Medicine II: The Development of Scientific Medicine in Europe and the World.**

From the 18th century onward, Western medicine has claimed universal validity due to its scientific foundations, relegating other kinds of medicine to the status of "alternative" practices. The course therefore examines the development of scientific medicine in Europe and elsewhere up to the late 20th century, and its relationships with other medical ideas, practices, and traditions. Students with a knowledge of languages and the social and natural sciences are welcome but no prerequisites are required. Not open to first year students.

Spr: HIST0286B S01 24106 MWF 9:00-9:50(02) (H. Cook)

**HIST 0521A. Christianity in Conflict in the Medieval Mediterranean.**

Students in this class will learn about medieval history by taking on roles, informed by classic texts, in elaborate games set in the past. Drawing on the innovative "Reacting to the Past" curriculum, this class explores a dramatic period of medieval history: the debate about Christian belief held at Nicaea in 325 and the deliberations about crusading held at Acre in 1148. Students will adhere to the intellectual beliefs of the medieval figures they have been assigned to play, and will learn skills—speaking, writing, critical thinking, leadership, and teamwork—in order to prevail in difficult and complicated situations. FYSP

Fall: HIST0521A S01 14917 TTh 2:30-3:50(11) (J. Conant)

**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 20 first-year students. FYSP

Spr: HIST0522G S01 24637 Th 4:00-6:30(17) (H. Cook)

**HIST 0522N. Reason, Revolution and Reaction in Europe.**

This is a first year seminar designed to introduce students to the study of history through a focused look at the French Revolution. It will be divided into two very different parts. The first part will be organized as a traditional history seminar in which we explore together the eighteenth-century developments that preceded the outbreak of the French Revolution. In the second half of the class, students will be assigned different roles in order to re-enact the discussions in the National Assembly that, from 1791 to its collapse in 1792, tried to create a constitution for the new French Nation. FYSP

Fall: HIST0522N S01 15409 TTh 6:40-8:00PM(05) (J. Richards)

**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, FYSP

Fall: HIST0522O S01 16658 Th 4:00-6:30(02) (J. Revill)

**HIST 0535A. Atlantic Pirates.**

This seminar explores piracy in the Atlantic from the sixteenth to the early nineteenth centuries. We will examine everyday life on pirate vessels; the pirates’ role in emerging colonial societies and economies; the complex links between piracy, imperialism, and nation-building; and the image of pirates as both villains and figures of legend. Enrollment limited to 20 first-year students.

Fall: HIST0535A S01 14900 M 3:00-5:30(15) (R. Cope)

**HIST 0537A. Popular Culture in Latin America and the Caribbean.**

From tango to plastic surgery, Donald Duck to reggaeton, this course places popular culture at the center of modern Latin American and Caribbean history. How, will we ask, did popular culture reflect and shape struggles over national belonging? How did foreign cultural products come to bear on international relations and transnational flows? In what contexts has culture served as a vehicle of resistance to dominant ideologies and systems of power? Far from a mere “diversion,” popular culture instead offers a compelling lens onto the relationship between state and society in Latin America and beyond. WRIT FYSP

Fall: HIST0537A S01 15411 Th 4:00-6:30(02) (J. Lambe)

**HIST 0540F. Women in the Middle East, 7th-20th C.: Patriarchal Visions, Revolutionary Voices.**

This course provides an historical approach to women’s lives, status, and perceptions. It focuses on women in the Middle East, from the seventh century emergence of Islam to the twentieth century revolutions and struggles for new identities. It examines the contested roles of women in society and the ways women were culturally crafted. In particular, we will discuss the modes by which women’s lives were narrated (by themselves and others); women’s use of the “patriarchal bargain” to deal with the shift from so-called “traditional” to so-called “modern” culture; and the encounter between “Eastern” and “Western” societies. FYSP

Fall: HIST0540F S01 14902 Th 4:00-6:30(18) (P. Brunnett)

**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. WRIT FYSP

Fall: HIST0551A S01 15412 M 3:00-5:30(15) (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 20 first-year students. FYSP

Fall: HIST0556A S01 15413 Th 9:00-10:20(08) (H. Chudacoff)

**HIST 0574A. The Silk Road, Past and Present.**

The Silk Road has historically been the crossroad of Eurasia; since the third-century BCE it has linked the societies of Asia—East, Central, and South— and Europe and the Middle East. The exchange of goods, ideas, and peoples that the Silk Road facilitated has significantly shaped the
polities, economies, belief systems, and cultures of many modern nations: China, Russia, Afghanistan, Uzbekistan, and India. This course explores the long history (and the mythologies or imaginations) of the Silk Road in order to understand how the long and complex pasts of the regions it touches are important in the age of globalization. FYS WRIT

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 but composed a single cycle of intellectual ferment, imperial reform, accelerating violence and, forging of new political communities. We will examine revolutions that helped create the world we live in. Enrollment limited to 20 first year students. FYS WRIT

HIST 0582A. Animal Histories.
Animals have been people’s energy, food, wealth, gods, hobbies, icons, and companions. Wild and domesticated non-human animals are essential yet often invisible historical subjects. This seminar makes them visible by tracking them through time—ancient, modern, and contemporary—on every continent. They are often symbols, but we look beyond animals as represented by people. We are more interested in them as actors and subjects with agency. By pushing at the boundaries of what constitutes legitimate topics, this seminar serves as a critical introduction to the historical discipline. FYS WRIT

HIST 0654A. Welfare States and a History of Modern Life.
History of the American welfare state, from its origins in nineteenth-century industrial capitalism to contemporary debates about health care, in comparative perspective. Why did welfare states appear and what form did the U.S. version take? Considerations of social inequality, labor relations, race, gender, family policy, the social wage, and the relationship between markets and the state are all considered. Some comparison with European models. SOPH

HIST 0658D. Walden + Woodstock: The American Lives of Ralph Waldo Emerson and Bob Dylan.
Emerson and Dylan are cultural icons of 19th and 20th Century America. Both are elusive and yet representative writers who pushed against the limits of tradition genres, and, by doing so, created new ones: both gave voice to turning points in the civil rights struggle and against American military aggression; both were at the epicenter of a wide circle of intellectuals, while denying their own centrality; both had boundless energy for innovative public performance. "Walden and Woodstock" is an investigation of the role of the intellectual within celebrity culture and of the use of comparative biography. SOPH

HIST 0685A. The Social Lives of Dead Bodies in China and Beyond.
The dead are all around us, but how do we know it? This course aims to uncover how corpses interact with the living as participants in social relations, especially during times of community upheaval. We’ll take China and Taiwan as jumping off points, but also look elsewhere in Africa, the Americas, Asia and Europe since the 19th century, when the broadening scale and nature of warfare; state expansion; rapid development; global circuits of technology; and the interplay of international philanthropies with older forms of charity and ritual pacification significantly affected the treatment, conceptions, and actions of the dead. WRIT SOPH

HIST 0930G. Difficult Relations? Judaism and Christianity from the Middle Ages until the Present (JUDS 0050M).
Interested students must register for JUDS 0050M. 

HIST 0940A. History of Intercollegiate Athletics (EDUC 0850).
Interested students must register for EDUC 0850.
Fall HIST1155 S01 15418 MWF 11:00-11:50(04) (K. Smith)

HIST 1200B. The Fall of Empire and Rise of Kings: Greek History to 479 to 323 BCE.
The Greek world was transformed in the 5th and 4th centuries BCE. The rise and fall of Empires (Athens and Persia) and the metempsichosis of Macedon into a supreme power under Philip II and Alexander the Great provide the headlines. The course covers an iconic period of history, explores life-changing events that affected the people of the eastern Mediterranean, and through these transformations, offers deep insight into the common pressures that ordinary people and their communities confronted. The course addresses political, social and economic history using literary, epigraphical and archaeological evidence. No prior knowledge of ancient history is required.
Spr HIST1200B S01 24148 MWF 10:00-10:50(03) (G. Oliver)

HIST 1200C. History of Greece: From Alexander the Great to the Roman Conquest.
Covers the decline of Athens as the center of classical civilization; the conquests of Alexander the Great; the culture of the Greek elite and, to the extent that it's recoverable, of the indigenous populations of the Hellenistic world; and Greek contributions to what we call Western Civilization. P
Spr HIST1200C S01 24184 TTh 10:30-11:50(09) (K. Sacks)

HIST 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. P
Fall HIST1205 S01 14904 TTh 10:30-11:50(13) (J. Conant)

HIST 1230A. Revolution and Romanticism in 19th century Europe.
A lecture course, primarily for juniors and seniors, that focuses on salient philosophic, artistic, and ideological currents of 19th-century Europe. Beginning with the crisis of political and cultural legitimacy posed by the French Revolution, it concludes with the consolidation of bourgeois culture in the 1860s and 1870s and the two great scientific systematizers of these decades: Darwin and Marx. WRIT
Fall HIST1230A S01 14905 MWF 10:00-10:50(03) (M. Gluck)

HIST 1230B. Birth of Modernist Culture in Fin-de-Siecle Europe.
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 Hofhouse, Nietzsche, Weber, and Freud. The course explores issues such as the rise of mass consumer culture, neoliberal and neoliberalist politics, philosophic irrationalism, psychoanalysis, and the woman question. WRIT
Spr HIST1230B S01 24149 MWF 10:00-10:50(03) (M. Gluck)

HIST 1235A. Modern European Women + Gender History.
This course deals with the history of European women and gender from the Enlightenment to the present. It will focus on large historical themes and questions, especially shifting constructions of femininity and masculinity. It will begin with an analysis of eighteenth-century philosophies regarding women and gender, and it will move to examinations of specific topics such as industrialization, Victorian femininity, the suffrage movements, gender and the Great War, interwar sexuality, fascism, gender and the Second World War, and the sexual revolution.
Fall HIST1235A S01 16713 MWF 1:00-1:50(06) (K. Colvin)

HIST 1260D. Living Together: Muslims, Christians, and Jews in Medieval Iberia.
A pressing issue in today's pluralistic societies is how people of different identities (religious, ethnic, etc.) can live together. This course explores a slice of history that can help us think through questions of difference in our world: medieval Spain, where for centuries Muslims, Christians, and Jews lived in close proximity. Through explicit juxtaposition with modern debates, this course examines how these people understood and structured their relations with each other in the Iberian Peninsula between 711 and 1492. Themes include: identity and cultural definition; power and religious violence; tolerance and intolerance; acculturation and amalgamation; gender and sexuality. WRIT P
Fall HIST1260D S01 24150 TTh 9:00-10:20(08) (A. Remensnyder)

HIST 1266C. English History, 1529-1660.
Examines politics, religion, and society from the Protestant Revolution to the Puritan Revolution-a period of rapid and dramatic change when the world, for most English people, was turned upside down. Considers the experiences and concerns of ordinary men and women, as well as the elite. Takes in Scotland, Ireland, and the great migration to New England. P
Fall HIST1266C S01 14928 MWF 2:00-2:50(07) (T. Harris)

HIST 1266D. British History, 1660-1800.
A survey of British history from the restoration of monarchy to the Wilkes affair and the loss of the American colonies. In addition to political developments such as the Glorious Revolution and the rise of party, examines political ideology (including the great political theorist, John Locke) and various themes in social history (such as crime, popular protest, the sexual revolution, and the experiences of women). P
Spr HIST1266D S01 24151 MWF 2:00-2:50(07) (T. Harris)

HIST 1268B. Russia in the Era of Reforms, Revolutions, and World Wars.
This course covers the rapid industrialization, modernization, and urbanization of Russia from the era of the "Great Reforms" (1860s) through the Second World War. We will examine both the growing discontentment among the population with autocracy's efforts to maintain power and the Bolshevik effort to recreate the economy, society, and everyday life. Topics will include Russian Marxism and socialism, terrorism, the Russian revolutions of 1917, the rise and consolidation of Soviet socialism, famine, the red terror, and World War II. WRIT
Fall HIST1268B S01 14929 MWF 10:00-10:50(03) (E. Pollock)

HIST 1270C. German History, 1806-1945.
This course examines the development of German history from the dissolution of the Holy Roman Empire to the end of World War II. During that time the German states went from being a sleepy backwater to being the conquerors of Europe, finally conquered themselves by the Allied Forces. Through lecture, readings, and discussion we will examine post-Napoleonic Germany, Prussia's role in uniting Germany, the Wilhelmine Empire, the Weimar Republic, and finally National Socialism. The class will take into account politics, economics, war, and culture in painting a full picture of the development of a distinct German state and society.
Spr HIST1270C S01 25651 MWF 8:30-9:50(02) "To Be Arranged"

This course follows the history of France from the time of Louis XIV to the present, focusing on social and cultural trends, with particular emphasis on the boundaries of French national identity. It asks who belonged to the French nation at key moments in French history, including the Enlightenment, the French Revolution, the Napoleonic era, industrialization, imperialism, and the two world wars, as well as the complex questions presently facing France. We will examine how inclusions and exclusions during these moments reveal larger themes within French history, such as those dealing with race, class, gender, immigration, and anti-Semitism, amongst others.
Spr HIST1272C S01 25749 MWF 11:00-11:50(04) (K. Colvin)

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 country's political, economic, social, intellectual, and cultural development to understand the causes, interactions, and consequences of conflict, change, and continuity within Brazilian society. WRIT
Fall HIST1310 S01 14931 TTh 9:00-10:20(08) (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 reenactments. 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 discontent in addition to the historical processes that have forged one of the world’s most vibrant socio-cultural traditions.

Fall HIST1320 S01 14945 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
Spr HIST1331 S01 24152 MWF 12:00-12:50(05) (R. Cope)

HIST 1333. The Mexican Revolution.
An in-depth study of the Mexican Revolution. The focus is on the years of revolutionary violence (1910-1920), but considerable attention is also paid to the roots of the Revolution and to its socioeconomic and political impact in the period 1920-1940.
Fall HIST1333 S01 14906 MWF 12:00-12:50(12) (R. Cope)

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 14935 TTh 1:00-2:20(10) (D. Rodriguez)

HIST 1460. Modern Turkey: Empire, Nation, Republic.
One of the world's most populous Muslim majority countries today, Turkey is a member of NATO and candidate for European Union. Many see Turkey as a bridge between Europe and Asia. The founders of modern Turkey were former military officers, bureaucrats and intellectuals of the Ottoman Empire that spanned three continents lasting over six centuries. Mapping the political, socio-economic and cultural landscape since the late 19th century, this course examines the formation of modern Turkey until present day. We will particularly explore secularism, Islam, sexuality, Kurdish question, recent political protests, memory, and arts and music.
The course will consist of lectures and discussions.
Fall HIST1460 S01 17041 MWF 10:00-10:50(03) (P. Kadercan)

HIST 1503. Antebellum America and the Road to Civil War.
Surveys society, culture, and politics between 1800 and 1860. Topics include the social order of slavery, the market revolution and its impact, abolition and other evangelical reform movements, and the development of sectional identities.
Spr HIST1503 S01 24157 TTh 1:00-2:20(10) (S. Rockman)

HIST 1505. Making America Modern.
This course surveys a crucial period in American history between the end of Reconstruction and the beginning of World War I. During this time, the United States transitioned from a relatively fragmented, traditional, and largely agricultural society into one that was remarkably diverse, increasingly urban, and highly industrialized. In surveying this important transitional period, we will pay particular attention to far-reaching changes in the nation's business and economic life, its social movements, as well as its cultural developments, all with an eye to understanding how the United States became one of the world's most commanding economic, political, and cultural powers.
Fall HIST1505 S01 14947 MWF 11:00-11:50(04) (E. Searcy)

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 WRIT
Fall HIST1511 S01 15419 TTh 10:30-11:50(13) (L. Fisher)

This course explores the history of North America through the eyes of the original inhabitants from pre-contact times up through 1800. Far from a simplistic story of European conquest, the histories of Euro-Americans and Natives were and continue to be intertwined in surprising ways. Although disease, conquest, and death are all part of this history, this course also tells another story: the big and small ways in which these First Nations shaped their own destiny, controlled resources, utilized local court systems, and drew on millennia-old rituals and practices to sustain their communities despite the crushing weight of colonialism. WRIT P
Spr HIST1512 S01 24153 MWF 10:00-10:50(03) (L. Fisher)

HIST 1530. The Intimate State: The Politics of Gender, Sex, and Family in the U.S., 1873-Present.
Examines the "intimate politics" of gender norms, sex and sexuality, and family structure in American history, from the 1870s to the present, focusing on law and political conflict. Topics include laws regulating sex and marriage; social norms governing gender roles in both private and public spheres; the range of political perspectives (from feminist to conservative) on sex, sexuality, and family, and the relationship of gender to notions of nationhood and the role of the modern state. Some background in history strongly recommended.
Spr HIST1530 S01 24739 TTh 1:00-2:20(10) (R. Self)

HIST 1531. Political Movements in Twentieth-Century America.
Political movements in the United States in the twentieth century. History and theory. Highlights of the course include: populism, progressivism, segregationism, first wave feminism, labor movement, civil rights, new left, second wave feminism, new right. The course focuses on the origins, nature, ideologies, and outcomes of major political movements on both left and right in the twentieth century United States. WRIT
Fall HIST1531 S01 15420 MWF 2:00-2:50(07) (R. Self)

A survey with a specialized focus exploring American history from an urban frame of reference. Topics include the social consequences of the modern city, politics, reform, and federal-city relations. WRIT
Fall HIST1551 S01 15422 TTh 1:00-2:20(10) (H. Chudacoff)

HIST 1553. Empires in America to 1890.
This course surveys the development of American foreign relations from initial encounters between Native Americans and newly arrived Europeans to the extension of EuroAmerican power beyond the continental United States. By being attentive to a wider global context, we will attempt to understand the trajectory of "America" from a colonial hinterland to dominant world power. DPLL WRIT
Fall HIST1553 S01 15423 TTh 2:30-3:50(11) (J. Rosenberg)

HIST 1554. American Empire Since 1890.
This survey of twentieth-century US foreign relations will focus on the interplay between the rise of the United States as a superpower and American culture and society. Topics include: ideology and U.S. foreign policy, imperialism and American political culture, U.S. social movements and international affairs, and the relationship between U.S. power abroad and domestic race, gender and class arrangements.
Spr HIST1554 S01 24206 MWF 2:00-2:50(07) (N. Shibasawa)

HIST 1570. American Legal and Constitutional History.
History of American law and constitutions from European settlement to the end of the 20th century. Not a comprehensive survey but a study of specific issues or episodes connecting law and history, including witchcraft trials, slavery, contests over Native American lands, delineations of race and gender, regulation of morals and the economy, and the construction of privacy.
Spr HIST1570 S01 24550 MWF 12:00-12:50(05) (M. Vorenberg)
systems, psychoanalysis, sexuality and stigma, race, eugenics, and also consider the medical and social histories that intersect with, but are not contained by, asylum psychiatry: the rise of modern diagnostic systems, psychoanalysis, sexuality and stigma, race, eugenics, and pharmaceutical presents and futures.

Spr HIST1830M S01 24642 1:00-2:50(07) (J. Richards)

HIST 1830M. From Medieval Bedlam to Prozac Nation: Intimate Histories of Psychiatry and Self.
Humankind has long sought out keepers of its secrets and interpreters of its dreams: seers, priests, and, finally, psychiatrists. This lecture course will introduce students to the history of psychiatry in Europe, the United States, and beyond, from its pre-modern antecedents through the present day. Our focus will be on the long age of asylum psychiatry, but we will also consider the medical and social histories that intersect with, but are not contained by, asylum psychiatry: the rise of modern diagnostic systems, psychoanalysis, sexuality and stigma, race, eugenics, and pharmaceutical presents and futures.

Spr HIST1830M S01 24642 TTh 10:30-11:50(09) (J. Lambe)

HIST 1835A. Unearthing the Body: History, Archaeology, and Biology at the End of Antiquity.
How was the physical human body imagined, understood, and treated in life and death in the late ancient Mediterranean world? Drawing on evidence from written sources, artistic representations, and archaeological excavations, this class will explore this question by interweaving thematic lectures and student analysis of topics including disease and medicine, famine, asceticism, personal adornment and ideals of beauty, suffering, slavery, and the boundaries between the visible world and the afterlife, in order to understand and interpret the experiences of women, men, and children who lived as individuals—and not just as abstractions—at the end of antiquity.

Spr HIST1835A S01 24154 MWF 1:00-1:50(06) (J. Conant)

Interested students must register for EDUC 1200.

Spr HIST1930A S01 25297 Arranged "To Be Arranged"

HIST 1930L. American Higher Education in Historical Context (EDUC 1730).
Interested students must register for EDUC 1730.
Fall HIST1930L S01 16351 Arranged "To Be Arranged"

HIST 1930L. The History of American Education (EDUC 1020).
Interested students must register for EDUC 1020.
Fall HIST1930L S01 17157 Arranged "To Be Arranged"

HIST 1930Q. History of the State of Israel: 1948 to the Present (JUDS 1711).
Interested students must register for JUDS 1711.
Fall HIST1930Q S01 16352 Arranged "To Be Arranged"

HIST 1930W. Introduction to Yiddish Culture (JUDS 1713).
Interested students must register for JUDS 1713.
Spr HIST1930W S01 25312 Arranged "To Be Arranged"

HIST 1931E. The Culture of Death in Ancient Rome (CLAS 1420).
Interested students must register for CLAS 1420.
Spr HIST1931E S01 25310 Arranged "To Be Arranged"

HIST 1931F. History of Greece from Archaic Times to the Death of Alexander (CLAS 1210).
Interested students must register for CLAS 1210.
Fall HIST1931F S01 17159 Arranged "To Be Arranged"

HIST 1961B. Cities and Urban Culture in China.
Treats the development of cities and urban culture in China from roughly the sixteenth century (the beginning of a great urban boom) to the present. We will look at the physical layout of cities, city government and social structure, and urban economic life, often from a comparative perspective. The course focuses, however, on the changing culture of city life, tracing the evolution of a vernacular popular culture from the late imperial period, through the rise of Shanghai commercial culture in the late nineteenth and early twentieth centuries, to the diverse regional urban cultures of contemporary China.

Fall HIST1961B S01 14907 M 3:00-5:30(15) (C. Brokaw)

Typically, the Democratic Peoples Republic of Korea (DPRK) is portrayed as a rogue nation ruled by the Kim family, autocrats who are either "mad" or "bad" and whose policies have traumatized the country's citizens, wrecked the economy, and threatened nuclear disaster on South Korea, East Asia, even the USA. This course moves beyond such stereotypes to examine the interconnected political, economic, and cultural transformations of the DPRK from 1945 to the present. Also included are the lived experiences of the Korean people, the plight of refugees, and the question of unification with South Korea.

Fall HIST1961I S01 16550 W 3:00-5:30(17) (J. McClain)

This class explores the transition from antiquity to the Middle Ages through the lens of western North Africa. Divided internally by theological disputes and inter-communal violence, and subjected to repeated conquests and reconquests from the outside, in this period North Africa witnessed the triumph of Islam over Christianity; the rise and fall of ephemeral kingdoms, empires, and caliphates; the gradual desertion of once-prosperous cities and rural settlements; the rising strength of Berber confederations; and the continuing ability of trade to transcend political boundaries and to link the southern Mediterranean littoral to the outside world.

Spr HIST1963L S01 24644 M 3:00-5:30(13) (J. Conant)

Cross-dressing knights, virgin saints, homophbic priests, and mystics who speak in the language of erotic desire are but some of the medieval people considered in this seminar. This course examines how conceptions of sin, sanctity, and sexuality in the High Middle Ages intersected with structures of power in this period. While the seminar primarily focuses on Christian culture, it also considers Muslim and Jewish experience.

Enrollment limited to 20. WRIT P Fall HIST1963Q S01 14936 M 3:00-5:30(15) (A. Remensnyder)

European fascination with the unseen world reached its highpoint alongside the Renaissance, Reformation, Scientific Revolution, and Enlightenment. Between 1500 and 1800, theologians, natural philosophers, princes, and peasants devoted enormous energy to understanding, communicating with, and eliminating a host of ethereal creatures, including ghosts, angels, demons, vampires, nature spirits, and witches. Some also sought to access the praeternatural powers that these creatures seemed to command. This course explores the intellectual, social, political, and religious origins of the interest in this unseen world, the structures Europeans created to grapple with it, as well as the factors that ultimately led to its demise.

Fall HIST1964B S01 14937 W 3:00-5:30(17) (T. Nummedal)

Selected topics in the social history of early modern England (c.1500-1800), with particular emphasis on the experiences of women. Themes to be addressed will include the family, working life, education, crime, politics, religion, and the early feminists. Not open to freshmen sophomores. P
Fall HIST1964D S01 14930 F 3:00-5:30(14) (T. Harris)

HIST 1964E. The English Revolution.
Looks at the origins and nature of the English Civil War and Republican experiment in government (1642-1660) through a close examination of primary source materials. Considers not only the constitutional conflict between the crown and parliament, but also the part played by those out-of-doors in the revolutionary upheaval, the rise of popular radicalism, and the impact of events in Scotland and Ireland.

Fall HIST1964E S01 24158 M 3:00-5:30(13) (T. Harris)

Women have faced a deep antipathy at nearly every turn in their struggles for civic and social inclusion. These denials of women’s rights often take the form of commentaries—sometimes vicious ones—about women’s general natures, bodies, and fitness for public life. Women are consistently tagged with various labels of otherness: opponents of women’s rights deem them irrational, unnatural, traitors to society, even sexual deviants. This course will examine the dangers that women allegedly represent to social stability from the Enlightenment to today, as well as how women have fought back to assert their rights and independence.
Fall HIST1965N S02 16783 M 3:00-5:30(15) (K. Colvin)

HIST 1965O. She’s So Chic! Fashion, Gender, and Nationalism in French History.

From its beginnings, the fashion industry in France has been synonymous with the international reputation of the nation. Similarly, being “chic,” having an innate sense of discernment and style, became synonymous with French femininity. This seminar will explore the interconnectedness of the history of fashion in France, the requirements it placed on French women, and the pressures the fashion industry has borne since the 1700s. We will look at how fashion reflected and created the moods of various periods, and we will also see how French women’s national belonging has been innately tied to ability to display French fashion.
Fall HIST1965O S01 25822 W 3:00-5:30(12) (K. Colvin)


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 exclusions that have shaped Cuba’s history in the past and will continue to guide its path to an uncertain future. WRIT
Spr HIST1967C S01 24623 Th 4:00-6:30(17) (J. Lambe)

HIST 1967E. In the Shadow of Revolution: Mexico Since 1940.

This course traces political, social, and economic developments in Mexico since the consolidation of the revolutionary regime in the 1930s. The topics addressed include: the post World War II economic “miracle”; the rise of new social movements; the Tlatelolco massacre; the deepening of 19th and 20th century Latin American society, the efforts of states to regulate the family, and the role of gender in the organization of the modern labor force. Throughout the semester, we will discuss the intersections of race, gender and class that are at the heart of changing conceptions of family sexual morality and ideals of modern family organization.
Fall HIST1967E S01 14938 W 3:00-5:30(17) (D. Rodriguez)


From colonial outpost to capital of the Portuguese Empire, from sleepy port to urban megalopolis, this seminar examines the history of Rio de Janeiro from the sixteenth century to the present. Using an interdisciplinary approach rooted in historical analyses, we will analyze multiple representations of the city, its people, and geography in relationship to Brazilian history, culture, and society.
Spr HIST1967R S01 24160 W 3:00-5:30(14) (J. Green)

HIST 1968. 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 region. WRIT
Fall HIST1968 S01 15426 F 3:00-5:30(14) (B. Doumani)

HIST 1968L. Islamic Law and Societies: Evolution and Revolutions.

This seminar engages the question of change and continuity in the Islamic legal tradition from medieval to modern times. From the classical jurisprudence of al-Ghazali to late Ottoman constitutionalism, and the consequences of the 1979 Iranian Revolution to the Arab Spring uprisings, our goal is to explore the diversity and historicity of Islamic law across chronological and geographic space. As we probe questions at the juncture of law, religion, and politics in and outside the Middle East, course readings and discussions will reflect the perspectives of both historians and lawyers, as well as the newly emergent genre of “sociolegal” history.
Spr HIST1968L S02 29792 W 3:00-5:30(14) (F. Ahmed)

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 at its very core, engaging the perspectives of historians, 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 16563 W 3:00-5:30(17) (O. Bartov)

HIST 1969B. Israel-Palestine: Lands and Peoples II.

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 at its very core, engaging the perspectives of historians, 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.
Spr HIST1969B S01 25469 W 3:00-5:30(14) (O. Bartov)


This course examines the varieties of Indian and African enslavement in the Atlantic world, including North America, up through 1800. Reading widely in recent literature in the field as well as in primary sources from the colonial period, we will ponder the origins, practices, meanings, and varieties of enslavement, along with critiques and points of resistance by enslaved peoples and Europeans. Special emphasis will be given to the lived nature of enslavement, and the activity of Indians and Africans to navigate and resist these harsh realities. A final project or paper is required, but there are no prerequisites.
Spr HIST1970B S01 25090 Th 4:00-6:30(17) (L. Fisher)

HIST 1970D. Problem of Class in Early America.

This seminar considers economic inequality in colonial British North America and the new United States. Studying everyone from sailors, servants, and slaves in the seventeenth century to industrial capitalists and slaveholders in the nineteenth century, this course will look at the changing economic inequality in colonial British North America and the consequences of 1979 Iranian Revolution to the Arab Spring uprisings, our goal is to explore the diversity and historicity of Islamic law across chronological and geographic space. As we probe questions at the juncture of law, religion, and politics in and outside the Middle East, course readings and discussions will reflect the perspectives of both historians and lawyers, as well as the newly emergent genre of “sociolegal” history.
Fall HIST1970D S01 15427 Th 4:00-6:30(17) (S. Rockman)


Undergraduate seminar on selected topics in American legal and constitutional history, focusing mainly on the period before the twentieth century. Examines recent debates surrounding such subjects as the making and meaning of the U.S. Constitution; law as an instrument of
economic development and exploitation; crime and punishment in the early republic; construction of racial and gender categories through law; and the evolution of rights-consciousness. Enrollment limited to 20. Students should contact the instructor before the beginning of the semester if they are interested in taking the course. Instructor permission required. WRIT
Spr HIST1972A S01 24648 F 3:00-5:30(15) (M. Vorenberg)

This seminar will explore the knowledge-production and military-financial infrastructures that maintain empires, and the means through which people have resisted or embraced empire. While some attention will be made to the 19th and early 20th century colonial context, the bulk of the course will focus on the Cold War liberal era to the neoliberal regime that continues today. Topics include: popular culture and ideology, Cold War university, area studies, international anti-war networks, transnational labor activism, the anti-colonial radical tradition, and the Arab Spring/Occupy Movements. Weekly readings; evaluation based on participation and analytical essays. Enrollment limited to 20 juniors and seniors.
Spr HIST1974J S01 24209 W 3:00-5:30(14) (V. Zamindar)

What can the experience of a minority group like the Jews teach us about roots of globalization? What were the economic, political, and cultural conditions that allowed early modern Jewish merchants to create economic networks stretching from India to the New World? We will answer these questions by examining the connections and interactions between four major Jewish centers: Ottoman Jewry in the Eastern Mediterranean, the Port Jews of Amsterdam and London, Polish-Jewish estate managers in Ukraine, and the Court Jews of central Europe. We will see how European expansion exploited - and was exploited by - these Jewish entrepreneurs. P
Spr HIST1974M S01 24212 Th 4:00-6:30(17) (A. Teller)

HIST 1974S. The Nuclear Age.
This is a course for students interested in questions about the development of atomic weapons, their use on Hiroshima and Nagasaki, the Cold War arms race that followed, and debates over the risks associated with other nuclear technologies. We will look carefully at the scientific and military imperatives behind the Manhattan Project, the decisions that led to the use of atomic weapons on Japan, and subsequent efforts to reflect on the consequences of those choices. We will also explore how popular protest and popular culture after 1945 shaped our understanding of the threats and promise of the nuclear age. WRIT
Fall HIST1974S S01 15428 Th 4:00-6:30(02) (K. Smith)

HIST 1976E. The Anthropocene: Climate Change as Social History.
This seminar will explore ramifications of the concept of the Anthropocene. The Anthropocene has been proposed as a new human-driven geologic age that began with the increased exploitation of fossil fuels in the late eighteenth century. Its proponents emphasize transformations through anthropogenic climate change, but we will also consider the effects of population growth, pollution, habitat destruction, and extinction. To assess the historical validity of the concept, we will discuss the impact of humans on the environment between 1800, the extent of transformation since 1800, and whether human-environmental interactions can be usefully generalized to our species as a whole. WRIT
Spr HIST1976E S01 24208 W 3:00-5:30(14) (N. Jacobs)

The transition from an energy regime based on biomass and animal muscle to another based on fossil fuels is an epochal transformation whose importance is on a par with the Neolithic transition from hunter-gathering to agriculture. For most of their history, human societies relied on the sun’s energy locked up in plants and animals for their livelihood. In the late eighteenth century, some societies began to transcend the limits of the established energy regime. This course examines the implications of the modern energy transition from the old energy regime to a new one based on fossil fuels around the world.
Fall HIST1976F S01 16714 T 4:00-6:30(18) (G. Vergara)

This course will focus on the work of Isaac Newton in the context of his times and its impact in the centuries that followed. WRIT
Spr HIST1976L S01 24647 M 3:00-5:30(13) (J. Richards)

This course is for students interested in how ideas about what the future of human societies would look like have developed over time, and in the impact of those ideas on cultural, social and political norms. We will look carefully at examples of early modern prophecy before turning to the more recent emergence of theories of economic and social progress, plans for utopian communities, and markedly less optimistic and often dark visions of where we’re headed. We will also explore the roles capitalism, popular culture, and science have played in shaping the practices and vocabularies associated with imagining the future. WRIT
Spr HIST1976R S01 24649 W 3:00-5:30(14) (K. Smith)

HIST 1976S. Art and Politics.
This seminar will examine how power and culture give meaning to objects as well as how objects become subjects of history. This seminar will work closely with the RISD Museum and students in the seminar will select objects from the museum’s collection to historically and creatively examine different ways of seeing and narrating, combining theory with hands-on exploration of how objects make their way to museum collections and acquire the status of “art.” This course will meet in the Danforth Room of the RISD Museum.
Fall HIST1976S S01 15098 W 3:00-5:30(17) (V. Zamindar)

HIST 1977I. Gender, Race, and Medicine in the Americas.
This seminar explores the gendered and racial histories of disease and medicine in nineteenth and twentieth century Latin America and the United States. From the dark history of obstetrics and slavery in the antebellum U.S. South to twentieth-century efforts to curb venereal disease in revolutionary Mexico or U.S.-occupied Puerto Rico, to debates over HIV policy in Cuba and Brazil—together we will explore how modern medicine has shaped both race and gender in the Americas. Topics we will explore include environmental health and the body; infant mortality; the medicalization of birth; and the colonial/imperial history of new reproductive technologies.
Spr HIST1977I S01 24650 W 3:00-5:30(14) (D. Rodriguez)

HIST 1979S. History of Life Itself: Biopolitics in Modern Europe.
Life has long existed, but also has a history of its own. With the development of the natural sciences and state governance of its own populations, human life can be said to have entered into history. Homo Sapiens became the subject of medical science, political philosophy, and state law. In looking at the intersecting histories of science, politics, and theories of life, this seminar will examine the origins and effects of political economy, biology, public health, racism, eugenics, state violence, and ultimately democracy. We will read meta-histories from theorists, case studies from historians, and classic works of political philosophy.
Fall HIST1979S S01 16851 Th 4:00-5:30(02) (J. Gentry)

HIST 1979T. Modernism and Its Critics.
Life has long existed, but also has a history of its own. With the recent emergence of theories of economic and social progress, plans for utopian communities, and markedly less optimistic and often dark visions of where we’re headed. We will also explore the roles capitalism, popular culture, and science have played in shaping the practices and vocabularies associated with imagining the future. WRIT
Spr HIST1979T S01 25795 T 4:00-6:30(16) (J. Gentry)

HIST 1979W. Debates on the Holocaust.
Few topics in Modern European History have so heavily engaged historians while producing so little consensus as the Holocaust. Several debates have emerged in scholarship around several major issues such as motivation, collaboration, ideology, as well as larger questions around genocide itself. In this course, we will examine each debate and the links to specific methods within history such as periodization, causality and disciplinary boundaries. This course presents a unique entry to gain exposure to foundational historical categories and methods. Students will gain a knowledge of concepts critical to historical debate and foundation in a variety of approaches to history.
Fall HIST1979W S01 16856 F 3:00-5:30(14) (J. Gentry)

Scholars have long equated modernity with "disenchantment," the subordination of magic and mysticism to the forces of science and secularization. Recent scholarship, however, has challenged this view, suggesting that the persistence of magical worldviews has been integral to the development of modernity itself. In this course, we will explore the various interactions, both conflicting and complementary, between science, religion, and magic in the nineteenth- and early twentieth-century United States. Topics will include spiritualism, hypnosis, phrenology, optical illusions, alternative medicines, stage magic, and the early psychology of religion. Throughout, we will interrogate the concept of modernity and the narrative of disenchantment.

Fall HIST1979X S01 16850 T 4:00-6:30(18) (E. Searcy)


This course explores the history of the major themes, problems and ideals of global peace, justice and human rights. We investigate the theoretical, social and political elements within these ideals and practices, spanning broad temporal and spatial genealogies of human thought. From biopolitics to geopolitics, we uncover attempts to demand food security, health care, and dignity as universal human rights. We highlight philosophies of peace and ethics, and unpack competing conceptions of "justice." Among other topics, the political economy of global survival plays an important role in this perspective, especially within bioethics and environmental justice.

Spr HIST1979Y S01 25990 T 4:00-6:30(16) "To Be Arranged"


We'll explore varied relationships between Americans and Global South during the long 1970s—from the wave of revolutionary movements of the late 1960s to the Reagan "offensive" of 1981. As we trace these relationships across the decade, students will learn how Americans from all walks of life encountered the revolutionary "Third World." While many on the American Left—from Black Nationalists to feminists such as Bella Abzug—sought cooperation with the revolutionary movements in the Global South, others became determined to reassert U.S. hegemony abroad following the Vietnam War. We will try to understand why this latter group's antagonistic attitude towards the Global South ultimately came to define U.S. foreign policy.

Fall HIST1979Z S01 16649 F 3:00-5:30(14) (J. Rosenberg)


Interested students must register for JUDS 1718.

Spr HIST1980T S01 25577 Arranged "To Be Arranged"


Interested students must register ITAL 1430.

Spr HIST1980U S01 26040 Arranged "To Be Arranged"

HIST 1980Y. Jews and Revolutions (JUDS 1701).

Interested students must register for JUDS 1701.

Fall HIST1980Y S01 16734 Arranged "To Be Arranged"

HIST 1981B. Advanced Topics in Landscape History (HMAN 1971P).

Interested students must register for HMAN 1971P.

Fall HIST1981B S01 16865 Arranged "To Be Arranged"


Interested students must register for POBS 1694.

Fall HIST1981C S01 17158 Arranged "To Be Arranged"

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.

Fall HIST1990 S01 16745 Arranged "To Be Arranged"


HIST 1992 and HIST 1993 students meet together as the History Honors Workshop, offered in two separate sections per week. 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, allowing students to refine research skills, define a project, prepare a thesis prospectus, 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. WRIT

Fall HIST1992 S01 15056 M 3:00-5:30(17) (E. Pollock)
Spr HIST1992 S01 24200 M 3:00-5:30(13) (E. Pollock)


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 15057 Arranged (E. Pollock)
Spr HIST1993 S01 24201 Arranged (E. Pollock)


This is the second half of a year-long course, upon completion the grade will revert to HIST 1993. Prerequisite: HIST 1993. WRIT

Fall HIST1994 S01 15056 Arranged (E. Pollock)
Spr HIST1994 S01 24203 Arranged (E. Pollock)

HIST 2450. Exchange Scholar Program.

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

Fall HIST2450 S01 14583 Arranged "To Be Arranged"
Fall HIST2450 S02 17293 Arranged "To Be Arranged"
Spr HIST2450 S01 23789 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 14584 Arranged "To Be Arranged"
Spr HIST2890 S01 23790 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.

Required of all first-year graduate students; includes participation in Thursday Lecture Series. E

Fall HIST2930 S01 14871 Th 4:00-6:30(02) (K. Sacks)

HIST 2935. Historical Crossings: Empires and Modernity.

"Historical crossings" is a rough translation of histoire croisée, referring to global configurations of events and a shared history, rather than to a traditional comparative history. This Seminar is designed to be the cornerstone of the M.A. program. It will not serve as a traditional historical methods course but instead focus on training students to read and think on various scales of historical analysis—from cross-cultural and trans-geographic to the granularity of social and cultural specificity, requiring students to think both globally and locally and introducing them to an advanced level of historical inquiry, debate, and exploration.

Fall HIST2935 S01 15645 M 12:30-2:50(12) (H. Cook)

HIST 2940. Writing Workshop.

Required of all 3rd semester Ph.D. students.

Fall HIST2940 S01 14873 Th 4:00-6:30(02) (R. Self)

HIST 2950. Professionalization Seminar.

Required of all second year Ph.D. students; includes participation in Thursday Lecture Series. E

Spr HIST2950 S01 23990 T 1:00-3:30(10) (A. Remensnyder)

HIST 2960. Prospectus Development Seminar.

This required course open only to second-year students in the History Ph.D. program focuses on the development of a dissertation prospectus. The seminar will include considering the process of choosing a dissertation topic, selecting a dissertation committee, identifying viable dissertation projects, articulating a project in the form of a prospectus, and developing research grant proposals based on the prospectus. E

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
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 14867 Th 1:00-3:30(10) (A. Teller)

HIST 2970H. American Political History.
This graduate seminar will explore a range of approaches to the study of America’s political past from the colonial period to the late twentieth century, including scholarship on electoral politics, the state, political culture, grassroots politics and resistance, the politics of gender and family, and American political development. We will analyze how scholars have defined and redefined the field over time and throughout we will interrogate the question, “what is political history?”
Fall HIST2970H S01 14949 W 3:00-5:30(17) (T. Steffes)

HIST 2970W. Graduate Readings in Early American History.
No description available.
Fall HIST2970W S01 14868 W 12:00-2:30(12) (L. Fisher)

HIST 2970Z. Core Readings in Nineteenth Century Europe.
Provides an introduction to the central issues of nineteenth-century European history. It has two purposes: first, to help you refine your abilities to think historiographically; second, to assist you in preparing for your comprehensive exams. To that end, we will read both standard interpretations and newer scholarship.
Fall HIST2970Z S01 14889 M 3:00-5:30(15) (M. Gluck)

HIST 2971E. Latin American Historiography.
This course examines the development of historical writings on Latin America produced in the United States from the late nineteenth century until the present. We will focus on themes, such as race, gender, labor, subaltern studies, dependency theory, postcolonial analysis, and postmodernism, to understand the diverse approaches to Latin American history.
Fall HIST2971E S01 14870 W 3:00-5:30(17) (J. Green)

HIST 2980W. First Person History in Times of Crisis: Witnessing, Memory, Fiction.
This seminar examines the relationship between History as a narrative of events and history as individual experience. Postulating that historical events as related by historians were experienced in numerous different ways by their protagonists, the seminar focuses on the complementary and contradictory aspects of this often fraught relationship at times of crisis, especially in war and genocide. While much time will be spent on World War II and the Holocaust, the seminar will engage with other modern wars and genocides across the world. Materials will include eyewitness reports, postwar testimonies and trial records, memoirs and relevant works of fiction. Open to graduate students only.
Spr HIST2980W S01 23989 Th 4:00-6:30(17) (O. Bartov)

HIST 2981J. The Body.
This seminar will consider theories of the body as a site of knowledge, politics, culture, gender, and identification in a broad range of temporal and geographic contexts. We will also examine how historians have written the history of the body, and what sources they have used to do so.
Spr HIST2981J S01 24216 W 3:00-5:30(14) (T. Nummedal)

HIST 2981K. Ritual Studies For Everyday Life.
This course explores the methods and frameworks of ritual and spatial analysis as applied widely across fields of history. Readings reflect theory and practice from anthropology, archaeology, cultural and religious studies; and the histories of architecture, cities, economy, the environment, memory, politics, religion, and science. The goal of the course is to discover how studying spatial arrangements and ritual relationships (broadly conceived) can be used as tools in historical work, and to discuss where historians can learn method from other disciplines and vice versa.
Spr HIST2981K S01 24217 M 3:00-5:30(13) (R. Nedostup)

HIST 2990. Thesis Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.
Fall HIST2990 S01 14585 Arranged ‘To Be Arranged’
Spr HIST2990 S01 23791 Arranged ‘To Be Arranged’

History of Art and Architecture
HIAA 0075. Introduction to the History of Art: Modern Photography.
This class will survey the history of photography as an art form and means of visual communication in the modern era. The photograph will be considered from both esthetic and social perspectives; photography’s rise as a medium of personal expression will be examined, as will technology’s role in the creation of new regimes of spectatorship, and the mass dissemination of visual information. The class follows the rise of photography’s acceptance as an art form in the twentieth century, and culminates with its prominence within the phenomenon of postmodernism. Prior coursework in modern history or art history is helpful. Enrollment limited 80.
Fall HIAA0075 S02 16570 MWF 11:00-11:50(04) (D. Nickel)

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. WRIT Spr HIAA0089 S01 25826 MWF 11:00-11:50(04) (D. Nickel)

HIAA 0321. Toward a Global Late Antiquity:200-800 CE.
Competing empires, the division of the eastern and western halves of Roman territory; long distance trade, the rise of monotheism, the spread of Buddhism: how did these factors affect the art and architecture associated with the Roman west, Constantinople, Ctesiphon, Alexandria, the Han Dynasty capitals, and Gandhara? This course takes an expanded view of Late Antiquity, extending beyond typical that associate the period with the post-classical west, to explore the dynamic creativity and intercultural connectivity of an era once considered a “Dark Age” in a world history.
WRIT Fall HIAA0321 S01 16275 TTh 9:00-10:20(08) (A. Chen)

HIAA 0460. Muslims, Jews and Christians in Medieval Iberia.
The cultural diversity of medieval Spain and Portugal is proclaimed by their Christian churches, Islamic mosques and Jewish synagogues. The three distinct cultures that produced these buildings lived together for centuries in medieval Iberia, sometimes in peace, sometimes not. For almost eight centuries (711-1492) writers, scholars and artists emerged from a cultural environment of intellectual borrowing nurtured by uninterrupted contact through marriage, conversion, commerce and travel. This convivencia of Jews, Muslims and Christians will be examined from the perspectives of literature, music, art, architecture, archaeology, and history.
WRIT Spr HIAA0460 S01 25247 M 3:00-5:30(13) (S. Bonde)

Examines the paintings, sculpture, graphic art, and architecture of Tuscany in the 15th century, primarily in Florence but also venturing into Siena, Arezzo, Borgo San Sepolcro. Using Renaissance critical terms and analytical tools, we take into account the technical and commercial habits of craftworkers, the economy of the cities and towns, and the forms and functions of art in domestic, civic, and religious spheres. Weekly one-hour conference required. WRIT / A
Spr HIAA0550 S01 25710 TTh 1:00-2:20(10) (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, Caravage, 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.

### HIAA 0830, Revolutionary Forms: 100 Years of Art and Politics in Latin America.
This course surveys Latin American art within the context of socio-political and intellectual concerns in the region. We will consider a wide variety of media with an eye to local and global events that prompted their production. We will examine how artworks embodied, challenged, and helped to shape history. We will survey major trends in art production: from photography during the Mexican Revolution to participatory and activist art in the beginning of the 21st century. Students will acquire visual and critical analysis skills in order to actively engage with their visual surroundings. Previous knowledge of art history is not required.

**Fall**  HIAA0830  S01  217110  TTh  2:30-3:50(11)  (C. Maroja)

### 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." A

**Fall**  HIAA0850  S01  14921  MWF  10:00-10:50(03)  (D. Neumann)

### HIAA 0860, Contemporary Architecture.
Stylistic, technological, and theoretical developments in architecture from the 1960s to the present. Analyzes movements such as "Brutalism," "Postmodernism," and "Deconstruction" and works by architects such as Frank Gehry, I. M. Pei, and Zaha Hadid. Emphasizes the complex conditions of architectural production in different parts of the world. Complements HIAA 0850, but may be taken independently. A

**Spr**  HIAA0860  S01  24061  MWF  10:00-10:50(03)  (D. Neumann)

### HIAA 0870, 20th Century British Art: Edwardian to Contemporary.
The field of British art offers a wide view onto the history of art and aesthetics. This survey of British art in the twentieth century will examine the nation's arts, artists, and art movements alongside its current events. Readings will be drawn from periodicals, primary documents (artist's letters and manifestos) and secondary texts (Alloway, Hall, Read and others). Architecture, literature (Martin Amis, Joseph Conrad, Lynton Kwesi Johnson and others) and music will be considered throughout the course. WRIT

**Fall**  HIAA0870  S01  14855  TTh  1:00-2:20(10)  (C. Martin)

### HIAA 1201, Brushwork: Chinese Painting in Time.
How did the tenor of the individual brushstroke become the locus of value in traditional Chinese painting? What other possible standards of excellence—such as verismilitude—were displaced in the process? This course pursues these questions by analyzing the great monuments of Chinese painting from the perspective of the aesthetic debates that defined them over the centuries. Proceeding from the famous Six Laws of Painting down to the aesthetic watershed of the Northern and Southern Schools, the course traces the fraught interplay of artistic practice and critical judgment in China over more than a thousand years. No prior knowledge required. WRIT

**Fall**  HIAA1201  S01  17174  F  3:00-5:30(14)  (J. Moser)

### HIAA 1302, Women and Families in the Ancient Mediterranean.
What was life like for the women of the ancient Mediterranean? What rights, roles, responsibilities, and expectations defined their lives? Why is the examination of art and architecture such an important source for answering these questions? This course will provide a comparative perspective exploring Greek, Etruscan, and Roman case studies. WRIT

**Fall**  HIAA1302  S01  16271  T  4:00-6:30(18)  (A. Chen)

### HIAA 1600A, Bosch and Bruegel: Art Turns the World Upside Down.
An in-depth look at the work of these two enigmatic Netherlandish artists. After seeing how art history uses various methods to establish what they actually painted and drew, we will move outwards to interpretation and historical study of their images of comedy, proverbs, religion, and landscape. Artworks in local museums will be important focuses of discussion. Prerequisite: HIAA 0010 or 0500.

**Spr**  HIAA1600A  S01  25831  W  3:00-5:30(14)  (J. Muller)

### HIAA 1850H, Berlin: Architecture, Politics and Memory.
This course deals with the architecture and urbanism of the German capital and the way the city's traditions of commemoration in different phases of its history and under different political regimes. Students will research historic structures and sites of the 19th through 21st Centuries and engage with the intense German debate about historic preservation and commemoration. Depending on the approval of a GELT grant, one section of the course will be taught in Berlin during spring break. There we would meet with local architects, politicians and artists to discuss the city's engagement with its dramatic past.

**A WRIT**  Spr  HIAA1850H  S01  25845  Th  4:00-6:30(17)  (D. Neumann)

### HIAA 1920, Individual Study Project in the History of Art and Architecture.
Reading and reports on an approved topic, supervised by a member of the staff. Project proposals must be submitted and approved no later than the first week of the semester. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

### HIAA 1930, The History and Methods of Art Historical Interpretation.
This seminar provides an overview of the methods and theories used by art historians and introduction to the history of the discipline. Through readings and discussions, we will examine how art history emerged as an intellectual pursuit and humanistic discipline in the modern era, and review its foundations in the Western philosphical tradition. The transformations wrought by the advent of critical theory and the incorporation of approaches from outside the discipline of art history will receive particular attention in the second half of the course. Open to juniors and seniors concentrating in History of Art and Architecture or Architectural Studies.

**Spr**  HIAA1930  S01  24064  M  3:00-5:30(13)  (D. Nickel)

### HIAA 1990, Honors Thesis.
The subject of the thesis and program of study will be determined by the needs of the individual student. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

### HIAA 2210, Asian Reprographics A Long History of Impression.
This seminar examines the early history of reprography in East Asia. Defining reprography broadly to encompass all pre-photographic technologies of graphic impression, it explores the transfers that occurred within and between piece-mold bronze casting, ceramic molding, sealing, rubbing, and woodblock printing as they developed in succession and total over the past four millennia. In particular, the seminar considers the extent to which technics of transfer facilitated the movement of schema across medium and time.

**Spr**  HIAA2210  S01  26110  Th  4:00-6:30(17)  (J. Moser)

### HIAA 2450, Exchange Scholar Program.
For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
of technical innovation, points of change in function and practices of art, rationalizations through art theory, dissemination of European paradigms to Asia and the Americas, response to expanding markets, workshops as sites of knowledge, all are questions to consider in an open-ended and interdisciplinary forum.

Fall HIAA2610 S01 17166 F 3:00-5:30(14) (J. Muller)

**HIAA 2860A. The Museum and the Photograph.**
This graduate seminar examines the relationship between two rapidly evolving modern institutions: the history of photography and the modern art museum. Through readings, discussions, and independent research, we will look at how the history of photography has been affected by its unique association with the museum, and what this means for it as a field of intellectual inquiry. Enrollment limited to 18.

Fall HIAA2860A S01 14854 M 3:00-5:30(15) (D. Nickel)

**HIAA 2870H. What is Contemporary Art History.**
Contemporary art history is a field in formation. As such, it is often contested and embraced, misunderstood and championed. Is contemporary art history a radical new field with a discrete set of practices, methodology and historiography? Or is contemporary art history simply a study of the present? Is the study of the contemporary relevant to other areas of art history? Is contemporary art history a model for other disciplinary approaches to the present? Throughout the term, this graduate seminar will discuss each of these questions. This course is open to students of all art historical periods.

Fall HIAA2870H S01 15646 Th 4:00-6:30(02) (C. Martin)

**HIAA 2930. Practicum Working with Wood in the Middle Ages.**
The graduate Practicum for 2015 will engage with the significant and understudied collection of medieval and early modern wooden sculpture at the RISD Museum. We will examine the collection from the perspective of its changing contexts: from forest to workshop, to the decorative, devotional and ceremonial roles objects played in medieval and early modern spaces. We will then consider the later contexts of these works: their use and reuse in early modern and modern sites, the circumstances of their transfer to collections of individuals and institutions and finally their installation as single works of art in the RISD museum.

Fall HIAA2930 S01 14920 W 3:00-5:30(17) (S. Bonde)

**HIAA 2940. Master’s Qualifying Paper Preparation.**
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

**HIAA 2970. Preliminary Examination Preparation.**
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for their doctoral examination.

Fall HIAA2970 S01 14578 Arranged "To Be Arranged"
Spr HIAA2970 S01 23784 Arranged "To Be Arranged"

**HIAA 2980. Individual Reading (Single Credit).**
Single credit. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

**HIAA 2981. Individual Reading (Double Credit).**
Double credit. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

**HIAA 2982. Individual Reading for the Doctoral Candidate.**
Single Credit. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

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

**HIAA 2990. Thesis Preparation.**
For graduate students who are preparing a thesis and who have met the tuition requirement and are paying the Registration Fee to continue active enrollment.

Fall HIAA2990 S01 14579 Arranged "To Be Arranged"
Spr HIAA2990 S01 23785 Arranged "To Be Arranged"

**HIAA 2991. Dissertation Preparation.**
For graduate students who are preparing a dissertation and who have met the tuition requirement and are paying the registration fee to continue active enrollment.

Fall HIAA2991 S01 14580 Arranged "To Be Arranged"
Spr HIAA2991 S01 23786 Arranged "To Be Arranged"

**HIAA 2992. Master’s Thesis Preparation.**
For students preparing a terminal MA thesis, may be repeated in the following semester. Sign up for sections according to individual primary advisor.

**HIAA XLIST. Courses of Interest to Concentrators.**

**Fall 2015**
The following related courses, offered in other departments, may be of interest to students concentrating in the History of Art and Architecture. Please see the course listing of the sponsoring department for times and locations.

**Classics**
CLAS 0660 The World Of Byzantium

**Urban Studies**
URBN 0210 The City: An Introduction to Urban Studies

**Spring 2016**
The following related courses, offered in other departments, may be of interest to students concentrating in the History of Art and Architecture. Please see the course listing of the sponsoring department for times and locations.

**Theatre Arts and Performance Studies**
TAPS 1345 Dance and the Visual Arts after 1960: Performing the Everyday, Choreographing the Museum

**German**
GRMN 1890 Two Artwork Essays: Martin Heidegger and Walter Benjamin

**Theatre Arts, Performance Studies**
TAPS 1345 Dance and the Visual Arts after 1960: Performing the Everyday, Choreographing the Museum

**International Relations**

**INTL 1443. History of American Intervention.**
This course reviews modern history through the study of invasions, coups, and other interventions carried out by the United States. From the Marine assault on Tripoli in 1805 to the bombing of Tripoli in 2011, there have been scores of these episodes. They have shaped American history and the history of the wider world. We examine a variety of them, and try to answer three questions about each one. (1) Why did the United States decide to carry out a particular intervention? (2) How was the intervention executed? (3) What have been its long-term effects?

Fall INTL1443 S01 16592 Th 1:00-2:20(10) (S. Kinzer)

**INTL 1700. International Law.**
This introduction to public international law covers the nature of legal reasoning in international relations, the interplay of international law and international politics, and the international legal process. Examines selected substantive fields such as state responsibility, the use of force, international human rights, and the U.S. and international law.

Fall INTL1700 S01 16604 TTh 2:30-3:50(11) (A. Becker)

**INTL 1802G. Reading Global: International Relations through Fiction.**
"Any book thoughtfully read sharpens the mind and improves on an individual's professional potential." So declared U.S. General James Amos when he reinvigorated the Marine Commandant's reading list in October 2012. This capstone course is designed in a similar spirit for Brown IR students, built around 20th century works of fiction from around the world which won recognition for the insights they offer on core issues in international relations and development studies. Enrollment limited to 20 juniors and seniors. Priority given to IR seniors. WRIT

Fall INTL1802G S01 16717 M 3:00-5:30(15) (K. Brown)

**INTL 1802O. Global Corporate Accountability: Issues of Governance, Responsibility and NGOs.**
How does the international system hold corporations accountable? As the global value chain engages increasingly greater sections of the economy, how do we understand the role of corporations in shaping the ethical and

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
political issues of environment, human rights, labor conditions, equality and opportunity, gender, and community rights. Enrollment limited to 20 juniors & seniors. Priority given to IR seniors. WRIT
Fall INTL1802O S01 16947 T 4:00-6:30(18) (P. Gourevitch)

INTL 1802V. Diplomacy, Economics & Influence.
This course examines a dozen diplomatic situations and identifies the players, their interests, and their tools – and how those produced outcomes. Particular attention is paid to economic factors – pressures, incentives, and influences – that contribute to the outcome. By examining these elements students will understand the economic tools of diplomacy and power, and how to wield them. The course concludes with a close look at China's growing role in the world economy and considers how that will change China's role in world affairs. Enrollment limited to 20 Juniors & Seniors. Priority given to IR seniors. WRIT
Fall INTL1802V S01 16769 W 3:00-5:30(17) (R. Boucher)

INTL 1802Y. India in the World.
This course is designed to introduce students to the role of India in the world. From being a newly independent country in the nineteen forties, India is today a globally re-emergent power. The world’s largest democracy and third-largest economy is grappling with linguistic and religious diversity, economic growth and inclusive development, the politics of the Centre-versus-States, uneasy neighborhood relationships, the threat of terror, and the redefinition of her role in the Indo-Pacific world. The Course aims at deepening understanding of the priorities that define India’s global outreach. Enrollment limited to 20 juniors & seniors. Priority given to IR seniors. WRIT
Fall INTL1802Y S01 16700 T 4:00-6:30(18) (N. Rao)

INTL 1803. Risk, Regulation and the Comparative Politics of Finance.
The course introduces students to the comparative history of finance as well as to alternative theories of regulation. It thereby develops students' ability to compare the role played by financial institutions in different historical periods and national contexts. This comparative perspective puts the recent financial crisis into a broader perspective, allowing students to see the structural as well as more proximate causes of recent financial instability in the industrialized democracies. Enrollment limited to 20 juniors and seniors. Priority given to IR, DS, and Public Policy seniors. WRIT
Fall INTL1803 S01 17046 M 3:00-5:30(15) (J. Ziegler)

INTL 1910. Senior Honors Seminar.
Open only to Senior students accepted into the honors program in international relations. Instructor permission required. WRIT
Fall INTL1910 S01 16813 W 6:30-9:00PM(17) (C. Elliott)

Open only to Senior students accepted into the honors program in international relations. Instructor permission required. WRIT

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.
Fall ITAL0100 S01 15307 TTh 10:30-11:50(15) (C. Abbona-Sneider)
Fall ITAL0100 S01 15307 MW 11:00-12:50(15) (C. Abbona-Sneider)

ITAL 0200. Elementary Italian.
See Elementary Italian (ITAL 0100) for course description.
Spr ITAL0200 S01 24500 TTh 10:30-11:50(13) (C. Abbona-Sneider)
Spr ITAL0200 S01 24500 MW 11:00-11:50(13) (C. Abbona-Sneider)
Spr ITAL0200 S02 24501 TTh 9:00-10:20(13) (C. Abbona-Sneider)
Spr ITAL0200 S02 24501 MW 10:00-10:50(13) (C. Abbona-Sneider)
Spr ITAL0200 S03 24502 MW 1:00-1:50(13) (C. Abbona-Sneider)
Spr ITAL0200 S03 24502 TTh 1:00-2:20(13) (C. Abbona-Sneider)
Spr ITAL0200 S04 24503 MW 2:00-2:50(13) (C. Abbona-Sneider)
Spr ITAL0200 S04 24503 TTh 2:30-3:50(13) (C. Abbona-Sneider)

ITAL 0300. Intermediate Italian I.
Review of the fundamentals of grammar, with emphasis on speaking and writing. Reading of representative short stories. Weekly compositions, presentations, and a paper. Three Italian films. Prerequisite: ITAL 0100-0200, or ITAL 0110, or placement by examination. Requirement for enrollment in the Bologna Program.
Fall ITAL0300 S01 15312 MW 12:00-12:50(09) (C. Abbona-Sneider)
Fall ITAL0300 S01 15312 TTh 12:00-12:50(09) (C. Abbona-Sneider)
Fall ITAL0300 S03 15314 TTh 12:00-12:50(09) (C. Abbona-Sneider)
Fall ITAL0300 S03 15314 MW 2:00-2:50(09) (C. Abbona-Sneider)
Spr ITAL0300 S01 24504 MW 12:00-12:50(10) (C. Abbona-Sneider)
Spr ITAL0300 S01 24504 TTh 12:00-12:50(10) (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 24505 MW 12:00-12:50(10) (C. Abbona-Sneider)
Spr ITAL0400 S01 24505 TTh 12:00-12:50(10) (C. Abbona-Sneider)
Spr ITAL0400 S02 24506 MTWTh 12:00-12:50(05) (C. Abbona-Sneider)

ITAL 0500. Advanced Italian I.
The purpose of this advanced course is to improve speaking and writing skills by offering extensive practice in a variety of styles and forms. Students will discuss various aspects of contemporary Italian culture. Reading, analysis and class discussion of texts (articles, songs, pictures, short stories, movies and television), oral presentations, based on research, and a writing portfolio (compositions, essays, blog and a journal). Prerequisites: ITAL 0400, or placement by examination.
Fall ITAL0500 S01 15315 TTh 2:30-3:50(11) (C. Abbona-Sneider)
ITAL 1010. Dante in English Translation: Dante’s World and the Invention of Modernity. 
Primarily for students with no knowledge of Italian. Given in English. Concentrators in Italian should enroll in ITAL 1610; they are expected to read the material in the original. Close study and discussion of Dante’s deployment of systems of retribution in the Inferno and rehabilitation in the Purgatorio with a view to imagining a society based on love and resistant to the effects of nascent capitalism and the money economy. Dante’s work summarizes and transforms the entire ancient and medieval tradition of literature, philosophy, and science. WRIT
Fall ITAL1010 S01 15591 TTh 9:00-10:20(08) (R. Martinez)

ITAL 1020. Boccaccio’s Decameron.
Close study and discussion of Boccaccio’s collection of 100 tales told by ten young Florentines over a period of two weeks, while in flight from the devastating plague of 1348. The Decameron defined the standard of Italian prose narrative for four centuries and deeply influenced Renaissance drama. We will also pay particular attention to visualizations and adaptations of the Decameron into a variety of media, from manuscript illumination to painting, theatre and film. Students will contribute to the Decameron Web, the award-winning Boccaccio web site administered by the department of Italian Studies. Sections in English and Italian. Enrollment limited to 40. WRIT
Spr ITAL1020 S01 24287 TTh 1:00-2:20(10) (M. Riva)
Spr ITAL1020 S02 25900 Th 4:00-6:30(17) (M. Riva)

ITAL 1320. Great Authors and Works of Italian Renaissance.
The major authors and trends of 16th-century Italy (Machiavelli, Giucchiardini, Ariost; Tasso, classicism and anti-classicism, petrarchism, manierism).
Spr ITAL1320 S01 24625 TTh 2:30-3:50(11) (R. Martinez)

Throughout the 19th-century, the Panorama was a wildly popular ‘vision machine,’ the model for many later attractions from theme park rides to immersive educational spectacles like IMAX movies. In this course, we will use 21st-century vision technology to study the role of these cultural artifacts, optical media and storyelling devices in the shaping of 19th-century ‘virtual reality.’ We will focus on three case studies: the Garibaldi panorama at the Brown museum; the panorama of the Pilgrim’s Progress at the Saco, Maine museum; and the Whaling Voyage ‘round the world, at the New Bedford Whaling Museum. Taught in English.
Fall ITAL1340 S01 15261 TTh 1:00-2:20(10) (M. Riva)

ITAL 1400P. The Southern Question and the Colonial Mediterranean.
This course examines Antonio Gramsci’s interpretation of the Southern Question (quistione) in an attempt to better understand the politics and culture informing the colonial Middle East. Through an analysis of Gramsci’s critique of Southernism—the representation of Southern Italy as a semi-barbarous territory inhabited by “biologically inferior beings” and his sociological description of pre-World War II Italy, we will acquaint ourselves with some of the key-concepts characterizing his political thought. Next, we will examine how critics of European colonialism in the Mediterranean have adopted this rich epistemological and analytical vocabulary. DPLL LILE WRIT
Spr ITAL1400P S01 24507 T 4:00-6:30(16) (N. Perugini)

From folktales to rebel songs, carnival play and everyday rituals, popular culture shaped the lives of ordinary people of the early modern world. In this course we explore the materials available at Brown for examining popular culture before 1800. Students write a final paper from the materials they select. Italy will be examined comparatively with other geographical areas in order to prepare students for their research. Topics will include the multiplicity of popular cultures; the relationship between popular culture and elite culture; transformations in the beliefs, rituals, and practices that provided meaning for peoples of the early modern world. (P)
Spr ITAL1430 S01 25751 M 3:00-5:30(13) (C. Castiglione)

ITAL 1590. Word, Media, Power in Modern Italy.
The role of media (print, news, art, music, photography, cinema, radio, television) in shaping national identity, nationalistic agendas, imperial aspirations, democratic revivals and populist consensus in Italy, from the post-Risorgimento age to the Fascist regime, and from the post-WW2 renaissance to the “decadent” Berlusconi era. The most influential genres and trends in Italian culture, from opera to futurism, from neo-realist cinema and literature to post-modern fashion and industrial design, will be analyzed against the backdrop of the most important social and political turning points of Italian and European history.
Fall ITAL1590 S01 15260 Th 10:30-11:50(13) (M. Riva)

ITAL 1610. The Divina Commedia: Inferno and Purgatorio.
A close reading of the first two canticles of Dante’s poem in the light of contemporary European and American critical interpretations. In Italian. Enrollment limited to 40.
Fall ITAL1610 S01 15590 Th 4:00-6:30(02) (R. Martinez)

ITAL 1620. The Divina Commedia: Dante’s Paradiso: Justifying a Cosmos.
Close study of the third and final part of Divine Comedy, in which Dante unfolds how, in his view, the planetary and stellar spheres condition human life and fashion the Providential plan of history. There will be ancillary readings from Dante’s other works: Convivio, the Monarchia, and the Epistles. In Italian. Prerequisite: ITAL 0500 or 0600, or instructor permission. Enrollment limited to 40.
Spr ITAL1620 S01 24624 W 3:00-5:30(14) (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, for 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 15234 M 3:00-5:30(15) (S. Stewart-Steinberg)

ITAL 2450. Exchange Scholar Program.
Fall ITAL2450 S01 14586 Arranged ‘To Be Arranged’
Spr ITAL2450 S01 23792 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.
JUDS 0050. Israel's Wars.
Israel's history has unfolded under the shadow of its prolonged conflict with the Palestinians and its Arab neighbors. This first year seminar will survey the military aspect of this conflict. The major aim of the course is to present an historical survey of the Israeli-Arab wars and Jewish-Palestinian encounters in the 20th century. This will provide some of the necessary background for understanding the present phase of the Arab-Israeli conflict in the Middle East, and help in comprehending the roots and causes of contemporary controversies between Israel and the Palestinians and/or its Arab neighboring states. Enrollment limited to 20 first year students. FYS

JUDS 0050M. 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 Jews’ attitudes and actions will be examined alongside those of their Christian neighbors. Topics covered include: medieval revulsion 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. FYS LILE WRIT DPLL

JUDS 0050N. Death and Afterlife in the Biblical Tradition (RELS 0090J).
Interested students must register for RELS 0090J.

JUDS 0060. The Bible and Moral Debate.
How was the Bible employed in past moral debates that divided American society, e.g., debates over the legitimacy of slavery? How is the Bible used in contemporary moral discourse, e.g., concerning abortion, capital punishment and gay rights? What does the Bible really have to say about such issues? This course will consider these and other questions through a close reading of pertinent texts which address topics such as abortion, homosexuality, capital punishment, immigration, gender, family violence, race and slavery, disability, genocide, the environment and inequality of wealth. No prerequisites. DPLL LILE WRIT

JUDS 0090. 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.

JUDS 0090B. Readings in Biblical Hebrew.
An introduction to the reading of biblical texts in Hebrew. Reading of selected texts from narrative, law, and poetry in the Hebrew Bible, with a few texts in post-classical Hebrew (the Dead Sea Scrolls and the Mishnah) introduced late in the semester. Intended for students who have completed JUDS 0090A; others should consult the instructor.

JUDS 0100. Elementary Hebrew.
An introduction to the skills of reading, writing, and conversing in contemporary Israeli Hebrew. Students also read Hebrew texts adapted for their level of Hebrew based on biblical, rabbinic, and modern Hebrew literature, which introduce them to the approaches of Hebrew writers in various periods and to a variety of cultural issues. If registration is closed, please contact the professor and a wait list will be created. This is the first half of a year-long course whose first semester grade is normally a temporary one. Neither semester may be elected independently without special permission. Enrollment limited to 20.

JUDS 0200. Elementary Hebrew.
This is the second half of a year-long course, an introduction to the skills of reading, writing, and conversing in contemporary Israeli Hebrew. Students also read Hebrew texts adapted for their level of Hebrew based on biblical, rabbinic, and modern Hebrew literature, which introduce them to the approaches of Hebrew writers in various periods and to a variety of cultural issues. Prerequisite: JUDS 0100. Students must have taken JUDS 0100 for credit to receive credit for this course. Exceptions must be approved by both the academic department and the Committee on Academic Standing. Enrollment limited to 20.

Develops the skills of reading, writing, and conversing in contemporary Israeli Hebrew at the intermediate level and of reading Hebrew texts of the biblical, rabbinic, and modern periods (biblical stories, rabbinic legends, modern Hebrew poems, stories, essays, newspaper articles). Discussions and compositions focus on the psychological, cultural, political, and social issues reflected in the Hebrew sources that we study. Prerequisite: JUDS 0200 or equivalent. Enrollment limited to 20. If unable to enroll because of closed registration, please contact the professor and a wait list will be created.

Develops the skills of reading, writing, and conversing in contemporary Israeli Hebrew at the intermediate level and of reading Hebrew texts of the biblical, rabbinic, and modern periods (biblical stories, rabbinic legends, modern Hebrew poems, stories, essays, newspaper articles). Discussions and compositions focus on the psychological, cultural, political, and social issues reflected in the Hebrew sources that we study. Prerequisite: JUDS 0300 or equivalent. Enrollment limited to 20. If unable to enroll because of closed registration please contact the professor and a wait list will be created.

JUDS 0500. Writing and Speaking Hebrew.
Enables students to improve their skills in speaking and writing Hebrew on a variety of topics. Features advanced work on language structure and active language practice in the classroom. Class discussions of Israeli current events draw on Israeli stories, poems, television programs, and films and on the Israeli press. Students also compose essays and stories in Hebrew. Prerequisite: JUDS 0400 or equivalent. Enrollment limited to 20.
JUDS 0600. Issues in Contemporary Israeli Society, Politics, and Culture in Hebrew.
An exploration of current issues in contemporary Israeli society, politics, and culture: the Israeli-Palestinian conflict, tensions between ultra-orthodox and secular Jews, religion and state, Israel as a Jewish and democratic state, the economic gap between rich and poor, the integration of citizens from a variety of backgrounds (Jews of Middle Eastern, North African, Russian, and Ethiopian origin; Arab citizens of Israel), gender relations, Sources include films, television programs, Internet news, works of literature. Conducted in Hebrew. Emphasizes strengthening Hebrew reading, writing, and speaking skills. Prerequisite: JUDS 0500. Students who have not taken JUDS 0500 should see instructor for permission to enroll.
Spr JUDS0600 S01 24242 MWF 10:00-10:50(03) (D. Jacobson)

JUDS 0602. Wealth: Religious Perspectives (RELS 0025).
Interested students must register for RELS 0025.
Fall JUDS0602 S01 16345 A 3:00-6:30(16) (K. Galior)

A survey of classic Jewish texts, from the Bible to modern literature. Each text will be discussed from the perspective of both its own historical and social context and its engagement with earlier ones. Attention will be paid on how these authors address perennial issues of human concern and how their answers are shaped by their experience as Jews. DPLL LILE WRIT
Fall JUDS0681 S01 15078 W 10:00-10:50(03) (M. Satlow)

JUDS 0682. How Bible Became Holy (RELS 0325).
Interested students must register for RELS 0325.
Spr JUDS0682 S01 25298 A 10:00-10:50(03) (D. Jacobson)

JUDS 0820. God and Poetry.
Throughout recorded history, poetry has expressed a variety of religious experiences. In this seminar we will read selections from biblical psalms, the biblical book of Job, and contemporary Christian and Jewish poetry, and explore how the language of poetry can serve as a means to convey the nature of relations between humanity and God. We will also seek to understand the underlying universal human psychological experiences reflected in the poems and how religiosity provides a framework for people to deal with those experiences. In our discussion of the contemporary Christian and Jewish poems, we will seek to understand the attempt of the poet to write about religious experience in a secular age. Students with a variety of cultural backgrounds and religious orientations (believers, agnostics, and atheists) are welcome. Enrollment limited to 20.
Fall JUDS0820 S01 14677 MWF 10:00-10:50(03) (A. Teller)

JUDS 0902. History of the Holocaust.
Explores questions raised by the Holocaust regarding how such barbarism erupted in our so-called civilized and enlightened age. Attempts to analyze the meaning of the Holocaust from three vantage points: that of European, and more particularly, German history; that of Jewish history; and that of the states and religious institutions which shared responsibility. Enrollment limited to 40. If unable to enroll because of closed registration please contact the professor and a wait list will be created. DPLL LILE WRIT
Spr JUDS0902 S01 25465 TTh 10:30-11:50(09) (A. Teller)

JUDS 1602. Mishnah and Tosefta.
An examination and close reading of the Mishnah and Tosefta, two third-century CE documents foundational to rabbinic Judaism. The class will focus on both contemporary scholarly understandings of these texts and readings, in the original Hebrew, of the text itself. Knowledge of Hebrew (biblical, rabbinic, or two years of modern or its equivalent) required. DPLL LILE WRIT
Spr JUDS1602 S01 24243 W 3:00-5:30(14) (M. Satlow)

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.
Spr JUDS1620 S01 25887 M 3:00-5:30(13) (K. Galior)

JUDS 1654. Russian Jewish Literature and Film (RUSS 1900).
Interested students must register for RUSS 1900.
Fall JUDS1654 S01 16885 A 10:00-10:50(03) (To Be Arranged)

Reviews the discoveries and related scholarship of ancient synagogues, churches, and mosques in ancient Palestine. Focuses on their architectural and decorative as well as their spiritual and religious characteristics, and examines how those institutions influenced each other throughout their history of development.
WRIT Spr JUDS1670 S01 25888 T 4:00-6:30(16) (K. Galior)

JUDS 1690. Prophets and Priests in Exile: Biblical Literature of the 6th Century BCE.
The exile of Judah's elite to Babylon elicited profound and conflicting literary responses. We will undertake a literary and historical analysis of a number of the most important works produced in response to the crisis of exile, including Jeremiah, Ezekiel, Second Isaiah, Lamentations, Psalm 137, the Priestly Writing, and the work of the exilic deuteronomists. Enrollment limited to 20.
Fall JUDS1690 S01 15654 M 3:00-5:30(15) (S. Olyan)

The 20th century was an age of revolutions, both political and social, in which Jews played pivotal roles. The student uprisings of the 1960s, the Feminist revolution, and the rise of the LGBTQ movement were crucial moments of change in the development of the western world. We will discuss the Jews' roles in all these revolutionary movements, as well as in the great political revolutions of the time.
WRIT DPLL LILE Fall JUDS1701 S01 15652 Th 4:00-6:30(02) (R. Rojanski)

This course surveys the history of Israel from its Proclamation of Independence in 1948 until today. Israel's history has unfolded under the shadow of its prolonged conflict with the Palestinians and its Arab neighbors. At the same time, an entirely new, vibrant and dynamic society and culture has developed there. This course aims to familiarize the student with the major outlines of Israel's development, and with different narratives and interpretations of that history. The reading materials and class discussions will examine not only the Arab-Israeli conflict, but also its influence on Israeli politics, society and culture.
WRIT Fall JUDS1711 S01 14680 TTh 1:00-2:20(10) (R. Rojanski)

JUDS 1713. Introduction to Yiddish Culture and Language.
Yiddish was the language spoken by most Jews in Eastern Europe and the countries to which they emigrated (including the U.S., England, South Africa, South American countries, and Israel) from the nineteenth century until after the Holocaust. It was the basis for a transnational Jewish culture and literature, and it played a central role in modern Jewish political life. We will explore the history of Yiddish culture and the development of the Yiddish press, literature, and cinema. The connection between Yiddish and modern Jewish politics will also be discussed. Students in this course will also have the opportunity to develop a basic knowledge of the Yiddish language.
DPLL Spr JUDS1713 S01 24245 TTh 2:30-3:50(11) (R. Rojanski)

JUDS 1718. Modernity, Jews, and Urban Identities in Central Europe.
The course will explore the distinct cultural identities that Jewish modernist intellectuals like Walter Benjamin, Gershom Scholem, Sigmund Freud, Franz Kafka and Karl Kraus forged for themselves in response to the conflicting challenges of assimilation, anti-semitism and modernization. Readings will be based on primary sources and special emphasis will be placed on the historical contexts of Berlin, Vienna, Budapest and Prague where these thinkers lived their lives.
DPLL LILE WRIT
JUDS 1820. Holocaust Literature.
Readings in works of prose and poetry by victims and survivors of the
Holocaust that portray experiences in ghettos, in concentration camps,
and in hiding. Additional readings in works of the post-war era by survivors
and their offspring. Discussion of the moral, psychological, religious,
and cultural dimensions of the Holocaust and its ongoing impact on humanity.
WRIT
Fall JUDS1820 S01 14681 MWF 11:00-11:50(04) (D. Jacobson)

Section numbers vary by instructor. Please see Banner for the correct
course reference number (CRN) to use when registering for this course.

JUDS 1975. Honors Thesis Semester I.
First of two semesters working with a faculty member in the Program
in Judaic Studies to complete an honors thesis. Instructor permission
required. LILE

JUDS 1976. Honors Thesis Semester II.
Second of two semesters working with a faculty member in the Program
in Judaic Studies to complete an honors thesis. Instructor permission
required. LILE

JUDS 2450. Exchange Scholar Program.

Center for Language Studies
American Sign Language
SIGN 0100. American Sign Language I, II.
Introduces basic ASL conversation. Features core vocabulary, common
signing phrases, non-manual components (facial expression, body
postures), signing space, fingerspelling, numbers, loan signs, cultural
protocols, rules of ASL grammar and structure. Deaf cultural behavior is
introduced in the classroom and through readings, videotapes, and Deaf
community events.
This is the first half of a year-long course whose first semester grade is
normally a temporary one. Neither semester may be elected independently
without special written permission. The final grade at the end of the course
work in SIGN 0200 covers the entire year and is recorded as the final
grade for both semesters.
Fall SIGN0100 S01 14857 MWF 11:00-11:50(15) (T. Riker)
Fall SIGN0100 S01 14857 TTh 11:00-11:50(15) (T. Riker)
Fall SIGN0100 S02 17146 MTWThF 9:00-9:50(15) (T. Riker)

SIGN 0200. American Sign Language I, II.
Introduces basic ASL conversation. Features core vocabulary, common
signing phrases, non-manual components (facial expression, body
postures), signing space, fingerspelling, numbers, loan signs, cultural
protocols, rules of ASL grammar and structure. Deaf cultural behavior is
introduced in the classroom and through readings, videotapes, and Deaf
community events.
This is the second half of a year-long course. Students must have taken
SIGN 0100 to receive credit for this course. If SIGN 0100 was taken for
credit then this course must be taken for credit; if taken as an audit, this
course must also be taken as an audit. Exceptions to this policy must be
approved by both the academic department and the Committee on
Academic Standing.
Spr SIGN0200 S01 24044 MWF 11:00-11:50(04) (T. Riker)
Spr SIGN0200 S01 24044 TTh 11:00-11:50(04) (T. Riker)
Spr SIGN0200 S02 25829 MWF 9:00-9:50(02) (T. Riker)
Spr SIGN0200 S02 25829 TTh 9:00-9:50(02) (T. Riker)

SIGN 0300. American Sign Language III.
Explores sociolinguistic aspects of ASL within the Deaf cultural context.
Focuses on classifiers, linguistic principles related to dialogues and
storytelling techniques (e.g., role-shifting, narrative structure). Deaf culture
is experienced by attending events and by voluntary service to the Deaf
community. Prerequisite SIGN 0200 or placement interview.
Fall SIGN0300 S01 14859 TTh 1:00-2:20(10) (T. Riker)

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.
Spr SIGN0400 S01 24045 TTh 1:00-2:20(10) (T. Riker)

SIGN 0500. American Sign Language V.
Focuses on the use of ASL discourse in formal as well as informal
settings. Students will explore and present the advanced ASL genres of
public speaking, artistic expression, formal discussion, interview, and
narrative projects. Development of ASL vocabulary in specialized area not
covered in previous courses. Prerequisite: ASL IV (SIGN 0400) or
equivalent.
Fall SIGN0500 S01 14860 TTh 2:30-3:50(11) (T. Riker)

Independent study in an area of special interest to the student, with close
guidance by a member of the faculty, and leading to a major paper/project.
Required of candidates for honors, and recommended for third year
students. Section numbers vary by instructor. Please check Banner for the
correct section number and CRN to use when registering for this course.
Prerequisite: SIGN 0500 or instructor permission. DPLL LILE

Arabic

ARAB 0100. First-Year Arabic.
Builds basic listening, speaking, reading, and writing skills, introducing
the Arabic language in its cultural environment. Six contact hours per
week, with an emphasis on grammar and communication, plus written,
audio, and video assignments outside of class. This is the first half of a
year-long course whose first semester grade is normally a temporary one.
Neither semester may be elected independently without special written
permission. The final grade at the end of the course work in ARAB 0200
covers the entire year and is recorded as the final grade for both
semesters. If course is full, please sign the wait list in Room 205, 195
Angell Street. Enrollment limited to 18.
Fall ARAB0100 S01 14693 MWF 9:00-9:50(16) (M. Christoff)
Fall ARAB0100 S01 14693 MWF 9:00-9:50(16) (M. Christoff)
Fall ARAB0100 S02 14694 TTh 10:30-11:50(04) (A. Hassan)
Fall ARAB0100 S02 14694 MWF 11:00-11:50(04) (A. Hassan)
Fall ARAB0100 S03 14695 MWF 2:00-2:50(07) (A. Hassan)
Fall ARAB0100 S03 14695 MWF 2:30-3:50(07) (A. Hassan)
Fall ARAB0100 S04 16640 F 10:00-10:50(06) (A. Hassan)
Fall ARAB0100 S04 16640 MW 1:00-1:50(06) (A. Hassan)
Fall ARAB0100 S04 16640 TTh 1:00-2:20(06) (A. Hassan)

ARAB 0200. First-Year Arabic.
Builds listening, speaking, reading, and writing skills, at the low
intermediate level of Arabic proficiency. Six contact hours per week,
with an emphasis on grammar and communication, plus written, audio,
and video assignments outside of class. This is the second half of a
year-long course. Students must have taken ARAB 0100 to receive credit
for this course. If ARAB 0100 was taken for credit then this course must be
taken for credit; if taken as an audit, this course must also be taken as an
audit. Exceptions to this policy must be approved by both the academic
department and the Committee on Academic Standing. Enrollment limited
to 18.
Spr ARAB0200 S01 23969 MWF 9:00-9:50(13) (M. Christoff)
Spr ARAB0200 S01 23969 TTh 9:00-10:20(13) (M. Christoff)
Spr ARAB0200 S02 23972 TTh 10:30-11:50(13) (A. Hassan)
Spr ARAB0200 S02 23972 TTh 10:30-11:50(13) (A. Hassan)
Spr ARAB0200 S03 23973 MWF 2:00-2:50(13) (A. Hassan)
Spr ARAB0200 S03 23973 TTh 2:30-3:50(13) (A. Hassan)
Spr ARAB0200 S04 25551 F 10:00-10:50(13) (A. Hassan)
Spr ARAB0200 S04 25551 TTh 10:30-11:50(13) (A. Hassan)
Spr ARAB0200 S04 25551 MW 1:00-1:50(13) (A. Hassan)

ARAB 0300. Second-Year Arabic.
Develops listening, speaking, reading and writing skills at the intermediate
level of language proficiency through extensive use of various texts
and multimedia. Promotes a better understanding of the Arabic cultural
traditions. Six contact hours weekly, plus written, audio, and video

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
ARAB 0400. Second-Year Arabic.
Develops listening, speaking, reading and writing skills at the intermediate level of language proficiency through extensive use of various texts and multimedia. Promotes a better understanding of the Arabic cultural traditions. Six contact hours weekly, plus written, audio, and video assignments outside of class. Prerequisite: ARAB 0300. This is the second half of a year-long course. Students must have taken ARAB 0300 to receive credit for this course. If ARAB 0300 was taken for credit, then this course must be taken for credit; if taken as an audit, this course must also be taken as an audit. Exceptions to this policy must be approved by both the academic department and the Committee on Academic Standing. Enrollment limited to 18.

ARAB 0500. Third-Year Arabic.
Offers comprehensive training in listening, speaking, reading, and writing, with grammar review as needed. Broadens students' perspective of Arabic culture using selections from the classical and modern traditions of Arabic writing and various art forms. Five contact hours weekly. Prerequisite: ARAB 0400.

ARAB 0600. Third-Year Arabic.
Offers comprehensive training in listening, speaking, reading, and writing with grammar review as needed. Broadens students' perspective of Arabic culture with selections from the classical and modern traditions of Arabic writing and various art forms. Five contact hours weekly. Prerequisite: ARAB 0500.

ARAB 0700. Advanced Arabic: Tales of the City.
The Arab city, current site of a major political upheaval, is the central theme of this integrated-skill language and culture course. Images of cities, as multifaceted as the people who inhabit them, animate cinema screens and daily news reports, inspire masters of writing, artists, and musicians, arouse political activism. By engaging the complex articulations 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. DPLL

ARAB 1100. Love, Revolution and Nostalgia in Modern Arabic Poetry.
This course aims to introduce students to the most prominent Arabic poets of the 20th and 21st century. Students will strengthen their language skills while reading and discussing texts by major modern poets from the Middle East and North Africa, including Nizar Qabbani, Darwish and Adonis. Through the works of these poets, they will explore a range of themes from politics and oppression, to love and eroticism, personal freedom and women's liberation.

Catalan
CATL 110. Independent Study in 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.

EINT 2300. Negotiating an American Classroom.
In this course, international graduate students increase their abilities to communicate accurately and fluently in English with American undergraduates. International students develop their ability to interact, in culturally appropriate ways, in a variety of teaching situations common to an institution of higher education, where they are responsible for expressing and explaining complex information and ideas in English. Instructor permission required.

EINT 2400. Speaking Professionally for Internationals.
This course develops the English communication skills of international graduate students with an emphasis on intelligibility of speech and clarity of expression in a variety of teaching and professional situations (e.g. presenting material, responding to questions, directing discussions). Students develop increased facility of English in extended discourse when they are the authority in a teaching or other professional context. Instructor permission required.

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.
Haitian-Creole

CROL 0100. Basic Haitian Creole.
Fast-paced course for beginners. Course stresses acquisition of skills in speaking and listening comprehension; writing included to a lesser degree. Strong emphasis on cultural as well as linguistic competency. Enrollment limited to 18.
Fall CROL0100 S01 14861 MW 3:00-5:30(15) (P. Sylvain)

CROL 0200. Early Intermediate Creole.
Fast-paced course for beginners. Course stresses acquisition of skills in speaking and listening comprehension; writing included to a lesser degree. Strong emphasis on cultural as well as linguistic competency. Enrollment limited to 18. Prerequisite: Beyond basic level of reading, writing and comprehension or having successfully completed CROL 0100.
Spr CROL0200 S01 23978 W 3:00-5:30(14) (P. Sylvain)

CROL 0300. Advanced Intermediate Haitian Creole.
Fast-paced course for advanced/intermediate students of Haitian Creole. Designed for those who speak and understand Haitian Creole with some fluency but are seeking ways of perfecting their language skills, overcoming grammatical snags, increasing vocabulary, and mastering the idiomatic use of the language and proverbs. Reading and responding to authentic literature in Haitian Creole will be the focus of the course. Prerequisite: CROL 0200. Enrollment is limited to 18.
Fall CROL0300 S01 14862 M 6:30-8:30PM(15) (P. Sylvain)
Spr CROL0300 S01 23979 M 3:00-5:30(13) (P. Sylvain)

HNDI 0100. Beginning Hindi or Urdu.
Introduces conversation, reading, and writing of modern standard Hindi and the Devanagari script. Those who already know Devanagari but have rusty conversation skills may join the class second semester; obtain instructor's permission during the first semester. Those who prefer to learn Urdu and the Persian script should contact the instructor.
Fall HNDI0100 S01 14800 TTh 12:00-12:50(12) (A. Koul)
Fall HNDI0100 S01 14800 MW 12:00-12:50(12) (A. Koul)

HNDI 0200. Beginning Hindi or Urdu.
Introduces conversation, reading, and writing of modern standard Hindi and the Devanagari script. Those who already know Devanagari but have rusty conversation skills may join the class second semester; obtain instructor's permission during the first semester. Those who prefer to learn Urdu and the Persian script should contact the instructor. Prerequisite: HNDI 0100.
Spr HNDI0200 S01 23987 MTWH 12:00-12:50(15) (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 14801 MW 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 24039 Th 4:00-4:50(17) (A. Koul)
Spr HNDI0400 S01 24039 MW 1:00-1:50(17) (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 14803 Arranged (A. Koul)
Spr HNDI1080 S01 24040 Arranged (A. Koul)

Language Studies

LANG 2900. The Theory and Practice of Foreign Language Learning and Teaching.
The course is intended for graduate students in departments of foreign languages and literatures, who are interested in acquiring a theoretical understanding of second language acquisition (SLA) and language teaching methodologies and, by extension, developing a pedagogically sound teaching practice, grounded in research. Spr LANG2900 S01 25680 T 9:00-11:30(08) (E. Balic)

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 14864 TTh 1:00-2:20(06) (I. Anvar)
Fall PRSN0100 S01 14864 MW 1:00-1:50(06) (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 audit; 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 24041 TTh 1:00-2:20(10) (I. Anvar)
Spr PRSN0200 S01 24041 MW 1:00-1:50(10) (I. Anvar)

PRSN 0300. Intermediate Persian Language and Culture.
Expands students' proficiency in modern Persian language and culture; develops listening, speaking, reading and writing skills at the intermediate level through various texts and multimedia. Prerequisite: PRSN 0200.
Fall PRSN0300 S01 14865 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 24042 TTh 10:30-11:50(09) (I. Anvar)

PRSN 0500. Advanced Persian Language and Culture I.
For students who have completed PRSN 0400 or have acquired language skills above the intermediate level through contact with Persian in other ways. The main goal of this course is to improve speaking, listening, reading and writing skills and promote exposure to the culture. It will enable students to expand their knowledge of the language by studying samples of modern and classical Persian literature in order to advance toward mastery of contemporary literature. The course will motivate students to communicate both in written and spoken Persian by utilizing the adequate grammatical order and correct vocabulary. Prerequisite: PRSN 0400.
Fall PRSN0500 S01 14866 TTh 2:30-3:50(11) (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 PRSN0800 S01 24043 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. DPLL Fall TKSH0100 S01 14811 TTh 2:00-2:50(11) (E. Balci)
Fall TKSH0100 S01 14811 MWF 2:00-2:50(11) (E. Balci)

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 course 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 25246 TTh 2:00-2:50(11) (E. Balci)
Spr TKSH0200 S01 25246 MWF 2:00-2:50(11) (E. Balci)

Latin American Studies

LAST 1504A. Violence and Urban Poverty in Latin America: Ethnographic and Qualitative Perspectives.
Living in a barrio, favela, villa, or colonia means living in a state of emergency, caught in the middle of armed confrontations between state and non-state actors. This course has three main objectives: 1) to understand urban violence from the perspective of people living in poor and marginalized areas; 2) to analyze how ethnographic and interpretive research on urban violence in Latin America is presented; and 3) to consider the ethnographic narrative, the voice of the ethnographer and the challenges of conducting research in violent settings where the research itself is a social problem.

Fall LAST1504A S01 17140 W 3:00-5:30(17) (M. Zubillaga Gabaldon)

For Latin American Studies concentrators writing senior projects or honors theses.

For Latin American Studies concentrators writing senior projects or honors theses.

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 LAST 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 LAST 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 LAST 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 LAST 1994/1995 may be used toward concentration requirements in Latin American and Caribbean Studies.

LAST XLIST. Courses of Interest to Students Concentrating in Latin American 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. FYS WRIT

Fall LITR0100A S01 15662 F 3:00-5:30(14) (T. Vick)
Spring LITR0100A S01 24760 Th 5:00-7:30(17) "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. FYS WRIT

Fall LITR0100B S01 15663 M 4:00-8:10PM(15) (N. Kuhl)
Spring LITR0100B S01 24761 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. WRIT

Fall LITR0110A S01 15664 T 4:00-6:30(18) (B. Brewer)
Fall LITR0110A S02 15665 T 4:00-6:30(18) (C. Mongeau)
Fall LITR0110A S03 15666 Th 5:00-7:30(18) (Y. Ham)
Spring LITR0110A S01 24762 M 5:30-8:00PM(13) "To Be Arranged"
Spring LITR0110A S02 24763 T 4:00-6:30(16) "To Be Arranged"
Spring LITR0110A S03 24764 F 3:00-5:30(15) "To Be Arranged"

LITR 0110B. Poetry I.
A workshop for students who have little or no previous experience in writing poetry. Enrollment limited to 17 per section. This course is limited to undergraduates. S/NC. WRIT

Fall LITR0110B S01 15667 M 5:40-8:10PM(15) (A. Greenberg)
Fall LITR0110B S02 15668 T 4:00-6:30(15) (D. Neu)
Fall LITR0110B S03 15669 F 3:00-5:30(15) (O. Strand)
Spring LITR0110B S01 24765 M 5:30-8:00PM(13) "To Be Arranged"
LITR 0110D. Digital Language Art I.
Project-oriented workshop for writers, visual/sound artists, filmmakers and programmers who wish to explore digital media techniques. No experience working in this field (or with computer programming) required. You'll learn through doing, reading, talking and collaborating on works in various traditions. Enrollment limited to 17. S/NC. WRIT
Fall LITR0110D S01 15843 T 4:00-6:30(16) (K. Hayter)
Spr LITR0110D S01 24767 Th 5:00-7:30(17) "To Be Arranged"  

LITR 0110E. Screenwriting I.
A workshop for students who have little or no previous experience in writing screenplays. This course is limited to undergraduates. S/NC. Enrollment limited to 17. WRIT
Spr LITR0110E S01 24593 M 3:00-5:30(13) (L. Colella)

LITR 0210A. Fiction Writing II.
Topics often include stylistic matters related to tone and point of view, and structural matters like controlling switches in time. See general course description above for course entry procedures for all intermediate workshops. Enrollment limited to 17. Instructor permission required. S/NC. WRIT
Fall LITR0210A S01 15549 W 3:00-5:30(18) (J. Howard)
Fall LITR0210A S02 15550 T 4:00-6:20(18) (M. Hedley)
Fall LITR0210A S03 15550 T 4:00-6:30(18) (M. Hedley)
Spr LITR0210A S01 24567 W 3:00-5:30(14) (J. Howard)
Spr LITR0210A S02 24588 T 4:00-6:30(16) "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. WRIT
Fall LITR0210B S01 15845 T 4:00-6:30(18) (W. Hicks)

LITR 0210D. Digital Language Art II.
Project-oriented workshop for writers, visual/sound artists, filmmakers, and programmers wishing to explore techniques for effective and innovative use of text in digital media. Topics include hypertext narrative, kinetic poetry, and recombinant and computer-generated texts. Collaboration encouraged. Work sample (writing, programming, website) due on first day of semester. Enrollment limited to 17. Instructor permission required. S/NC. WRIT
Fall LITR0210D S01 15846 T 12:00-2:30(10) (J. Gaines)
Spr LITR0210D S01 24771 T 12:00-2:30(10) "To Be Arranged"

LITR 0310H. Art of Film: An Introduction to Filmmaking.
This is a course in the art of film writing, directing, editing picture and sound, and producing, be it narrative or avant-garde. Students will engage the theory and practice of the art of filmmaking via readings, viewings, writings, and making their own films. S/NC required. WRIT
Fall LITR0310H S01 17034 W 10:30-12:50(03) (L. Colella)

LITR 0510B. Into the Machine.
Starting from Turing's work on artificial intelligence, we shall examine the cultural and artistic ramifications of the rise of the machine, using Marx and Walter Benjamin to provide a framework. We will look at how machines generate anxiety, with special emphasis on robots, puppets and automatons; and we shall also consider utopian and dystopian images of machines, and visions of near and distant futures. Finally we will look at authors who utilize machine models of operation to generate artistic work. Authors and filmmakers include: Capek, E.T.A. Hoffman, Asimov, Lem, Breton, Redon, Fritz Lang, Chaplin, Tati. Enrollment limited to 20 first year students. FYS
Fall LITR0510B S01 15551 T 4:00-6:30(18) (J. Howard)

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 experiments. 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. FYS WRIT
Fall LITR0510C S01 16597 M 3:00-5:30(15) (C. Maso)
Fall LITR0510C S01 16597 M 3:00-5:20(15) (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 visit classes by contemporary writers who will read to the class and talk about their work. Enrollment limited to 20 first year students. FYS WRIT
Fall LITR0710 S01 15556 TTh 2:30-3:50(11) (F. Gander)
Spr LITR0710 S01 24566 TTh 2:30-3:50(11) (J. Howard)

LITR 1010A. Advanced Fiction.
The writing of short stories or longer works in progress in regular installments, along with appropriate exercises and reading assignments. See general course description above for course entry procedures for all advanced workshops. Written permission required. S/NC. WRIT
Fall LITR1010A S01 15553 Th 10:30-1:00(13) (M. Steinbach)
Spr LITR1010A S01 24577 T 10:30-1:00(09) (M. Steinbach)

LITR 1010B. Advanced Poetry.
Course work includes a body of exercises, close reading of poetry, workshop conversations and conferences. See general course description above for course entry procedures for all advanced workshops. Instructor permission required. S/NC. WRIT
Fall LITR1010B S01 15558 M 3:00-5:30(15) (C. Wright)
Spr LITR1010B S01 24585 M 3:00-5:30(13) (P. Nelson)

LITR 1010D. Advanced Electronic Writing.
An advanced experimental workshop in writing for digital media. Students should have some experience of working with computer-based authoring tools for generating content. Writing for digital media is taken to mean any writing for which electronic supports are vital: to its literary aesthetic, to its cultural viability as (potential) literary art. The primary aim of the course is to produce a work of writing in digital media, but associated readings and discussion will draw out the problems associated with this contemporary challenge to traditional practices. Prerequisite one of the following: LITR 0210D, 1010A, 1010B, 1010C, 1010E, 1010G (or related experience).
Enrollment limited to 12. Instructor permission required. S/NC. WRIT
Fall LITR1010D S01 16595 W 3:00-5:30(17) (J. Cayley)

LITR 1010E. Advanced Screenwriting.
The writing of short screenplays or a longer work in progress in regular installments, along with a body of exercises, workshop conversations and conferences. See general course description above for course entry procedures for all advanced workshops. Instructor permission required. S/NC. WRIT
Fall LITR1010E S01 15559 Th 10:30-1:00(10) (L. Colella)

LITR 1010F. Advanced Translation.
Translation draws from many fields including linguistics, comparative literature, literary studies, anthropology, cultural studies, cognitive science, and creative writing. While we consider different theories and approaches to translation, students will embark on a semester-length translation project. Expect to read and energetically discuss readings, to give a presentation on your ongoing translation, and to write a critical essay and numerous translation exercises on your way toward completing a manuscript in translation (the length of which will be determined by the work itself and an agreement between professor and student). Enrollment limited to 12. Instructor permission required. S/NC. WRIT
Spr LITR1010F S01 24894 W 3:00-5:30(14) (F. Gander)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
interdisciplinary, the course encourages collaboration between students with different skills in different media, who work together to discover a literary aesthetic in artificially rendered space. Instructor permission required. Enrollment limited to 12. S/NC. WRIT
Spr LITR1010G S01 24591 M 3:00-5:30(13) (J. Cayley)

LITR 1110N. 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. WRIT
Fall LITR1110N S01 15557 M 3:00-5:30(15) (P. Nelson)

LITR 1110S. Fiction into Film.
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 Auster, 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, Kurasa, Lee, Potter, and others. Class and weekly screenings. Enrollment limited to 12. S/NC. WRIT
Fall LITR1110S S01 15552 T 10:30-12:50(13) (M. Steinbach)

LITR 1150J. The Cinematic Essay.
A creative writing seminar in which we take the Essay Film as the primary inspiration for weekly writing exercises. Works by Marker, Godard, Ivens, Resnais, Varda, Akerman, Herzog, Morris, Suk Friedrich, Sadie Benning and Trinh Mon-Ha to be included. Also writing by Cannetti, Gass, Handke, Cha, Hong Kingston and more. See general course description above for course entry procedures for all special topics workshop/seminars. Written permission required S/NC. Students MUST register for the lecture section and the screening. WRIT
Spr LITR1150J S01 24574 Th 12:00-2:30(10) (C. Maso)

LITR 1150T. Foreign Home.
Project-centered workshop for exploration beyond one's "home" genre, whether in video, poetry, fiction, music, performance or visual arts. Contemporary and art-historical interdisciplinary works will ground our investigation into the tension between expertise and "beginner's mind". Collaborative and individual work expected. Instructor's permission required. WRIT
Spr LITR1150T S01 25594 T 10:30-1:00(9) (T. Field)

LITR 1151D. Art of Film.
This is a course in the art of film writing, directing, editing picture and sound, and producing, be it narrative or avant-garde. Students will engage the theory and practice of the art of filmmaking via readings, viewings, writings, and making their own films. Each student will complete four films from initial conception to the final film in a collaborative environment. DPLL LILE WRIT
Spr LITR1151D S01 24595 T 10:30-1:00(9) (H. Bizi)

LITR 1200. Writers on Writing.
Offers students an introduction to the study of literature (including works from more than one genre) with special attention given to a writer's way of reading. This course will include visits to the course by contemporary writers, who will read to the class and talk about their work. Enrollment is limited to 30 students.

Fall LITR1200 S01 15547 TTh 2:30-3:50(11) (B. Evenson)
Spr LITR1200 S01 24586 TTh 2:30-3:50(11) (C. Wright)

LITR 1230E. Form and Theory of Fiction.
"Form and Theory of Fiction" offers an exploration of narrative theories directed particularly at creative writers, in conjunction with a hands-on examination of contemporary fictional narrative practices. Theoretical readings include historical essays on fiction and work by Gaston Bachelard, Mieke Bai, Gilles Deleuze, and others. Enrollment limited to 20.

Fall LITR1230E S01 16857 W 3:00-5:30(17) (B. Evenson)

LITR 1230J. Writing: Material Differences.
An exploration of practices that make a material difference to writing, that may change what writing is in specific cultural circumstance and locations. We will look for such differences through transcultural and translingual experiments with writing, beginning "West" and moving "East." We will engage with a selection of widely divergent writers and genres, with emphases on poetics-- particularly a translated rendition of Chinese poetics (such as was taken up by Pound and became influential in English literature) - and on theories that we can use for our practice, from: Fenollosa, Foucault, Derrida, and others. Enrollment limited to 20. DPLL
Spr LITR1230J S01 24589 W 3:00-5:30(14) (J. Cayley)

LITR 1230K. Latin American Death Trip.
Death is the subject of many of the greatest (most moving, innovative, funny, haunting, political, onerotic) Latin American poems of the 20th century, from Gorostiza's Death without End to Villaurrutia's Nostalgia for Death to Saenz' The Night. What is up with Latin Americans and death? What particularities of culture, gender, age, faith or experience might account for the visionary clarity of death as constant companion or permeable border, etc.? What makes the poems great? We shall read classic Latin American books in bilingual editions (so Spanish literacy is not a requirement, but we'll talk about translation issues). Students will be expected to participate in literary discussions, to write essays and a death poem. Enrollment limited to 20.
Spr LITR1230K S01 24581 M 3:00-5:30(13) (F. Gander)

LITR 1230V. Why Don't We Fall in Love?
We focus here on intersections of the erotic and poetry. How do we fall in love? Why? We will explore joy and happiness, love and lust, devotion and seduction. We will also, unfortunately, explore longing, heartbreak, jealousy, unrequited love. We will explore, through literature and film, the ageless enigma that prompted Ruth Stone to proclaim, "there is no choice among the voices / of love..." WRIT
Fall LITR1230V S01 17035 M 3:00-5:30(15) (A. Colarusso)

LITR 1230W. Spectroscopy: [Identifying] Black Bodies in Narrative.
We shall focus on character development and narrative structure through the formation and presence of textual and cinematic black bodies. Our discussions will focus on the identification of that which is not allowed to speak -- the prototypical foil (Caliban), the other (Man Friday), the black body (Jim). How are narratives (how are we) shaped by that which cannot be acknowledged? DPLL WRIT
Spr LITR1230W S01 25989 Th 4:00-6:30(16) (A. Colarusso)

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.

LITR 1410A. Fiction Honors.
A workshop setting for the completion of theses by advanced writers of fiction. See general course description above for course entry procedures for all honors workshops. Instructor permission required. Enrollment limited to 12 senior Literary Arts concentrators. S/NC.
Spr LITR1410A S01 24578 T 10:30-1:00(9) (M. Steinbach)

LITR 1510. Honors Independent Study in Creative Writing.
Provides tutorial instruction for students completing their theses or capstone projects. Typically taken by honors or capstone candidates in their final semester. See instructor to seek permission during the semester before undertaking the course of study. S/NC.

LITR 2010A. Graduate Fiction.
Advanced practice of the art: a writing seminar, limited to graduate students in Literary Arts. Emphasis is placed on developing a better understanding of the creative process, strategies and forms. Written permission required. S/NC.
Fall LITR2010A S01 15548 M 11:00-1:30(04) (T. Field)
Spr LITR2010A S01 24575 F 12:00-2:30(05) (C. Maso)
LITR 2010B. Graduate Poetry.
Advanced practice of the art: a writing seminar, limited to graduate students in Literary Arts. Emphasis is placed on developing a better understanding of the creative process, strategies and forms. Written permission required. S/NC.
Fall LITR2010B S01 15554 W 12:00-2:30(12) (F. Gander)
Spr LITR2010B S01 24587 W 12:00-2:30(05) (L. Swensen)

Geographically and/or aesthetically suspect, often shelved under the wrong rubric. Word-works by hermits and wanderers, solis and sol nots, whose language confirm, as Sister Rosetta Tharpe sang: Strange Things Happening Every Day. Including work by Besmilr Brigham, Wong May, Bernadette Mayer, Mary Reufle, Frank Stanford, David Fisher, a new translation of Beowulf (by an American! A Woman!), and others. There may also be music.
Fall LITR2110K S01 17208 T 12:00-2:30(10) (C. Wright)

LITR 2110L. Brazenly Brown.
A course of multi-disciplinary arts masterclasses — with talks, seminars, and critiques — concluding the ‘Brazenly Brown’ series initiated in Spring 2015, and allowing students to meet and study with visiting alumni artists for course credit, while engaging with the visitors and their own creative practice and practice-based research across the arts-related disciplines of the university.
Fall LITR2110L S01 17001 ThF 10:30-11:50(13) (J. Cayley)

LITR 2230. Graduate Independent Study in Reading, Research, and Writing About Literature.
Provides graduate students with an opportunity to pursue tutorial instruction oriented toward a literary research topic.

LITR 2310. Graduate Independent Studies in Literary Writing.
Offers tutorial instruction oriented toward some significant work in progress by the graduate student. S/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. S/NC only.
Fall MATH0050 S01 15316 TTh 9:00-10:20(08) (A. Landman)

MATH 0060. Analytic Geometry and Calculus.
A slower-paced introduction to calculus for students who require additional preparation. Presents the same calculus topics as MATH 0090, together with a review of the necessary precalculus topics. Students successfully completing this sequence are prepared for MATH 0100. Prerequisite: for MATH 0050 is written permission; for MATH 0060 is MATH 0050 or written permission. S/NC only.
Spr MATH0060 S01 24351 TTh 10:30-11:50(09) (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 0100 or the equivalent are recommended for all students intending to concentrate in the sciences or mathematics. Lectures plus one 80-minute section arranged. S/NC only.
Fall MATH0090 S01 15318 MWF 9:00-9:50(14) (K. Lai)
Fall MATH0090 S02 15319 MWF 10:00-10:50(14) (D. Katz)
Fall MATH0090 S03 15320 MWF 12:00-12:50(14) (A. Harper)
Fall MATH0090 S04 15321 TTh 9:00-10:20(14) (Y. Solomon)

Fall MATH0090 S05 15322 TTh 10:30-11:50(14) (K. Lai)
Spr MATH0090 S01 24352 MWF 11:00-11:50(13) (D. Katz)
Spr MATH0090 S02 24353 MWF 2:00-2:50(13) "To Be Arranged"

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.
Fall MATH0100 S01 15334 MWF 12:00-12:50(09) (A. Walker)
Fall MATH0100 S03 15335 MWF 1:00-1:50(09) (R. Yi)
Fall MATH0100 S04 15336 MWF 9:00-9:50(09) (E. Newkirk)
Fall MATH0100 S05 15337 TTh 2:30-3:50(09) (Q. Le)
Spr MATH0100 S01 24358 MWF 9:00-9:50(14) "To Be Arranged"
Spr MATH0100 S02 24359 MWF 10:00-10:50(14) (D. Katz)
Spr MATH0100 S03 24360 TTh 9:00-10:20(14) "To Be Arranged"
Spr MATH0100 S04 24361 TTh 2:30-3:50(14) "To Be Arranged"

MATH 0170. Advanced Placement Calculus.
Provides tutorial instruction for graduate students completing their advanced practice of the art: a writing seminar, limited to graduate 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 0170, but is intended for students with a special interest in physics or engineering. The main topics are: calculus of vectors and paths in two and three dimensions; differential equations of the first and second order; and infinite series, including power series and Fourier series. The extra hour is a weekly problem session.
Fall MATH0170 S01 15348 MWF 9:00-9:50(15) (B. Freidin)
Fall MATH0170 S02 15349 MWF 2:00-2:50(09) (S. Fan)
Fall MATH0170 S03 15350 MWF 10:00-10:50(15) (L. Walton)

MATH 0180. Intermediate Calculus.
Three-dimensional analytic geometry. Differential and integral calculus for functions of two or three variables: partial derivatives, multiple integrals, line integrals, Green's Theorem, Stokes' Theorem. Prerequisite: MATH 0100, 0170, or 0190.
Fall MATH0180 S01 15351 MWF 12:00-12:50(09) (N. Malik)
Fall MATH0180 S02 15352 MWF 1:00-1:50(09) (B. Cole)
Fall MATH0180 S03 15353 MWF 2:00-2:50(09) (A. Culiuc)
Spr MATH0180 S01 24370 MWF 9:00-9:50(15) "To Be Arranged"
Spr MATH0180 S02 24371 MWF 10:00-10:50(15) "To Be Arranged"
Spr MATH0180 S03 24372 MWF 12:00-12:50(15) "To Be Arranged"

MATH 0190. Advanced Placement Calculus (Physics/Engineering).
Covers roughly the same material and has the same prerequisites as MATH 0170, but is intended for students with a special interest in physics or engineering. The main topics are: calculus of vectors and paths in two and three dimensions; differential equations of the first and second order; and infinite series, including power series and Fourier series. The extra hour is a weekly problem session. Required prerequisite: MATH 0190, 0100, or 0170.
Fall MATH0190 S01 15354 MWF 2:00-2:50(09) (Y. Wu)
Fall MATH0190 S02 15359 MWF 2:30-3:50(09) (Y. Ou)

MATH 0200. Intermediate Calculus (Physics/Engineering).
Covers roughly the same material as MATH 0180, but is intended for students with a special interest in physics or engineering. The main topics are: geometry of three-dimensional space; partial derivatives; Lagrange multipliers; double, surface, and triple integrals; vector analysis; Stokes' theorem and the divergence theorem, with applications to electrostatics and fluid flow. The extra hour is a weekly problem session. Required prerequisite: MATH 0100, 0170, or 0190.
Fall MATH0200 S01 15363 MWF 12:00-12:50(09) (C. Liu)
Fall MATH0200 S02 15364 MWF 2:00-2:50(09) (P. McGrath)
Fall MATH0200 S03 15365 TTh 10:30-11:50(09) (S. Watson)
Spr MATH0200 S01 24377 MWF 12:00-12:50(16) "To Be Arranged"
Spr MATH0200 S02 24378 MWF 1:00-1:50(16) (F. DiPlinio)
Spr MATH0200 S03 24379 MWF 2:00-2:50(16) (F. DiPlinio)

MATH 0350. Honors Calculus.
A third-semester calculus course for students of greater aptitude and motivation. Topics include vector analysis, multiple integration, partial
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Section</th>
<th>Instructor</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH0350</td>
<td>Calculus I</td>
<td>S01</td>
<td>(J. Goodwillie)</td>
<td>10:30-11:50(09)</td>
<td>TTh</td>
</tr>
<tr>
<td>MATH0520</td>
<td>Introduction to Number Theory</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH0540</td>
<td>Linear Algebra</td>
<td>S01</td>
<td>(J. Hoffstein)</td>
<td>1:00-2:20(10)</td>
<td>TTh</td>
</tr>
<tr>
<td>MATH0540</td>
<td>Linear Algebra</td>
<td>S02</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH1060</td>
<td>Differential Geometry</td>
<td>S01</td>
<td>(G. Daskalopoulos)</td>
<td>10:30-11:50(13)</td>
<td></td>
</tr>
<tr>
<td>MATH1080</td>
<td>Ordinary Differential Equations</td>
<td>S01</td>
<td>(Y. Wu)</td>
<td>1:00-2:00(08)</td>
<td></td>
</tr>
<tr>
<td>MATH1100</td>
<td>Partial Differential Equations</td>
<td>S01</td>
<td>(B. Cole)</td>
<td>1:00-2:20(10)</td>
<td>TTh</td>
</tr>
<tr>
<td>MATH1130</td>
<td>Functions of Several Variables</td>
<td>S01</td>
<td>(S. Maloni)</td>
<td>1:00-1:50(06)</td>
<td>MWF</td>
</tr>
<tr>
<td>MATH1190</td>
<td>Graph Theory</td>
<td>S01</td>
<td>(B. Schwartz)</td>
<td>1:00-3:00(07)</td>
<td>MWF</td>
</tr>
<tr>
<td>MATH1230</td>
<td>Complex Analysis</td>
<td>S01</td>
<td>(M. Chang)</td>
<td>1:00-2:50(14)</td>
<td>TTh</td>
</tr>
<tr>
<td>MATH1240</td>
<td>Abstract Algebra</td>
<td>S01</td>
<td>(M. Chan)</td>
<td>2:00-2:50(14)</td>
<td>TTh</td>
</tr>
<tr>
<td>MATH1250</td>
<td>Combinatorial Topology</td>
<td>S01</td>
<td>(A. Landman)</td>
<td>2:00-2:50(14)</td>
<td>TTh</td>
</tr>
<tr>
<td>MATH1260</td>
<td>Topics in Functional Analysis</td>
<td>S01</td>
<td>(R. Schwartz)</td>
<td>2:30-3:50(11)</td>
<td>MWF</td>
</tr>
<tr>
<td>MATH1270</td>
<td>Topics in Abstract Algebra</td>
<td>S01</td>
<td>(D. Abramovich)</td>
<td>1:00-1:50(04)</td>
<td>MWF</td>
</tr>
</tbody>
</table>

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
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 24399 TTh 1:00-2:20(10) (A. Braverman)

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 15383 MWF 11:00-11:50(04) (N. Pflueger)

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 15384 TTh 2:30-3:50(11) (S. Watson)

MATH 1620. Mathematical Statistics.
Central limit theorem, point estimation, interval estimation, multivariate normal distributions, tests of hypotheses, and linear models. Prerequisite: MATH 1610 or written permission.

Spr MATH1620 S01 24400 TTh 9:00-10:20(08) (R. Kenyon)

MATH 1970. Honors Conference.
Collaborative reading, individual conferences. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Introduction to differential geometry (differentiable manifolds, differential forms, tensor fields, homogeneous spaces, fiber bundles, connections, and Riemannian geometry), followed by selected topics in the field.

Fall MATH2010 S01 15385 TTh 9:00-10:20(08) (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 15386 TTh 1:00-2:20(10) (B. Hassett)

MATH 2060. Algebraic Geometry.
See Algebra (MATH 2510) for course description.

Spr MATH2060 S01 24401 Arranged (N. Pflueger)

MATH 2110. Introduction to Manifolds.
Inverse function theorem, manifolds, bundles, Lie groups, flows and vector fields, tensors and differential forms, Sard’s theorem and transversality, and further topics chosen by instructor.

Spr MATH2110 S01 24402 Arranged (T. Goodwillie)

MATH 2210. Real Function Theory.
Point set topology, Lebesgue measure and integration, Lp spaces, Hilbert space, Banach spaces, differentiability, and applications.

Fall MATH2210 S01 15389 MWF 2:00-2:50(07) (F. DiPlinio)

MATH 2220. Real Function Theory.
The basics of Hilbert space theory, including orthogonal projections, the Riesz representation theorem, and compact operators. The basics of Banach space theory, including the open mapping theorem, closed graph theorem, uniform boundedness principle, Hahn-Banach theorem, Riesz representation theorem (pertaining to the dual of C_0(X)), weak and weak-star topologies. Various additional topics, possibly including Fourier series, Fourier transform, ergodic theorems, distribution theory, and the spectral theory of linear operators.

Spr MATH2220 S01 24403 Arranged (J. Holmer)

MATH 2250. Complex Function Theory.
Introduction to the theory of analytic functions of one complex variable. Content varies somewhat from year to year, but always includes the study of power series, complex line integrals, analytic continuation, conformal mapping, and an introduction to Riemann surfaces.

Fall MATH2250 S01 15388 MWF 1:00-1:50(06) (S. Treil)

MATH 2260. Complex Function Theory.
See Complex Function Theory (MATH 2250) for course description.

Spr MATH2260 S01 24404 Arranged (G. Daskalopoulos)

MATH 2410. Topology.
An introductory course with emphasis on the algebraic and differential topology of manifolds. Topics include simplicial and singular homology, de Rham cohomology, and Poincaré duality.

Fall MATH2410 S01 15391 TTh 10:30-11:50(13) (S. Maloni)

MATH 2420. Topology.
See Topology (MATH 2410) for course description.

Spr MATH2420 S01 24405 Arranged (T. Goodwillie)

MATH 2450. Exchange Scholar Program.
Fall MATH2450 S01 14591 Arranged 'To Be Arranged'

MATH 2510. Algebra.
Basic properties of groups, rings, fields, and modules. Topics include: finite groups, representations of groups, rings with minimum condition, Galois theory, local rings, algebraic number theory, classical ideal theory, basic homological algebra, and elementary algebraic geometry.

Fall MATH2510 S01 15392 MWF 11:00-11:50(04) (D. Abramovich)

MATH 2520. Algebra.
See Algebra (MATH 2510) for course description.

Spr MATH2520 S01 24406 Arranged (M. Rosen)

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.

Fall MATH2530 S01 15393 TTh 2:30-3:50(11) (J. Hoffstein)

MATH 2540. Number Theory.
See Number Theory (MATH 2530) for course description.

Spr MATH2540 S01 24407 Arranged (D. Abramovich)

MATH 2710B. Solitary Waves.
Fall MATH2710B S01 15394 TTh 9:00-10:20(08) (J. Holmer)

MATH 2710G. Punctured Torus Groups.
Graduate Topics course in hyperbolic geometry.

Fall MATH2710G S01 17356 TTh 2:30-3:50(11) (J. Brock)

MATH 2710R. Problems of the Uncertainty Principle in Harmonic Analysis.
Graduate Topics course in Harmonic Analysis.

Fall MATH2710R S01 17356 WF 9:20-10:50 (A. Poltoratski)

MATH 2710S. Quasilinear Dispersive PDE.
Graduate Topics course in Partial Differential Equations.

Fall MATH2710S S01 17357 Arranged (B. Pausader)

MATH 2970. Preliminary Exam Preparation.
No description available.

Fall MATH2970 S01 14592 Arranged 'To Be Arranged'
Spr MATH2970 S01 23797 Arranged 'To Be Arranged'

MATH 2980. Reading and Research.
Independent research or course of study under the direction of a member of the faculty, which may include research for and preparation of a thesis. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

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

Fall MATH2990 S01 14593 Arranged 'To Be Arranged'
Spr MATH2990 S01 23798 Arranged 'To Be Arranged'

MATH XLIST. Courses of Interest to Graduate Students Majoring in Mathematics.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Fall 2015
The following courses may be taken for credit by graduate students majoring in Mathematics. Please check with the sponsoring department for times and locations.

**Applied Mathematics**
- APMA 2230 Partial Differential Equations
- APMA 2630 Probability

**Fall 2015**
The following courses may be taken for credit by graduate students majoring in Mathematics. Please check with the sponsoring department for times and locations.

**Applied Mathematics**
- APMA 2240 Partial Differential Equations
- APMA 2640 Theory of Probability

**Medieval Studies**

**MDVL 0025. Wealth: Religious Approaches (RELS 0025).**
Interested students must register for RELS 0025.
- Fall MDVL0025 S01 17153 Arranged "To Be Arranged"

**MDVL 0150C. The Medieval King Arthur (ENGL 0150C).**
Interested students must register for ENGL 0150C.
- Fall MDVL0150C S01 17151 Arranged "To Be Arranged"

**MDVL 0321. Toward a Global Late Antiquity: 200-800 CE (HIAA 0321).**
Interested students must register for HIAA 0321.
- Fall MDVL0321 S01 17144 Arranged "To Be Arranged"

**MDVL 0460. Muslims, Jews and Christians in Medieval Iberia (HIAA 0460).**
Interested students must register for HIAA 0460.
- Spr MDVL0460 S01 25834 Arranged "To Be Arranged"

**MDVL 0521A. Christianity in Conflict in the Medieval Mediterranean (HIST 0521A).**
Interested students must register for HIST 0521A.
- Fall MDVL0521AS01 17145 Arranged "To Be Arranged"

**MDVL 0660. The World of Byzantium (CLAS 0660).**
Interested students must register for CLAS 0660.
- Fall MDVL0660 S01 16961 Arranged "To Be Arranged"

**MDVL 0681. Great Jewish Books (JUDS 0681).**
Interested students must register for JUDS 0681.
- Fall MDVL0681 S01 17152 Arranged "To Be Arranged"

**MDVL 1100H. Literature at the Court of Charlemagne (LATN 1100H).**
Interested students must register for LATN 1100H.
- Spr MDVL1100HS01 25838 Arranged "To Be Arranged"

**MDVL 1120C. Survey of Late and Medieval Latin (LATN 1120C).**
Interested students must register for LATN 1120C.
- Fall MDVL1120CS01 16963 Arranged "To Be Arranged"

**MDVL 1120G. The Idea of Self (CLAS 1120G).**
Interested students must register for CLAS 1120G.
- Fall MDVL1120GS01 16962 Arranged "To Be Arranged"

**MDVL 1205. The Long Fall of the Roman Empire (HIST 1205).**
Interested students must register for HIST 1205.
- Fall MDVL1205 S01 17147 Arranged "To Be Arranged"

**MDVL 1260D. Living Together: Muslims, Christians, and Jews in Medieval Iberia (HIST 1260D).**
Interested students must register for HIST 1260D.
- Spr MDVL1260DS01 25837 Arranged "To Be Arranged"

**MDVL 1310T. Chaucer (ENGL 1310T).**
Interested students must register for ENGL 1310T.
- Spr MDVL1310TS01 25840 Arranged "To Be Arranged"

**MDVL 1311L. From Mead-Hall to Mordor: The Celtic and Germanic Roots of Tolkien's Fiction (ENGL 1311L).**
Interested students must register for ENGL 1311L.
- Fall MDVL1311LS01 17261 Arranged "To Be Arranged"

**MDVL 1360H. Introduction to the Old English Language (ENGL 1360H).**
Interested students must register for ENGL 1360H.
- Fall MDVL1360HS01 17155 Arranged "To Be Arranged"

**MDVL 1360U. Europe in the Vernacular (ENGL 1360U).**
Interested students must register for ENGL 1360U.
- Fall MDVL1360US01 16964 Arranged "To Be Arranged"

**MDVL 1750L. Erotic Desire in the Premodern Mediterranean (CLAS 1750L).**
Interested students must register for CLAS 1750L.
- Spr MDVL1750LS01 25839 Arranged "To Be Arranged"

**MDVL 1835A. Unearthing the Body: History, Archaeology, and Biology at the End of Antiquity (HIST 1835A).**
Interested students must register for HIST 1835A.
- Spr MDVL1835AS01 25835 Arranged "To Be Arranged"

**MDVL 1900Y. Medieval Manuscript Studies: Paleography, Codicology, and Interpretation (ENGL 1900Y).**
Interested students must register for ENGL 1900Y.
- Spr MDVL1900YS01 25841 Arranged "To Be Arranged"

**MDVL 1963L. Barbarians, Byzantines, and Berbers: Early Medieval North Africa, AD 300-1050 (HIST 1963L).**
Interested students must register for HIST 1963L.
- Spr MDVL1963LS01 25836 Arranged "To Be Arranged"

**MDVL 1963Q. Sex, Power, and God: A Medieval Perspective (HIST 1963Q).**
Interested students must register for HIST 1963Q.
- Fall MDVL1963QS01 17150 Arranged "To Be Arranged"

**MDVL 1970. Independent Study.**
Tutorial instruction on an approved topic in Late Antique and/or Medieval cultures, supervised by a member of staff. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. May be repeated once for credit.

**MDVL 1990. Honors Thesis.**
Independent research and writing on a topic of special interest to the student, under the direction of a faculty member. Required of candidates for honors. Permission should be obtained from the Director of the Program in Medieval Studies.

**Middle East Studies**

**MES 0155. Cultures of the Contemporary Middle East.**
In our exploration of Middle Eastern social movements, this course addresses the role of culture and art in social change; the relationship between faith and politics; as well as the impact of national, regional, and transnational discourses on identity, ethics, and citizenship. The study of social movements in the region will address the impact of technology, media, women’s rights and LGBT movements, as well as economic liberalization, entrepreneurship, and the politics of oil. Finally, we will trace the emergence and consequences of the “Arab Spring.” DPLL
- Fall MES0155 S02 16240 T 4:00-6:30(18) (S. Tobin)

**MES 0170. Visual Expressions of Social Change in the Contemporary Middle East.**
This course explores the relationship between the visual arts and social change in the contemporary Middle East. With a specific focus on visual art, architecture and cinema we examine how visual creativity expresses the desires of social and political groupings and, existing within historic traditions, give form and shape to larger social-political movements across the area. From the 20th century, we see the intertwining religious, political, and social movements, large and small, nationalist and separatist, embodied in visual expressions. This interdisciplinary course will uncover the iconographic origins of contemporary art to understand how visual expressions convey meanings in shaping our world. DPLL
- Fall MES0170 S01 17049 M 3:00-5:30(15) (P. Chomowicz)

**MES 1350. Israel/Palestine: The One State Condition.**
This course follows the formation and transformation of the Israeli Regime, since its inception in the last years of the British Mandate in Palestine. At the theoretical level, we shall explore the difference between State and regime, ask what is a political regime, how to classify types of regimes and how to determine the regime of any given state. At the historical level we shall reconstruct and question the structural transformations and
continuities of the Israeli regime, giving special attention to the impact of Palestinians’ civic status and almost half a century of “occupation” of Palestinian territories. DPLL

Fall MES1350 S01 16671 W 3:00-5:30(17) (A. Ophir)

MES 1450. The Archival of Gestures.
Often people think about archives as static spaces. How to develop a gestural archive able to translate instances and desires of justice? This course provides students with a theoretical and practical background on the archival of gestures in performance and the role that artists-archivists can play in contributing to change through exploring and problematizing social and political memories. We explore how Arab artists have sought and investigated this role after the “Arab Spring” and of civil disobedience against Arab regimes. We then look closely at a series of performance works, by Arab, Israeli and international artists. No dance experience required. DPLL

Spr MES1450 S02 25716 TTh 2:30-3:50(11) (F. Saleh)

Seizing land in Israel/Palestine, colonizing it, shaping its boundaries, and reconstructing it as a governed space have played a major role in the struggles between Jews and Palestinians. Space has been a medium of domination and resistance, a scene of dispossession, construction and destruction, and its governmentalization has become a powerful state apparatus. Using concepts drawn from political theory, human geography, and postcolonial studies we shall examine and contrast the mental geographies and actual government of land and space(s) in Israel/Palestine and use space as a privileged perspective for understanding the history and structure of the Land’s political predicament. DPLL

Spr MES1995B S01 25821 W 3:00-5:30(14) (A. Ophir)

MES 1999B. Colonialism and Human Rights.
Are anti-colonial struggles human rights struggles? Is emancipation the objective of these struggles? Where and when do anti-colonial and human rights discourses converge and diverge? What is the role of violence in the moral, political and discursive trajectories of anti-colonialism and human rights? This course takes up these questions, starting with the reconstruction of the historical relationship between colonialism, anti-colonial struggles and the post-World War II formation of the international human rights regime. We then turn to discuss different authors who developed their anti-colonial thought and dealt with, appropriated or ignored human rights in their different conceptions of anti-colonial justice.

DPLL

Fall MES1999B S01 16238 Th 4:00-6:30(02) (N. Perugini)

MES 2000A. Decolonizing the Racialized Female Subject: Black and Indigenous Women’s Self-Making Under Empire.
This study grapples with conceptions of freedom and humanity emergent in Black and Indigenous women’s practices under empire. Colonialism is prefigured on construction of an “other.” Aimé Césaire refers to this as “thingification,” whereby colonial subjects are dehumanized and the colonizer “dechristized.” Totalizing dehumanizing forms are resisted by praxes and epistemologies which challenge the prevailing symbolic order and assert the humanity of those regarded as subhuman. We will examine how epistemological and political contestations of the human inform discourses on freedom and sovereignty and interrogate how various categories of identity refract and re-frame conceptions of humanity, freedom, and sovereignty.

DPLL

Fall MES XLIST. Courses of Interest to Students Concentrating in Middle East Studies.
For information on courses which may be of interest to students concentrating in Middle East Studies, please refer to the MES XLIST in the Class Schedule menu.

Fall 2015

The following related courses, offered in other departments, may be of interest to students concentrating in Middle East Studies. Please see the course listing of the sponsoring department for times and locations.
Modern Culture and Media

MCM 0110. Theory and Analysis of Modern Culture and Media.
An introduction to critical theory, cultural studies, and media analysis that addresses print, photography, film, television, and digital media. We will examine these media in relationship to influential theoretical approaches such as structuralism and post-structuralism, ideological analysis and psychoanalysis, feminist and queer theory, critical race theory and theories of post-colonialism and globality, and media and technology studies. LILE WRIT

Fall MCM0110 S01 14874 MW 1:00-1:50(06) (P. Rosen)

MCM 0230. Digital Media.
This course introduces students to the critical study of digital media: from surveillance to hatchivism, from cyberpunk fiction/films to art installations, from social media to video games. We will analyze the aesthetics, politics, protocols, history and theory of digital media. Special attention will be paid to its impact on/relation to social/cultural formations, especially in terms of new media’s “wonderful creepiness,” that is, how it compromises the boundaries between the public and private, revolutionary and conventional, work and leisure, hype and reality.

Fall MCM0230 S01 23994 MW 11:00-11:50(04) (W. Chun)

MCM 0240. Television Studies.
Introduces students to the rigorous study of television, concentrating on televised formations (texts, industry, audience) in relation to social/cultural formations (gender, generational, and family dynamics; constructions of race, class, and nation; consumerism and global economic flows). That is, this course considers both how television has been defined and how television itself defines the terms of our world. Students MUST register for the lecture section, the screening, and a conference section. Open to undergraduates only. LILE WRIT

Spr MCM0240 S01 24004 TTh 1:00-1:50(10) (L. Joyrich)

MCM 0710. Introduction to Filmmaking: Time and Form.
A studio-style course on working with time based media, focused specifically on the technology of 16mm film production. With its focus on photographic and montage processes, as well as lighting and sound, the principles established in this course provide a solid foundation for all subsequent work in media, whether cinematic, video or new media, and it is strongly advised as a foundation level, skills-oriented media course. Students produce a series of short, non-sync films. No previous experience required. Screenings, demonstrations and studio work. Application required. Application is available in the MCM office. Students must bring a completed application to the first class to be considered for admission. Up to 40 students can apply, but the final class list of 15 will be determined after this meeting, with permission of the instructor. Enrollment limited to 15. S/NC

Fall MCM0710 S01 14883 Th 1:00-3:50(10) (L. Thornton)
Spr MCM0710 S01 24010 Th 4:00-6:50(17) (L. Thornton)

MCM 0730. 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. Application required. Application is available in the MCM office. Students must bring a completed application to the first class to be considered for admission. Up to 40 students can apply, but the final class list of 12 will be determined after this meeting, with permission of the instructor.

Fall MCM0730 S01 14885 Th 4:00-6:50(02) (B. Biggs)

MCM 0750. Art in Digital Culture.
How do we produce, disseminate, and exchange images in a global networked society? How do digital technologies challenge conventions about art making, authorship, and audience? This production course introduces students to the practice, and critical inquiry into art in digital 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 Harun Farocki, Oliver Laric, and anonymous-memes-creators; readings include, Hito Steyerl, David Joselit, and Boris Grosz. Enrollment limited to 40. LILE

Fall MCM0750 S01 17050 M 3:00-6:50(15) (E. Giardina Papa)
Spr MCM0750 S01 25881 M 3:00-6:50(15) (E. Giardina Papa)

MCM 0901M. Ishiguro, Amongst Others (ENGL 0710L).
Interested students must register for ENGL 0710L.

Fall MCM0901M S01 16319 Arranged "To Be Arranged"

From the photographs of Abu Ghraib, to Tyler Clementi’s suicide, and the rise of "revenge porn," contemporary media have been central to understanding the ways in which sexuality, law, and citizenship are negotiated in our present moment. This course will take these moments of public crisis as instances from which to understand the politics of belonging within the framework of the contemporary nation-state. We will examine the inter-related problematics of sexuality as a site of state governance, and the anxieties about sexual violence as national crises. Assigned readings will include queer of color critique, critical race theory, feminism, and postcolonialism.

Fall MCM0901Q S01 15479 T 4:00-6:30(18) (L. Padmanabhan)

MCM 0901R. Altered Cinema: The Cultural Politics of Film Revision.
Repetition and variation define contemporary cinema texts. Media producers create multiple “cuts” of the same picture for domestic/international theater, television and home video markets. Meanwhile, consumers use new technologies to create their own textual variations and share them using informal distribution channels. This is a primary concern of Altered Cinema, which examines the history and culture of film revision from multiple perspectives, including originality, authorship, censorship, globalization, preservation, translation, copyright, fandom, new media and piracy. Screenings compare and contrast different editions, including director and fan cuts, of Metropolis, Star Wars, Dune and Night Watch among others.

Spr MCM0901R S01 24953 T 4:00-6:30(16) (M. Skoptsov)

MCM 0901S. Mediating Reproduction: Feminism, Art, Activism.
How have feminist artists and activists imagined and transformed the politics of reproduction? This course explores the complex meanings of “reproduction” across media, performance, and public culture, with a focus on questions of sexuality, race, labor, and aesthetic practice. Situating reproduction in an expanded frame, we will consider the relationship between biological reproduction and the gendered labor of reproducing social life (e.g., domestic labor, sex work, care work). Throughout, we will pay special attention to the entanglements of artistic labor with women's reproductive labor. Topics include: eugenics, housework/welfare activism, art workers movements, biotechnologies, queer kinship, and feminist utopias.

Spr MCM0901S S01 24950 T 10:30-11:50(09) (B. Capper)

MCM 0901T. Shakespeare: The Screenplays (ENGL 0310E).
Interested students must register for ENGL 0310E.

Fall MCM0901T S01 16331 Arranged "To Be Arranged"

MCM 0901U. What is Colonialism - Archives, Texts and Images (COLT 0812L).
Interested students must register for COLT 0812B.

Spr MCM0901U S01 25445 Arranged "To Be Arranged"

MCM 0901V. Getting Emotional: Passionate Theories (ENGL 0500Q).
Interested students must register for ENGL 0500Q.

Spr MCM0901V S01 25447 Arranged "To Be Arranged"
MCM 1100. The Theory of the Sign.
A survey of three late twentieth-century theorists: Louis Althusser, Jacques Derrida, and Michel Foucault. Our analyses will focus on these figures as they emerge from and reorient the broad field of semiotics, with particular attention to the evolution of each oeuvre, the continuities and discontinuities that distinguish their theoretical claims, and their diverging legacies. Readings will include Althusser's Reading Capital and "Contradiction and Over-determination," Derrida's Of Grammatology and Spurs; and Foucault's This Is Not a Pipe and History of Sexuality. Critical concepts to be examined include signification, reading, discourse, subjectivity, power, historicism, archaeology, the supplement, and difference.

Fall MCM1100 S01 25823 TTh 10:30-11:50 (E. Rooney)

This course focuses on the role of the star within the "machinery" of Hollywood: how stars function in the film industry, within cinematic and extra-cinematic texts, and at the level of individual fantasy and desire. The paradoxes posed by stars--represented as like yet unlike us, public yet privately known, commodities yet (super)human--suggest complex formations and implications of the star system. We will read film theories and histories and investigate films in which star images are foregrounded to explore these issues.

Fall MCM1200G S01 14888 TTh 6:40-8:00PM(05) (L. Joyrich)

MCM 1201K. Queer Relations: Aesthetics and Sexuality (ENGL 1900R).
Interested students must register for ENGL 1900R.

Fall MCM1201K S01 16325 Arranged 'To Be Arranged'

MCM 1201T. Russian Cinema (RUSS 1250).
Interested students must register for RUSS 1250.

Fall MCM1201T S01 16910 Arranged 'To Be Arranged'

MCM 1201Z. On Being Bored (ENGL 1511L).
Interested students must register for ENGL 1511L.

Fall MCM1201Z S01 16334 Arranged 'To Be Arranged'

Interested students must register for EAST 1270.

Fall MCM1202D S01 16322 Arranged 'To Be Arranged'

MCM 1202N. Performance Theory and World Theatre History: Paleolithic to Medieval (TAPS 1230).
Interested students must register for TAPS 1230.

Fall MCM1202N S01 16320 Arranged 'To Be Arranged'

MCM 1202Q. Word, Media, Power in Modern Italy (ITAL 1590).
Interested students must register for ITAL 1590.

Fall MCM1202Q S01 16323 Arranged 'To Be Arranged'

MCM 1202T. Perverse Cinema (ENGL 1762A).
Interested students must register for ENGL 1762A.

Fall MCM1202T S01 16324 Arranged 'To Be Arranged'

MCM 1203F. The Aesthetics of Political Cinema: From Montage to Political Modernism.
In the 1920s, Russian revolutionary filmmakers with political concerns blended mass cinema and innovative avant-garde and modernist filmmaking styles. Their most influential filmmaker, Sergei Eisenstein, elaborated his concept of montage to explore and explain his ideas of cinema. This course will examine the development in film history of political filmmaking which draws on modernist aesthetics, beginning from the montage filmmaking of the 1920s. Emphasis on 1920s and 1960s-70s, but not limited to those years. Work by such filmmakers as Eisenstein and contemporaries, Brecht, Capra, Godard, Marker, Resnais, Oshima, Bertolucci, the Taviani Brothers, Kluge, Fassbinder, Akerman, Mulvey, Rocha, Solanas, Hondo, Gerima, etc.

Spr MCM1203F S01 24218 TTh 2:30-3:50(11) (P. Rosen)

MCM 1203G. East Asian Internet Cultures.
This course examines the social, cultural, and aesthetic dimensions of internet life in China, Japan, and South Korea. Our focus will be on the formal diversity of internet use (including websites, social media, mobile phones, blogs, gaming, and streaming video); the relationship between the internet and other media (literature, film, animation, documentary); and interdisciplinary methods for studying online life. By considering how the internet has developed in each country and how it has reshaped identity, sociality, politics, public space, and aesthetic form, we will work towards building a conceptual and critical vocabulary for the comparative study of internet cultures.

Fall MCM1203G S01 17044 F 3:00-5:30(14) (P. Roquet)

MCM 1500D. Contemporary Film Theory.
Major arguments in film theory from the late 1960s to the present, contextualized by contemporaneous intellectual tendencies and selected films. Some key issues: cinematic specificity and signification, the politics of form and style, subjectivity/spectatorship, gender/sexuality, postmodern media, digital theory and cinema. Readings from figures such as Baudry, Bordwell, Deleuze, Doane, Elsaesser, Gunning, M. Hansen, Heath, Jameson, Koch, Manovich, Metz, Mulvey, Pasolini, Rodowick, L. Williams, Willemen, Wollen, etc. Enrollment limited to 15. Prerequisite: one MCM core course.

Fall MCM1500D S01 14890 Th 4:00-6:30(02) (P. Rosen)

MCM 1501I. Reading Marx.
What is it to read Marx now? We will begin with a group of key texts written by Marx drawn from different points in his development, including the first volume of Capital and sections from the other volumes. We will study influential later reinterpretations and commentaries on Marx that argue for his contemporary importance (drawn from figures such as Althusser, Balibar, J. Butler, Derrida, Haraway, Hardt, Negri, Virmo, Zizek, etc.

Spr MCM1501I S01 24012 F 2:00-4:30(07) (P. Rosen)

MCM 1501Q. Word, Media, Power in Modern Italy (ITAL 1340).
Interested students must register for ITAL 1340.

Fall MCM1501Q S01 25284 Arranged 'To Be Arranged'

Interested students must register for EAST 1950G.

Spr MCM1503A S01 25284 Arranged 'To Be Arranged'

Interested students must register for ITAL 1340.

Fall MCM1504H S01 16321 Arranged 'To Be Arranged'

MCM 1504Q. Reading Narrative Theory (ENGL 1950G).
Interested students must register for ENGL 1950G.

Fall MCM1504Q S01 16322 Arranged 'To Be Arranged'

MCM 1504T. Freud Writer and Reader (COLT 1810N).
Interested students must register for COLT 1810N.

Spr MCM1504T S01 25435 Arranged 'To Be Arranged'

This seminar asks how we can visualize differently human rights in an era when photographs depicting their violations abound. We shall study the event of photography and the forms of interrelations it generates and learn how to use photographs to question human rights violations and study their contexts in various sites around the globe. We shall learn to discern how photographs record not only particular rights violations, but general
structures of dispossession as well. We will ask how understanding those records can help us (re)write a visual declaration of human rights. 

MCM 1504V. Technologies of/and the Body: Mediated Visions (GNSS 1720).
Interested students must register for GNSS 1720.
Fall MCM1504V S01 16870 Arranged "To Be Arranged"

MCM 1504W. Two Artwork Essays: Martin Heidegger and Walter Benjamin (GRMN 1890).
Interested students must register for GRMN 1890.
Spr MCM1504W S01 25843 Arranged "To Be Arranged"

MCM 1700B. Approaches to Narrative.
A production seminar for intermediate to advanced students in film and/or video production. Students complete a substantial media project in the course of the semester. Class meetings will focus on close readings and critical feedback of students’ work during all phases of production. Texts related to narrative theory and production will be discussed. Screenings of exemplary works will supplement the class. Class members should have completed at least one time-based media class. Students are expected to be competent technically. An application will be completed during the first class session and the final class list will be determined after this meeting, with permission of the instructor. S/N/C
Fall MCM1700B S01 14897 W 2:00-5:30(07) (L. Thornton)

MCM 1700F. Theory for Practice / Practice as Theory.
This advanced seminar explores the tensions between theory and practice in contemporary media and art works. The course examines how recent creative practices use theoretical concepts, and how practices today often include textual production or crucial theoretical implications. Requirements include: a major production project, short papers, presentations of work-in-progress, and weekly readings and screenings. Application required. Application is available in the MCM office. Students must bring a completed application to the first class to be considered for admission. The final class list will be determined after this meeting, with permission of the instructor. Enrollment limited to 20. S/N/C
Spr MCM1700F S01 24013 W 10:00-12:50(03) (A. Cokes)

MCM 1700Y. Expanded Storytelling: Capture, Share and Expose.
How can we shoot a documentary inside an online videogame? How can we transform a historical archive into a dynamic narrative platform? How can we tell a story together with hundreds of other people? How can we create portraits with data retrieved from the Internet/mobile companies about ourselves? In this production course we will explore how emerging technologies and new habits of image making/sharing are challenging traditional forms of storytelling. In particular, we will focus on collaborative authorship, citizen journalism, fictional online persona creation, big data, and digital archives editing. Includes screenings, readings, technical-workshops (video/lighting/editing/coding), assignments, and a final project.
Fall MCM1700Y S01 17051 T 4:00-7:50(16) (E. Giardina Papa)

MCM 1700Z. What is Happening to Narrative?.
An advanced media production seminar about the impact of digital technology on the practice of media based storytelling. We begin with questions: are we still interested in telling stories? What kinds of stories do we tell? Are there narratives specific to particular technics? What happens when technology makes things “easier?” We explore forms that work well online, on smart devices, or in theaters and TV. This workshop includes group experiments and a major individual project that may be linear, installation, or interactive in format. Projects should function as a stimulus and a challenge to conventional practices of duration-based narrative. Required reading and research include: Benjamin (GRMN 1890), Collier, Cronenberg, Haynes.
Fall MCM1700Z S01 24135 W 2:00-5:30(07) (L. Thornton)

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. Eight semester students only.

MCM 2100N. The Body and the Desire to Sleep.
Almost automatically, we tend to think corporeality as bound up with caducity; the body is the lodestone of all that is finite, frail, susceptible to hurt, to wearing out, to exhaustion. Taking our initial cues from Freud's propensity to speak of the body's desire to sleep (rather than its need for it) we will reexamine the premises of our automatic assumptions. How does psychoanalysis think the body and what does that discourse owe or add to philosophical theories of corporeality? What makes the body move? What does it contribute to our sense of self?
Fall MCM2100N S01 14924 T 1:20-3:50(10) (L. Joyrich)

Some political and philosophical vocabularies conjure thinking as walking, working, and/or waking. How do these concepts frame critical deliberation and reading? How do they position us in relation to dissent, negativity, and inoperativity? This course traces these three concepts in texts and films where the peripatetic, laborious, and somnambulistic itineraries of the subject bring it to the limits of psychic and theoretical reparation. Can we imagine life and things otherwise, through listless, pedestrian forms of reading, playfully errant, and cautious about recovery or remediation.
Texts include work by Plato, Rousseau, Wordsworth, Emerson, Melville, Winnicott, Agamben, Derrida; films by Cronenberg, Haynes.
Spr MCM2210L S01 24137 T 1:20-3:50(10) (B. Honig)

MCM 2110M. Literary Theory I: Continental Aesthetics and the Questions of Politics (COLT 2650M).
Interested students must register for COLT 2650M.
Fall MCM2110M S01 16503 Arranged "To Be Arranged"

MCM 2110N. Literary Theory II: Post-Structuralism and the Problem of the Subject (ENGL 2901B).
Interested students must register for ENGL 2901B.
Spr MCM2110N S01 25262 Arranged "To Be Arranged"

MCM 2120H. Objects of (and in) Animation.
The course focuses on the notion of animation as a general concept. This includes more than just the genre of animation films. It also includes the animation of objects that are neither organic nor alive: The animation of the machine. The technical object plays here an important role. The focus is on the discussion of concepts of film as medium of animation per se and on different procedures of animating. Our debates here will cover: cartoon, the digital, experimental and animated effects in film. The aim is to gain a deeper understanding of the animated character of film.
Fall MCM2120H S01 16025 Th 1:00-3:30(10) (G. Koch)

MCM 2310I. At the Limits: Media Representation of the Holocaust.
The Holocaust has been described as unimaginable, at the limits of representation. Yet there have been numerous attempts to imagine and represent it, across media (film, television, graphic novels), genres (documentary, melodrama, comedy, fantasy), and modalities (through history and memory, "high" and "low" culture, fiction and nonfiction, reporting and marketing). Considering such attempts to represent the unrepresentable and mediate the immediacy of trauma, this course will explore media texts and theoretical/philosophical reflections on the Holocaust.
Enrollment limited to 12. This course is for Graduates only. Upperclass undergraduates require instructor's permission.
Spr MCM2310I S01 24275 W 3:00-5:30(14) (L. Joyrich)

MCM 2310J. Writing and Methods in Political Theory I (POLS 2121).
Interested students must register for POLS 2121.
Fall MCM2310J S01 16536 Arranged "To Be Arranged"

MCM 2310K. Writing and Methods in Political Theory II (POLS 2122).
Interested students must register for POLS 2122.
Spr MCM2310K S01 25446 Arranged "To Be Arranged"

MCM 2510F. The Racial Lives of Affect (ENGL 2816F).
Interested students must register for ENGL 2761F.
Fall MCM2510F S01 16802 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 complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
for the correct section number and CRN to use when registering for this course.

**MCM 2990. Thesis Preparation.** No description available.
Fall MCM2990 S01 14594 Arranged "To Be Arranged"
Spr MCM2990 S01 23799 Arranged "To Be Arranged"

**Music**

**MUSC 0010. Introduction to Western Music.**
A study of a thousand years of music of Europe and America through CDs, DVDs, and YouTube. We'll explore how individuals, institutions, and societies create music, use it, experience it, pay for it, and control it. We'll discuss music and time, music and politics, music and identity. Still, the heart of the course is listening to great music, and learning how it works.
Fall MUSC0010 S01 15905 MWF 11:00-11:50(04) (D. Josephson)

**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 20 first year students. PYSS DPLL LILE
Fall MUSC0021B S01 16017 Th 4:00-0:30(02) (M. McGarrell)

**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 24959 TTh 10:30-11:50(09) (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.
Fall MUSC0033 S01 16854 Th 1:00-2:20(10) (E. Nathan)

**MUSC 0065. Music and Social Protest.**
This class will explore music as a vehicle for social protest, including historical examinations of music within the U.S. labor and civil rights movements, music and political campaigns, contemporary activist street bands (with a field trip to the Providence HONKI festival), and other examples from global independence and social justice movements in Nigeria, South Africa, Brazil, Estonia, Indonesia, and others. Students will write: two short papers on the role of music within recent protest movements, a midterm essay, and a final research paper on a protest topic of their choice. No previous musical background necessary; open to all students.
Fall MUSC0065 S01 17167 MWF 2:00-2:50(07) (S. Kaskowitz)

**MUSC 0071. Opera.**
A survey of the history, aesthetics, and politics of opera from 1600 to the present day. Analyzes operas and scenes by Monteverdi, Purcell, Mozart, Rossini, Verdi, Wagner, Strauss, and others. Ability to read music not required.
Fall MUSC0071 S01 16015 TTh 2:30-3:50(11) (D. Gooley)

**MUSC 0200. Computers and Music.**
An introduction to the field of computer music, focusing on the use of electronics and computers in music and performance. Investigates basic acoustics, perception of sound, the history of music technology, and musical applications. Extensive listening assignments illustrate the impact of technology on popular and experimental genres. No prerequisites, though some experience with computers and some knowledge of music is very helpful. Significant hands-on experience with computer music systems. Enrollment limited to 80 students. Permission will be granted based on a questionnaire given in the first class, with preference given to lower-level students. LILE
Fall MUSC0200 S01 16010 TTh 10:30-11:50(13) (T. Winkler)

**MUSC 0220. Electroacoustic Improv Ensemble.**
An ensemble devoted to free improvisation with new media. Experimental approaches to sound and focused listening techniques are explored with acoustic instruments, live electronics, real-time video, together with networked improvisation, and more. Enrollment limited to 12 students; by audition.
Fall MUSC0220 S01 16081 W 7:00-9:50PM(17) (J. Rovan)

**MUSC 0221. Electroacoustic Improv Ensemble.**
An ensemble devoted to free improvisation with new media. Experimental approaches to sound and focused listening techniques are explored with acoustic instruments, live electronics, real-time video, together with networked improvisation, and more. Enrollment limited to 12 students; by audition.
Spr MUSC0221 S01 24993 W 7:00-9:50PM(14) (J. Rovan)

**MUSC 0400. Introduction to Music Theory.**
An introduction to musical terms, elements, and techniques, including notation, intervals, scales and modes, triads and seventh chords, modulation, melody writing and harmonization, analysis, and composition. Ear-training and sight-singing are included. For students with some musical training. Enrollment limited to 40.
Fall MUSC0400 S01 15904 MWF 10:00-10:50(03) (L. Jodry)
Spr MUSC0400 S01 25973 MWF 11:00-11:50(04) (J. Jolte-Nagy)

**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. MUSC0400 is appropriate for students who need training in the rudiments to prepare for MUSC0550. MUSC0550 is prerequisite to MUSC0560.
Fall MUSC0550 S01 16019 TTh 1:00-2:20(10) (M. Steinbach)
Fall MUSC0550 S02 16020 TTh 10:30-11:50(13) (E. Nathan)

**MUSC 0560. Theory of Tonal Music.**
See Theory Of Tonal Music (MUSC 0550) for course description. Prerequisite: MUSC 0550 or permission of the instructor.
Spr MUSC0560 S01 24996 TTh 1:00-2:20(10) (M. Steinbach)
Spr MUSC0560 S02 24997 TTh 10:30-11:50(09) "To Be Arranged"

**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 performances. Enrollment is by audition, based on voice quality, experience, and music-reading ability. Instructor permission required.
Fall MUSC0600 S01 16027 MW 6:30-8:20PM(15) (L. Jodry)

**MUSC 0601. Chorus.**
See Chorus (MUSC 0600) for course description.
Spr MUSC0601 S01 24971 MW 6:30-8:20PM(13) (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 16028 TTh 7:15-9:45PM(05) (P. Phillips)

**MUSC 0611. Orchestra.**
See Orchestra (MUSC 0610) for course description.
Spr MUSC0611 S01 24972 TTh 7:15-9:45PM(12) (P. Phillips)

**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 16029 W 6:00-8:21PM (17) (M. McGarrell)
Fall MUSC0620 S02 16029 M 6:00-7:20(17) (M. McGarrell)

MUSC 0621. Wind Symphony.
See Wind Symphony (MUSC 0620) for course description.

Spr MUSC0621 S01 24973 W 6:00-8:21PM (14) (M. McGarrell)
Spr MUSC0621 S02 24973 M 6:00-7-2(14) (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 16034 Th 6:10-7:20(15) (M. McGarrell)
Fall MUSC0630 S01 16034 M 7:30-8:50PM (15) (M. McGarrell)
Fall MUSC0630 S02 16035 T 8:00PM-9:20PM (15) (M. McGarrell)
Fall MUSC0630 S03 16036 W 2:03-3:20(15) (M. McGarrell)
Fall MUSC0630 S04 16037 W 4:00-5:20(15) (M. McGarrell)
Fall MUSC0630 S05 16038 F 4:00-5:20(15) (M. McGarrell)

MUSC 0631. Jazz Band.
See Jazz Band (MUSC 0630) for course description.

Spr MUSC0631 S01 24974 Th 6:10-7:20(18) (M. McGarrell)
Spr MUSC0631 S01 24974 M 7:30-8:50PM (18) (M. McGarrell)
Spr MUSC0631 S02 24979 T 8:00PM-9:20PM (18) (M. McGarrell)
Spr MUSC0631 S03 24980 W 2:03-3:20(18) (M. McGarrell)
Spr MUSC0631 S04 24981 W 4:00-5:20(18) (M. McGarrell)
Spr MUSC0631 S05 24982 F 4:00-5:20(18) (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 16047 W 5:00-7:20(17) (M. McGarrell)

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 24983 W 5:00-7-20(14) (M. Obeng)

MUSC 0645. Brazilian Choro Ensemble.
Half credit each semester. Students will play this popular Brazilian style, which emerged in the late 19th century and is often compared to early jazz. Classes run according to the traditional roda model, a structured jam session where performers read through, improvise upon, and hone their abilities to play familiar tunes. Prior familiarity with choro music not required, but some instrumental expertise is; ability to read notation preferred. Typical instruments include guitar, cavaquinho (Brazilian ukulele), mandolin, flute, and pandeiro (Brazilian tambourine), but others are welcome to participate on instructor approval, as are performers interested in learning these. Enrollment limited to 20.

Fall MUSC0645 S01 16057 M 5:30-7:00(15) (E. Kurtz)

MUSC 0646. Brazilian Choro Ensemble.
Half credit each semester. Students will play this popular Brazilian style, which emerged in the late 19th century and is often compared to early jazz. Classes run according to the traditional roda model, a structured jam session where performers read through, improvise upon, and hone their abilities to play familiar tunes. Prior familiarity with choro music not required, but some instrumental expertise is; ability to read notation preferred. Typical instruments include guitar, cavaquinho (Brazilian ukulele), mandolin, flute, and pandeiro (Brazilian tambourine), but others are welcome to participate on instructor approval, as are performers interested in learning these. Enrollment limited to 20.
MUSC 1030. Tonal Counterpoint.
The contrapuntal techniques of the 18th century with emphasis on music of Bach. Written exercises in and analysis of several genres including fugue. Prerequisite: MUSC 0560 or permission of instructor.
Fall  MUSC1030 S01  16011  TTh  10:30-11:50(13) (L. Wang)

MUSC 1040. Advanced Music Theory I.
A study of chromaticism and advanced tonal techniques, with a focus on 19th-century European art music. Assignments will include exercises in analysis and composition and in-class presentations. Prerequisite: MUSC 0560 with a grade of B, or the equivalent.
Spr  MUSC1040 S01  24824  MWF  11:00-11:50(04) '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 permission of the instructor. Enrollment limited to 20 students.
Fall  MUSC1100 S01  16013  TTh  2:30-3:50(11) (L. Wang)

MUSC 1110. Seminar in Composition.
Finding a personal voice as a composer. Assignments develop familiarity with large forms and increasingly complex structures. Analyses of contemporary compositions elucidate issues of aesthetic and political stance inherent in compositional activity and teach technical facility and range of expression. Problems of rehearsal and performance for new music are considered. Prerequisite: MUSC 0560 and 1100, or permission of the instructor. Enrollment limited to 20 students.
Spr  MUSC1110 S01  24929  M  3:00-5:30(13) 'To Be Arranged'

MUSC 1120. The Technique of Orchestration.
The study of orchestration includes the ranges, sounds, and idiosyncrasies of the individual instruments, and the combination of those instruments into ensemble textures. A series of graduated assignments, including pieces for solo cello, string quartet, wind quintet, wind ensemble, and full orchestra, form the basis of this course. Prerequisite: MUSC0560 or permission of the instructor. Not open to first year students.
Spr  MUSC1120 S01  24925  MWF  1:00-1:50(06) 'To Be Arranged'

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
Fall  MUSC1200 S01  24964  TTh  2:30-3:50(11) (J. Moses)

Seminar in Electronic Music is a study of music employing electronic media, including real-time digital signal processing, multimedia, and live performance. Technical aspects of the course focus on programming using Max/MSP to create interactive projects and algorithmic compositions. Permission of instructor required. Interested students must come to the first class. Preference will be given to students who have completed MUSC 0200.
Spr  MUSC1210 S01  24961  TTh  1:00-2:20(10) (J. Rovan)

MUSC 1250. Sound Design.
This production seminar is a study of techniques and aesthetics used to create sonic environments and effects that enhance a variety of media including video, radio and audio art, new media, theater, and installation art. Technical topics include audio production in multi-channel formats, advanced audio editing, mixing and synthesis techniques, and audio system design. Enrollment limited to 12 students. Preference will be given to students who have completed MUSC 1200. Others will be evaluated for potential future work in the MEME program (Multimedia and Electronic Music Experiments) and past participation in MEME. Admission is determined by an entrance questionnaire completed at the first class meeting. Prerequisite: MUSC 1200. LILE
Fall  MUSC1250 S01  16009  TTh  10:30-11:50(13) (J. Moses)

This course examines the music industry and highlights areas where music and business intersect. Students will work in groups to explore the role of artists as they form a band, create original music, work with producers, record music, and plan a tour to develop and maintain their fanbase. Students will learn the building blocks of a successful musical career including copyrights, fan engagement, social marketing, building and managing the artist’s team, forming business entities, budgeting, taxes, and intellectual property rights. We will examine the publishing, recording, and touring industries and explore methods and tools for developing a sustainable business strategy.
Fall  MUSC1270 S01  16082  W  3:00-5:30(17) (V. Lovely)

This advanced seminar investigates new ideas and developments in electronic music from 1990 to the present. The course consists of reading and discussion of seminal texts in the field, “deep” listening of electronic work, and investigating various methods for analysis. Students will respond to the materials with a series of short essays and creative assignments. Open to upper-level undergraduates and graduate students. The final class list will be determined by a questionnaire handed out in the first class. Prerequisite: MUSC0200 preferred. Enrollment limited to 16.
Spr  MUSC1280 S01  25076  W  2:00-4:50(07) (T. Winkler)

MUSC 1500A. Major Masters and Repertoires of Music: Bach.
An examination of the life and work of Bach, including its place in German church music, views of his contemporaries and explanation of his manuscript and publishing history.
Spr  MUSC1500A S01  24930  TTh  9:00-10:20(08) (L. Jodry)

MUSC 1500B. Major Masters of Music: Olivier Messiaen.
This seminar explores Messiaen’s life, theoretical writings, and above all his music. Listening and analysis will focus on Messiaen’s idiosyncratic harmonic and rhythmic language as well as performance practice issues. We will investigate Messiaen’s use of color, plainsong, “modes of limited transposition,” “personages rhythmic,” birdsong, serialism, Greek modes, and Indian ragas via representative works. We will also examine Messiaen’s formation and his legacy as teacher/composer/performer. Final project is either student performance/analysis or a theoretical/historical paper. Prerequisite MUSC 0560. Class size limited to 16.
Spr  MUSC1500B S01  24995  W  3:00-5:30(14) (M. Steinbach)

MUSC 1690D. Seminar in Jazz Studies: The Changing Standard of Jazz.
This class studies the history and aesthetics of jazz by examining “standard” tunes and comparing multiple realizations by jazz artists. The most common standards have been arranged and recorded hundreds of times by jazz musicians and are still played daily in the repertoire or working musicians. We will consider how jazz artists reinterpret these tunes to “make a statement,” and will investigate how the renditions have evolved over time in response to changes of style and historical context. No background in jazz required, but students must have some fluency in basic musical concepts. Prerequisites: MUSC0400 or MUSC0550, or permission of instructor.
Fall  MUSC1690D S01  16007  F  3:00-5:30(14) (D. Gooley)

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.
Spr  MUSC1700 S01  25010  M  3:00-5:30(15) (P. Phillips)

Half credit each semester. Restricted to skilled musicians. Restricted to skilled musicians demonstrating mastery of an advanced repertory
in their fields. Openings are limited. Enrollment and re-enrollment is
by audition and jury. Lessons are given by consultants to the Applied
Music Program. MUSC 0830, 0840 is prerequisite to this course. A fee is
charged for enrollment. Copies of the Applied Music Program Guidelines
giving detailed information are available online at www.brown.edu/
music. Prerequisite: MUSC 0400, or MUSC 0550, MUSC 0560. Written
permission required. May be repeated up to four times for credit.

MUSC 1900. Introduction to Ethnomusicology.
The study of people making music. Ethnographic research and writing
on musical practices; history of ethnomusicology; musical case studies
from around the world highlighting such issues as authenticity, tradition,
commercialization, and nationalism, and the relationships between
music and identity in several case studies. We consider the possible contributions of music to cross-cultural understanding, and discuss the ethics of musical border-crossing.

MUSC 1905E. Music in the Middle East and North Africa.
This course provides an introduction to the music of the eastern Mediterranean, north Africa, Turkey, and Iran. Throughout this course we will view music culture through a variety of thematic lenses. We will see how music is implicated in the human experience; how musical forms transcend political boundaries, ethnic lines, and religious divides; how music influences gender and sexuality. We will explore elite, folk, and popular genres. Though we will also discuss musical structures and terminology, no musical training is necessary for this course.

Examines topics related to the everyday use of music: the determinants of musical taste, music for emotional self-management (in the health club or Iraq War), "high" vs. "low" music; eclectic taste; popular music and the music industry; mp3blogs; new business models. Readings (in sociology, history, and cultural studies) and original field research by class members. Instructor permission required. Enrollment limited to 20. WRIT Fall MUSC1920 S01 16012 M 3:00-5:30(15) (M. Perlman)

The traditional music of Java, Bali, and Sumatra, with special attention to the bronze percussion orchestras (gamelan) and their use in ritual, dance, and drama. Topics include: music and trance; the impact of colonialism; nationalism, modernization, and tourism; and Indonesian music and "world beat." Theory and practice are integrated through extensive instruction on Brown's gamelan instruments. Enrollment limited to 20 students. Spr MUSC1930 S01 24963 TTh 1:00-2:00(10) (M. Perlman)

This seminar-practicum explores the art, science, and politics of music technology from a variety of theoretical and experimental perspectives. Topics will include early mechanical instruments; World War II radio; 1960s-70s studio innovations (multitrack, analog synthesis, tape effects); and contemporary "virtual" tech (mp3, Internet, remix apps). We will read from ethnomusicology, music history, cultural studies, and cognitive science. Most class meetings will include lab where students will create sound projects related to course topics. We will work with Ableton Live software, plus samplers, drum machines, and vinyl. No previous musical or technological training required. Enrollment limited to 15.

Fall MUSC1945 S01 17189 F 3:00-5:30(14) (S. Hankins)

Students with experience in African and related musical traditions perform drumming, dancing, and singing of Ghana and the diaspora. Focus on a more challenging repertoire with emphasis on multi-part, lead, and improvisational playing. Prerequisite: audition. May be repeatable for credit. Instructor permission required. Enrollment limited to 15 students.

Fall MUSC1960 S01 16052 W 7:30-9:50PM(17) (M. Obeng)

Students with experience in African and related musical traditions perform drumming, dancing, and singing of Ghana and the diaspora. Focus on a more challenging repertoire with emphasis on multi-part, lead, and improvisational playing. Prerequisite: audition. May be repeatable for credit. Instructor permission required. Enrollment limited to 15 students.

Fall MUSC1961 S01 24994 W 7:30-9:50PM(17) (M. Obeng)

Directed undergraduate research for advanced students. Prerequisite: permission of the instructor. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Directed undergraduate research for advanced students. Prerequisite: permission of the instructor. Section numbers vary by instructor. Please see the registration staff for the correct section number to use when registering for this course.

MUSC 2070. Music and Identity.
From 19th-century European nationalism to 20th-century American multiculturalism, people have used music to affirm their identities. Drawing on anthropological and sociological theory, we examine the variety of connections between music and identity in several case studies. We consider the possible contributions of music to cross-cultural understanding, and discuss the ethics of musical border-crossing.

MUSC 2080E. Seminar in Ethnomusicology: Historiography of Music and the Performing Arts.
Advanced seminar in methods of historical research and their relevance to the interpretation of music, the performing arts, and culture. Readings include Foucault, Collingwood, Schorske, Said, Adorno, Pierre Nora and Diana Taylor, as well as musicological essays by Taruskin, DeVeaux, Nettl, Tomlinson, Tretler, Lawrence Kramer, Susan McClary, Kerman, and Nicholas Cook. Open to juniors, seniors, and graduate students.

Spr MUSC2080E S01 24928 F 3:00-5:30(15) (D. Gooley)

MUSC 2080G. Seminar in Ethnomusicology: Sound Studies.
Explores sound studies through readings of exemplary texts and discussions of the key debates that enliven this interdisciplinary field of inquiry. Drawing on philosophical, musicological, anthropological, and other kinds of writings, it explores issues like the way that relations between sound, noise, silence, and music have formed in different cultures and different historical periods. Theoretical structures that determine the place of sound in artistic practice and in everyday life; the power relations that are implicated in the design of local soundscapes; and the place of aural perception within the sensorium, among other potential topics. Enrollment limited to graduate students.

Spr MUSC2080G S01 25064 W 3:00-5:30(14) (C. Tucker)

MUSC 2080H. Interdisciplinary Perspectives in Ethnomusicology.
Ethnomusicology has always been interdisciplinary, and is becoming more so. The student today may encounter concepts from semiotics, linguistics, cultural studies, literary theory, political economy, sociology, cognitive psychology, media studies, sound studies, science and technology studies, organizational studies, and material culture studies, and other disciplines as well. We will examine some of the key concepts of these fields and consider their possible uses in the study of the performing arts. From ‘affordances’ to the ‘type/token distinction,’ from ‘actor-network theory’ to the ‘third-person effect,’ we will learn to apply (and criticize) concepts presupposed by much current socio-cultural theorizing.

Spr MUSC2080H S01 25077 Th 4:00-6:30(17) (M. Perlman)

This seminar will explore the use of interactive systems from the point of view of the programmer/performer. Using the dialectic between composition and improvisation as a starting point, we will explore the aesthetics and philosophy of performance, from the perspective of real-time systems that enhance the relationship between action and event. The experience of writing a real-time composition will then be developed in experiments in improvisation and real-time networks. The goal is to blur the boundaries of composer and performer by exploring the intersections of each role within a real-time electronic environment.

Fall MUSC2230 S01 16274 W 4:00-6:30(17) (J. Rovan)

MUSC 2270B. Performance in a Virtual World.
A co-taught production course exploring emerging technology in the context of live performance, focusing on techniques where the body appears both on stage and on screen. What does it mean to be "live"
challenge as a touchstone for a broader examination of political philosophy that falls into three main categories: arguments over the basis of the state’s claim to an individual’s obedience; arguments over the scope of its claim to authority; and arguments over the existence of our obligation to obey in the face of that claim.

PHIL 0100. Critical Reasoning.
The overall goal of this course is to improve students’ ability to think clearly and carefully and to enable them to identify and evaluate arguments, not only those used in philosophy, but in politics, law, public policy, religion, and science as well. This includes enabling them to: understand and apply relevant concepts like truth, validity, soundness; determine the structure of an argument; work with arguments using basic propositional logic; understand and apply rules of inference; understand the basics of probability theory; identify and avoid common fallacies. No prior knowledge of philosophy or formal logic will be presupposed in this course.

Spr PHIL0100 S01 24473 MWF 9:00-9:50(02) (L. Yan)

PHIL 0220. Introduction to Philosophy.
This course will introduce the student to the how, what, and why of philosophical inquiry through engagement with some of the major themes, and major figures, of the field. We will follow our wonder about the world around us, ourselves and about how we should act in it, using classical as well as contemporary writings. Through a combination of lectures, readings, class discussions, and assignments the student will develop their ability to understand and engage with philosophical texts, evaluate arguments, and express their critical and reflective opinions in writing.

Fall PHIL0220 S01 15527 MWF 9:00-9:50(16) (T. Fuchs)

PHIL 0300C. Unacceptable Conclusions: Arguments Against Common Sense.
Consider three claims: *Plants obtain energy from sunlight.* "The earth will not suddenly lurch out of orbit tomorrow." "Hurtling people is morally wrong." Probably, we take these claims to be objectively true. And probably, we take ourselves to know them to be true. According to both the relativist and the skeptic, we are wrong. This course introduces students to the two most fundamental challenges to views widely taken to be core tenets of "common sense." We will first consider the challenges in their most general forms and then examine domain specific challenges, with special regard to the domains of science and morality.

Fall PHIL0300C S01 15592 TTh 9:00-10:20(08) (Z. Barnett)

PHIL 0300D. Love and Friendship.
Love and friendship are of central importance to a flourishing life. But what are love and friendship? This course will begin with a study of a few key historical texts (Plato, Aristotle, and Montaigne). After that we will turn to contemporary philosophy. We will consider the following questions: What is the nature and value of friendship? Do we have reason to love the people we love? What may parents do for their children and what do grown children owe their parents? Ought we to love our country? An emphasis will be placed on careful reconstruction and evaluation of philosophical arguments.

Spr PHIL0300D S01 25201 TTh 9:00-10:20(08) (B. Recknerich)

PHIL 0350. Ancient Philosophy.
We will discuss the ethics, epistemology, and metaphysics of the principal figures in ancient philosophy from the Presocratics to Aristotle. Emphasis is given to understanding the problems the philosophers were trying to solve and to assessing the arguments for their various positions. Primary readings are from the original sources in translation. WRIT

Fall PHIL0350 S01 15083 MWF 12:00-12:50(12) (M. Gill)

PHIL 0360. Early Modern Philosophy.
An introduction to central themes in Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume, and Kant. Major topics include: reason, experience, and knowledge; substance and the nature of the world as it really is; induction, causation, and the origin of our ideas; skepticism, realism, and idealism. Connections are made with the scientific revolution of the 17th century. There will be discussion and advice on ways to approach philosophical reading, research and writing. WRIT

Spr PHIL0360 S01 24255 MWF 12:00-12:50(05) (P. Goyer)
PHIL 0390. Global Justice.
Is it unjust that people in some countries have less wealth, worse health, etc., than those in other countries? Does this depend on whether the better off countries partly caused the disparity? Does it depend on whether the worse off are poor, or is it enough that they are relatively worse off? If there are global injustices, what obligations are there, and on whom do they fall, to remedy them? We will study (mostly) recent philosophical work on such questions, including attention to special contexts such as immigration, climate change, poverty, colonialism, secession, intervention, and war.  
Fall PHIL0390 S01 15103 MW 2:00-2:50(07)  
(D. Estlund)

PHIL 0450. The Meaning of Life.
This is an introductory course in ethics, with a focus on the question of what is the nature of the human good, or of a life lived well. Readings will be from classical sources (Aristotle, Epicurus, Kant, Nietzsche, Camus) as well as from contemporary authors. In investigating this question, the course will also introduce students to some of the main problems and positions in moral philosophy. Central concepts such as obligation, responsibility, pluralism, and moral knowledge will be discussed, but in the larger context of what is the nature of the good life. No prior work in philosophy will be presupposed.  
Fall PHIL0450 S01 15081 MWF 11:00-11:50(04)  
(C. Larmore)

PHIL 0500. Moral Philosophy.
An introduction to ethics, the part of philosophy that is concerned with right and wrong, good and bad, virtue and vice. We will look at some central issues in the field as well as some of the main theories in it. Is an action good or bad because of its anticipated results or regardless of these results? Is it ever right to kill one person to save five? Is relativism true? Is abortion wrong? These would be some of the topics discussed. WRIT  
Fall PHIL0500 S01 15089 TTh 1:00-2:20(10)  
(N. Arpaly)

PHIL 0540. Logic.
An introduction to perhaps the most fundamental tool of rational thought: deductive logic. Course begins with basic sentential logic, then moves on to deduction, quantification, and prediction. Argumentation and reasoning may also be addressed at times. No previous experience with logic or philosophy is required.  
Fall PHIL0540 S01 15080 MWF 10:00-10:50(03)  
(R. Heck)

PHIL 0850. Philosophy of Language.
Discussion of the nature of linguistic meaning and other topics, such as vagueness; metaphor; and language, thought, and culture.  
Fall PHIL0850 S01 17040 MW 1:00-1:50(06)  
(A. Bjurman Pautz)

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. WRIT  
Spr PHIL0880 S01 24261 MWF 2:00-2:50(07)  
(F. Ackerman)

PHIL 0990I. Self-Respect.
We often act as if the sole object of morality were treating others properly. In this course, we will consider how we ought to treat ourselves. Among the questions we will consider are: What is self-respect? How is it attained, preserved, and lost? Can self-respect exist in the absence of personal and moral integrity? This course is a Senior Seminar; lectures and discussions will be led at the level of advanced undergraduates.  
Fall PHIL0990I S01 16943 Th 4:00-6:30(02)  
(M. Mason)

PHIL 0990M. Descartes Meditations.
This seminar will focus on the main arguments and overall goals of Descartes' Meditations, read in conjunction with the Objections and Replies and some of Descartes' other writings. Also discussed will be some philosophically engaging studies of the Meditations by contemporary writers such as Harry Frankfurt and Bernard Williams.  
Fall PHIL0990M S01 15094 W 3:00-5:30(17)  
(C. Larmore)

PHIL 1100D. Conditionals.
In this course, we will look at different theories of what "if P, then Q" even have truth conditions? Some logic will be very helpful; some familiarity with philosophy of language also helpful.  
Fall PHIL1100D S01 15084 MW 12:00-12:50(12)  
(J. Dreier)

PHIL 1260. Plato.
A close reading of Plato's major dialogues from a philosophical perspective. Topics may include his ethics, politics, metaphysics, epistemology, philosophy of mind, philosophy of language, or aesthetics. Readings are from original sources (in translation) and contemporary secondary literature. (Students wishing to read the texts in the original Greek should make arrangements with the instructor.) WRIT  
Spr PHIL1260 S01 28007 TTh 6:40-8:00PM(12)  
(M. Gill)

PHIL 1290. Kant's Moral Philosophy.
An introduction to the central themes of Kant's moral philosophy, including autonomy, freedom, happiness, obligation, and virtue. Kant's position in the history of moral philosophy will also be considered. Readings to include all of Kant's major writings in this field, thus Groundwork for the Metaphysics of Morals, Critique of Practical Reason, Religion within the Boundaries of Mere Reason, and Metaphysics of Morals, as well as several essays and lectures. Work will include two short papers and one term paper.  
Fall PHIL1290 S01 15473 TTh 10:30-11:50(13)  
(F. Guyer)

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. WRIT  
Fall PHIL1400 S01 15092 TTh 2:30-3:50(11)  
(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.  
Spr PHIL1420 S01 24264 TTh 10:30-11:50(09)  
(C. Larmore)

PHIL 1520. Consciousness.
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? WRIT  
Spr PHIL1520 S01 24266 TTh 1:00-2:20(10)  
(C. Hill)

PHIL 1590. Philosophy of Science.
Philosophical examination of the chief classical and contemporary theories of the nature and function of law. Topics include the definition of law, the nature of legal systems, the logic of legal reasoning, the analysis of basic legal conceptions (e.g., of right and duty), legal rules and principles, law and justice, and law and morality. WRIT  
Fall PHIL1600 S01 15082 MW 11:00-11:50(04)  
(D. Estlund)

PHIL 1620. Philosophy of Quantum Mechanics.
Can cats be both dead and alive? Can baseballs tunnel through solid walls? Is the universe constantly branching? What does that even mean? In this course we’ll examine the standard non-relativistic quantum mechanical formalism and show how various interpretations of that
formalism give surprising answers to the questions above. Among the philosophical issues at stake: the nature of explanation and probability in the physical world, how if at all we can make choices between empirically equivalent theories, and the role of appeals to intuition, common sense, and simplicity in science. Prerequisite: One previous course in philosophy. No physics experience required. WRIT
Spr PHIL1620 S01 24271 TTh 2:30-3:50(11) (N. Emery)

PHIL 1640. The Nature of Morality.
Investigates major theories and issues concerning the nature of moral value. Readings from 20th-century authors. Issues include naturalism, supervenience, moral motivation, subjectivity/objectivity of value, skepticism, moral relativism, and moral realism. WRIT
Fall PHIL1640 S01 15079 MWF 10:00-10:50(03) (J. Dreier)

PHIL 1650. Moral Theories.
A systematic examination of the main alternative normative moral theories: consequentialism; moral rights; moral duties; moral virtues. Focuses on the principal issues in the formulation of the different theories, on the main points of conflict between them, and on the critical evaluation of each. Readings are drawn mainly from contemporary work in moral philosophy.
Spr PHIL1650 S01 24265 TTh 1:00-2:20(10) (N. Arpaly)

PHIL 1730. Nietzsche.
A systematic study of Nietzsche's philosophy as it developed throughout his works. Substantial attention also given to Nietzsche's major philosophical predecessors (e.g., Kant and Schopenhauer) as well as to the most significant recent secondary literature on his philosophy. Prerequisite: at least one prior course in philosophy.
Spr PHIL1730 S01 24268 TTh 2:30-3:50(11) (B. Register)

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? 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? WRIT
Fall PHIL1750 S01 15067 TTh 10:30-11:50(13) (D. Christensen)

PHIL 1760. Philosophy of Language.
This course examines recent philosophical work in natural language semantics. The focus is on names and descriptions. We will consider which kind of propositions sentences containing these terms express, and their truth conditions. We may also examine belief reports and vague terms, and other theoretical issues. Prerequisite: PHIL 0540 or 1630.
Spr PHIL1760 S01 24260 MWF 1:00-1:50(06) (R. Heck)

PHIL 1810B. Expressivism.
Expressivism is a theory (or family of theories) of the language of ethics (and perhaps other things), according to which we best understand the meanings of ethical statements not by grasping their truth conditions, but by understanding what a person does (and what state of mind a person expresses) by making them and otherwise using them.
Spr PHIL1810B S01 25210 Th 4:00-6:30(17) (J. Dreier)

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.
Spr PHIL1880 S01 24253 MWF 10:00-10:50(03) (R. Heck)

PHIL 1890B. Wittgenstein.
This course will focus on the Philosophical Investigations and its treatment of various questions in the philosophy of language and the philosophy of mind. Some attention will also be given to other writings of the later Wittgenstein. Prerequisite: Two courses in philosophy.
Spr PHIL1890B S01 24274 Th 3:00-5:30(17) (C. Larmore)

An elective for students with at least six previous courses in philosophy. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

PHIL 2010B. Physics as Metaphysics.
Philosophers and physicists often investigate similar topics and struggle with similar methodological concerns: What is the nature of time and space? What are the fundamental constituents of the world? Is a simpler theory more likely to be true? When are we allowed to posit new fundamental laws? In this course we will investigate the ways in which philosophers can learn from physicists, and vice-versa, in their shared investigation of an overlapping subject matter. No previous experience with physics required.
Fall PHIL2010B S01 15204 M 3:00-5:30(15) (N. Emery)

PHIL 2020O. Puzzles of Consciousness.
This seminar will be an opinionated introduction to some philosophical puzzles about consciousness. Topics covered will include: the debate between representationalists and their opponents, the metaphysics of physicalism (grounding, reduction, etc.), the internalism-externalism debate and why it matters to the mind-body problem, the status of the "secondary qualities," the (descriptive, normative and epistemic) significance of consciousness in nature, the issue of whether facts about consciousness might be radically indeterminate, the debate over whether we have "purely cognitive experiences", the "phenomenal intentionality program" of grounding all intentionality (belief, desire, etc.) in consciousness, "emergentist" approaches to consciousness, and "Russellian Monism."
Fall PHIL2020O S01 17085 Th 4:00-6:30(02) (A. Pault)

PHIL 2030A. Moral Psychology.
We all have our notions of good people, bad people, and ordinary people, but reality tends to defy these concepts. Many otherwise "nice", family loving, church going people voted for Hitler. On the other hand, people with stupid or even evil views about morality sometimes turn out to be a lot better "in practice" than their smart counterparts who know Kant by heart. The same person may be very honest with her husband but very dishonest with the IRS, brave in battle but scared of public speaking. In this class we shall explore this complexity, touching upon topics like rationality, free will, will, character, and love. We'll look at attempts by contemporary philosophers to find some method in the mess. Undergraduates require instructor permission to enroll.
Spr PHIL2030A S01 24272 Th 4:00-6:30(17) (N. Arpaly)

PHIL 2050G. Epistemology.
No description available.
Spr PHIL2050G S01 25089 M 3:00-5:30(13) (D. Christensen)

PHIL 2060A. Concepts.
 Topics will include: the individuation of concepts, the relationship between concepts and language, the relationship between concepts and perception, the semantic, representational, and informational properties of concepts, the nature of propositions, "conceptual truth" and the a priori, intuitions and experimental philosophy, and conceptual combination. Most of the readings will be from such philosophers as Peacocke, Prince, Brandom, Gibbard, and Machery, but we will also look the work of several psychologists, including Larry Barsalou and Susan Carey.
Spr PHIL2060A S01 25430 W 3:00-5:30(14) (C. Hill)

PHIL 2070M. Moral Realism.
We will look at recent work on moral realism, especially non-naturalist realism, including work by Parfit, Scanlon, Enoch, Kramer, and critical reaction thereto.
Spr PHIL2070M S01 25810 M 3:00-5:30(13) (J. Dreier)

PHIL 2080F. Kant's Political Philosophy.
A close examination of Kant's political philosophy or "philosophy of right," with topics including: the relation between right and morality; innate and acquired rights; Kant's analysis of property; coercion and punishment; Kant's republicanism; the obligations of politicians and citizens; rebellion and reform; and international law and perpetual peace. Readings will be drawn from "Theory and Practice," Toward Perpetual Peace, Metaphysics of Morals, The Conflict of the Faculties, and Lectures and Dreier on Political Philosophy.
PHIL 2800G. Art and Philosophy in the Nineteenth Century.
An excessively cognitivist approach to aesthetics in German Idealism led to Hegel's thesis of the "end of art" (who had himself redefined aesthetics as philosophy of art). During the remainder of the century, philosophers searched for more complex approaches to the experience of art that would not have this consequence. We will explore this narrative. Authors to be studied include Hegel, Schopenhauer, Emerson, Nietzsche, Ruskin, Dilthey, and Santayana.
Fall PHIL2800G S01 16636 W 3:00-5:30(17) (P. Guyer)

PHIL 2100L. Political Authority and Its Limits.
On what basis are political institutions (domestic or global) permitted to coercively enforce their rules, and/or impose genuine (pro tanto) moral obligations to obey. We will study recent efforts to answer the "philosophical anarchism" that arises from the (alleged) failure of the traditional accounts. In particular, we will explore the prospects for a hypothetical agreement account, which has important connections with recent contract-based approaches to morality in politics, as in Rawls, Scanlon, and others. Finally, we will look at the issues that arise where authority finds its limits: from political criticism, to protest and obstruction up to violence and revolution.
Fall PHIL2100L S01 25615 MW 8:30-9:50(02) (G. Landsberg)

PHIL 2120J. Philosophy of Language.
Our goal in the course is to read two recent papers proposing a somewhat new idea about how to deal with so-called "Frege cases." These are my paper "Solving Frege's Puzzle," and an as yet unpublished paper by Jim Pryor, "Mental Graphs." We'll read these toward the end. Most of our time will be spent developing the background that is necessary to see why such a radical approach might seem like a good idea. As it happens, our focus will be more on philosophy of mind than on philosophy of language, but this kind of issue tends to straddle that border.
Fall PHIL2120J S01 15093 W 3:00-5:30(17) (D. Estlund)

Aristotle's Metaphysics, books VII, VIII, and IX, investigate the question, what is substance? Do these books revise Aristotle's view in the Categories that individual living things are primary substances? We will work through the central books of the Metaphysics systematically, discussing the nature of Aristotle's project, his essentialism, his views about matter and form, potentiality and actuality, particulars and universals, and attempt to understand his conclusions about substance.
Enrollment limited to 40.
Fall PHIL2150G S01 15095 W 6:00-8:30PM(17) (M. Gill)

PHIL 2160N. Ethics, Fiction, and the University.
This interdisciplinary seminar will use fiction as well as conventional philosophical and sociological writings to discuss ethical issues at colleges and universities. Topics will include criteria for selecting and evaluating students and faculty; campus disciplinary proceedings, especially with respect to academic dishonesty, sexual relations, and speech; mental health services on campus; and aspects of the curriculum, including but not limited to those with some previous knowledge of physics. In particular, we will explore the prospects for a hypothetical agreement account, which has important connections with recent contract-based approaches to morality in politics, as in Rawls, Scanlon, and others. Finally, we will look at the issues that arise where authority finds its limits: from political criticism, to protest and obstruction up to violence and revolution.
Fall PHIL2160N S01 25943 M 3:00-5:30(13) (A. Pautz)

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 15099 Arranged (N. Arpaly)
Spr PHIL2200 S01 24269 Arranged (N. Emery)

PHIL 2450. Exchange Scholar Program.
Fall PHIL2450 S01 14599 Arranged "To Be Arranged"
Spr PHIL2450 S01 23804 Arranged "To Be Arranged"

PHIL 2800. Dissertation Workshop.
No description available. Undergraduates require instructor permission to enroll.
Fall PHIL2800 S01 16261 Arranged (C. Hill)
Spr PHIL2800 S01 24270 Arranged (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 PHIL2970 S01 14600 Arranged "To Be Arranged"
Spr PHIL2970 S01 23805 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.
Fall PHIL2980 S01 14601 Arranged "To Be Arranged"
Spr PHIL2980 S01 23806 Arranged "To Be Arranged"

PHIL XLIST. Courses of Interest to Philosophy Concentrators.

Physics
PHYS 0030. Basic Physics.
Survey of mechanics 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. Emphasizes the concepts of elementary calculus but little of its technique. Lectures, conferences, and laboratory. Six hours of attendance. Recommended: MATH 0090 or 0100.
Fall PHYS0030 S01 15202 MWF 11:00-11:50(02) (G. Landsberg)
Fall PHYS0030 S02 15203 MWF 12:00-12:50(02) (G. Landsberg)

PHYS 0040. Basic Physics.
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. Emphasizes the concepts of elementary calculus but little of its technique. Lectures, conferences, and laboratory. Six hours of attendance. Recommended: MATH 0090 or 0100.
Spr PHYS0040 S01 24288 MWF 11:00-11:50(13) (M. Narain)
Spr PHYS0040 S02 24289 MWF 12:00-12:50(13) (M. Narain)

An introduction to Newtonian mechanics that employs elementary calculus. Intended for science concentrators. Potential physics concentrators, who do not have adequate preparation for PHYS 0070, may enroll, but are urged to continue with PHYS 0160 rather than PHYS 0060. Lectures, conferences, and laboratory. Six hours of attendance. Recommended: MATH 0090 or MATH 0100.
Fall PHYS0050 S01 15217 MW 8:30-9:50(16) (M. Dorca)

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 24301 MW 8:30-9:50(02) (M. Dorca)

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.
Fall PHYS0070 S01 15227 MWF 9:00-9:50(16) (C. Tan)

PHYS 0113. Squishy Physics.
A freshman seminar to explore everyday applications of physics. It offers practical training on project based learning. The course involves hands-on experimentation, data analysis and presentation. The course is designed for students interested in any field of science with no pre-requisite. The topics covered include motion, forces, flow, elasticity, polymers, gels,
electricity, energy, etc. Students will be guided to work on several projects over the semester. They are required to report their projects in both written and oral reports. There is no exam for the course. Students are required to register for one of the labs. FYS

Spr PHYS0113 S01 25803 M 3:00-5:30(13) (J. Tang)

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 biomasses. Enrollment limited to 20. FYS

Spr PHYS0114 S01 25703 TTh 2:30-3:50(11) (D. Stein)

PHYS 0160. Introduction to Relativity and Quantum Physics. A mathematically rigorous introduction to special relativity and quantum mechanics. The second course in the three-semester sequence (PHYS 0470 being the third) for those seeking the strongest foundation in physics. Also suitable for students better served by an introduction to modern physics rather than electromagnetism. Lectures, conferences, and laboratory. Six hours of attendance. Prerequisite: PHYS 0070 or 0050. Recommended: MATH 0180 or 0200.

Spr PHYS0160 S01 24311 MWF 9:00-9:50(02) (J. Marston)

PHYS 0220. Astronomy. An introduction to basic ideas and observations in astronomy, starting with the observed sky, coordinates and astronomical calendars and cycles, the historical development of our understanding of astronomical objects. Particular emphasis is placed on the properties of stars, galaxies, and the Universe as a whole, including the basic ideas of cosmology. The material is covered at a more basic level than PHYS 0270. Knowledge of basic algebra and trigonometry is required, but no experience with calculus is necessary. The course includes evening laboratory sessions.

Spr PHYS0220 S01 24318 TTh 10:30-11:50(09) (G. Tucker)

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 PHYS0270 S01 15235 TTh 1:00-2:20(10) (I. Dell’antonio)

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.

Fall PHYS0470 S01 15236 MWF 10:00-10:50(03) (J. Tang)

PHYS 0500. Advanced Classical Mechanics. Dynamics of particles, rigid bodies, and elastic continua. Normal modes. Lagrangian and Hamiltonian formulations. Prerequisites: PHYS 0070, 0160 or 0050, 0060 and MATH 0180 or 0200; or approved equivalents.

Spr PHYS0500 S01 24319 MWF 10:00-10:50(03) (M. Spradlin)

PHYS 0560. Experiments in Modern Physics. Introduction to experimental physics. Students perform fundamental experiments in modern quantum physics, including atomic physics, nuclear and particle physics, and condensed matter physics. Visits to research labs at Brown acquaint students with fields of current research. Emphasizes laboratory techniques, statistics, and data analysis. Three lecture/discussion hours and three laboratory hours each week. Required of all physics concentrators. Prerequisites: PHYS 0070, 0160 or 0050, 0060; 0470. WRIT

Spr PHYS0560 S01 24320 MWF 11:00-11:50(04) (X. Ling)

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 PHYS0720 S01 15242 MWF 11:00-11:50(04) (A. Jevicki)

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 PHYS0790 S01 15243 TTh 9:00-10:20(08) (G. Xiao)

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 PHYS1170 S01 24495 MWF 2:00-2:50(07) (C. Tan)

PHYS 1250. Stellar Structure and the Interstellar Medium. This class is an introduction to the physics of stars and their environment. The course covers the fundamental physics that set the physical properties of stars, such as their luminosity, size, spectral properties and how these quantities evolve with time. In addition, it includes a study of the physics that takes place in the gaseous environment surrounding stars, the Interstellar Medium (ISM). The ISM is very important because it contains a wealth of information on the evolutionary history of galaxies, their composition, formation and future. Prerequisites: PHYS 0270, PHYS 0500, or instructor permission. PHYS 1530 (perhaps taken concurrently) is strongly recommended but not required.

Spr PHYS1250 S01 24496 TTh 9:00-10:20(08) (I. Dell’antonio)

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. WRIT

Fall PHYS1270 S01 15244 TTh 1:00-2:20(10) (S. Koushiappas)

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 PHYS1410 S01 15246 MWF 9:00-9:50(16) (V. Mitrovic)

PHYS 1420. Quantum Mechanics B. See Quantum Mechanics A. (PHYS 1410) for course description.

Spr PHYS1420 S01 24321 MWF 9:00-9:50(02) (D. Feldman)

PHYS 1510. Advanced Electromagnetic Theory. Maxwell's laws and electromagnetic theory. Electromagnetic waves and radiation. Special relativity. Prerequisites: PHYS 0470; and MATH 0180, 0200, or 0350; or approved equivalents.

Fall PHYS1510 S01 15247 TTh 2:30-3:50(11) (X. Ling)

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 PHYS1530 S01 15248 TTh 10:30-11:50(13) (D. Lowe)

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. WRIT

Spr PHYS1560 S01 24322 TTh 9:00-10:20(08) (U. Heintz)
PHYS 1610. Biological Physics. 
Introduction on structures of proteins, nucleotides, and membranes; electrostatics and hydration; chemical equilibria; binding affinity and kinetics; hydrodynamics and transport; cellular mechanics and motions; biophysical techniques including sedimentation, electrophoresis, microscopy and spectroscopy. Suitable for undergraduate science and engineering majors and graduate students with limited background in life science. Prerequisites: MATH 0180.

Fall PHYS1610 S01 15249 TTh 2:30-3:50(11)  
Spr PHYS1610 S01 25801 TTh 2:30-3:50(11) (T. Raben)

PHYS 1970F. Quantum Information.
Quantum information is the modern study of how to encode and transmit information on the quantum scale—in many ways fundamentally different from classical information. This course will connect a standard treatment of Quantum Mechanics with information theory. Some topics will overlap with phyS 1410, but information will be presented from a different viewpoint and with new applications. Topics covered will include: measurement, quantum states, bits, density of states, entanglement, quantum information processing, computing, and some special topics. Students will be expected to complete an end of term project for successful completion of the course.

Spr PHYS1970FSO1 25801 TTh 2:30-3:50(11) (T. Raben)

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 members early in the fall semester 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.

PHYS 2010. Techniques in Experimental Physics. 
No description available.

Fall PHYS2010 S01 15250 W 3:00-5:30(17)  
Spr PHYS2010 S01 24326 W 3:00-5:30(14) (R. Gaitskell)

An introduction to methods of mathematical analysis in physical science and engineering. The first semester course includes linear algebra and tensor analysis; analytic functions of a complex variable; integration in the complex plane; potential theory. The second semester course includes probability theory; eigenvalue problems; calculus of variations and extremum principles; wave propagation; other partial differential equations of evolution.

Fall PHYS2020 S01 15251 T 4:00-6:30(18)  
Spr PHYS2020 S01 15252 TTh 9:00-10:20(08) (D. Feldman)

PHYS 2030. Classical Theoretical Physics I. 
No description available.

Fall PHYS2030 S01 15252 TTh 9:00-10:20(08)  
Spr PHYS2030 S01 24327 TTh 10:30-11:50(09) (A. Jevicki)

PHYS 2040. Classical Theoretical Physics II. 
No description available.

Spr PHYS2040 S01 24327 TTh 10:30-11:50(09) (A. Jevicki)

PHYS 2050. Quantum Mechanics. 
No description available.

Fall PHYS2050 S01 15253 MWF 10:00-10:50(03)  
Spr PHYS2060 S01 15254 MWF 10:00-10:50(03) (R. Pelcovits)

PHYS 2060. Quantum Mechanics. 
No description available.

Spr PHYS2060 S01 24328 MWF 10:00-10:50(03) (R. Pelcovits)

PHYS 2070. Advanced Quantum Mechanics. 
No description available.

Fall PHYS2070 S01 15254 TTh 1:00-2:20(10)  
Spr PHYS2070 S01 23809 TTh 1:00-2:20(10) (A. Voloovich)

PHYS 2100. General Relativity and Cosmology. 
Given every other year.
PHYS 2990. Research in Physics.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

PHYS 2981. Research in Physics.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

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

Fall PHYS2990 S01 14606 Arranged "To Be Arranged"
Spr PHYS2990 S01 23810 Arranged "To Be Arranged"

Political Science

POL 0010. Introduction to the American Political Process.
This course is designed to be an introduction to the American political process, broadly defined. We will cover topics including but not limited to: Constitution, Federalism, Federal Budget, Congress, Presidency, Bureaucracy, Judiciary, Civil Rights, Civil Liberties, Public Opinion, Media, Interest Groups, Political Parties, Campaigns, Elections, and Participation.

Fall POLS0010 S01 15017 MW 6:30-7:50(15) (K. Tate)

POL 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.

WRIT Spr POLS0110 S01 24165 TTh 1:00-2:20(10) (C. Bretschneider)

POL 0200. Introduction to Comparative Politics.
Introduces students to the sub-field of comparative politics or politics within states. Topics include types of regimes (i.e., democratic, authoritarian-with-adjectives, totalitarian); transitions to democracy; collapse of democratic regimes; democratizing, revolutionary and ethnic challenges to the state; and globalization. The course also pays attention to modes of analysis in comparative politics. Cases will be drawn from various regions, including Western and Eastern Europe, Asia, Africa, the Middle East, and Latin America.

Steinfeld Spr POLS0200 S01 24166 TTh 2:00-3:50(11) (E. Steinfeld)

POL 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 15018 TTh 1:00-2:20(10) (J. Branch)

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 qualitative and quantitative approaches are covered. Not open to first-year students.

Wright Spr POLS0500 S01 24167 MWF 10:00-10:50(03) (R. Weitz-Shapiro)

Why were ten national holidays created? The answer requires a review of key events in American political history from 1775 to 1893. Why was the Civil War pivotal? Which presidents were most important in generating support for special days? Conflicts occurred not only in creating the day but which day would be the holiday. Enrollment limited to 20 first-year students.

FYS Fall POLS0820Q S01 15039 M 3:00-5:30(15) (R. Cobb)

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.

FYS Fall POLS0820V S01 15512 Th 4:00-6:30(02) (J. Branch)

POL 0820W. Bleeding Heart Libertarianism.
What is libertarianism? In what sense can libertarians claim to combine the best of the “right” with the best of the “left”? Why do libertarians emphasize private property? Why are they skeptical of political agency? Are libertarians anti-democratic? Can they care about social justice? How do libertarians approach problems such as racism, sexism, militarism, state surveillance, global inequality, and environmental sustainability? This course will explore such questions, as illuminated by a variety of texts in the libertarian tradition, classical and contemporary.

FYS Fall POLS0820W S01 15610 W 3:00-5:30(17) (J. Tomasi)

POL 1010. Topics in American Constitutional Law.
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. Each year we will focus on a different theme and set of constitutional issues. Topics might include a mix of federalism, separation of powers, privacy, free speech, and abortion. We will also focus how political and legal theory helps us to consider these topics in tandem.

Fall POLS1010 S01 15019 MWF 2:00-2:50(07) (C. Bretschneider)

POL 1080. Politics of Transportation Policy.
Three transportation modes are emphasized: planes, trains, and automobiles. Three sets of actors are studied: Congress, pressure groups, and governmental agencies. The focus is on historical patterns of usage and current policy questions including airlines vs. airports, problematic drivers, and cars vs. transit. Background in the rudiments of American politics is desired.

Fall POLS1080 S01 15021 MW 8:30-9:50(16) (R. Cobb)

POL 1120. Campaigns and Elections.
This course is designed to survey both historical and contemporary elections at both the congressional level, emphasizing the 2012 elections. Topics include campaigns, parties, candidates, voting behavior, public opinion, and the media.

Fall POLS1120 S01 16654 TTh 9:00-10:20(08) (R. Arenberg)

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 24168 TTh 10:30-11:50(09) (R. Arenberg)

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 15022 MWF 1:00-1:50(08) (J. Tomasi)

POL 1220. Politics of the Post-Soviet States.
What political and economic systems have developed in the Post-Soviet states since 1981? Course focuses on failed efforts to build democracy in Russia; divergent patterns of development, including democratization and EU accession in the Baltics, reversions to authoritarianism and Islamic revival in Central Asia; conflict in Georgia and Chechnya; development of economies, civil society; relations among post-Soviet states. Prior study of political science recommended.

Fall POLS1220 S01 15024 TTh 2:30-3:50(11) (L. Cook)
POLS 1240. Politics, Markets and States in Developing Countries
How can we explain fundamental differences in economic performance and policy across developing countries in the face of Globalization? Why are some countries praised as economic "miracles," yet others seem mired in inescapable stagnation? This course addresses these questions by introducing the basic topics, concepts, and theoretical approaches that comprise the field of political economy of development. The course draws on case studies from Asia, Africa, and Latin America.

Fall POLS1240 S01 15025 TTh 2:00-2:50(07)  (R. Snyder)

POLS 1285. Quality of Democracy in Latin America
Focus on democratic quality in modern Latin America, its failures as well as its successes. Topics include police violence, the rule of law, indigenous movements, gender and gay rights, anti-poverty policy, and direct democracy. Will draw on material from across the Spanish and Portuguese speaking democracies in the region. We will engage with different theories of what makes democracies representative and accountable to their citizens. Not open to first years.

Fall POLS1285 S01 15026 TTh 10:30-11:50(13)  (R. Weitz-Shapiro)

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.

Fall POLS1315 S01 15027 MWF 9:00-9:50(16)  (K. Tate)

POLS 1320. Urban Politics and Urban Public Policy.
A central theme of the course is that urban politics in the United States is mired 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.

Fall POLS1320 S01 15028 TTh 1:00-2:20(10)  (M. Orr)

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 an international security simulation exercise. Pre-requisite: POLS 0400.

Spr POLS1410 S01 24170 TTh 1:00-2:20(10)  (N. Tannenwald)

POLS 1415. Classics of Political Economy.
Traces the most important classical statements of political economy through consideration of the major contributions to the "political" study of the economy from the seventeenth century to the present; Locke, Ricardo, Smith, Rousseau, Mill, Bentham, Marx, Mill, Marshall, Keynes, Hayek, Friedman, and Lucas. By mapping the parallel evolution of the liberal/capitalist economy and the liberal/democratic notion of the individual, both a product of and a producer within this economy, the course will demonstrate the political nature of economics and the economic bases of politics. First year students require instructor permission.

Spr POLS1415 S01 24171 TTh 10:30-11:50(09)  (M. Blyth)

This class explores some of today's key policy challenges: economic development and poverty alleviation, the provision of basic public services, corruption, management of natural resources, environmental protection, intergroup violent conflict, and related issues. For each topic, the course (1) presents the problem, (2) reviews potential solutions, (3) discusses failed approaches, and (4) identifies concrete successes. Examples are drawn from around the world.

Fall POLS1490 S01 16642 TTh 10:30-11:50(13)  (K. Brown)

POLS 1500. The International Law and Politics of Human Rights.
Introduces students to the law and politics of international human rights; examines the construction of an international human rights regime and its influence on international politics. Will survey the actors and organizations involved in the promotion of human rights around the globe, as well as the obstacles. Will review competing conceptions of human rights, whether human rights are universal, problems of enforcement, and the role of human rights in foreign policy. Major topics include civil and political rights; economic, social and cultural rights; genocide, torture, women's rights, humanitarian intervention, and the international criminal court. POLS 0400 strongly encouraged as a prerequisite.

Fall POLS1500 S01 15030 MWF 11:00-11:50(04)  (N. Tannenwald)

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 sophomores, junior, and senior Political Science, International Relations, or Public Policy concentrators.

Fall POLS1600 S01 15031 MW 6:30-7:50(15)  (N. Miller)

POLS 1740. Politics of Food.
How do politics and public policy shape the nature of farming and the price of food in the US? What is the extent of hunger and malnutrition in the country, and how to politics and public policy shape the responses to these issues? How well does government regulate the safety and healthiness of food? These will draw on a combination of case studies and scholarly work to examine these questions. The significance of globalization will also be considered but the emphasis of the course will be on American politics and policy. The course is not open to first-year students. This course is not capped but TA allocations are made based on pre-enrollment and the course might be closed the first day, depending on the availability of TAs beyond the original allocation.

Spr POLS1740 S01 24172 TTh 2:30-3:50(11)  (R. Cheit)

POLS 1780. Use of Symbols in American Politics.
What do a flag, Martin Luther King, Jr. and socialized medicine have in common? They are all political symbols that have produced a strong public response. The political process is complicated beyond the understanding of most. But it becomes manageable when converted into sets of conflicting symbols. How does the public learn about political symbols? What is their role in the policy making process? Three types of symbols will be considered: community, regime and situational symbols. Course coverage limited to American domestic politics.

Spr POLS1780 S01 24173 MW 8:30-9:50(02)  (R. Cobb)

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. WRIT

Fall POLS1820D S01 15041 M 3:00-5:30(15)  (C. Brettschneider)

POLS 1820J. Dynamics of Agenda Building.
How do new issues make the political agenda? Why aren't elections crucial? Who are the "problem pushers" and "solution savers?" How are they linked? What factors determine the life of an issue? The key processes include problem identification, conflict expansion through issue redefinition, the role of institutional actors and issue activists. Focus limited to domestic American politics. Prerequisite: POLS 0010. Enrollment limited to 20 juniors and seniors. WRIT

Spr POLS1820J S01 24180 M 3:00-5:30(13)  (R. Cobb)

POLS 1822A. Nuclear Weapons and International Politics.
This seminar explores the causes and consequences of nuclear weapons proliferation in international politics. Each week we will explore a different dimension of nuclear proliferation, drawing on academic theory and historical evidence. Specific topics examined include the causes of nuclear proliferation, nonproliferation and counterproliferation policies, nuclear strategy, the effect of nuclear weapons on international conflict, and nuclear terrorism. Enrollment limited to 20 junior and senior Political Science or International Relations concentrators. WRIT

Spr POLS1822A S01 25547 Th 4:00-6:30(17)  (N. Miller)
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.
Fall POLS1822C S01 16565 T 4:00-6:30(18) (R. Arenberg)

POLS 1823H. Public Opinion.
We will examine public opinion on a variety of current issues. The course’s principal objective is to help students understand the role of public opinion in democratic governments. In addition, students learn how to integrate data analysis into their analysis of public opinion trends. Enrollment limited to 20 juniors and seniors concentrating in Political Science and Public Policy. WRIT
Fall POLS1823H S01 24184 M 3:00-5:30(13) (K. Tate)

POLS 1823Y. Global Governance.
This seminar explores the changing nature of global governance. Governance refers to the systems of authoritative rules, norms, institutions, and practices by means of which the international community manages its common affairs. Emphasizing in-depth readings of sustained arguments, this seminar examines key global governance processes and how they differ across different issue areas. It explores the variety of actors involved in managing global issues, surveys emerging trends, and explores possible ways of improving the capacity of the international community to deal with global challenges. Key issues examined include the global economy, nuclear weapons, the global environment, and human rights and justice. WRIT
Fall POLS1823Y S02 16629 Th 4:00-6:30(02) (N. Tannenwald)

POLS 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. WRIT
Spr POLS1823Z S01 25245 W 3:00-5:30(14) (S. Moffitt)

POLS 1824B. Post Conflict Politics.
What, if anything, can the international community do to keep peace in countries wracked by civil war? Why does international intervention succeed in some countries but not others? How can war-torn societies overcome the myriad challenges inherent in post-conflict politics, including disarmament, demobilization and reintegration of ex-combatants; repatriation of refugees; transitional justice; and reconciliation of wartime adversaries. This senior seminar addresses these questions through a combination of case studies, in-class discussions and debates, and readings from a wide variety of academic, policy and philosophical sources. While there are no prerequisites for the course, some familiarity with quantitative data analysis will be useful. WRIT
Fall POLS1824B S01 16259 W 3:00-5:30(17) (R. Blair)

POLS 1824C. Political Communication.
This course will focus on the importance of written and oral communication in public decision-making, particularly in the Congressional context. The course will examine the impact on political interactions, and the influencing of public policy decisions and outcomes. The course will emphasize some of the practical tools for producing relevant, useful material in the professional policy and the political communications arenas. The course requires several writing assignments focusing on different public policy analyses and political communications tools as well as active class participation including oral presentations. WRIT
Spr POLS1824C S01 25603 T 4:00-6:30(16) (R. Arenberg)

POLS 1824D. Power and Prosperity in Urban America.
Over the past twenty years, many American cities have experienced comebacks: growing numbers of upper-income residents have relocated to cities; downtowns have been transformed into lively arts and entertainment districts; and crime has fallen. How did cities achieve these transformations? Why were some cities more successful than others? How has the revitalization of cities affected the urban poor? The course will also examine the impact of the “Great Recession” on cities. Did the recession jeopardize recent gains in urban prosperity? How have cities coped with the fiscal strains presented by reduced tax revenues and limits on state and federal assistance? WRIT
Fall POLS1824D S01 16905 T 4:00-6:30(18) (M. Weir)

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. WRIT
Fall POLS1910 S01 15045 F 3:00-5:30(14) (A. Weinstein)

POLS 1920. Senior Honors Thesis Preparation.
This course is a continuation of POLS 1910. Political Science Honors students who are completing their theses should enroll. Prerequisite: POLS 1910. Instructor permission required. WRIT
Spr POLS1920 S01 24188 F 3:00-5:30(15) ‘To Be Arranged’

POLS 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.

POLS 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 15046 T 1:00-3:30(10) (R. Weitz-Shapiro)

POLS 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 15047 W 2:00-4:30(07) (J. Morone)

POLS 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 24189 W 2:00-4:30(07) (J. Morone)

POLS 2070. Public Opinion.
This class provides an introduction to the major theoretical approaches and applied research in the study of American public opinion. We examine opinions on a variety of topics. Enrollment limited to 14 Political Science graduate students.
Spr POLS2070 S01 24190 T 1:00-3:30(10) (K. Tate)

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 POLS2090D S01 24191 T 10:00-12:30(09) (R. Snyder)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
POLS 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 26171 Arranged (W. Schiller)

POLS 2121. Writing and Methods in Political Theory I
The study of politics requires historical and analytic, interpretive and normative, critical and genealogical, humanist and post-humanist methods. We will first look at reading and discussing assigned methodological material on language, interpretation, causality, history, gender, and genre, all relevant to the various approaches to political thought. Second will be the circulation, presentation and critique of graduate student papers. Each participant will be expected to present a pre-circulated, article length paper, and respond to a designated discussant, as well as field questions from seminar participants. The aim is to help students learn how to prepare their work for publication.
Fall POLS2121 S01 16245 Th 12:30-3:00(10) (B. Honig)

POLS 2122. Writing and Methods in Political Theory II
The study of politics requires historical and analytic, interpretive and normative, critical and genealogical, humanist and post-humanist methods. We will first look at reading and discussing assigned methodological material on language, interpretation, causality, history, gender, and genre, all relevant to the various approaches to political thought. Second will be the circulation, presentation and critique of graduate student papers. Each participant will be expected to present a pre-circulated, article length paper, and respond to a designated discussant, as well as field questions from seminar participants. The aim is to help students learn how to prepare their work for publication.
Spr POLS2122 S01 25184 Th 12:30-3:00(10) (A. Gourevitch)

POLS 2130. Proseminar in International Relations.
Surveys the main theoretical trajectories and intellectual disagreements that define International Relations as a discipline today. Positions examined include varieties of rationalism and constructivism; realism-liberalism-sociological approaches; and systemic and subsystemic theories. Also considers debates about the contours of contemporary world politics, America and the world, moral issues, and the links between theory and policy. Enrollment limited to 14. Not open to undergraduates.
Fall POLS2130 S01 15049 W 12:30-3:00(12) (J. Colgan)

POLS 2140. Post Cold War Conflict.
Course explores the nature and causes of post-Cold War conflict. We'll discuss the end of the Cold War, as well as prominent contemporary themes, such as the spread of ethnic warfare and humanitarian intervention, the privatization of security provision, and the proliferation of "transnational threats" such as cross-border crime and terrorism. Enrollment limited to 14. Graduate students only; qualified undergraduates with instructor permission.
Spr POLS2140 S01 24192 M 3:00-5:30(15) (P. Andreas)

This course will examine contemporary and historical work in the area of democratic political and legal theory. Topics include the relationship between democracy and individual rights, deliberative vs. aggregated conceptions of democracy, the substance/procedure controversy, and the role of judicial review in a democracy. Open to graduate students only.
Spr POLS2150 S02 25548 T 10:30-1:00(9) (C. Brettschneider)

POLS 2175. Ideas, Institutions and Politics.
A Graduate level survey of the literatures on institutions and ideas in political science, and on occasion, in related fields. These literatures are often seen as rival bodies of literature. These literatures are in fact compliments, with much empirical work combining both approaches in a productive manner. The point engaging the literature in this way is to question the presumption that interests should remain the most popular counter-theories, practices of disobedience: revolution, mass strikes, sabotage, civil disobedience and conscientious objection. Other kinds of resistance -- like mass protests, political strikes, and boycotts -- hover on the border of disobedience itself. This course begins with a brief examination of theories of political obligation before moving to a discussion of different, concrete examples of disobedience and the political ideas that they produced. We will discuss revolution, mass strikes, and civil disobedience as paradigm cases of the political problems raised by actually existing, illegitimate laws and governments.
Fall POLS2175 S01 16718 W 6:00-8:30PM(17) (M. Blyth)

POLS 2220. Urban Politics.
Covers a number of topics linked to urban politics and urban public policy. Topics include the politics of urban education, affordable housing, downtown development. Examines how state and federal policy actions have contributed to the nature of the urban condition; and how race, class and ethnicity are interwoven with urban politics and urban public policy. Enrollment limited to 14. Graduate Students only; all others by permission only.
Spr POLS2220 S01 24194 M 10:00-12:30(03) (M. Orr)

POLS 2235. Disobedience and Resistance.
Why should we obey the laws that states make? Unsurprisingly, there are numerous counter-theories, practices of disobedience: revolution, mass strikes, sabotage, civil disobedience and conscientious objection. Other kinds of resistance -- like mass protests, political strikes, and boycotts -- hover on the border of disobedience itself. This course begins with a brief examination of theories of political obligation before moving to a discussion of different, concrete examples of disobedience and the political ideas that they produced. We will discuss revolution, mass strikes, and civil disobedience as paradigm cases of the political problems raised by actually existing, illegitimate laws and governments.
Fall POLS2235 S02 16257 Th 10:00-12:20(08) (A. Gourevitch)

POLS 2260. Comparative Politics and China.
Will explore the main theoretical, empirical, and methodological approaches to the study of contemporary Chinese politics. Will relate these approaches to broader analytical issues in the field of comparative politics. What phenomena are generally studied in Chinese politics, and how are they studied? How are arguments made, and how could they be made more effectively? What is not studied that should be? How should regionally-focused empirical research be structured? What are the most effective ways to integrate area studies, broader comparative approaches, and theory? Course will prepare graduate students for dissertation research on China specifically and comparative politics more generally.
Spr POLS2260 S01 24196 W 9:30-12:00(02) (E. Steinfield)

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.
Fall POLS2270 S01 15777 T 9:30-12:00(08) (E. Steinfield)

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.
Spr POLS2330 S01 24197 T 1:00-3:30(10) (A. Varshney)

Interested students must register for MCM 2110L.
Spr POLS2385 S01 25580 Arranged 'To Be Arranged'

POLS 2450. Exchange Scholar Program.
Fall POLS2450 S01 14609 Arranged 'To Be Arranged'
Spr POLS2450 S01 23813 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 and Public Policy only.

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.

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.

POLS 2976. Field Survey and Research Design.
An independent study directed by a tenure-line faculty member of the Department of Political Science. Only third-year graduate students may register for the course; it is intended to provide a framework for producing a formal research design modeled on the dissertation prospectus.

POLS 2980. Individual Reading and Research.
An independent study course directed by a tenure-line faculty member in the Department of Political Science. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

POLS 2981. Individual Reading and Research.
An independent study course directed by a tenure-line faculty member in the Department of Political Science. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

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

POLS 2991. Thesis Research and Preparation.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Portuguese and Brazilian Studies

POBS 0100. Elementary Portuguese.
Designed for students with little or no preparation in the language. Stresses the fundamental language skills of understanding, speaking, reading, and writing. Aspects of Portuguese and Brazilian culture are also presented. Uses a situational/natural approach that emphasizes communication in Portuguese from the very first class. A two-semester sequence in one semester with ten contact hours each week. A two-semester sequence in one semester with ten contact hours each week. Prerequisite: POBS 0110, or placement. Conducted in Portuguese.

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.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
POBS 0910. On the Dawn of Modernity
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 20. Reserved for First Year students. FYSE LILY WRIT
Fall POBS0910 S01 15542 M 3:00-5:30(15) (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 Piñón, Salman Rushdie, Taiye Selasi and others. No experience in the arts necessary. SOPH
Spr POBS0990 S01 25224 W 3:00-5:30(14) (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. WRIT
Fall POBS1030 S01 15540 T 10:30-12:50(13) (L. Simas-Almeida)

POBS 1090. Portuguese-speaking Cultures Via Film.
We will view and discuss films from Brazil, Lusophone Africa, Portugal and other regions as vehicles to understand the cultural diversity of Portuguese-speaking countries. Readings will include related fiction and non-fiction focusing on immigration, gender, race, family dynamics and social inequality. Students will write a series of short papers and develop a final project in consultation with the instructor. Particular attention will be paid to contemporary Brazilian cinema. Prerequisite: POBS 0610, 0620, 1030, or 1080, or instructor permission. Enrollment limited to 20. Conducted in Portuguese.
Spr POBS1090 S01 24576 TTh 1:00-2:20(10) (P. Sobral)

POBS 1210. Afro-Brazilians and the Brazilian Polity (AFRI 1210).
Interested students must register for AFRI 1210.
Fall POBS1210 S01 16353 Arranged ’To Be Arranged’

POBS 1500i. Fiction and History (COLT 1810G).
Interested students must register for COLT 1810G.
Spr POBS1500i S01 25314 Arranged ’To Be Arranged’

Examines both ﬁctional narratives written in Portuguese by African authors and ﬁctional works by Portuguese authors that focus on the colonial experience of Angola, Mozambique, and Cape Verde. Aims in particular at the critical analysis of Portuguese colonialism as a means to verify its speciﬁcity or lack thereof within the larger context of overarching European colonialisms. Conducted in Portuguese.
Fall POBS1501A S01 16775 Th 4:00-6:30(02) (L. Simas-Almeida)

POBS 1600A. The Afro-Luso-Brazilian Triangle (AFRI 1020C).
Interested students must register for AFRI 1020C.
Spr POBS1600A S01 25313 Arranged ’To Be Arranged’

POBS 1600D. Portuguese Discoveries and Early Modern Globalization.
Introduces the study of global early modernity through the lens of the Portuguese empire c. 1400-1700. Maps out the origins, motivations, and nature of Portugal’s imperial expansion. Establishes the patterns of the Portuguese presence in the Atlantic and Indian Ocean. Emphasizes the dependence of the Portuguese empire on other societies, its institutional fragility, its social complexity, and the difﬁcult relations between ideology and economy. Explores the idea of an early “cultural globalization” in religion, art and politics from Iberia to Japan via Brazil, Africa and India. Avoids the traditional idea of an exceptionality of the Portuguese overseas experience. Conducted in Portuguese.
Fall POBS1600E S01 16948 T 5:30-8:00PM(18) (O. Almeida)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
POBS 1800E. The Brazilian Puzzle: Confronting the Post-Colonial Legacy.
Brazilian intellectuals have often attempted to understand and explain the challenges in modern Brazilian society (political, economic, racial, educational) by pondering Brazil's Iberian roots and assessing the legacy of Portuguese colonialism. Manuel Bonfim, Sérgio Buurque de Holanda, Paulo Prado, Gilberto Freyre, Vianna Moog, Caio Prado, Celso Furtado, Paulo Freire, Oswald the Andrade, Roberto DaMatta. Attention to film, music and the visual arts. Conducted in Portuguese.

Fall 2017. Reading and Guided Study.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

This independent study course is designed for students working on honors projects. Written permission of the concentration advisor (Prof. Sobral) is required. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

POBS 2010A. Language Theory and Curriculum Development.
Focuses on the application of language theory, methodology, and curriculum development procedure for classes enrolling English language learners. Participants focus on setting appropriate goals and objectives aligned with learning standards and develop appropriate curricula in several subject areas. Conducted in English.

Fall 2020A. Applied Linguistics for ESL.
Focuses on the linguistic development of bilingual children. Addresses three major dimension of language acquisition-linguistic, cognitive and sociocultural-within educational contexts for students of all ages. Conducted in English. Enrollment limited to 15 graduate students.

POBS 2020D. Theories in First and Second Language Acquisition.
Theory and current research relating to first and second language acquisition and learning are examined from a pedagogical perspective. Focuses on both learning and teaching a second language. Conducted in English.

POBS 2120A. ESL Methodology Assessment and Evaluation.
An overview of the current principles, practices and approaches that inform assessment and evaluation for English language learners. Participants engage in class activities that duplicate select assessment approaches and identify strategies for integrating assessment with planning and instruction appropriate to the language proficiency of students. Participants explore assessment research and theoretical background for an understanding of the complexity of evaluating student achievement. Conducted in English.

POBS 2500K. Senses and Sensibilities in the Nineteenth Century Portuguese Novel.
The works to be read are representative of the main literary trends in 19th century Portuguese literature. They will be analyzed with a focus on literary aesthetics, but also on meanings (or senses), both culturally and personally, by exploring the textual construction of emotions, i.e., the engagement of sensibilities in the written word. Authors to be studied include Almeida Garrett, Camilo Castelo Branco and Eça de Queirós. Conducted in Portuguese.

POBS 2600I. Modern and Contemporary Brazilian Poetry.
An intensive reading of selected Brazilian poets of the past eighty years, including Carlos Drummond de Andrade, João Cabral de Melo Neto, Mário Faustino, Paulo Leminski, Ana Cristina Cesar, the "concretistas", and Salgado Maranhão. Each student will be responsible for an oral presentation about an additional poet, to be chosen in consultation with the instructor. Conducted in Portuguese.

Public Health

PHP 0050. Pain and the Human Condition: Exploring the Science, Medicine, and Culture of Pain.
Pain is a universal human experience, yet it is highly subjective. For most, pain represents an occasionally unpleasant, self-limited experience. However, for others, chronic pain persists beyond the recovery from an injury or as a result of a chronic health condition. Persons with chronic pain often describe their pain as permeating every aspect of their lives. While an active area of research, pain remains a significant challenge to the individual seeking treatment, the health care provider and society. This multidisciplinary course introduces students to scientific, medical, and public health aspects of pain and explores personal narratives and cultural meanings of pain. Enrollment limited to 20 first year students. FYS WRIT

Spr PHP0310. 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. LILE

Fall PHP0320. Introduction to Public Health.
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 16530 TTh 2:30-3:50(11) (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. DPLL LILE WRIT

Fall PHP1070 S01 16212 MW 8:30-9:50(16) (S. McGarvey)

PHP 1100. Comparative Health Care Systems. Focuses on principles of national health system organization and cross-national comparative analysis. Emphasizes application of comparative models to the analysis of health and health-related systems among nations at varying levels of economic development and health care reform. Addresses research questions related to population health and systems' performance. Questionnaire completion required for Freshman and Sophomore students. Enrollment limited to 30. DPLLspr

Spr PHP1100 S01 25666 TTh 1:00-2:20(10) (O. Galarraga)

PHP 1400. HIV/AIDS in Africa: A Multidisciplinary Approach to Support HIV/AIDS Care and Treatment Programs. The course is intended to challenge students from different disciplines to develop strategies to address the challenges of establishing and sustaining HIV/AIDS care and treatment programs in Africa. The course will begin with a general introduction to HIV/AIDS to provide a foundation wherein students will obtain a basic scientific and sociological understanding of the disease. Discussion topics on: the impact of AIDS, introducing antiretroviral therapy in Africa, monitoring and evaluating ARV therapy scale up and developing a country wide plan for a national laboratory system to support HIV/AIDS care and treatment will be facilitated through the use of case studies. Enrollment limited to 25 juniors and seniors. Graduate students with permission of instructor. DPLLspr

Spr PHP1400 S01 25737 T 4:00-6:30(16) (M. Ghee)

PHP 1500. Global Health Nutrition. The course focuses on nutritional status influences on population health of low and middle income countries. It covers both 1) undernutrition, including protein-calorie malnutrition and specific micronutrient deficiencies; and 2) overnutrition, including obesity. It covers morbidity and mortality associated with under- and overnutrition. Nutritional aspects of maternal and child health and the association of nutritional exposures early in life and later adult health are emphasized. Specific areas include nutritional status measurement, including body size and composition, dietary intake and physical activity, as well as household, community, and national, socioeconomic and political factors. Prerequisite: PHP 1070, 2120, 2150, or BIOL 0030. DPLL

Spr PHP1500 S01 25721 TTh 2:30-3:50(11) (S. McGarvey)

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 16526 TTh 1:00-2:20(10) (R. Gutman)


Spr PHP1520 S01 24843 W 3:00-5:30(14) (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's 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 25667 Arranged (P. Nolan)

PHP 1540. Alcohol Use and Misuse. Reviews the epidemiology of alcohol use, abuse, and dependence and examines its neurobiological and behavioral underpinnings. Covers etiology including physiological, genetic, psychological and social cultural influences, and prevention, brief intervention and treatment considerations. Course background in psychology, sociology, or community health is recommended. Recommended prerequisites: PHP 0320 and CLPS 0010. Enrollment limited to 20 juniors, seniors, and graduate students.

Fall PHP1540 S01 15896 TTh 9:00-10:20(8) (K. Carey)

PHP 1600. Obesity in the 21st Century: Causes, Consequences and Countermeasures. The scope of obesity knowledge is too large to cover during one single course, therefore we will focus primarily on obesity-related health outcomes, assessment of obesity, obesity epidemiology, social and behavioral correlates of obesity, obesity and stigma, policy and interventions across population groups. The readings for this course are multi-disciplinary in nature and integrate epidemiological, biological, sociological, political and philosophical perspectives. This course is specific to the United States and thusly all readings will reflect this contextual focus. Enrollment limited to 30. DPLL

Spr PHP1600 S01 24844 M 3:00-5:30(13) (A. Keita)

PHP 1680. Pathology to Power: Disability, Health and Community. This course offers a comprehensive view of health and community concerns experienced by people with disabilities. Guest speakers, and hands on field research involving interactions with people with disabilities will facilitate the students gaining a multi-layered understanding of the issues faced by people with disabilities and their families. DPLL FALL PHP1680 S01 16220 W 3:00-5:30(17) (S. Skeels)

PHP 1680K. Introduction to Conducting Clinical Research. This course is intended to help students become familiar with the design and implementation of clinical research, including ethical and logistical processes related to collecting data and interpretation of published medical literature. In addition to weekly sessions, the course requires 4-6 hours weekly in the Emergency Department at Rhode Island Hospital enrolling patients in clinical trials. As students will be directly exposed to patient and clinical care, the course is limited to 12 students for the semester. Interested students should contact the course director to be considered for enrollment. Not open to first year students. Instructor permission required.

Spr PHP1680K S01 25668 M 3:00-5:30(13) (F. Beaudoin)

PHP 1680N. Tobacco, Smoking, and the Evil Empire. Reviews the epidemiology of smoking and nicotine addiction and briefly examines its neurobiological and behavioral underpinnings. Covers prevention efforts and state-of-the-art treatment interventions with an emphasis on policy implications. Course background in psychology, sociology, or community health is recommended. Suggested prerequisites: PHP 0320 and CLPS 0010. Restricted to juniors, seniors, and graduate students.

Spr PHP1680N S01 24845 T 1:00-3:20(10) (D. Williams)
PHP 1680T. Translation, Diffusion and Cultural Relevance of Health Promotion Interventions.
Course content covers three key aspects of disease prevention/health promotion programs: (1) how "basic" behavioral and social science research is tested for effectiveness in real-life settings (translation); (2) how programs with demonstrated effectiveness, in one or more local settings, are introduced and adopted more broadly (diffusion); and (3) how cultural relevance is involved in both translation and diffusion. Translation and Diffusion are the two main sections of the semester. Cultural relevance is a theme integrated into each part of the course. Appropriate for BSSI, MPH, and advanced undergraduate students with coursework in public/community health. Open to juniors, seniors graduate students. DPLL
Spr PHP1680T S01 24846 TTh 11:00-12:20(09) 'To Be Arranged'

PHP 1700. Current Topics in Environmental Health.
This course is designed to introduce students to the field of environmental health, and demonstrate how environmental health is integrated into various aspects of our lives, both directly and indirectly. Topics to be covered include: toxic metals, vector-borne disease, food safety, water quality, radiation, pesticides, air quality, hazardous waste, risk assessment, and the role of the community in environmental health. Several topics will be presented by guest speakers so that students can learn from the expertise of professionals in the field. Enrollment limited to 40.
Fall PHP1700 S01 16683 F 1:00-3:30(06) (K. Kelsey)

PHP 1740. Principles of Health Behavior and Health Promotion Interventions.
Examines health behavior decision-making and elements for design of health promotion interventions. Covers theories of health behavior (focusing on primary and secondary prevention), principles of intervention design, and reading of research literature. Emphasizes psychological, social, and proximate environmental influences on individuals' health-related behaviors. Restricted to juniors, seniors, and graduate students. Prerequisite: PHP 0320 or equivalent. Enrollment limited to 25.
Fall PHP1740 S01 15889 MW 1:00-2:20(06) (P. Risica)

PHP 1854. The Epidemiology and Control of Infectious Diseases.
Course objectives are to introduce students to key methods and concepts in the epidemiological 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 PHP0320 and to graduate students who have completed or are concurrently enrolled in either PHP2120 or PHP2150. Enrollment limited to 15 graduate students.
Fall PHP1854 S01 16771 MW 1:00-2:20(06) (B. Marshall)

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, pain management, 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. DPLL
Fall PHP1880 S01 15188 W 3:00-5:30(17) (E. Loucks)

The course provides an overarching capstone experience to Public Health seniors. It is designed to weave together 3 threads, specifically: (1) Capstone final written project based on Public Health concentration goals, including a systematic review or data analysis; (2) Formalizing and presenting career plans; (3) Learning and practicing key principles of effective workplace skills. The course provides opportunities to synthesize and reflect on the knowledge gained during the undergraduate program, provide support for career development and implementation of an Honors project, and provide important soft skills for excelling in the workplace. Prerequisite: PHP 0310 and 0320. Open to Senior Public Health concentrators only.
Spr PHP1910 S01 25740 M 3:00-5:30(13) (E. Loucks)

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 Community Health Concentration.

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 16679 M 1:00-3:30(06) (L. Gareen)

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 25723 M 5:30-8:30PM(13) (S. Rosenthal)

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 15 graduate students.
Spr PHP2060 S01 25669 F 9:00-11:30(02) (T. Wette)

PHP 2070. Public Health/Community Service Internship.
The course is an introduction to the history, organization, resources, concepts and issues of public health and health care. Students will be matched according to their interests in a related practical experience in a public health organization, with the expectation that they complete a project or produce a product of public health utility. This gives students an opportunity to critically apply knowledge and skills learned in didactic sessions. Instructor permission required.
Fall PHP2070 S01 16855 Arranged (P. Vivier)
Spr PHP2070 S01 25628 Arranged (P. Vivier)

PHP 2080. Public Health Law and Ethics.
Uses case study strategies to: identify key ethical principles, values, legal authorities and regulation relevant to public health practice and research; evaluate public health research designs in terms of ethical and legal principles; conduct ethical analyses of public health interventions by identifying potential ethical and legal concerns and conflicts; and employ strategies for working effectively with special populations, including the design of culturally appropriate interventions. Open to graduate students only.
Spr PHP2080 S01 25670 M 3:00-5:30(13) (E. Tobin-Tyler)

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: (1) 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 16888 Th 2:30-5:00(11) (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 16685 TTh 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 25724 Arranged (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 16682 F 9:30-12:00(03) (Y. Huang)

**PHP 2170. Injury As A Public Health Problem.** Injury causes significant morbidity and mortality in the U.S. and across the globe. However, injuries – both violent and non-violent – are eminently preventable. The overarching objective of this course is to enable students to understand the epidemiology of injury and violence, as well as strategies to improve public health through injury prevention. Prerequisite: PHP 2120 or 2150 (may be taken concurrently) or instructor permission. Enrollment limited to 20 graduate students.

Fall PHP2170 S01 16689 M 1:00-3:30(06) (M. Ranney)

**PHP 2180. Interpretation and Application of Epidemiology.** This course follows the core sequence of quantitative and methods courses with emphasis on interpreting and applying epidemiological studies to the decision making process concerning both individual and population health. Much is devoted to the sensible analysis, interpretation, evaluation, and synthesis of data that have been generated from a wide range of epidemiological studies that are often inconsistent across studies. Through exploration of specific high-profile studies of biological, medical and public health importance, students are expected to develop contemplative expertise and skills in at least two main domains: interpretation and application. Open to graduate students; undergraduates by permission of instructor.

Spr PHP2180 S01 25725 Arranged (S. Liu)

**PHP 2200. Intermediate Methods in Epidemiologic Research.** This second course in epidemiologic methods reinforces the concepts and methods taught in PHP 2150, with in-depth instruction in issues of study design, assessing threats to study validity including confounding and selection bias, and analyzing data with standard regression models. The course emphasizes hands-on learning and includes a combination of didactic lectures, discussions of methodologic papers, and a required laboratory component where students will learn to apply the concepts learned in class to real-world problems. Prerequisites: PHP 2150 and either 2510 or 2507, or permission of the instructor. Co-requisite: PHP 2511 or 2508.

Spr PHP2200 S01 25726 Arranged (T. Zheng)

**PHP 2220B. Nutritional Epidemiology**

Although epidemiology is logically equipped to address the dietary causes of disease, the complex nature of diet has posed an unusually difficult challenge to this discipline. This course will focus on the methodological challenges that epidemiologists face in studying dietary factors as determinants of chronic diseases. Dietary assessment methods, biomarkers, and anthropometric measures will be reviewed. Substantive material and up-to-date issues will be used as examples. The course will consist of lectures and exercises to develop basic skills to allow students to have a strong grounding in this field. Open to graduate students only.

Spr PHP2220B S01 25813 Arranged (S. Liu)

**PHP 2220E. Topics in Environmental and Occupational Epidemiology.** This course introduces students to the epidemiological study of historical and contemporary environmental/occupational agents, focusing on study design, biases, and methodological tools used to evaluate and extend the evidence linking exposures to human disease. The course will discuss applications, strengths, and limitations of different study designs and their use in studying specific environmental agents. Didactic lectures and student-led discussions will be used to provide students with a basic understanding of and the tools to apply/extend their knowledge of specific environmental agents (endocrine disruptors) and special topics (children's neurodevelopment). Prerequisite: PHP 2120, PHP 2150, or equivalent. Undergraduates with PHP0850 and instructor's permission.

Spr PHP2220E S01 25728 Arranged (J. Braun)

**PHP 2222. Genetics, Human Population and Diseases.** The purpose of this course is: 1) to introduce students to genetics, genomics and various designs of genetic studies of human diseases, and 2) to discuss selected topics in challenges and advances in human genetic studies. Some prior knowledge with genetics or epidemiology is preferred. This course may be most appropriate for second-year MPH, ScM, or PhD students, as well as first-year graduate students and advanced undergraduate students with previous exposure to introductory epidemiology and biostatistics. Prerequisite: introductory-level statistical analyses and epidemiology courses, such as PHP 2507 or 2510, and 2120 or 2150. Undergraduates need permission of instructor to register.

Spr PHP2222 S01 25729 Arranged (Y. Huang)

**PHP 2225. 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 PHP2225 S01 16681 TTh 1:00-2:20(10) (C. Howe)

**PHP 2300. Research Methods in Behavioral Science.** This course provides students with fundamental principles of behavioral and social research methodology for understanding the determinants of public health problems, and for executing and testing public health interventions. We will focus on experimental methods, observational studies, and qualitative approaches. We will develop skills in understanding and interpreting data—both quantitative and qualitative. Throughout the course we will emphasize ethical, cultural, and professional issues for designing public health interventions. Prior coursework in research methodology and quantitative methods is recommended but not required. Open to graduate students and advanced undergraduates. Enrollment limited to 15.

Fall PHP2300 S01 15890 W 1:00-3:30(06) (D. Operario)
**PHP 2325. Place Matters: Exploring Community-Level Contexts on Health Behaviors, Outcomes and Disparities.**

There is growing recognition among researchers, public health practitioners and policymakers that place matters for health behaviors and health outcomes. But what is place, and why does it matter? As with many health-related outcomes, the prevalence of ill health is unequally distributed across populations with certain features playing significant roles on health. In this course, we will explore the features of community environments and the associations with health behaviors (e.g., physical activity, preventive care, alcohol, sexual behaviors) and health outcomes (e.g., obesity, cardiovascular disease and mental health). This course is specific to the US. Enrollment limited to 25.

Fall  PHP2325  S01  15891  T  9:00-11:30(08)  (A. Keita)

**PHP 2340. Behavioral and Social Science Theory for Health Promotion.**

This course will help students become familiar with behavioral and social science theories commonly used for planning disease prevention/health promotion interventions. In addition to review of specific theories, topics to be discussed include: how theories are developed and tested; challenges and potential pitfalls in using theory for intervention planning; and creation of causal diagrams based on concepts from theories. Undergraduates need permission of instructor; priority will be for Community Health concentrators. Enrollment limited to 25.

Fall  PHP2340  S01  15893  T  12:00-2:20(10)  (D. Williams)

**PHP 2350. Economics of Medical Therapies: Health Policy and Practice.**

Introduces methods and applications of decision analysis, cost-effectiveness analysis, and benefit-cost analysis in public health policy and practice, including health care technology assessment, medical decision making, and health resource allocation. Examines technical features of these methods, problems associated with implementing them, and advantages and pitfalls in their application in setting public health policy. Open to juniors, seniors, and graduate students.

Spr  PHP2350  S01  25671  W  12:30-3:00(05)  (J. Bentkover)

**PHP 2360. Designing and Evaluating Public Health Interventions.**

Aims to develop skills in designing and evaluating public health interventions. Levels of intervention include the individual; families or small groups; organizations such as schools, worksites, health care settings; communities; social marketing and health communications; policy and environmental changes. Will identify personal and environmental factors that affect public health and discuss needs assessment, formative research, cultural sensitivity, behavior change theories, intervention mapping, process and impact/outcome evaluation and dissemination. Students will critique intervention studies and gain experience in developing a hypothetical behavior change intervention. Graduate students and AB-MPH undergraduates only. DPLL

Spr  PHP2360  S01  25556  W  3:00-5:30(14)  "To Be Arranged"

**PHP 2370. Etiology of Substance Use Disorders.**

This course will help students become familiar with behavioral, genetic, neurobiological, and cultural factors related to the onset and course of substance use disorders. In addition to review of specific theories, empirical evidence supporting models will be covered as will the integration of evidence across models. Priority will be given to postdoctoral fellows.

Fall  PHP2370  S01  15894  F  1:00-3:30(06)  (P. Monti)

**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 Community Health may enroll with instructor’s permission. Enrollment limited to 20 graduate and medical students. DPLL

Spr  PHP2380  S01  24847  M  2:20-4:50(07)  (K. Carey)

**PHP 2390. Quantitative Methods for Behavioral and Social Sciences Intervention Research.**

This course provides broad coverage of the quantitative methods used in behavioral intervention research ranging from descriptive data analysis to longitudinal methods. Students will learn to conduct, interpret, and write up a range of statistical procedures including basic psychometrics, t-tests and ANOVAs, correlations, and multiple regression. Students also will be introduced to more advanced techniques used for longitudinal data analysis in order to understand their common uses in behavioral intervention research. The course provides students in the Master's program in Behavioral and Social Sciences Intervention the requisite skills to conduct analyses of behavioral data as part of their Master's Thesis. Enrollment limited to 15 graduate students in the BSSI Master's program and the MPH program.

Fall  PHP2390  S01  15865  Th  12:00-2:20(17)  (C. Kahler)

**PHP 2400. The U.S. Health Care System: Case Studies in Financing, Delivery, Regulation and Public Health.**

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 promotion. Examining on epidemiological, economic, political and cultural principals. Prerequisites: Graduate standing or PHP 0310 or PHP 0070 (not available to first year students or sophomores). Instructor permission required.

Fall  PHP2400  S01  16676  M  9:30-11:50(16)  (C. Koller)

**PHP 2410E. Medicare: A Data Based Policy Examination.**

This course will explore the role of Medicare as America’s health insurer for the elderly and disabled through the use of real Medicare insurance claims data, examining how Medicare policy changes in financing and regulation have affected the delivery and receipt of medical services. At the end of the course students will: 1) know the history of important Medicare policy changes; 2) be able to construct aggregated patient case mix acuity adjusted measures of provider quality using insurance claims data; 3) be able to conduct policy analyses using Medicare claims data that are sensitive to standardized coding schemes. Enrollment limited to 15 graduate students. Prerequisite: PHP 2120, 2508, or 2510. Instructor permission required.

Fall  PHP2410E  S01  16677  Th  12:00-2:20(10)  (V. Mor)

**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  25672  W  9:00-11:30(02)  (T. Trikalinos)

**PHP 2425. Doing Public Health: Getting It Done in the Real World.**

This course covers topics that MPH graduates will encounter in public health work and engages students with important challenges in public health practice. Class sessions will be as real-world as possible. We will choose a major current public health problem in RI and develop a coalition of agencies. Each student will learn about a different agency, develop its role in addressing the problem as a part of the coalition, and design a proposal for intervention, interacting with experienced public health practitioners, interviewing agency staff, gathering data, writing proposals, drafting budgets etc. Assignments will foster good communication within organizations and coalitions.

Fall  PHP2425  S01  16965  T  3:00-5:30(18)  (P. Nolan)

**PHP 2450. Measuring and Improving the Quality of Health Care.**

The quality of health care in the United States is in urgent need of improvement. This course will focus on the science of measuring and improving the quality of health care. Topics will include quality assessment,
patient safety, medical errors, public reporting, financial incentives, organizational change, and health care disparities. Students will engage in a team-based quality improvement project. Open to graduate and medical students only.

Fall PHP2450  S01  16860  M  3:30-6:00(13)  (A. Trivedi)

**PHP 2451. Exchange Scholar Program.**  
(To Be Arranged)

**PHP 2455A. Seminar on Modern Methods for HSR and CER (I).**  
This graduate course will cover a number of methods topics in health services and comparative effectiveness research. This is the first part of the course, focusing on analysis of primary data. Prior exposure to theory is assumed, so theory will be reviewed only briefly; emphasis is on application. For 2015, the course will focus on the following domains: (1) Predictive modeling; (2) Model selection and regularization, and machine learning for classification + clustering; (3) Estimation of intervention effects + imputation for missing data. The class will briefly review theory; critically appraise applied papers; conduct a practical exercise.

Fall PHP2455A  S01  16941  W  12:00-2:30(12)  (T. Trikalinos)

**PHP 2470. Topics in Clinical, Translational and Health Services Research.**  
Through a combination of mini-courses and seminars, students will explore concepts, gain knowledge and develop skills in a variety of public health areas. To receive a half credit for this course, students will be required to successfully complete 70 units. Units must be pre-determined by the course instructor and the unit instructor. Units are generally based on the number of in-person contact hours and the number of outside of class/homework hours required for a mini-course or seminar. Students must receive special permission from the instructor or accept the be enrolled in the Clinical and Translational Research Summer Institute to enroll.

Spr PHP2470  S01  25873  T  4:30-5:00(16)  (A. Trivedi)

**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  25753  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 the knowledge, skills and perspectives necessary to analyze data in order to answer a public health questions. The year long sequence will focus on statistical principles as well as the applied skills necessary to answer public health questions using data, including: data acquisition, data analysis, data interpretation and the presentation of results. Through lectures, labs and small group discussions, this fall semester course will focus on identifying public health data sets, refining research questions, univariate and bivariate analyses and presentation of initial results. Prerequisite: understanding of basic math concepts and terms; basic functional knowledge of Stata. Enrollment limited to 50 MPH, CTR, and BSSI students. Instructor permission required.

Fall PHP2507  S01  16772  W  6:00-8:00PM(17)  (A. Gjelsvik)

Fall PHP2507  S01  16772  Th  1:00-2:20(17)  (A. Gjelsvik)

**PHP 2508. BioStatistics and Data Analysis II.**  
Biostatistics and Applied Data Analysis II is the second course in a year-long, two-course sequence designed to develop the skills and knowledge to use data to address public health questions. The courses are specifically for students in the Brown MPH program, and the training programs in Clinical and Translational Research. The sequence is completed in one academic year, not split across two years. The courses focus on statistical principles as well as the applied skills necessary to answer public health questions using data, including: acquisition, analysis, interpretation and presentation of results. Prerequisite: PHP 2507. Enrollment limited to 48. Instructor permission required.

Spr PHP2508  S01  25616  W  6:30-8:00PM(14)  (A. Gjelsvik)

Spr PHP2508  S01  25616  Th  1:00-2:20(14)  (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  16774  W  9:00-10:20(08)  (C. Bauer)

**PHP 2511. Applied Regression Analysis.**  
Applied multivariate statistics, presenting a unified treatment of modern regression models for discrete and continuous data. Topics include multiple linear and nonlinear regression for continuous response data, analysis of variance and covariance, logistic regression, Poisson regression, and Cox regression. Prerequisite: APMA 1650 or PHP 2510. Open to advanced undergraduates with permission from the instructor.

Spr PHP2511  S01  25617  Th  9:00-10:20(08)  (To Be Arranged)

**PHP 2515. Fundamentals of Probability and Statistical Inference.**  
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 of 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  16999  MW  9:00-10:20(02)  (A. Sullivan)

**PHP 2520. Statistical Inference I.**  
First of two courses that provide a comprehensive introduction to the theory of modern statistical inference. PHP 2520 presents a survey of fundamental ideas and methods, including sufficiency, likelihood based inference, hypothesis testing, asymptotic theory, and Bayesian inference. Measure theory not required. Open to advanced undergraduates with permission from the instructor.

Fall PHP2520  S01  16776  MW  9:00-10:20(16)  (Z. Wu)

**PHP 2530. Bayesian Statistical Methods.**  
Surveys the state of the art in Bayesian methods and their applications. Discussion of the fundamentals followed by more advanced topics including hierarchical models, Markov Chain Monte Carlo, and other methods for sampling from the posterior distribution, robustness, and sensitivity analysis, and approaches to model selection and diagnostics. Features nontrivial applications of Bayesian methods from diverse scientific fields, with emphasis on biomedical research. Prerequisites: APMA 1650, PHP 2510, PHP 2511, or equivalent. Open to advanced undergraduates with permission from the instructor.

Spr PHP2530  S01  25659  MW  9:00-10:20(02)  (C. Schmid)

**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  16915  MW  10:30-11:50(03)  (C. Schmid)

**PHP 2560. Statistical Computing.**  
Covers the theory and application of common algorithms used in statistical computing including numerical analysis, random number generation, sorting, root finding, optimization, numerical integration, simulation and Monte Carlo methods, smoothing and density estimation, Markov chain Monte Carlo and bootstrapping. Some specific topics discussed include: rejection sampling, Newton-Raphson, Sweep, Gaussian quadrature, EM, importance sampling, Metropolis-Hastings, Gibbs sampling, kernel densities, maximum likelihood, simplex algorithm, etc. Necessary
numerical linear algebra and analysis will be reviewed. Also discusses applications of these algorithms to real research problems. Recommended course work in multivariable calculus, linear algebra, and statistics (PHP 2510, 2511).

PHP 2508. Statistical Inference II.
This sequence of two courses provides a comprehensive introduction to the theory of modern inference. PHP 2580 covers such topics as non-parametric statistics, quasi-likelihood, resampling techniques, statistical learning, and methods for high-dimensional Bioinformatics data. Prerequisite: PHP 2520. Open to advanced undergraduates with permission from the instructor.

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 PHP2560 S01 25626 Arranged 'To Be Arranged'
Spr PHP2560 S02 25661 Arranged 'To Be Arranged'

The purpose of this seminar is to facilitate discussions of current scientific literature in epidemiology, biostatistics, health services, behavioral and health sciences, and public health in general. The main goal is to expose students to current methodological issues and controversies, in an effort to integrate knowledge across disciplines. This seminar is open only to doctoral students in Epidemiology, Behavioral and Social Health Sciences, Biostatistics and Health Services Research.

Fall PHP2950 S01 17021 Arranged (K. Carey)
Fall PHP2950 S02 17176 Arranged (Z. Wu)
Fall PHP2950 S03 17177 Arranged (B. Marshall)
Fall PHP2950 S04 17178 Arranged (A. Trivedi)

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

PHP 2985. MPH Independent Study for Thesis Preparation and Research.
This optional half credit course may be taken up to two times during preparation for the MPH degree. It provides MPH students with self-directed thesis research and preparation time under the guidance of a thesis advisor. Prior to taking this course the student and advisor must reach agreement as to what constitutes satisfactory completion of the course (e.g., completion of a satisfactory literature review, attainment of specific thesis benchmarks, or completion of the thesis). Please check Banner for the correct section number and CRN to use when registering for this course.

PHP 2990. Thesis Preparation.
No description available.

Spr PHP2990 S01 23807 Arranged 'To Be Arranged'

PHP XLIST. Courses of Interest to Concentrators in Community Health.

Public Policy

PLCY 0100. Introduction to Public Policy.
An overview of policymaking and policy analysis in the contemporary United States. The course begins with an examination of traditional justifications for government action. We will then examine the discipline of policy analysis that has arisen to design and evaluate public policies. We will also consider critiques of the rational method and ask questions about how policy expertise fits into the political system. The course ends with classic works on organizations and implementation. Not open to graduate students. WRIT

Fall PLCYO100 S01 16004 TTh 1:00-2:20(10) (R. Hackey)
Spr PLCYO100 S01 24346 TTh 10:30-11:50(09) (S. Prasad)

Who determines how public policy is made? Do public policies reflect what voters want, or do lobbyists, politicians, and bureaucrats really make the decisions? What factors motivate these different actors? This course examines public policy from the perspective of comparative politics. Over the course of the semester, we will examine policy making in the US and a number of industrialized countries in Western Europe and Japan. Topics studied include immigration policy, education policy, and family policy. Enrollment limited to 20 first year students. FYS WRIT

Spr PLCYO700J S01 26026 T 4:00-6:30(16) (G. Augusto)

Broad overview of public policy analysis and program evaluation with emphasis on methodological issues involved in the analysis and assessment of government programs. Illustrations are drawn from a variety of substantive policy areas. Prerequisite: PLCY 0100, and POLS 1600 or EDUC 1110 or SOC 1100 or ECON 1620, or written permission of instructor. Enrollment limited to 40 Political Science and Public Policy concentrators. WRIT

Spr PLCY1200 S01 24889 TTh 1:00-2:20(10) 'To Be Arranged'

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
PLCY 1700K. Health Policy Challenges. This course examines the topic of health reform through a variety of lenses – politics, policy, community organizing, and bureaucratization. Specific issues include recent reform efforts at the national and state levels, including the Affordable Care Act and several Rhode Island state legislative campaigns over the past twenty years. During each of these legislative victories (or defeats), the interplay between politics and policy, community organizing and implementation have defined how successful the laws have been in improving people’s access to quality, affordable healthcare.

Fall PLCY1700K S01 17056 W 3:00-5:30(17) (M. Rosenberg)

PLCY 1700T. Good Government. An applied ethics course specifically for students with backgrounds in Public Policy, it will emphasize the primary themes of good government: openness, deliberation, and integrity. Students will develop an essay on good government and do research for case studies of ethical dilemmas involving public servants. Prerequisite: PLCY 0100 (or equivalent). Instructor permission required. This course satisfies the American Institutions requirement.

Fall PLCY1700T S01 15118 M 3:00-5:30(15) (R. Cheit)

PLCY 1700V. Nonprofit Organizations. Contemporary nonprofits and their role in community building and shaping public policy are central to this course. Topics include how strong coalitions impact housing, welfare and children’s policy, organizing empowered communities, the influential and engaged donor and building the value of nonprofits. Case studies will be featured and new nonprofit models will be conceptualized to strategically address critical human need. Enrollment limited to 20 juniors, seniors, and graduate students concentrating in Public Policy. This course satisfies the American Institutions requirement.

Spr PLCY1700V S01 25635 W 3:00-5:30(14) (W. Allen)

PLCY 1700Y. Crisis Management. Introduces future policymakers to the multifaceted decision-making process in which governments, businesses, advocacy organizations, and the public are thrust into the throes of a policy crisis. Various crisis management theories, key stakeholders in a crisis situation, and the positive and negative effects of various strategies are analyzed. Enrollment limited to 20 junior and senior concentrators in Public Policy. This course satisfies the Public Policy Problems requirement.

Fall PLCY1700Y S01 15706 Th 4:00-6:30(02) (D. Preston)

PLCY 1700Z. State and Local Government. Examines state and local politics and government in the United States. The first part of the course examines the historical underpinning and division of power of the major political actors, institutions, and processes through both institutionalist perspectives. The second part focuses on the role of states in shaping significant policy areas including civil unions, education, healthcare, welfare, and the environment. This course satisfies the American Institutions requirement.

Fall PLCY1700Z S01 15705 W 3:00-5:30(17) (R. Kerbel)

PLCY 1701D. Aging and Public Policy: The Impact of an Aging Society on Public and Private Sector Organizations. A “silver tsunami” is coming. Soon 20% of US residents will be over the age of 65. Governmental policy makers and business leaders are scrambling to adapt as the aging population reshapes the demand for services and products and threatens to unravel the social safety net. This course will investigate the aging wave, analyze its impact on both private and public organizations through case study review, and consider implications for future management and policy. Emphasis will be on “social entrepreneurship” - practical solutions and their implementation within organizations. Enrollment limited to 20, preference given to public policy concentrators, and seniors.

Fall PLCY1701D S01 17109 M 6:00-8:30PM(15) (S. Gresham)

PLCY 1701H. Congressional Leadership, Parties and Public Policy. Focuses on the Congressional leadership, parties in Congress and their impact on political interactions, and public policy. The course will examine the relationship between the leadership in the Congress and the powerful elements in the House and Senate such as committee chairmen and the party caucuses as well as the media and lobbyists. Emphasis is on the decades long trend toward greater political polarization and its impact on the ability of the institution to respond effectively to address critical national priorities such as the federal debt, health reform immigration, nuclear proliferation and global warming. Enrollment limited to 20 juniors, seniors and graduate students.

Fall PLCY1701H S01 16628 F 9:30-12:00(16) (R. Arenberg)

PLCY 1701I. Immigration: The Imaginaries of Race, Space, and Nation. Immigration in the United States has been and continues to be about delineations of boundaries, of belonging. By definition, immigration delimits American national identity; however, it does so by defining it as a cultural notion. American-ness is a cultural identity, one that is explicitly descriptive about who belongs and who does not belong.

In this course, we will briefly examine the rise of American nationalism vis-à-vis the history of immigration policy in the United States.

Fall PLCY1701I S01 17052 T 4:00-6:30(18) (Y. Matos)

PLCY 1701K. Governance in the Academy: A University at Work in the 21st Century. Focuses on understanding and evaluating the governance of the modern university. Brown will be used as one example to illustrate and illuminate various aspects of university governance. Themes of leadership, effective decision-making, priority-setting, planning, conflict and crisis management, and optimal organizational structure and behavior will be discussed.

Students will be well-versed in the language, structure, roles of actors, and general operations of university governance and equipped to analyze and assess the strengths and weaknesses of various models. Students with an interest in pursuing a career in academia or other non-profit organizations will benefit from this course. Enrollment limited to 20 juniors and seniors. Instructor permission required. This course satisfies the Public Policy Problems requirement. WRIT

Spr PLCY1701K S01 25481 M 3:00-5:30(15) (R. Carey)

PLCY 1701M. Juvenile Justice Institutions and Policy. Examines the historical and legal development of the juvenile justice system and provides an overview of delinquency theory. These frameworks are used to study the major institutions and current policy issues in the juvenile justice system. Special topics include teen and family courts, age of jurisdiction, racial disparities in juvenile justice, and female delinquency. Students engage in a semester-long project to develop a policy brief addressing a current issue in juvenile justice. Enrollment limited to 20 juniors and seniors. Instructor permission required. This course satisfies the Public Policy Problems requirement. WRIT

Spr PLCY1701M S01 25543 Th 4:00-6:30(17) (V. Cooley)

PLCY 1701Q. Leading Social Ventures - Social Entrepreneurship in Action. Intractable social problems across the globe demand new, impactful solutions. Social entrepreneurs, driven by passion to change the world, fuse social missions and savvy business practices to create enterprises that solve these complex challenges.

Leading Social Ventures is designed for students who are leading social ventures or aspire to create and lead them. “Action learning” means students will apply educational content to a specific venture in the early stage of development. Students will work on a venture that they have created or select an existing early-stage venture among provided choices. Submit by 5pm on January 23, 2015 a required application here: http://bit.ly/11g7hBc. You must attend the first class on January 21, 2015. Accepted students will be notified on January 26. Students who do not attend class on January 28 will forfeit their spot in the class. Enrollment limited to 25.

Spr PLCY1701Q S01 24896 W 3:00-5:30(14) (M. Kaplan)

PLCY 1701W. Race, Gentrification, and the Policing of Urban Space. This seminar focuses on the relationships between structures and processes of racialization, gentrification, and the policing of urban space in the post 1970s United States. Through readings, lectures, and original research, students will develop analyses of a series of linked case studies in North American cities including Baltimore, Ferguson, New York, New Orleans, Los Angeles, and San Francisco. Students will develop an inventory of concepts such as race, class, gender, sexuality, neoliberalism, rent, restructuring, scale, and spaces that are foundational for analyzing the interrelationship between housing and policing policies. DPLL WRIT

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
This course examines the range of approaches to making social change through democratic institutions and processes in the U.S. These approaches—direct service, community organizing, policy/politics, philanthropy, social entrepreneurship and research/scholarship—have different value systems, methodologies, strengths and limitations. There’s no one “right” approach, and the modes often intersect in ways that can be mutually reinforcing or counterproductive. The course will be valuable to students interested in being involved in social change during their time at Brown and in their future careers. LILE

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. Students understand the competencies that are needed to develop transformative solutions to pressing social issues in society. Enrollment limit is 40. Submit by 5pm on Friday, September 11, 2015 a required application here: http://gpoa.gil/forms/awrwhGVro You must attend the first class on Thursday, September 10, 2015. Accepted students will be notified on September 14. Students who do not attend the second class on Tuesday, September 14th will forfeit their spot in class.

Fall PLCY1910 S01 16862 TTh 6:40-8:00PM(05) (A. Harlam)

PLCY 1970. Independent Reading and Research.
Supervised reading or research. Specific program arranged in terms of the student’s individual needs and interests. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

PLCY 1971. Independent Reading and Research.
See Independent Reading And Research (PPAI 1970) for course description. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

PLCY 1990. Public Policy Colloquium.
An advanced two-semester research seminar for senior honors candidates in the public policy and American institutions concentration. Participants jointly consider strategies appropriate to researching and writing a senior paper before proceeding to individual research on topics they choose. Each participant is required to present a summary of his or her work to the colloquium.

Fall PLCY1990 S01 15692 Arranged (R. Cheit)

Explores how organizations use budgets and management tools to achieve broader social, economic, and political objectives. It is designed to show how these techniques can be used to improve organizational performance.

Fall PLCY2020 S01 15114 MW 8:30-9:50(16) (P. Marino)

PLCY 2035. Statistics II for Public Policy Analysis.
The course introduces students to the use of multiple regression analysis and program evaluation for analyzing data in the social sciences. We will study a variety of designs for empirical public policy analysis, from random assignment to quasi-experimental evaluation methods, and students will have the opportunity to analyze actual datasets. We will also study the strengths and weaknesses of alternative evaluation strategies.

Please note that students must be present at the first class meeting in order to have the option to enroll in this course. Because the class meets once per week and the first assignment will be distributed during the first class, we will be launching directly into substantive material for the course. Week one/meeting one is not only an introduction. It is therefore essential that all students attend beginning from the first class meeting on 9/15/2015.

Fall PLCY2035 S01 15193 T 5:40-6:10PM(16) (J. Owens)

Broad overview of public policy analysis and program evaluation with emphasis on methodological issues involved in the analysis and assessment of government programs. Illustrations are drawn from a variety of substantive policy areas.

Fall PLCY2040 S01 15192 W 10:00-12:30(03) (J. Yardley)

PLCY 2050. Program Evaluation.
Designed to equip graduate students with the knowledge and tools needed to become critical consumers of evaluation research and to conduct evaluations of various social programs and policies. Following an introduction to the field of program evaluation, the course will address specific topics including: logic models, process evaluations, experimental and quasi-experimental designs for outcome evaluations, and alternative data sources. Class discussions and assignments will utilize evaluation examples from a variety of substantive policy areas. Prerequisite: PPAI 2030. Open to graduate students only.

Fall PLCY2050 S01 15695 Th 3:00-5:30(02) (V. Cooley)

PLCY 2140. Politics, Public Policy, and Economic Development in Asia.
It is widely accepted that development is not simply an economic phenomenon. Political processes are intimately tied up with economic development. We will compare and contrast the various Asian countries and models of development around themes identified above. The heaviest emphasis will be on China, India and South Korea. Economic policy will be the center of our discussion.

Fall PLCY2140 S01 16614 W 1:00-3:30(06) (A. Varshey)

PLCY 2150. Strategic Communication.
Teaches students communication skills for social change, and examines how individuals and organizations frame issues in order to effect change.

Spr PLCY2150 S01 24350 M 3:00-6:00(13) ‘To Be Arranged’

PLCY 2160. Policy Implementation.
What happens after elected officials, courts, and bureaucrats make policy decisions? What affects whether those policies produce expected changes? What contributes to policy success or policy failure? What do success and failure mean? This course is designed to address these questions and help you learn about:
• policy outcomes by considering why policies yield both intended and unintended results
• policy design by considering the relationship between policy aims, policy instruments, implementers’ capabilities, and the political, institutional, and organizational environments in which implementers work
• policy problems by considering sources of social dilemmas
• process by considering dimensions of policymaking beyond legislative, executive, or judicial intent

Fall PLCY2160 S01 15691 M 3:00-5:30(15) (S. Moffit)

PLCY 2350. Thinking, Planning and Acting Strategically.
This course will focus on the strategic trends and issues which impact the public and nonprofit sectors and the role of strategic planning and strategic thinking as fundamental tools of public and nonprofit institutions to build high performance organizations, increase the value of their programs and services and enhance problem-solving. This course has been designed to support students in acquiring a mastery of practical skills in strategic planning and strategic thinking.

Fall PLCY2350 S01 15123 TTh 9:00-10:20(08) (M. Kaplan)

PLCY 2450. Exchange Scholar Program.

PLCY 2545. An Introduction to Public Finance in Multilevel Democracies.
This course will introduce students to the fundamental political, institutional, and technical issues associated with sub-national governance and public finance reform multilevel democracies. The course requires no prior experience with either intergovernmental finance or fiscal issues. Its central purpose is to explore how politics and policy shape the way responsibility for regulating, financing, and managing public services get defined and divided up between levels of government in both federal and unitary states.

Fall PLCY2545 S01 17201 W 1:00-3:30(06) (A. Levitas)

PLCY 2555. Environmental Policy, From the Ground Up.
The seminar will examine selected environmental issues at local, national and international (especially Global South) levels which are at the center of widespread public concern. We will give critical consideration to some

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
of the key ideas, concepts, discourses and approaches underlying public solutions to those concerns. The seminar will draw on literature and concepts from the fields of public policy and administration, science and technology studies, feminist theory, Africana Studies, and indigenous knowledge systems, as well as on practitioners' knowledge.

Fall PLCY2555 S01 17195 T 3:00-5:30(18) (G. Augusto)

Focus is on the federal budget process, political interactions, and public policy outcomes. The budget represents nearly one-quarter of GDP making those decisions central to the functioning of our democracy and the health of our economy. Emphasis is on the Congressional budget process, appropriations process, and revenue decision-making because the Constitution establishes Congress as the guardian of the nation's purse strings.

Spr PLCY2650 S01 26011 MW 5:40-8:40PM(13) (R. Kerbel)

PLCY 2750. Mediation, Negotiation, and Arbitration Strategies.
This graduate-level seminar is a synthesis of negotiation, arbitration, and mediation theories and practices as applied to public policy professionals. Course topics include interagency negotiation and cooperation, professional and workplace negotiations, agreements in legislative and advocacy environments, using non-governmental bargaining partners, role of government regulators, and international and cross-cultural agreements. Emphasis on analysis of ethical issues and strategies in the planning, formulation, and implementation of negotiated agreements. Enrollment limited to 16. Instructor permission required.

Spr PLCY2750 S01 26012 MW 5:40-8:40PM(13) (R. Kerbel)

PLCY 2800. Internship.
Practical job experience in the public, private, or non-profit sector.

Fall PLCY2800 S01 15888 Arranged (J. Morone)

Spr PLCY2800 S01 24667 Arranged (J. Morone)

PLCY 2900. Research Workshop.
Group research projects centering on topics organized by the instructor. Students will be organized into small teams that will undertake research projects such as policy analysis, evaluation studies, organizational assessments, or data projects. Results of these projects will be presented in the seminar.

Fall PLCY2900 S01 15700 W 6:00-8:30PM(17) (W. Allen)

Spr PLCY2900 S01 24887 T 6:00-8:20PM(12) (W. Allen)

PLCY 2980. Graduate Independent Study.
Please check Banner for the correct section number and CRN to use when registering for this course.

Religious Studies

RELS 0025. Wealth: Religious Approaches.
This course will survey religious approaches to the acquisition and use of wealth: How do religious thinkers understand the notion of ownership and private property? Is the fact of ownership of significant possessions seen as a moral good or an impediment to the spiritual life? Are there better or worse ways to acquire wealth? To spend it? The course will focus primarily on Judaism and Christianity, although examples from Islam and perhaps eastern religions will be brought in as appropriate. Topics to be covered will include religious understandings of poverty, charity, finance, and the link between religion and capitalism. DPLL LILE WRIT

Fall RELS0025 S01 15990 TTh 2:30-3:50(11) (S. Harvey)

RELS 0035. The Bible and Moral Debate (JUDS 0060).
Interested students must register for JUDS 0060.

Spr RELS0035 S01 25290 Arranged "To Be Arranged"

RELS 0055. Modern Problems of Belief.
Some say it is impossible to be both a modern person and a religious person. What are the assumptions behind this claim? And what is it about the modern (or postmodern) era that, according to some, has made religion difficult to believe in? These questions will be discussed as we explore the ways religion has been understood in Western culture from the Enlightenment to the present. We will read such influential thinkers as Hume, Kant, Hegel, Kierkegaard, Marx, Nietzsche, Freud, Durkheim, Buber, and Woody Allen. Each figure has left a decisive mark on the way we think about religion. LILE.

Fall RELS0055 S01 15873 MWF 2:00-2:50(07) (M. Cladis)

This course explores the past and present of spirituality in the United States. Using the familiar phrase “spiritual but not religious” as a point of departure, this introductory course not only surveys the wide range of ideas, practices, and desires that Americans often associate with spirituality but also asks why the concept of spirituality has drawn those associations. Through encounters with such varied phenomena as suburban shopping malls, evangelical revivals, bestselling novels, yoga, environmentalism, and Oprah, students will reflect upon what spirituality’s popularity illustrates about prevailing attitudes toward issues including institutional affiliation, religious pluralism, personal experience, consumerism, nationalism, and secularism. LILE

Spr RELS0056 S01 24898 MWF 1:00-1:50(08) (D. Vaca)

RELS 0068. Religion and Torture.
The debates about the moral and legal status of torture have acquired a new urgency since 9/11. People are now questioning the consensus of law and rights decision-makers that torture is never permissible. Indeed, some argue that in extreme cases, it may be obligatory to torture a captive for information that could save many lives. This class explores the recent debates about torture from secular and religious perspectives. It also deals with more general themes related to torture: What are the nature and effects of pain? Are human beings sacred, and does sacredness involve a prohibition against torture? LILE WRIT

Spr RELS0068 S01 24900 MWF 11:00-11:50(04) (S. Bush)

RELS 0090J. Death and Afterlife in the Biblical Tradition.
A close analysis of the development of ideas about death and the afterlife in the Hebrew Bible and in the literatures of Second Temple Judaism and early Christianity. Topics: life and death in Israel and ancient West Asia; the abode of the dead and its denizens; from Sheol to Heaven, Hell, and the final judgment; religious specialists, rituals, and the literature of death: necromancy; burial and mourning rites; cults of the dead ancestor. No prerequisites. Enrollment limited to 20 first year students. FYS LILE WRIT

Fall RELS0090J S01 15874 Th 4:00-5:30(02) (S. Olayan)

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 participate 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. FYS LILE WRIT

Fall RELS0090K S01 15992 W 3:00-5:30(17) (D. Vaca)

RELS 0145. Karma, Liberation + Rebirth.
Karma, Sanskrit for the "action" that makes up a human life, has been a central concern for the religious traditions of South Asia throughout their history. Hinduism, Buddhism and Jainism share the belief that after death people are reborn, taking on lives according to their actions in lives previous. In these traditions, liberation from the cycle of rebirth becomes the ultimate goal of human existence. This course examines the ideas of karma, rebirth and liberation in Hinduism, Buddhism and Jainism from historical, cosmological, ritual, narrative, iconographic and theological points of view. We also look at these ideas in Western culture.

Spr RELS0145 S01 26073 TTh 4:00-6:30(16) (F. Moore-Gerety)

Interested students must register for EAST 0180.

Fall RELS0195 S01 16349 Arranged "To Be Arranged"

RELS 0290D. Islamic Sexualities.
This course is a survey of women in Islamic society from the medieval to the modern worlds. Using a variety of non-fiction, fiction and film sources, we will address issues such as women and Islamic law, women's bodies and images of Muslim women in the Muslim world; contemporary feminism

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
and movements in Islam, the question of secularism, veiling, and others. Preference given to students with prior university level coursework in Islam. Examples include RELS 0150, 0640, 1520. Enrollment limited to 50.

**DPPL LILE**

Spr RELS0290D S02 26004 TTh 1:00-2:20 (N. Khalek)

**RELS 0290E. Engaged Buddhism.**

"Engaged Buddhism" is a term used to describe social activism that applies Buddhist insight and ethics. This course will examine the historical background of engaged Buddhism, explore its central concepts, analyze it theoretically, and look at practical applications. Since many engaged Buddhist movements employ meditation, we will also study, first hand, the effects of meditation on prosocial attitudes in the "Mediation Labs" that are integral to the pedagogy of the course. Preference given to students who have taken RELS 0500 or UNIV 0540 or who have prior coursework in Buddhism. Meditation Labs MWF at 9 AM; Weekly Seminar. LILE Fall RELS0290E S01 15994 Th 4:00-6:30(02) (H. Roth)

**RELS 0322. Great Jewish Books (JUDS 0681).**

Interested students must register for JUDS 0681.

Fall RELS0322 S01 16326 Arranged "To Be Arranged"

**RELS 0325. How the Bible Became Holy.**

No book in human history has exercised as much influence as the Bible. Over the past 2,000 years, people have killed and died for the Bible, and it continues to exert a powerful influence 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. DPPL WRIT Spr RELS0325 S01 20004 MWF 10:00-10:50(03) (M. Satlow)

**RELS 0365. God and Poetry (JUDS 0820).**

Interested students must register for JUDS 0820.

Fall RELS0365 S01 16327 Arranged "To Be Arranged"

**RELS 0405. Jesus and the Gospels.**

This course will investigate the history and development of the earliest accounts of Jesus' life and teachings. We will analyze a number of first and second century gospels, including canonical texts and non-canonical. We will examine what the early Jesus movement offered socially and ethically that other religious systems did not, which made it appealing to women, slaves, and those of lower classes. Through a close reading of the individual texts, we will be able to understand their structure, major themes, and historical-cultural backgrounds, as well as the practices, beliefs, and experiences of the communities that produced them. LILE WRIT Fall RELS0405 S01 17125 TTh 1:00-2:20(10) (N. Desrosiers)

**RELS 0410. Christianity in Late Antiquity.**

The communal struggles, personal rivalries, and theological conflicts that shaped Christianity in its formative centuries: heresy and orthodoxy, hierarchy and charisma, gender and class, persecution and martyrdom, paganism and classical tradition, creeds and councils, asceticism and the body, church and state, eastern and western Christianity. Focused in the 2nd through 6th centuries A.D. WRIT Spr RELS0410 S01 20005 MWF 12:00-12:50(05) (S. Harvey)

**RELS 0440. The World of Byzantium (CLAS 0660).**

Interested students must register for CLAS 0660.

Fall RELS0440 S01 16702 Arranged "To Be Arranged"

**RELS 0580. Experiencing the Sacred: Embodiment and Aesthetics in South Asian Religions.**

This course explores South Asian religions through the body, aesthetics, and the senses, with a focus on Hindu, Buddhist, and Jain traditions. Concentrating on embodied practices like meditation, chanting, eating, sex, asceticism, ritual, possession, and performance, we will examine experiences of the sacred past and present. How have sensory and material cultures shaped lives, practices, and doctrines? What placed does the pursuit (or denial) of sensual pleasure have in South Asian religious cultures? This course will draw on texts as various as sermons of the Buddha and the Kamasutra, and integrating a range of media from ethnographic films to graphic novels. DPPL LILE Fall RELS0580 S01 17122 T 4:00-6:30(18) (F. Moore-Gerety)

**RELS 0600B. Islam in America.**

Lupe Fiasco, the Al-Jazeera News Network, and Mos Def: from films to fiction, poetry and music, contemporary Islam is having an impact on modern culture in unprecedented ways. Islam is often said to be the fastest growing religion in America, and in this class we will study the contemporary life, culture and thought of Muslims in the US. We will begin with exploring Muslims in the US from its beginnings, as a result of the Atlantic slave trade, through the civil rights movement and the Nation of Islam, Malcolm X and mainstream Sunnis, and conclude with the multicultural present. DPPL LILE WRIT Fall RELS0600B S01 16000 MWF 1:00-1:50(06) (N. Khalek)

**RELS 0845. Religious Freedom in America.**

"Religious freedom," former Secretary Hilary Rodham Clinton remarked in 2009, "provides a cornerstone for every healthy society." It is, Clinton continued, "a founding principle of our nation." As Clinton's remarks illustrate, the concept of religious freedom is central to how people perceive the history of the United States and its position in the world today. But what is religious freedom? Does it actually exist? Has it ever? This seminar invites students to ask and answer these and other questions about the contested concept, engaging such varied issues as race, secularism, law, media, money, pluralism, and foreign policy. DPPL LILE WRIT Fall RELS0845 S01 15823 Th 4:00-6:30(02) (D. Vaca)

**RELS 0880A. Difficult Relations? Judaism and Christianity from the Middle Ages until the Present (JUDS 0050M).**

Interested students must register for JUDS 0050M.

Fall RELS0880A S01 16329 Arranged "To Be Arranged"

**RELS 0915. Epics of India (CLAS 0820).**

Interested students must register for CLAS 0820.

Fall RELS0915 S01 16333 Arranged "To Be Arranged"

**RELS 0925. Mythology of India (CLAS 0850).**

Interested students must register for CLAS 0850.

Spr RELS0925 S01 26296 Arranged "To Be Arranged"

**RELS 0950. The Floating World (EAST 0950B).**

Interested students must register for EAST 0950B.

Spr RELS0950 S01 25396 Arranged "To Be Arranged"

**RELS 1000. Methods in Religious Studies.**

Intensive introduction to classical and contemporary theories of religion and the principal methods for the study of religion. Junior seminar for religious studies concentrators. Enrollment limited to 25. WRIT LILE Fall RELS1000 S01 15824 W 3:00-5:30(17) (A. Bialek)

Fall RELS1000 S01 15824 W 3:00-5:20(17) (A. Bialek)

**RELS 1110. Mishnah and Tosefta (JUDS 1602).**

Interested students must register for JUDS 1602.

Spr RELS1110 S01 25291 Arranged "To Be Arranged"

**RELS 1211. Lords of Middle Sea: Greek and Biblical Myth and Society.**

In ancient times, men and women told stories of gods, kings, and heroes. Some of the best known and best loved are those from the Bible and from the ancient Greeks. Why were these stories written, and by whom? How can we tell the difference between truth and fiction, and how did they? Finally, what do stories about the past do, and why were they told? In this class, we investigate these questions and more.

Spr RELS1211 S02 25809 TTh 10:30-11:50(09) "To Be Arranged"

**RELS 1300. Ancient Christianity and the Sensing Body.**

Bodily experience and sensory engagement became increasingly important for Christians during their first six centuries. This seminar examines how and why the body and its senses gained worth for ancient Christians as instruments for gaining knowledge of God. Prerequisites: RELS 0110, 0400 or 0410. WRIT Fall RELS1300 S01 16001 TTh 10:30-11:50(13) (S. Harvey)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
RELS 1370B. Philosophy of Mysticism.
Covers important attempts to understand the nature of religious experiences and mysticism. We will look at several philosophical issues surrounding religious experience, including: (a) whether mystical experiences are too private for outsiders to understand or evaluate them; (b) what the relationship between religious experiences, language, and culture is; (c) whether religious experiences justify religious beliefs; and (d) how gender and religious experiences are related. We will treat theorists from various perspectives, including philosophical, historical, theological, psychoanalytic, and neuroscientific. Previous work in philosophy courses (or philosophically-intensive courses) is highly recommended. Enrollment limited to 20.

RELS 1440. Themes in Japanese Buddhism.
An exploration of critical themes and debates in the study of Japanese Buddhism. Participants become conversant with the key features of medieval Japanese thought as well as the strengths and weaknesses of established conceptual models in Japanese Buddhist studies. Readings include primary texts in English translation and modern secondary interpretations. Recommended: a course in Buddhism or East Asian religions.

RELS 1442. The History, Philosophy, and Practice of Rinzai Zen Buddhism.
Follows Rinzai Zen Buddhism from origins in India to developments in China to its transmission to Japan and eventual transplanting to the West. Scope includes Indian foundations, the East Mountain Chan of Daoyin and Hongren, the major teachers, Huineng and Shenhui, Linji, Dahui and the development of koan practice, Bankei and Hakuin in Japan, and Sasaki Joshu in America. Course will examine the nature of cultural and historical influences on the practices and adaptations through the Asian and American contexts, including the secular pedagogy of Contemplative Studies. Distinctive practices will be studied in meditation labs.

RELS 1530D. Islamic Sectarianism.
Suni and Shi’i conflict and sectarian division have been an enduring issue in the Islamic world. From Iraq to Syria, Iran to Egypt, inter-Muslim conflict and conflicting ideologies seem to be central issues. But how accurate and historical is this impression? In this course, we examine the origins and evolution of Islamic sectarianism, with an emphasis on the politics of religious authority in the Islamic world, old and new. This is an upper level seminar, and juniors and seniors will be given preference for enrollment. Shoppers must attend the first day of class if they wish to enroll.

RELS 1530E. Muhammad and the Quran.
This seminar focuses on how the Quran, the holy book at the center of Islam, came into being and was received by Muslims over time. We begin with the life of Muhammad, and proceed through close analyses of the Quran as well as related literatures, including commentary and exegetics, history, law, and the biography of the Muhammad. We will also read secondary scholarship on the composition, contents, and arrangement of the Quran. We will also address the "sacred" status of the text and discuss contemporary responses to the treatment and nature of the Quran. Texts will be in translation.

RELS 1600B. Prophets and Priests in Exile: Biblical Literature of the 6th Century BCE (JUDS 1690).
Interested students must register for JUDS 1690.

RELS 1830A. Pragmatism, Religion, and Politics.
Pragmatism is a distinctive American school of thought that sees the goal of philosophy not as the apprehension of timeless truths but as a practical project of bettering individual lives and society. Pragmatists such as William James and John Dewey were devoted to deepening America's commitment to democracy. Both saw an important place for an unconventional sort of religion in democratic life. This course explores the pragmatist thought of James, Dewey, and others, looking especially at their views on religion and politics. We also will explore the influence of pragmatism on Barack Obama. Enrollment limited to 20 juniors and seniors.

RELS 1835. Sinners, Saints, and Heretics: Religion in Early America (HIST 1515).
Interested students must register for HIST 1511.

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.

The seminar will explore the central radical religious, democratic, and environmental dispositions and ideologies that mutually informed each other in eighteenth- and nineteenth-century British Romantic literature and their subsequent and sustained legacies in America. We will read such authors as William and Dorothy Wordsworth, Coleridge, Mary Shelley, Emerson, and Thoreau.

RELS 2150. Targumic Aramaic.
Introduction to Targumic Aramaic grammar with readings from Targum Onkelos. Assumes knowledge of Hebrew.

RELS 2160. Aramaic Readings.
A survey of epigraphic and biblical Aramaic intended for doctoral students and others with sufficient background in Aramaic grammar.

RELS 2200B. Asceticism.
A study of eastern Christian asceticism during late antiquity, with attention to forms, motivation, theological understandings, and cultural impact. The focus in this offering will be eastern Syrian monastic traditions, 4th through 8th century.

RELS 2210. Greek Palaeography and Premodern Book Cultures (GREK 2110F).
Interested students must register for GREK 2110F.

RELS 2300C. Chinese Bibliography and Reference Resources.
This graduate seminar provides an introduction to major resources and research methods in traditional and modern Chinese scholarship. Each session contains lecture and workshop on topics to explore. Students will learn how to use various bibliographies and reference tools to locate information and materials they need. They will also learn how to navigate library catalogs, special collections, databases and the Internet on Chinese scholarly resources. The final project is to let each student compile a bibliography on her/his own research topic. This course will be especially helpful for graduate students who are engaged in writing theses on Chinese studies.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
RELS 2350B. Japanese Religion and Thought: The Long Nineteenth-Century
Study of Japanese religious and intellectual life during the late Tokugawa and early Meiji periods, when Japan made its dramatic transition into the modern era. Consideration of late Tokugawa phenomena such as mass pilgrimage, the rise of new religious groups, the popularization of National Learning, and the influence of Neo-Confucian thought; and of early Meiji trends, including the “separation of gods and buddhas,” State Shinto, and the impact of Christianity. Readings from primary texts in English translation and in Japanese and/or Chinese, depending on enrolled participants; and selected secondary interpretations.
Spr RELS2350B S01 25103 M 3:00-5:30(13) (J. Sawada)

RELS 2450. Exchange Scholar Program.
Fall RELS2450 S01 14611 Arranged 'To Be Arranged'

RELS 2600N. Gender and Relation in Religious Thought.
Gender has often been posed as the fundamental distinction of the human condition, creating the original opportunity for relation across that distinction. In some strands of religious thought, this distinction comes second to the creation of the world distinct from the divine. Religious and secular thinkers have turned to ordinary experiences of interpersonal relations for insight into these purportedly more fundamental relations and the connection between them. This seminar examines the role of interpersonal relationships in recent religious, ethical, and political thought, with particular attention to the way they bring gender and sexual desire more centrally into view.
Fall RELS2600NNS01 17215 F 10:00-12:30 (A. Bialek)

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 14612 Arranged 'To Be Arranged'
Spr RELS2890 S01 23815 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 tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.
Fall RELS2990 S01 14613 Arranged 'To Be Arranged'
Spr RELS2990 S01 23816 Arranged 'To Be Arranged'

Renaissance and Early Modern Studies
REMS 1880. Independent Study in REMS.
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.

Science and Society
SCSO 0292. Introduction to Environmental Social Science (ENVS 0495).
Interested students must register for ENVS 0495.
Spr SCS00292 S01 26085 Arranged 'To Be Arranged'

Interested students must register for HIST 0150B.
Spr SCS00381 S01 26086 Arranged 'To Be Arranged'

SCSO 0470. Digital Media (MCM 0230).
Interested students must register for MCM 0230.
Spr SCS00470 S01 26087 Arranged 'To Be Arranged'

SCSO 0520. Modern Science and Human Values (PHIL 0060).
Interested students must register for PHIL 0060.
Fall SCS00520 S01 17188 Arranged 'To Be Arranged'

SCSO 0700B. Science and Social Controversy.
In this course we will examine the institution of science and its relations to the social context in which it is embedded. Such topics as scientific objectivity, scientific consensus, scientific authority, and social and moral accountability of scientists will be considered in the context of discussing several controversies including: the AIDS epidemic, cultural impact of communications technologies, climate change, science and religion, the Manhattan Project, the Tuskegee Syphilis Experiment, genetic and pharmacological enhancement of human capacities, the role of drug companies in science and medicine, psychiatric diagnosis and medication, and the implications of neuroscience for free will and moral responsibility. Enrollment limited to 20 first year students and sophomores.
Spr SCS00700E S01 25275 T 4:00-6:30(16) (J. Poland)

SCSO 0700D. The Social Lives of Dead Bodies in China and Beyond (HIST 0685A).
Interested students must register for HIST 0685A.
Fall SCS00700E S01 16392 Arranged 'To Be Arranged'

SCSO 1000. Introduction to Science and Society: Theories and Controversies.
What is "science"? How do scientific ideas become knowledge? What is the nature of scientific objectivity, how can it be compromised? What is a scientific community, scientific consensus, and scientific authority? What roles does science play in our culture, and how is science related to other social institutions and practices? The interdisciplinary field of science studies is introduced through exploration of topics that include: gender and race, psychiatric classification, the drug industry, science and religion, and the use of nuclear weapons during World War II. Enrollment limited to 30 sophomores, juniors, seniors; other may enroll with permission of instructor. LILE WRIT
Spr SCSO1000 S01 25277 TTh 10:30-11:50(09) (J. Richards)

Interested students must register for AMST 1601.
Spr SCSO1110 S01 25857 Arranged 'To Be Arranged'

SCSO 1120. International Health: Anthropological Perspectives (ANTH 1310).
Interested students must register for ANTH 1310.
Fall SCSO1120 S01 17186 Arranged 'To Be Arranged'

SCSO 1152. Astronomy, Divination and Politics in the Ancient World (ASYR 1700).
Interested students must register for ASYR 1700.
Fall SCSO1152 S01 16310 Arranged 'To Be Arranged'

SCSO 1385. History of Medicine I: Medical Traditions in the Old World Before 1700 (HIST 0286A).
Interested students must register for HIST 0286A.
Fall SCSO1385 S01 16311 Arranged 'To Be Arranged'

SCSO 1386. History of Medicine II: The Development of Scientific Medicine in Europe and the World (HIST 0286B).
Interested students must register for HIST 0286B.
Spr SCSO1386 S01 25278 Arranged 'To Be Arranged'

SCSO 1389. The Science of Life: Biology, 1790 to Present (HIST 1825R).
Interested students must register for HIST 1825R.
Spr SCSO1389 S01 25279 Arranged 'To Be Arranged'

SCSO 1390. Science at the Crossroads (HIST 1825M).
Interested students must register for HIST 1825M.
Fall SCSO1390 S01 16393 Arranged 'To Be Arranged'

SCSO 1700P. Neuroethics.
In this course, we will examine ethical, social, and philosophical issues raised by developments in the neurosciences. Topics will include: neurodevelopment and the emergence of persons; the impact of child abuse on brain development; aging, brain disease, and mental decline; life extension research; strategies and technologies for enhancement of human traits; “mind-reading” technologies; agency, autonomy, and excuse from responsibility; error and bias in memory; mind control; neuroscientific and evolutionary models of religious belief and moral judgement. Enrollment limited to 20. Instructor permission required. LILE
Slavic Languages

Czech

CZCH 0100. Introductory Czech.
Introduces the performance of basic tasks in Standard Czech, highlights of Czech culture, and a worldview of a nation uniquely located on the threshold of western and eastern Europe. Emphasis on oral communication. Five meetings per week and use of audio/visual materials. Enrollment limited to 18.

Fall CZCH0100 S01 15194 MTWTHF 12:00-12:50 (M. Fidler)

CZCH 0200. Introductory Czech.
Introduces the performance of basic tasks in Standard Czech, highlights of Czech culture, and a worldview of a nation uniquely located on the threshold of western and eastern Europe. Emphasis on oral communication. CZCH 0200 includes readings of annotated literary texts on the Web. Five meetings per week and use of audio/visual materials. Enrollment limited to 18.

Spr CZCH0200 S02 25212 Arranged (L. Debenedette)

CZCH 0410C. Czech View of Self and Others.
Examines the Czech view of themselves as well as others, one of the most debated topics in the current context of expanding European Union. The centerpiece is a film about a man-eating flower (animated by Jan Svankmajer) invented by a crazy scientist, which unfolds in Prague, involving a peace-loving Czech botanist and his daughter, the American detective Nick Carter (played by a Slovak actor), and the Czech police enforcement. The film is a treasure box of symbolic representations of Czechs and people Czechs view as others. Reading materials are drawn from literary and journalistic texts. Equal emphasis on the acquisition of language, including exposure to Colloqial Czech. Separate language tasks for students of two proficiency levels (2nd and 3rd year). Conducted in Czech. The course is for students who completed CZCH 0200 or the equivalent. Enrollment limited to 18.

Spr CZCH0410C S01 15196 M 3:00-4:20 (M. Fidler)
Fall CZCH0410C S01 15196 Th 3:40-5:00 (M. Fidler)
Fall CZCH0410C S01 15196 W 3:30-4:20 (M. Fidler)

CZCH 0610B. Psychosis of Occupation in the Czech Lands.
Discussion of the Occupation period during WWII. The course is built around a Czech New Wave classic film about an eccentric director of a crematorium in Prague, who turns into a fanatic collaborator under the terror and demagogy of the regime. We will also read excerpts from the original literary text on which the film was based, and work with the Czech National Corpus. Separate language tasks given to students of two proficiency levels (2nd, 3rd year). Conducted in Czech. The course is for students who completed CZCH0410 or the equivalent. Enrollment limited to 18.

Spr CZCH0610E S01 24284 Arranged (M. Fidler)

Polish

PLSH 0100. 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 PLSH0100 S01 16262 TTh 12:00-12:50(03) (M. Harrison)
Fall PLSH0100 S01 16262 MW 10:00-10:50(03) (M. Harrison)

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.

Spr PLSH0200 S01 25221 TTh 12:00-12:50(10) (M. Harrison)
Spr PLSH0200 S01 25221 MW 10:00-10:50(10) (M. Harrison)

PLSH 0300. Intermediate Polish.
This course is for students who have completed first-year Polish. In this course you will further develop skills in speaking, reading, writing and understanding Polish. By the end of this course, you will be able to carry on basic conversations in Polish on many topics from your daily discussions.
life. You will be able to write notes and simple letters to Polish friends or keep a journal in Polish. You will also have the skills to read basic texts. Enrollment limited to 18.

- Fall PLSH0300 S01 16263 TTh 1:00-1:50(04) (M. Harrison)
- Fall PLSH0300 S01 16263 MWF 11:00-11:50(04) (M. Harrison)

**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.

- Spr PLSH0400 S01 25222 TTh 1:00-1:50(10) (M. Harrison)
- Spr PLSH0400 S01 25222 MWF 11:00-11:50(10) (M. Harrison)

**Russian**

**RUSS 0100. Introductory Russian.** Introduction to Russian language and culture. Oral and written communication in Russian; emphasis on the literary and everyday culture of Russia and the former U.S.S.R., including the changes that have reshaped everyday life for citizens of Russia. Five meetings per week, plus use of audio, video, and web materials. Enrollment limited to 18.

- Fall RUSS100 S01 15987 MWF 9:00-9:50(15) (L. Debenedette)
- Fall RUSS100 S01 15987 TTh 12:00-12:50(15) (L. Debenedette)
- Fall RUSS100 S02 16176 MWF 10:00-10:50(15) (L. Debenedette)
- Fall RUSS100 S02 16176 TTh 12:00-12:50(15) (L. Debenedette)

**RUSS 0110. Intensive Russian.** Intensively-paced introduction to Russian language and culture; completes one year of study in a first semester (RUSS 0110 + RUSS 0120). 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 25213 Arranged (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 25998 MWF 9:00-9:50(18) (L. Debenedette)
- Spr RUSS0200 S01 25998 TTh 12:00-12:50(18) (L. Debenedette)
- Spr RUSS0200 S02 25999 MWF 11:00-11:50(04) 'To Be Arranged' (L. Debenedette)
- Spr RUSS0200 S02 25999 TTh 12:00-12:50(04) 'To Be Arranged' (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 RUSS300 S01 15988 TTh 9:30-10:20(02) (L. Debenedette)
- Fall RUSS300 S01 15988 MWF 11:00-11:50(02) (L. Debenedette)
- Fall RUSS300 S02 16177 MWF 11:00-11:50(02) (L. Debenedette)
- Fall RUSS300 S02 16177 TTh 12:00-12:50(02) (L. Debenedette)

**RUSS 0320A. 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 20 first year students. FYS WRIT

- Spr RUSS0320A S01 25220 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 20 first-year students. FYS WRIT

- Fall RUSS0320E S01 15997 M 3:00-5:30(15) (V. Golstein)

**RUSS 0400. Intermediate Russian.** Continues development of language proficiency while broadening understanding of Russian culture via readings in literature and history. Includes expansion of vocabulary for dealing with conversational topics and review of Russian grammar. Features literary and nonliterary readings in Russian, as well as video and computer resources. Five class meetings per week. Prerequisite: RUSS 0300 or placement by exam. Enrollment limited to 18.

- Spr RUSS0400 S01 25600 TTh 12:00-12:50(04) 'To Be Arranged'
- Spr RUSS0400 S01 25600 MWF 11:00-11:50(04) 'To Be Arranged'

**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 15986 TTh 12:00-12:50(04) (L. Debenedette)
- Fall RUSS0500 S01 15986 MWF 11:00-11:50(04) (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 25601 MWF 1:00-1:50(06) (L. Debenedette)
- Spr RUSS0600 S01 25601 TTh 12:00-12:50(06) (L. Debenedette)

**RUSS 1019. Revolution in Russian Women's Writing.** This course will use Russian women's writing, primarily fiction, to develop a new understanding of Russian literary and cultural history. By weaving together literature, historical texts, and feminist theory from Russia and beyond, we will reveal a narrative of Russian literary and cultural history that is generally relegated to footnotes, a narrative that contains different cataclysmic shifts and revolutions than those that occurred at the state level, and we will examine the inception and development of the tradition of Russian women's writing. No knowledge of Russian required. LILE WRIT

- Fall RUSS1019 S01 16808 MWF 1:00-1:50(06) (E. Kraft)

**RUSS 1110. Special Topics in Russian Studies I: Advanced Reading and Conversation.** An advanced course recommended for students who are either planning to go or are returning from abroad. Focus on Russian culture as seen through the prism of Russian poetry. Extensive classroom discussion and frequent writing assignments. Prerequisite: RUSS 0600 or written permission. May be repeated once with permission from the instructor. Enrollment limited to 18.

- Fall RUSS1110 S01 16815 MWF 12:00-12:50(12) (L. Debenedette)

**RUSS 1120. Special Topics in Russian Studies II: Advanced Reading and Conversation.** A continuation of Russian 1110. Examines aspects of Russian culture as manifested in Russian literature. Readings range from fairy tales to contemporary works. Extensive classroom discussion and frequent writing assignments. Prerequisite: RUSS 1110, 1700, or written permission. May for complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
be repeated once with permission of the instructor. Enrollment limited to 18.

Spr RUSS120 S01 25216 MWF 12:00-12:50(05) (V. Golstein)

RUSS 1200. Russian Fantasy and Science Fiction.
Survey of Russian literature, from fairy tales, utopias, and dream sequences to science fiction, which depict altered states of reality. Readings in English, supplemented with films in March and April. Seminar with emphasis on discussion. Russian concentrators and graduate students expected to cover most of the readings in Russian. Familiarity with Russian literary history is not required.
Spr RUSS1200 S01 25214 TTh 10:30-11:50(09) (A. Levitsky)

RUSS 1250. Russian Cinema.
This seminar will provide a chronological overview of Russian cinema from its beginning to the present. The films will be considered against the background of some historical, political, and theoretical readings. The students will also be encouraged to juxtapose Russian and non-Russian films in order to evaluate the place of Russian cinema within a global film culture. Enrollment limited to 20.
Fall RUSS1250 S01 15995 Th 4:00-6:30(02) (V. Golstein)

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. WRIT Fall RUSS1290 S01 15991 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, Sologub, Blok, Mayakovskiy, Babel, Olesha, Zamiatin, Bulgakov, and Solzhenitsyn. Lectures and discussion. No knowledge of Russian required. WRIT Spr RUSS1300 S01 25217 MWF 2:00-2:50(07) (V. Golstein)

RUSS 1320. Soviet Literature from 1917 to 1953.
Survey of Soviet literature and culture from the Bolshevik revolution to the death of Stalin, with particular emphasis upon intersections between politics, history and aesthetics. Texts by Akhmatova, Babel, Blok, Bulgakov, Gan, Mandelstam, Mayakovskiy, Malevich, Platonov, Zamiatin and others, as well as films by Eisenstein, Vertov, and Alexanderov. Enrollment limited to 30.
Spr RUSS1320 S02 26005 MWF 1:00-1:50(06) (M. Walker)

RUSS 1810. Tolstoy.
Close readings of Tolstoy’s major novels (War and Peace and Anna Karenina, in particular) and shorter narratives with special emphasis on his iconoclastic ideas about art, religion, and society. Considers Tolstoy’s formal innovation in a broader historical and cultural context. Lectures and discussion. No knowledge of Russian required.
Fall RUSS1810 S01 16816 M 3:00-5:30(15) (S. Evdokimova)

RUSS 1900. Russian Jewish Literature and Film.
The roots of Russian Jewish literature reach back into the Pale of Settlement of the pre-revolutionary era. The Russian Jewish historical experience provided a highly distinctive perspective onto Stalin’s purges and the second World War, and the work of contemporary Russian Jewish authors and filmmakers reflects the complexity of the immigrant experience in Europe, North America, and the Middle East. We will also examine the diverse responses of writers to the present-day redrawing of the political map of Russia and Ukraine.
Fall RUSS1900 S01 16845 T 4:00-6:30(18) (A. Mihalovic)

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.

The most important literary currents from the Baroque to early romanticism. Study of style and genre and the development of the literary language.
Fall RUSS2010 S01 15993 W 3:00-5:30(17) (A. Levitsky)

RUSS 2410. Movements and Genres in Russian Literary Culture.
Seminar. Critical reading of selected texts from the Baroque period through the first half of the 19th century. Analysis is based on a study of the infrastructure of each work and the external influences of the period. Conducted mainly in Russian, with a focus on Russian critical terminology and approaches.
Spr RUSS2410 S01 25215 W 3:00-5:30(14) (A. Levitsky)

RUSS 2810. Russian Poetry: Silver Age.
Exploration of the writings of such Russian poets as Blok, Tsvetaeva, Pasternak, Mandelstam – in the context of social and cultural changes that shook Russia in first decades of the twentieth century. The class will be conducted in English, but the poetry will be read in the original. Primary goal of the class is to teach students to analyze and discuss the complexities of poetic expression. The class is geared toward graduate students in Slavic but it is open to qualified upper level undergraduates, i.e. to those who can read poetry assignments in original. Instructor permission required.
Spr RUSS2810 S01 25218 M 3:00-5:30(13) (V. Golstein)

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 14614 Arranged "To Be Arranged"
Spr RUSS2970 S01 23817 Arranged "To Be Arranged"

RUSS 2980. Advanced Reading and Research.
For graduate students. Independent research project on topics related to Russian culture. Enrollment permitted only after the written proposal (instructions in the department office) is submitted to the DGS and Chair of the department (deadline: the last day of Add a course without fee period during the semester when the project is undertaken). Please check Banner for the correct section number and CRN to use when registering for this course. Each section limited to 10 students; instructor permission required.

RUSS 2990. Thesis Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a thesis.
Fall RUSS2990 S01 14615 Arranged "To Be Arranged"
Spr RUSS2990 S01 23818 Arranged "To Be Arranged"

Slavic

SLAV 1250. Polish Culture Through Film.
This course uses Polish film and media to introduce cultural issues central to the Polish nationality and identity. It is a survey of Polish cinema from before World War II to the present, in which cultural and socio-historical contexts as part of Polish and European traditions are shown and examined through the lens of the camera. The main objective of the course is to provide students with deeper knowledge of and insight into the sociological and cultural issues of Polish society, as well as their complex and multifaceted nature. LILE
Fall SLAV1250 S01 16581 Th 4:00-7:00 (M. Harrison)

SLAV 1300. Sociolinguistics (with Case Studies on the Former USSR and Eastern Europe).
This seminar course examines the relationship between language and society: e.g. gender and language, politeness, terms of address, conversational analysis, dialects and language, language variation and social class, language policies and their consequences, language and national/ethnic identity. Case-study readings cover (but are not limited to) linguistic situations in East Europe, Russia, and the former republics of the USSR. Knowledge of Slavic languages not required. Open to advanced undergraduate and graduate students. Freshmen and sophomores who

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

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 examination 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 14617 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.

SLAV 2980. Advanced Reading and Research.  
Only for graduate students. Independent research project on topics in Slavic Studies. Enrollment permitted only after the written proposal (instructions in the department office) is submitted to the DGS and Chair of the department (deadline: the last day of Add a course without fee period during the semester when the project is undertaken). Please check Banner for the correct section number and CRN to use when registering for this course. Each section limited to 10 students; instructor permission required.

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

SLAV XLIST. Courses of Interest to Concentrators in Slavic Languages.  
Fall 2015  
The following courses may be of interest to Slavic Languages concentrators. Please see the sponsoring department for the time and location of each course.

Judaic Studies  
JUDS 1721 Jews and Revolutions  
TAPS 1710 Revolution as Work of Art

Spring 2016  
The following courses may be of interest to Slavic Languages concentrators. Please see the sponsoring department for the time and location of each course.

Judaic Studies  
JUDS 1713 Introduction to Yiddish Culture

Sociology  
The discipline of sociology has frequently been characterized as the "science of industrial society." While the discipline's founding father's - Karl Marx, Max Weber, and Emile Durkheim-addressed the origins and consequences of industrial growth in nineteenth century Europe, their descendants have examined -and continue to examine- a wide array of social problems in a host of different historical and geographic contexts, e.g., the definition and diffusion of "terrorism," and the origins and consequences of ethnic and gender discrimination the world over.

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.

SOC 0170. The Family.  
The state of the contemporary family generates debate within and beyond sociology. That debate is considered by examining different definitions of family, changing gender roles within the family, and the family in cross-cultural context. Special issues include new family forms, such as gay and lesbian families and biological and step-parenthood, as well as changing patterns of work and housework.

SOC 0230. 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.

SOC 0300K. Inequalities and Health.  
We start from the assumption that the social organization of society shapes definitions and experiences of health and illness, the distribution of diseases, and the responses to them. We explore the relevance of social structure and social interaction to health and well-being, emphasizing socioeconomic status, race, ethnicity, gender, and social contexts such as relationships, families, schools, and neighborhoods. This is not a "sociology of medicine" course. It will not emphasize the profession of medicine, health care policy, or health care organizations. Enrollment limited to 20 first year students. Instructor permission required. FY5 WRIT Spr SOC0300K S01 15520 MWF 9:00-9:50(16) (C. Spearin)

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 20 students per section.

Why do we follow social rules and conventions? And how is social change -- that is, the making of new rules and expectations -- possible? When we respond to rules, do we act as free-willing individuals or do we follow social structures we have no control over? These questions have motivated generations of sociologists, but many of the arguments...
have been already developed by the four "forefathers" of sociology: Karl Marx, Max Weber, Emile Durkheim, and Georg Simmel. Looking at the transformations around them – the rise of capitalism, the modern nation-state, rational bureaucracy, the metropolitan, the decline of religion, and much more – they developed arguments that allow us to better understand ourselves, our actions, and the contemporary political, economic and social transformations around us. WRIT

**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.

Fall SOC1010 S01 15431 TTh 9:00-10:20(08) (S. Frickel)

**SOC 1115. The Enlightened Entrepreneur: Changemakers, Inspired Protagonists and Unreasonable People.**
This course explores the practices of enlightened entrepreneurs, with the intention of moving beyond the limiting social/commercial dichotomy to develop a more useful paradigm for understanding entrepreneurs whose ventures lead to positive developments in society and in the environment. You will be exploring the success stories and cautionary tales of entrepreneurs to develop an understanding of how ventures can have an impact on their fields of engagement as well as their fields of influence. Afterwards you will develop an assessment tool for understanding the spectrum of entrepreneurs whose ventures lead to positive developments in society and in the environment.

Spr SOC1115 S01 25761 TTh 9:00-10:20(08) (L. Dicarlo)

**SOC 1120. Market and Social Surveys.**
This course covers the theory and practice of survey research. Topics include questionnaire design and formatting; sample design and selection; interviewing techniques; data base design and data entry; and elementary data analysis and report production. Students individually design and conduct a survey on a topic of their choice, and collectively conduct and analyze a sample survey of the Brown student population.

Fall SOC1120 S01 15435 MW 10:00-10:50(03) (C. Spearin)

**SOC 1121. Creative Companies: Entrepreneurship, Markets, and the Culture Industry.**
Firms in creative industries influence many physical and psychological aspects of our lives, from what we eat and wear to how we entertain ourselves, but markets for cultural goods are complex and difficult to navigate. Entrepreneurs must, therefore, understand the economic sociology of cultural market and ecosystem in order to capture economic value, a process that recursively relates to cultural norms. Students will analyze business cases of firms in a wide range of creative industries such as art, fashion, film, food, music, publishing, and theater to explore and understand the economic, organizational, and sociological underpinnings of culture, value(s), and markets.

Fall SOC1121 S01 16894 MWF 12:00-12:50(12) (M. Khaire)

**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.

Spr SOC1260 S01 24414 MWF 10:00-10:50(03) (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 15437 MWF 1:00-1:50(06) (J. Itzigsohn)

**SOC 1280. Immigration in America.**
This course is designed to be an introduction to the subject of international migration. The material in the course encompasses theories of migration, patterns and trends of migration and immigration, immigrant integration, social and economic effects of immigration, and immigration policy. The main focus of the course centers on contemporary patterns of immigration in the United States.

Spr SOC1280 S01 29598 MW 8:30-9:50(02) (Z. Qian)

**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 15438 TTh 1:00-2:20(10) (M. Suchman)

**SOC 1315. Macro-Organizational Theory: Organizations in Social Context.**
Macro-Organizational Theory focuses on the organization and its social/ economic environment. This class will explore various definitions of the organization’s environment, and the many types of macro-level organizational structures in which sets of organizations interact, function, compete, and cooperate. Important questions to be asked include the following:

- What is an organizational environment and how do organizations “deal” with what is outside of their boundaries?
- How are the boundaries of organizations defined/recognized/function?
- How do environments influence organizational strategy and performance?
- What are the major theories for assessing macro-level organizational phenomena?
- What are the many ways in which organizations relate to other organizations?

Spr SOC1315 S01 24415 TTh 10:30-11:50(09) (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 For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
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.

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 39 juniors and seniors. Instructor permission required. WRIT

SOC 1430. Social Structure and Personal Development.  The relationship between one’s place in the social structure and one’s own personal growth. Investigates the social aspects of individual growth and change throughout the life course. Also examines social factors involved in the failure to find a meaningful place for oneself in society. Fall

SOC 1620. Globalization and Social Conflict.  Examines the effects 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 networks 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. WRIT

SOC 1620A. Investing in Social Change.  Philanthropy -- “giving away money” -- sounds attractive and simple. But the very acts of giving and the conditions attached affect dynamics and relationships among all involved. We explore philanthropic strategies, social change, the sociological dimensions of philanthropy in historic and current practice. Students engage in teams to investigate a particular community concern, design an investment strategy, recommend the investment of grant dollars. Instructor permission required. Course enrollment is by application only. Applications can be found at swearencenter.brown.edu shortly before the start of class. Students who pre-register must still be selected through the application process and attend the first class meeting. Enrollment limited to 18. WRIT

SOC 1620K. Demographics and Development.  Assesses the social and economic determinants and consequences of changes in fertility, mortality, and migration and their impact on the size, distribution, and composition of population in developing societies. Implications of the evolving population structure for planning and policy. Enrollment limited to 20. WRIT

SOC 1870L. Migration, Displacement and Emerging Community Experiences: Contemporary Turkey.  This course explores Anatolia as a dynamic territory of transit, through a critical lens. We will study communities that have been formed through internal and international migration, displacement, and Otherness that forces people to organize along identity lines, resulting in emerging diverse communities within Turkey. We will look briefly at Anatolia’s past and focus primarily on contemporary Turkey. We will compare the reality of the population with the rhetoric and performance of ruling powers pertaining to indigenous status and belonging. Students will leave this course with a comprehensive understanding of population and identity formation in contemporary Turkey as they relate to migration and displacement. WRIT

SOC 1871M. Theories of the Third Sector and Civil Society.  Third Sector- consisting of non-government, non-profit, social movements organizations-- is an increasingly important segment of societies worldwide. This seminar will train students to critically apply organizational theory to evaluate the contributions, opportunities, and limitations of this sector. We will probe critical third sector issues, including: impact, accountability, and sustainability of sector activities; common issues in the sector such as legitimacy and co-optation; the dynamics of government collaboration; and what constitutes social justice in the distribution of the sector’s resources. Prerequisite: at least one course in Sociology. Enrollment preference given to Sociology and BEO concentrators. WRIT

SOC 1871R. Knowledge Networks and Global Transformation.  How do refined knowledge and the social relations that organize and distribute it influence changes in the institutions, inequalities and cultural systems and practices that define particular world regions and global formations? And how do global transformations influence the trajectories of knowledge production themselves? We will examine particular knowledge-identified agents, including universities, research institutes, think tanks, and professional associations, to consider why they approach global transformations in the way that they do. And we will consider how particular kinds of global transformations, from the end of the cold war and the transformation of information/communication technology to the last financial crisis, affect knowledge production itself. By exploring intersections between global complexity and reflexivity in this fashion, we hope to increase our own capacities for seeing the world not only as it is, but how knowledge might be used in making better alternatives for the future. Enrollment limited to 20 juniors and seniors. WRIT

SOC 1872. Sociology of Money.  What is money, wealth, their relationship? How have U.S. Markets for money changed this relationship? How have money markets changed? This is an introduction to current markets for money: how credit/debit is exchanged, how money is produced, what it represents in relation to global production, trade, and wealth distribution. Each week presents a question, than answers this question in two ways: 1st explaining how financial instruments work within U.S. market (economic explanation), 2nd examining how financial instruments change market outcomes (sociological critique). By the end students will understand how money markets work and how they effect the distribution of wealth.

SOC 1872C. Race and Ethnic Relations, Identity, and Inequality.  This course provides an overview of perspectives used in sociological studies of race and ethnicity. It focuses on race and ethnic relations, boundaries, and inequalities through empirical research on interracial or interethnic contact opportunities and racial, ethnic change and variation in interracial or interethnic relationship, romance, and marriage. The goal of the course is to deepen the understanding that racial/ethnic boundaries are rigid, yet may be crossed, blurred, or shifted over time and across generations.

SOC 1950. Senior Seminar.  Advanced each semester in senior year to work on an honors thesis. Participants examine methods for analyzing, writing, and presenting thesis material.
and apply peer review techniques in assessing each other's work. Culminates in presentation of thesis to the department. Students doing independent study research may also participate with the instructor's permission. Required for "honors" in sociology. WRIT
Fall SOC1950 S01 15440 MWF 8:00-8:50(01) (M. Kennedy)
Spr SOC1950 S01 24420 MWF 8:00-8:50(01) (M. Kennedy)

Supervised reading or research. Specific program arranged in terms of the student's individual needs and interests. Required of intensive concentrators; open to others only by written consent of the Chair of the department. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Research seminar for students writing an honors thesis. Under the direction of a faculty advisor, students construct and carry out a research project. The written report of the research is submitted to the advisor for honors consideration. A second reader selected by the thesis advisor certifies that the thesis is of honors quality. Please check Banner for the correct section number and CRN to use when registering for this course.

Research seminar for students writing an honors thesis. Under the direction of a faculty advisor, students construct and carry out a research project. The written report of the research is submitted to the advisor for honors consideration. A second reader selected by the thesis advisor certifies that the thesis is of honors quality. Please check Banner for the correct section number and CRN to use when registering for this course.

SOC 2010. Multivariate Statistical Methods I.
Introduction to probability, descriptive statistics and statistical inference. Coverage of the linear model, its assumptions and potential biases. Emphasis on hypothesis testing, model selection and interpretation through application with real data.
Fall SOC2010 S01 15445 T 1:00-4:00(10) (M. Jackson)

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 24425 T 1:00-4:00(10) (L. Vanwey)

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 26105 Th 9:00-12:00(08) (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 15446 M 9:00-12:00(16) (J. Itzigsohn)

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.
Fall SOC2050 S01 24426 W 1:00-4:00(06) (N. Chorev)

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 15447 F 9:00-12:00(16) (E. Fussell)

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 24427 Th 2:00-5:00(11) (J. Pacewicz)

SOC 2240. Event History Analysis.
An introduction to hazard models and their application to event history data in sociology. Topics include survival distributions, standard parametric models, discrete time approaches, partial likelihood models, and the introduction of covariates. Attention is given to practical application and the estimation of these models with software packages, where possible.
Spr SOC2240 S01 24429 T 9:00-12:00(08) (D. Lindstrom)

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.
Spr SOC2260D S01 25678 F 2:00-5:00(07) (J. Itzigsohn)

SOC 2360. Fertility.
An introduction to the study of the social determinants of human fertility. Contemporary and historical populations are considered. Theories and frameworks used to guide fertility research are reviewed. Special topics include: fertility decision-making, gender and fertility, work and fertility, adolescent fertility, and population policies and family planning programs.
Spr SOC2360 S01 24432 M 9:00-12:00(02) (S. Short)

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 16950 M 2:00-5:00(07) (A. Schrank)

SOC 2450. Exchange Scholar Program.
Fall SOC2450 S01 14620 Arranged "To Be Arranged"
Spr SOC2450 S01 23822 Arranged "To Be Arranged"

SOC 2600. Comparative Historical Analysis.
The seminar focuses on the application of theory and method in historical sociology. It will combine the reading of exemplary works, both classical and current, in comparative-historical sociology, with an exploration of historical methods that involves methodological readings but focuses on students' use of archives in their own individual research. For graduate students only.
Fall SOC2600 S01 15451 W 1:00-4:00(06) (N. Chorev)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
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 of the course, 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.
Spr SOC2612 S01 25850 W 9:00-12:00(02) (R. Franklin)

SOC 2960C. Urban Sociology.
This course will review alternative theoretical perspectives on urban and regional development with an emphasis on variants of ecological and political economy approaches. Substantive topics will include metropolitan restructuring in the U.S. and abroad, growth politics and growth control, neighborhood social networks and collective action, and incorporation of immigrants and minority groups in the metropolis.
Fall SOC2960C S01 15589 Th 9:00-12:00(08) (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.
Spr SOC2960K S01 25634 F 9:00-12:00(02) (P. Heller)

SOC 2960M. Sociology of Organizations Graduate Seminar.
The sociology of organizations offers a burgeoning and vibrant literature, with relevance not only for self-identified organizational sociologists, but also for scholars in fields as diverse as politics, development, industrial relations, finance, education, health care, and the arts. This seminar offers an intensive exploration of the "state of play" in contemporary macro-organizational theory. Shared and individual readings, coupled with weekly discussions and email dialogues, allow students to refine and extend their thinking on a series of important and controversial topics in the recent literature. Although this course has no formal prerequisites, the syllabus is aimed primarily at graduate students who enjoy some prior familiarity with organizational theory, whether in sociology or a kindred discipline. Enrollment limited to 15.
Fall SOC2960M S01 15453 W 9:00-12:00(16) (M. Suchman)

SOC 2960X. Bureaucracy and Regulation in Comparative Perspective.
This course will examine the management of government regulatory agencies in different domains of public policy and national contexts. It will focus on the apparent tension between rules and the probity and equity in the bureaucracy and laissez faire (i.e., an absence of rules) that allows for flexibility and adjustment in the market. We will pay particular careful attention to rational choice models derived from economics, and their modification by scholars in cognate social sciences, and we will draw examples from different domains including two workplace regulation and government support for research and development in Europe and the America.
Spr SOC2960X S02 25717 M 2:00-5:00(07) (A. Schrank)

SOC 2960Y. Causal Analysis.
"Does premarital cohabitation protect marriage?" "Does reducing class size improve elementary school education?" "Is there racial discrimination in the market for home loans?" We often use associations to claim causal effects. This course provide a broad introduction to casual analysis. We will address casual inference form observational and quasi-experimental research designs. Topics include instrumental variables estimation, difference-in-difference models, regression discontinuity, matching, propensity scores, heterogeneous treatment effects, and fixed effects models. The prerequisite of this course is SOC 2020 or equivalent.
Fall SOC2960Y S01 16757 T 9:00-12:00(08) (Z. Qian)

SOC 2961A. Advanced Spatial Data Analysis Techniques in the Social Sciences.
This course provides a survey of advanced spatial data analytical techniques with particular focus on methods relevant to applications in the social sciences. Topics include spatial process models, Bayesian analysis of spatial data, spatial models for discrete dependent variables (spatial counts, spatial probit and tobit, spatial multinomial models), spatial panel data (time series of cross-sections with spatial effects). The course introduces use of specialized software packages included in R and the PySAL library for spatial analysis in Python. SOC 2960G or equivalent is a prerequisite. The course requires a solid background in multivariate statistics, basic spatial statistics and spatial regression analysis.
Fall SOC2961A S01 17191 F 9:00-12:00(16) (L. Anselin)

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 14521 Arranged "To Be Arranged"
Spr SOC2970 S01 23823 Arranged "To Be Arranged"

SOC 2980. Reading and Research.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.
SOC 2981. Reading and Research.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

SOC 2982. Directed Research Practicum - MSAR Students Only.
The Directed Research Practicum is a one semester course taken in conjunction with an on- or off-campus research internship. The course consists of a directed reading of methodological texts and research articles selected by the student and the faculty director that are directly relevant to the methodological issues/challenges encountered in the internship. The student and faculty director will meet weekly to review the readings. The practicum may include written assignments, literature reviews, and data analysis exercises. Faculty directors need not be involved with the actual internship work, unless the student is working on the faculty member’s research project.
Fall SOC2982 S01 17218 Arranged (C. Spearin)

SOC 2990. Thesis Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.
Fall SOC2990 S01 14622 Arranged "To Be Arranged"
Spr SOC2990 S01 23824 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 18 first year students. Instructor permission required. No permission will be given during pre-registration.
Fall TAPS0030 S01 16123 TTh 9:30-11:50(02) (C. Crawford)
Fall TAPS0030 S02 16124 TTh 3:00-5:20(02) (C. Crawford)
Spr TAPS0030 S01 25039 TTh 9:30-11:50(13) (C. Crawford)
Spr TAPS0030 S02 25040 TTh 3:00-5:20(13) (C. Crawford)

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. WRIT
Fall TAPS0100 S01 16138 F 10:00-12:50(15) (C. Harris)
Fall TAPS0100 S02 16140 TTh 1:00-2:20(15) (E. Terry-Morgan)
Spr TAPS0100 S01 25046 T 1:00-3:50(14) (C. Harris)

TAPS 0200. Playwriting II.
Emphasis is placed on dramatic conventions, such as monologues, dialogue, mise-en-scene and time. Writing includes frequent exercises in various theatrical approaches. This course is limited to undergraduate students. Instructor permission required. Prerequisite: TAPS 0100 (formerly LITR 0110C and TSDA 0100). Enrollment is limited to 12-14 undergraduates per section. Instructor permission required. S/NC. WRIT
Fall TAPS0200 S01 16141 T 1:00-3:50(10) (D. Exavier)
Spr TAPS0200 S01 25059 F 1:00-3:50(06) (D. Exavier)

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 day of class. Attendance is mandatory. The application/waitlist process does not apply to students registering for the Summer term through the Office of Continuing Education.
Fall TAPS0220 S01 16129 MW 9:00-11:50(09) (B. Tannenbaum)
Fall TAPS0220 S02 16130 MW 1:00-3:50(09) (B. Tannenbaum)
Fall TAPS0220 S01 16131 MW 9:00-11:50(09) (B. Tannenbaum)
Fall TAPS0220 S01 16132 MW 1:00-3:50(09) (B. Tannenbaum)
Fall TAPS0220 S01 16133 MW 9:00-11:50(16) (L. Mengesha)
Spr TAPS0220 S01 25041 MW 9:00-11:50(15) (B. Tannenbaum)
Spr TAPS0220 S02 25042 MW 1:00-3:50(15) (B. Tannenbaum)
Spr TAPS0220 S01 25043 MW 9:00-11:50(15) (B. Tannenbaum)
Spr TAPS0220 S01 25044 MW 1:00-3:50(15) (B. Tannenbaum)
Spr TAPS0220 S01 25045 MW 9:00-11:50(15) (S. Miller)

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 based on comment for individual problems. Reading of dramatic texts and theory. Substantial scene rehearsal commitment necessary. Attendance mandatory. Not open to first-year students. Enrollment limited to 20. Instructor permission required. No permission will be given during pre-registration. S/NC
Fall TAPS0230 S01 16151 TTh 1:00-3:50(10) (K. Moore)
Fall TAPS0230 S02 16152 MW 11:00-1:50(04) (L. Rikard)
Spr TAPS0230 S01 25036 MW 12:00-2:50(05) (K. Moore)

TAPS 0250. Introduction to Technical Theatre and Production.
This course is an introduction to the basic principles of stagecraft, lighting and sound technology and the different elements of theatrical design. Instructor permission required. Enrollment limited to 15.
Fall TAPS0250 S01 16127 MWF 10:00-11:50(03) (T. Hett)
Spr TAPS0250 S01 25058 MWF 10:00-11:50(03) (A. Haynes)

TAPS 0260. Stage Lighting.
This course is an introduction to stage lighting. Enrollment limited to 20.
Fall TAPS0260 S01 16134 MWF 3:00-5:50(15) (T. Hett)

TAPS 0310. Beginning Modern Dance.
Introduction to the art of movement. Focuses on building a common vocabulary based on ballet, vernacular forms, improvisation, Laban movement analysis, American modern dance, and the body therapies. Individual work is explored. One and one-half hours of class, four days a week. Enrollment limited to 40. S/NC
Fall TAPS0310 S01 16114 MTWTh 1:00-2:20(06) (J. Strandberg)

TAPS 0310E. Shakespeare: The Screenplays (ENGL 0310E).
Interested students must register for ENGL 0310E.
Fall TAPS0310E S01 16541 Arranged "To Be Arranged"

TAPS 0320. Dance Composition.
Focuses on building the individual's creative voice. A movement vocabulary is developed from Western techniques (ballet, American modern dance, Laban/Bartenieff movement analysis, vernacular forms, space-harmony/movement physics, and the body therapies) along with group improvisations and collaboration with artists in other disciplines. Enrollment limited to 40. S/NC.
Fall TAPS0320 S01 16113 MWF 10:00-11:50(10) (M. Bach-Coulibały)

TAPS 0330. Mande Dance, Music and Culture.
Examines, by theory and praxis, the techniques and philosophy of dance in Mande culture. Each dance is taught as a highly codified language, with detailed phrasing structures, focus, center, variations of intonation, and qualitative choice. The specific ethnicities are studied in relationship to their music and dance variations. Participants must be physically fit. Attendance at the first class is required. There is an application process for enrollment. Enrollment limited to 100. S/NC
Spr TAPS0330 S01 25027 T 6:00-7:50(16) (M. Bach-Coulibały)
Spr TAPS0330 S01 25027 Th 4:00-5:50(16) (M. Bach-Coulibały)

TAPS 0901Q. Governing Sex: Citizenship, Violence, Media (MCM 0901Q).
Interested students must register for MCM 0901Q.
Fall TAPS0901Q S01 16484 Arranged "To Be Arranged"

TAPS 0901S. Mediating Reproduction: Feminism, Art, Activism (MCM 0901S).
Interested students must register for MCM 0901S.
Spr TAPS0901S S01 25385 Arranged "To Be Arranged"

TAPS 0930A. The Actor's Instrument: Voice and Speech.
A complete and well-seasoned actor has the ability to perform with specificity and ease, both vocally and physically. Specificity comes from an integration of speech and movement technique. Ease is only possible when a mastery of technical skills reaches the point where the actor can integrate them without loss of spontaneity. The goal of this class is to give the student the fundamental techniques of voice and speech in relation to the body. Prerequisite: TAPS 0230. Enrollment limited to 16. Instructor permission required. S/NC.
Prerequisite does not apply to students registering for the Summer term through the Office of Continuing Education.
Spr TAPS0930A S01 25037 MWF 4:00-5:50(15) (T. Jones)

TAPS 0930C. The Actor's Instrument: Stage Movement for Actors and Directors.
Students will be engaged in a process of exploration that centers on the physical relationship of the actor to the physical reality of the stage including sound, props and costumes. Work with a broad spectrum of contemporary and classic movement theories/approaches to constructing performance. Instructor permission required; interested students must come to the first class, fill out an application and participate in a sample class. Accepted students will be notified by the third class meeting. You must show up to every class meeting in order to keep your application active throughout the registration process. Enrollment limited to 18.
Fall TAPS0930C S01 16122 MWF 3:00-5:50(15) (L. Rikard)

TAPS 1000. Intermediate Dance.
Designed to expand the student's knowledge of and proficiency in dance as an art form. Mainly a studio course, but selected readings, papers, critiques, and field trips are important components of the course. Prerequisite: TAPS 0310 or equivalent. Enrollment limited to 40. S/NC.
Spr TAPS1000 S01 25025 MTWTh 1:00-2:20(10) (J. Strandberg)

TAPS 1100. Stage Management.
To introduce students to the principles and techniques of modern stage management from script selection to closing. Through the study of various models of stage management (both professional and academic), students will develop an appreciation of the role of the stage manager as the facilitator, mediator and organizer of the production process. Students will apply theory learned in the classroom by stage-managing a TAPS production and/or observing other TAPS and Trinity Rep stage managers during the production process. Enrollment limited to 12.
Fall TAPS1100 S01 16126 M 1:00-3:50(06) (B. Reo)
TAPS 1160. Style and Performance. 
For qualified sophomores, juniors, and seniors who offer TAPS 0230 as a prerequisite. Period scene study and monologues are basis for comment on individual progress in acting/directing. Extensive reading of dramatic texts and historic research materials. Work in voice, movement, and poetic text. Substantial commitment necessary for preparation of class scenes. Attendance mandatory. Prerequisite: TAPS 0230. Limited to 20. Instructor's permission required. No permissions will be given during pre-registration.
Spr TAPS1160 S01 25851 TTh 9:00-11:50(08) (L. Rikard)

TAPS 1210. Solo Performance. 
An exploration of the challenges and rewards of performing solo. Students research, write, and perform a one-person show. Other projects may include performance art, stand-up comedy, and monologing. Substantial time commitment. Attendance mandatory. For advanced students with appropriate background and experience. Submit proposal and resume in the fall. For guidelines and information contact taps@brown.edu. Permission required in advance. Enrollment limited to 20.
Spr TAPS1210 S01 25052 TTh 1:00-3:50(10) (K. Moore)

This course offers an introduction to basic texts performance theory and then directs the methodological questions derived from those texts to the study of performance practices in context, exploring paleolithic, ancient, and medieval performance histories in global, cross-cultural perspective.
WRIT Fall TAPS1230 S01 16136 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, colonization, incipient nationalism(s), urbanization, cultural negotiation, and the representational practices the enacted. Enrollment limited to 35. WRIT Spr TAPS1240 S01 25047 TTh 10:30-11:50(09) (V. Preston)

TAPS 1250. Twentieth-Century Western Theatre and Performance. 
The study of key figures and movements in 20th-century Western theatre and performance, from approximately 1870 to 2000. We explore naturalism and alternative strategies to realism such as symbolism, futurism, surrealism and constructivism, along with myriad figures in the modern and postmodern "avant-garde." WRIT Spr TAPS1250 S01 25049 TTh 1:00-2:20(10) (S. Golub)

TAPS 1280F. Introduction to Set Design. 
A survey of the history and concepts of scenic design with emphasis on the art, artists and the social/political movements influencing the major period. Aims to give the designer a foundation in research approaches. Also to provide an examination of stylistic approaches and innovations in the context of the historical period. Enrollment limited to 10.
Fall TAPS1280F S01 16153 W 1:00-4:50(06) (S. Osanna)

TAPS 1281M. Introduction to Costume Construction. 
An introduction to the study and practice of core costume construction skills. Topics include basic machine, hand sewing and patterning techniques.
Fall TAPS1281MS01 16154 W 3:00-6:50(17) (R. Cesario)

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 Spectrum Disorders (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 TAPS1281WS01 16147 TTh 2:30-5:30(11) (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 will provide arts experiences (primarily dance and music) for persons with Parkinson's Disease (PD) and Autism Spectrum Disorders (ASD). Course also includes guest lecturers, readings, field trips, curriculum development, ethnographic research, and planning of and participation in a convening of artists and scientists engaged in holistic healing.
Spr TAPS1281Z S01 25207 TTh 2:30-5:30(11) (J. Strandberg)

TAPS 1300. Advanced Set Design. 
The examination of the working relationship between designer and director. An emphasis on the design abilities needed to communicate varied visual approaches. Developing the creative, theatrical vocabulary needed to turn a director's vision into a fully articulated set design. A substantial amount of plays will be read and researched. Drafting and model rendering techniques will be applied. Prerequisite: TAPS 1280F. Instructor approval required prior to registration. Enrollment limited to 10.
Spr TAPS1300 S01 25069 MW 1:00-4:50(06) (S. Osanna)

TAPS 1310. Advanced Modern Dance. 
Designed for dancers who have attained an advanced level in any dance technique. The purpose is to help such dancers come to understand both intellectually and kinesthetically the diversity of one of the few indigenous American art forms: modern dance. Enrollment limited to 40. S/N/C. Fall TAPS1310 S01 16115 MW 3:00-4:20(11) (E. Pacheco) Fall TAPS1310 S01 16115 TTh 2:30-3:50(11) (E. Pacheco)

TAPS 1325. Experiments in Dance, Movement, and Performance. 
This course introduces students to the histories and methodologies; meanings and functions of experimental choreography in specific artistic, social, and political contexts. We examine the ways in which choreographers and dancers have experimented with the traditions and forms of dance, by mapping a series of interdisciplinary gestures in relation to creative and critical fields. The course builds on a series of composition exercises and creative assignments to culminate with the making and showing of a dance performance. No experience of dance is required, but an interest in thinking and experimenting with the roles of dance across art, society, and academia.
Fall TAPS1325 S01 16146 TTh 1:00-2:20(10) (N. Solomon)

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 16118 Th 10:30-11:50(13) (J. Strandberg) Fall TAPS1330 S01 16118 T 10:30-11:50(13) (J. Strandberg)

TAPS 1340. Dance Styles. 
This course focuses on the diverse styles, techniques and movement theories of Modern Dance. The students will practice the techniques and styles and will also study biographical material, view films, and attend live performances when possible. Enrollment limited to 40. S/N/C.
Spr TAPS1340 S01 25026 MW 3:00-3:50(13) (S. Skybetter) Spr TAPS1340 S01 25026 TTh 2:30-3:50(13) (S. Skybetter)

This course examines the mutual influences between the fields of dance and the visual arts since 1960. It surveys a series of artworks spanning early minimal art, happenings, and Judson Dance Theatre to contemporary global experiments in choreographing museal spaces. How can we map the “close correspondence” between choreographic and visual art practices across the performance of pedestrian bodies, dancing sculptures, and relational encounters? Students are invited to experiment collectively with dance archiving methodologies, to write about a performance event in the museum context, as well as to research the critical intersections between dance and art history; performance and curatorial studies.
Spr TAPS1345 S01 25624 M 3:00-5:30(13) (N. Solomon)

TAPS 1350. Dance Performance and Repertory. 
Half course credit each semester. A study of dance repertoire through commissioned new works, reconstruction, coaching, rehearsal, and performance, showing, writing. For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
TAPS 1350. Dance Performance and Repertory
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.

Fall TAPS1350 S01 16116 MW 6:30-9:30PM(05) (J. Strandberg)
Spr TAPS1360 S01 25033 W 6:30-9:30PM(14) (J. Strandberg)

TAPS 1370. New Works/World Traditions.
From research to performance, develops new dance theater pieces that are rooted in Mande dance and American dance. Includes study with Mande, American, and European artists in building a body of repertory for the concert stage. May be repeated for credit. By audition. S/NC.

Fall TAPS1370 S01 16117 T 6:00-8:50PM(02) (M. Bach-Coulibaly)
Fall TAPS1370 S01 16117 Th 6:00-7:50(02) (M. Bach-Coulibaly)
Spring TAPS1370 S01 25032 SuS 3:00-7:00(18) (M. Bach-Coulibaly)
Spring TAPS1370 S01 25032 Th 6:00-7:50(18) (M. Bach-Coulibaly)
Spring TAPS1370 S01 25032 T 8:00PM-10:00PM(18) (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. Arts "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. WRIT

Spr TAPS1380 S01 25056 W 3:00-5:30(14) (S. Golub)

TAPS 1500H. Advanced Writing for Performance.
This course is an intense examination of the craft of writing scripts for the stage from germinal idea through production by analyzing students work in workshops, reading scripts and attending local performances. Students will learn proper script format, story outline and structure, characterization, plot and the nuts and bolts of the script writing business. Moreover, they will write a full-length play or a series of one-acts. They will also be required to read and critique each other's work and bring a significant number of script copies to class for workshop. Prerequisite: TAPS 1010 and 2010. Enrollment limited to 17.

Spr TAPS1500H S01 26083 T 10:20-12:50(09) (L. Colella)

TAPS 1500L. Acting Together on the World Stage: Writing and Political Theatre.
Practical research in art for social change, with an emphasis on writing and composition, resulting in a series of solo and group devised performances (or well articulated proposals). Each week, in-session writing and devising exercises, coupled with a discussion of critical readings and case histories, build to projects that may be constructed solo or in small groups. Final projects may take the form of carefully constructed, achievable plans for long-range implementation. Students will be required to attend special workshops, field trips, and performances as scheduled through this semester; this schedule will be available at the first class. Enrollment limited to 12.

Spr TAPS1500L S01 25060 F 2:30-5:50(07) (E. Ehnl)

TAPS 1520. Seminar in Theatre Arts.
Seminar designed for senior theatre arts concentrators, required during Semester VII. Topics focus on career planning and theatre arts subjects not dealt with in other courses. Enrollment limited to seniors.

Fall TAPS1520 S01 16157 F 1:00-3:30(08) (R. Schneider)

TAPS 1670. Latino/a Theatre and Performance.
This course will be an introduction to Latino/a theatre concentrating on the following themes: borders, diaspora and exile, political and personal identities, sexuality, gender and violence, and latino re-imagination of U.S. and Latin history. We will read Chicana/o, Cuban American and Nuyorican drama and performance art. No prerequisites. Spr TAPS1670 S01 25647 Th 9:00-10:20(08) (P. Ybarra)

TAPS 1680. Performance, Politics, and Engagement.
A survey course in engaged and political performance; this seminar investigates social practice, political theatre, and dance as points of entry into contemporary questions in ecology, ethics, gender, racialization, sexuality, perception, labor, and value. Course materials include artists' and scholars' writings as well as scores, scripts, theoretical writings, photographs, films, reenactments, and performance procedures. Assignments include research projects on art and social movements, performance tasks, and scholarly writing projects. An existing performance or arts practice is not required. The course may be especially relevant to TAPS students, the Engaged Scholars Program, and Visual Art. There are no prerequisites.

Fall TAPS1680 S01 17002 W 12:30-3:00(12) (V. Preston)

TAPS 1710. Revolution as Work of Art.
A study of Russian revolutionary culture and new personhood, ca. 1905-1930, with readings from Russian fiction, philosophy, art criticism, dramatic and political theory, and cultural and theatre history. Topics are rooted in the revolution of the spirit, the culture of the future, iconography and spectacle, charismatic authority, and revolutionary terror. Open to juniors, seniors and graduate students. All readings are in English. In order to maintain the seminar structure and methodology of the course, enrollment is limited to 20 students.

Fall TAPS1710 S01 16128 M 3:00-5:30(15) (S. Golub)

TAPS 1790. 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 2200C. Inter(in)animations: Studies in Liminalities, Intervals, Alienations, and Performance.
"Liminality" is a keyword in the constellation of ideas that birthed Performance Studies as a discipline in the late 20th century. What has become of that constitutional "betweeness" in the field? What concepts extend or challenge liminality in PS cognate areas of inquiry (media studies, queer theory, affect theory, critical race studies, and various old and new materialisms)? Borrowing from Raymond Williams and Roland Barthes, this course is organized by "tarrying" with keywords explored for their (dis)identification with the liminal - words such as interval, gesture, atmosphere, interaniminate, theatrical, ecstasy, and even witch.

Spr TAPS2200C S01 26066 W 3:00-5:30 (R. Schneider)

TAPS 2200P. Subjects and Objects: Evidence as Methaphor and Constraint.
This seminar will investigate the nature of reality and unreality as they are conceived through the narratives and instantiations of subjects and objects, beginning in philosophy and in relation to various modes of performance. We will consider how metaphor inverts evidentiary logic and troubles the concepts of reason and facticity that so often serve as constraints. We will also investigate how the operations of such reasoning and counter-reasoning, logic and counter-logic locate themselves in the individual (in mind, body, embodied memory) and how we negotiate thought from the concept of the a priori.

Fall TAPS2200P S01 16037 Th 3:30-6:00(02) (S. Golub)

In the second year of the three-year MFA Playwriting Program, students are required to teach undergraduates Introductory and Intermediate Playwriting. This course teaches MFAs for their teaching in advance of their time at the head of the classroom, provides them with mentorship during the conduct of their teaching, and assesses their experience at the end of their assignments. It is an intensive seminar, where the head of
the Playwriting Program meets with students individually and as a team, sharing in the evolutions of curricular design and practice, offering close comment and tailored assignments (suggested readings; writing tasks).

Fall TAPS2300 S01 16119 Arranged (S. Bridgforth)
Spr TAPS2300 S01 25024 Arranged (E. Ehn)

**TAPS 2310. Graduate Playwriting.**
With Word as the budding forth into social reality of original experience, the structures, purposes and ethical risks of writing for performance are examined; experienced through the reading of each other’s works-in-progress, through the reading of essays and in session exercises. Must be taken by playwriting grad students every semester in residence. May be taken multiple times for credit. Undergraduates will be admitted with permission of the instructor. Contact Erik Ehn@Brown.edu using "Grad PW" in the subject line. Permission will be given once manuscripts have been reviewed. S/NC

Fall TAPS2310 S01 16156 M 10:00-2:50(16) (S. Bridgforth)
Spr TAPS2310 S01 25055 Th 11:00-3:50(09) (E. Ehn)

**TAPS 2500. Acting, Brown/Trinity Rep Consortium.**
This course is open only to students of the Consortium. It will include fundamental exercises, textual analysis, rehearsal techniques, character and scene work designed to provide the student actor with a working method based upon the general principles of the Stanislavski system. A major part of this course will include rehearsal and performance responsibilities.

Fall TAPS2500 S01 11008 Arranged (B. McEleney)
Spr TAPS2500 S01 20213 Arranged (B. McEleney)

**TAPS 2510. Voice: Power and Range for the Actor.**
This course is open only to students of the Consortium. It will provide a progression of exercises to free, develop and strengthen the voice as the actor’s instrument. The classes focus on relaxation, physical awareness, breath, freeing the channel for sound developing the resonators, releasing the voice from the body, articulation, self-expression, and the link to text and acting.

Fall TAPS2510 S01 11009 Arranged (T. Jones)

**TAPS 2520. Movement: Form, Center and Balance.**
This course is open only to students of the Brown University/Trinity Rep MFA Consortium program. It will develop a physical vocabulary through floor work, choreographed combinations and movement improvisation, helping the actor develop an understanding of space, strength of movement, and physical life onstage.

Fall TAPS2520 S01 11010 Arranged (D. Stein)

**TAPS 2530. Directing: Composition and Staging.**
This course is open only to the MFA Consortium program. It will include information and exercises addressing how to stage a play, balance the space, and transition from scene to scene. It will also focus on the director’s responsibility to the actors, and ways in which to help them create their roles.

Fall TAPS2530 S01 11011 Arranged (B. Mertes)

**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 the problems of style and language in the plays of Molierie and Shakespeare. This is a two-credit course and is open only to students of the MFA Consortium program. This is a scene study class with an emphasis on the problems of style and language in the plays of Molierie and Shakespeare.

Fall TAPS2560 S01 20215 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 physicality in order to create the inner and outer life of a character. Special attention will be given to the student’s repetitive physical patterns, and new ways will be explored in examining the internal and external life of a character.

Spr TAPS2570 S01 20216 Arranged (D. Stein)

**TAPS 2580. Directing: Collaboration with the Playwright.**
This course is open only to students of the MFA Consortium program. It will focus on issues of collaboration between the playwright and the director. Each director will be assigned to work on a new script in cooperation with a playwright. A workshop production will be staged and open to the public.

Spr TAPS2580 S01 20217 Arranged (B. Mertes)

**TAPS 2600. Acting: Shakespeare and Molierie.**
This is a two-credit course and is open only to students of the MFA Consortium program. This is a scene study class with an emphasis on the problems of style and language in the plays of Molierie and Shakespeare.

Fall TAPS2600 S01 11012 Arranged (B. McEleney)

**TAPS 2610. Voice: Verse Text.**
This course is open only to students of the MFA Consortium program. It will include advanced vocal work and an introduction to singing in performance. Rhythm and rhyme will be explored in relation to lyrics and verse.

Fall TAPS2610 S01 11013 Arranged (T. Jones)

**TAPS 2620. Movement: The Alexander Technique.**
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 11014 Arranged (D. Stein)

**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 11015 Arranged (B. Mertes)

**TAPS 2650. Acting: Problems of Style.**
This is a two-credit course and is open only to students of the MFA Consortium program. This is a scene study class with an emphasis on the problems of style and language in non-realistic plays. In addition to advanced work on Shakespeare’s texts, the course will explore other playwrights, possibly including Ibsen, Strindberg, Shaw and Beckett.

Spr TAPS2650 S01 20218 Arranged (B. McEleney)

**TAPS 2660. Voice: Singing with Joy.**
This course is open only to students of the MFA Consortium program. Students will work on music, both as soloists and in small groups. The course will address issues of sight reading, breath support, phrasing, and how to stage a song for performance.

Spr TAPS2660 S01 20219 Arranged (T. Jones)

**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 20220 Arranged (D. Stein)

**TAPS 2680. Directing: Critical Analysis.**
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 assistant direct a professional production at Trinity Rep Company.

Spr TAPS2680 S01 20221 Arranged (B. Mertes)

**TAPS 2700. Acting: Monologue Performance.**
This is a two-credit course and is open only to students of the Brown University/Trinity Rep MFA Consortium program. Acting assignments will include solo work presented in a variety of ways. These might include a selection of monologues and songs presented by the students to show the...
full range of his or her abilities. A performance might also include a solo piece written by the student and presented as a single-actor production.

Fall TAPS2700 S01 11016 Arranged (B. McEleney)
Spr TAPS2700 S01 20222 Arranged (B. McEleney)

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 11017 Arranged (T. Jones)

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 11018 Arranged (D. Stein)

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 11019 Arranged (B. Mertes)

TAPS 2750. Acting and Directing: Practical Application.
This is a two-credit course and is open only to students of the Brown University/Trinity Rep MFA Consortium program. The course will prepare acting students for a graduate showcase which will be performed in New York City and Los Angeles for agents, casting directors, and other professionals in the industry. Directing students will stage a New York showcase of their work for agents, artistic directors, and other theatre professionals. The course will also cover audition and interview techniques. Video work will be explored in detail, examining the difference between stage and on-camera direction and performance.
Spr TAPS2750 S01 20223 Arranged (B. McEleney)

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 20224 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 20225 Arranged (B. Mertes)

Interested students must register for ENGL 2901C.
Spr TAPS2901C S01 25638 Arranged "To Be Arranged"

TAPS 2970. Comprehensive Examination Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.
Fall TAPS2970 S01 14623 Arranged "To Be Arranged"
Spr TAPS2970 S01 23825 Arranged "To Be Arranged"

For graduate playwrights, in their second and third years, rehearsing and revising their thesis projects. May be taken multiple times for credit. Must be taken both semesters in the third year.

TAPS 2980. Graduate Level Independent Reading and Research.
A program of intensive reading and research on selected topics arranged in terms of special needs and interests of the student. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

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.

TAPS 2990. Thesis Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.
Fall TAPS2990 S01 14624 Arranged "To Be Arranged"
Spr TAPS2990 S01 23826 Arranged "To Be Arranged"

University Courses

UNIV 0400. Beyond Narnia: The Literature of C.S. Lewis.
C.S. Lewis was one of the most widely read authors of the 20th Century, yet much of his philosophical, theological and political theories are unfamiliar. His fiction and philosophical writings will be explored to better understand his perspective on modern humanity, the relationship of man to family, the community and the state. C.S. Lewis had a very clear philosophy on the importance of the individual and how he relates to the larger social structures. Morality and the role of individuals as they interface with others around them and their responsibility for working with society both at community level and at the macro-state level will be explored.
Spr UNIV0400 S01 25636 F 3:00-5:30(15) (T. Flanigan)
Spr UNIV0400 S02 25637 W 3:00-5:30(14) (T. Flanigan)

UNIV 0456. Stages of the Contemplative Path.
One common metaphor for human life and self-transformation is the journey or the path. Contemplative traditions have also employed this image, offering both concise and expansive maps of the stages of practice and anticipated end goals of the contemplative life. The study of path structures allow us to carefully compare the relationship between specific cognitive, affective, and somatic practices, their resultant states and traits of human experience, and the meaning and value ascribed to them in different historical and cultural contexts.
Fall UNIV0456 S01 16598 TTh 9:00-10:20(08) (J. Lindahl)

UNIV 0540. 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. Preference given to Contemplative Studies Concentrators. SOPH WRIT
Spr UNIV0540 S01 24949 W 3:00-5:30(14) (H. Roth)

UNIV 1000. Cognitive Neuroscience of Meditation.
The course will focus on the history and development of neuroscientific studies of meditation. We will examine the various technological innovations that drove this research, EEG, PET/IMRI, and MEG and the central scientific and philosophical challenges presented by it, including: the epistemological status of correlating subjective measures with brain function; the challenges of carrying out and analyzing data from a longitudinal meditation training study; the nature of neuroplasticity; how the brain's default network is affected by meditation; the neural oscillatory correlates of attentional processes in meditation; how the James-Lang hypothesis is affected by these cognitive neuroscientific studies. Instructor permission required.
Spr UNIV1000 S01 26010 M 3:00-5:30(13) "To Be Arranged"

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
UNIV 1001. The Israeli-Palestinian Conflict: Contested Narratives.
We will compare the radically different narratives that Palestinians and Israelis tell themselves and the world about their struggle over Palestine/Israel. Sources will include historical documents, memoirs, and accounts of the conflict by Israeli and Palestinian historians. We will read works of fiction and view films that present the story of the conflict from both perspectives. Attention will also be paid to efforts by Israelis and Palestinians to transcend their conflicting narratives and attain mutual understanding. All sources in English translation. LILE DPLL WRIT Spr UNIV1001 S01 24244 MWF 11:00-11:50(04) (D. Jacobson)

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. WRIT Spr UNIV1520 S01 24583 MWF 2:00-2:50(07) (O. Almeida)

UNIV 1700. Transformation of the Research University.
This seminar will focus on recent transformations of the academic, instructional and administrative character of the elite American research universities. Emphasis will be on selected pressure points (such as research funding, diversity, technology, market influence) that drive change and shape the future.
Fall UNIV1700 S01 16207 W 3:00-5:30(17) (W. Simmons)

Enables concentrators to synthesize their knowledge of the field of Contemplative Studies and its current principal issues, and learn how to most effectively conduct research and writing on their Capstone Projects. Students will write their Capstone Independent Research Project in this course under the direction of their Capstone Advisor, in most cases a member of the Contemplative Studies Core Faculty. Students accepted to pursue Honors will use this course as the first semester of a two-semester Honors sequence. The second semester will be an independent reading and research course with their Honors Advisor. LILE Fall UNIV1950 S01 17160 T 6:30-9:00PM(16) (H. Roth)

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, government, 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? DPLL LILE WRIT Fall URBN0210 S01 16160 TTh 1:00-2:20(10) (D. Neumann)

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, environmental issues, and urban sustainability. In a lively and varied approach to local learning, course activities include lectures, discussion, reading and writing assignments, films and other media, guest speakers, and excursions to local sites. Enrollment limited to 20 first-year students.
FYS Fall URBN0230 S01 15849 W 3:00-5:30(17) (R. Carter)

URBN 1000. Fieldwork in the Urban Community.
A fieldwork course with limited enrollment. Each student undertakes a fieldwork project in close collaboration with a government agency, a nonprofit association, or a planning firm. In weekly seminar meetings, the class explores a series of urban issues and discusses fieldwork methodology. Students also schedule regular appointments with the instructor. Restricted to Urban Studies concentrators. WRIT DPLL Spr URBN1000 S01 24805 TTh 2:30-3:50(11) (J. Pacewicz)

URBN 1220. Planning Sustainable Cities.
What does sustainability mean in the context of degraded urban areas? Can sustainable development be achieved in cities? This course offers a comprehensive, yet critical understanding of the competing theories and practices of sustainable development as applied to cities. Topics include sprawl, energy-efficient transportation, brownfields, community land trusts, green architecture, renewable energy, air and water pollution, and waste recycling.
Fall URBN1220 S01 16622 TTh 2:30-3:50(11) (Y. Sungu-Eryilmaz)

URBN 1230. Crime and the City.
This course surveys aspects of crime and policing in the contemporary urban environment. Topics include low-level criminality, the over policing paradox, neighborhood change, transgression, applications of spatial theory to normative constructions of criminality, and the ways in which members of urban-based subcultures (from graffiti writers to gang members and homeless youth) and marginalized communities occupy public space. DPLL LILE Fall URBN1230 S01 16602 TTh 9:00-10:20(08) (S. Bloch)

URBN 1870D. Downtown Development.
This seminar examines the development and revitalization of the urban core in the United States with a focus on urban planning. Providence is used as a laboratory to explore development from the perspective of the planner, the developer, and city residents. Important concepts are illustrated through field trips, public meetings, and guest speakers. Enrollment limited to 15 during registration. Instructor will select additional 5 students after first day of class. Instructor permission required. WRIT Fall URBN1870D S01 16616 Th 4:00-5:30(02) (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. Spr URBN1870JS01 24802 M 3:00-5:30(13) (M. Orr)

URBN 1870M. Urban Regimes in the American Republic.
A probing of topical issues in both their theoretical antecedents and their contemporary manifestations. Examines the intellectual debates and the scholarly treatments surrounding issues of power in the city, urban redevelopment policy, urban poverty, urban educational policy, and race in the city. Enrollment limited to 20. LILE WRIT Fall URBN1870M S01 15848 M 3:00-5:30(15) (M. Orr)

URBN 1870S. The City, the River, and the Sea: Social and Environmental Change at the Water's Edge.
This course examines urban social and environmental change at the water's edge, focusing in particular on urban rivers, coastal areas, and deltas. Beginning with key frameworks for understanding the relationship between people and place, students explore the history and current concerns of urbanization, within the larger and increasingly urgent inquiry on human dwelling and water/waterways. The course is then organized around key topics and case studies from around the world, framed by historical and scientific data but also explored through ethnography, narrative non-fiction, and documentary work to understand how water, urban dwelling, and change are variously experienced, enacted, and presented. WRIT Spr URBN1870S S01 24804 W 3:00-5:30(14) (R. Carter)

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.

Enrollment limited to 15 during registration. Instructor will select additional 5 students after first day of class. Instructor permission required. WRIT Spr URBN1870TS01 26020 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.

URBN 1981. Honors Thesis Workshop. This seminar introduces students to independent research and writing skills necessary for successful and timely completion of the honors thesis. Course work includes presentation of one’s own thesis drafts and peer review of classmates’ work. All students who submit an approved honors thesis proposal shall enroll in URBN 1981 for the spring semester of their thesis research and writing. Concentrators may also enroll in the course during semesters 6 or 7 in preparation for the honors thesis, but must present a written proposal in place of chapters. Enrollment limited to 20 juniors and seniors in Urban Studies. S/NC Spr URBN1981 S01 25227 Arranged "To Be Arranged"

URBN XLIST. Courses of Interest to Concentrators in Urban Studies. Fall 2015

The following courses offered by other departments will fulfill Core Discipline and Seminar Course requirements of the Urban Studies concentration. (Please refer to the Urban Studies website to determine which requirements are fulfilled by these courses.) Please check with the sponsoring department for times and locations.

Anthropology ANTH 1236 Urban Life: Anthropology in and of the City

Applied Mathematics APMA 1650 Statistical Inference I

Archaeology and the Ancient World ARCH 1900 The Archaeology of College Hill

Cognitive, Linguistics, Psychology CLPS 0900 Quantitative Methods in Psychology

Economics ECON 1620 Introduction to Econometrics

English ENGL 0700N City Novels

Engineering ENGN 1930S Land Use and Built Environment: An Entrepreneurial View

Environmental Studies ENVS 1400 Sustainable Design in the Built Environment

Geology GEOL 1320 Introduction to Geographic Information Systems for Environmental Applications

History of Art and Architecture HIAA 0850 Modern Architecture

History HIST 1140 Samurai and Merchants, Prostitutes and Priests: Japanese Urban Culture in the Early Modern Period

HIST 1551 American Urban History, 1870-1965

HIST 1310 History of Brazil

HIST 1961B Cities and Urban Culture in China

Japanese JAPN 0910B Japanese Cities: Tokyo and Kyoto

Political Science POLS 1320 Urban Politics and Urban Public Policy

POLS 1600 Political Research Methods

POLS 1824D Power and Prosperity in Urban America

Sociology SOC 1100 Introductory Statistics for Social Research

SOC 1270 Race, Class, and Ethnicity in the Modern World

SOC 1340 Principles and Methods of Geographic Information Systems

SOC 2960C Urban Sociology

Visual Art

VISA 0100. Studio Foundation. An introduction to basic visual art concepts, exploring a range of materials with emphasis on experimentation and analysis of visual relationships. Drawing is a vital part of this course. Admittance to this course will be determined by an online lottery, which can be accessed through the VISA 0100 Lottery link in the Student menu in Banner Web. VISA 0100 or 0110 is a prerequisite to any advanced studio course work at Brown or the Rhode Island School of Design. Under certain circumstances a student may petition for a waiver of this requirement upon submission of a portfolio.

Spring

Fall VISA0100 S01 16039 MW 10:00-11:50(03) (M. Smick)

Fall VISA0100 S02 16040 TTh 10:00-11:50(03) (E. Villanueva)

Fall VISA0100 S03 16041 MW 4:00-5:50(17) (K. Kodi)

Fall VISA0100 S04 16042 T 1:00-2:50(10) (E. Villanueva)

Fall VISA0100 S05 16043 MW 7:00-8:50PM(15) (K. Kodi)

Fall VISA0100 S07 16045 MW 1:00-2:50(06) (E. Donsky)

Fall VISA0100 S08 16046 MW 4:00-5:50(15) (E. Donsky)

Fall VISA0100 S09 16087 TTh 4:00-5:50(18) (E. Irons)

Fall VISA0100 S10 16090 TTh 1:00-2:50(10) (E. Irons)

Spring VISA0100 S01 25092 TTh 1:00-2:50(10) (H. Doyle)

Spring VISA0100 S02 25094 MW 10:00-11:50(03) (E. Villanueva)

Spring VISA0100 S03 25095 MW 4:00-5:50(14) (K. Kodi)

Spring VISA0100 S04 25096 TTh 4:00-5:50(16) (H. Doyle)

Spring VISA0100 S05 25097 MW 7:00-8:50PM(13) (K. Kodi)

Spring VISA0100 S06 25098 TTh 10:00-11:50(09) (L. Tarentino)

Spring VISA0100 S07 25099 MW 1:00-2:50(06) (E. Donsky)

Spring VISA0100 S08 25100 MW 4:00-5:50(13) (E. Donsky)

Spring VISA0100 S09 25101 TTh 4:00-5:50(16) (M. Smick)

Spring VISA0100 S10 26005 MW 1:00-2:50(06) "To Be Arranged"

VISA 0110. Advanced Studio Foundation. Some students arrive at Brown with a greater understanding of visual art principles than most, yet need an introduction to other aspects before taking more advanced courses. Figure drawing is practiced throughout the semester, utilizing a variety of media. Weekly outside assignments explore diverse themes and become the subject of comprehensive class discussions. Serves as a prerequisite to upper-level courses, as does VISA0100.

Admittance to this course will be determined by a portfolio review. Students must submit their portfolio, one week prior to the start of classes, to the Visual Art department office in List, room 222; digital images submitted on a CD are preferred. Students will be notified of acceptance into the class by the end of the first week of classes.

Fall VISA0110 S01 16088 TTh 10:00-11:50(13) (P. Myoda)

VISA 0120. Foundation Media: Sound and Image. This foundation studio course focuses on the production and theory of screen-based digital media artwork and introduces the computer as a medium and a tool for art. The principles and techniques web design, and sound and image production are addressed in readings, screenings, and a number of specific projects. During pre-registration, the course is open to Visual Arts concentrators; all others may enroll with instructor permission. After pre-registration ends, registration for all students is by instructor permission only. Enrollment limited to 12.

Fall VISA0120 S01 16089 MW 10:00-11:50(03) (E. Osborn)

Spr VISA0120 S02 26058 MW 10:00-11:50(03) (E. Osborn)

Spr VISA0120 S02 26059 TTh 1:00-2:50(10) "To Be Arranged"

VISA 1110. Drawing I. Drawing from nature, still life, the model, and the imagination in a variety of media. A continuing series of outside assignments emphasized. Visits to galleries and museums and pertinent exhibitions may be undertaken. The portfolio of the individual student will be the basis of evaluation. Great emphasis is put on classroom participation. Pre-requisite: VISA 0100 or 0110.

This course restricted to 20 students. 18 seats will be available during pre-registration. Students who are not admitted during pre-registration should attend the first meeting.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Fall  VISA1110  S01  16091  TTh  1:00-4:50(10)  (H. Doyle)  

**VISA 1120. Drawing II.**  
Drawing from the imagination, the model, and landscapes in a variety of media. Great emphasis is placed on creative work and on classroom participation. Prerequisite: VISA 0100 or 0110. This course restricted to 20 students. 18 seats will be available during pre-registration. This class will satisfy VA concentration requirement for drawing. Students who are not admitted during pre-registration or were unable to pre-register should attend the first meeting.

Spr  VISA1120  S01  25105  TTh  12:00-3:50(10)  "To Be Arranged"

**VISA 1210A. Big Woodcut.**  
This class will work both in black and white, as well as in color, using a reduction process. The emphasis will be on printing on a large scale, using various types of paper. Much independent work will be required, along with participation in classroom discussions and critiques. Lottery for spaces reserved for nonconcentrators. Prerequisite: VISA 0100 or VISA 0110.

Fall  VISA1210A  S01  25107  TTh  1:00-3:50(10)  (L. Bostrom)

**VISA 1210C. Investigating Collage.**  
No description available. Prerequisite: VISA 0100 or VISA 0110.

Fall  VISA1210C  S01  16092  TTh  1:00-3:50(10)  (L. Bostrom)

**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 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.

Spr  VISA1210D  S01  26057  MW  9:00-11:50(02)  (L. Bostrom)

**VISA 1210G. Silkscreen.**  
This course will provide students with a thorough knowledge of both water-based screen printing techniques and digital imaging. The intersection of digital printing processes and screen printing within the context of contemporary works on paper will be explored through a series of experimental mixed-media projects. Work will be in both black and white and color. Prerequisite: VISA 0100 or VISA 0110. This course restricted to 17 students. Students who are not admitted during pre-registration or were unable to pre-register should attend the first class.

Fall  VISA1210G  S01  16093  TTh  9:00-11:50(08)  (L. Tarentino)

**VISA 1240. Art of the Book.**  
Will examine the book, structurally and conceptually, as artist's medium. Students will learn the materials, tools and techniques of making books, as they explore the expressive and narrative possibilities of the book form. Topics and projects may include digital imaging, combining text and image, traditional binding or digital publishing. Pre-requisite: VISA 0100 or 0110 or by permission of instructor. This course restricted to 15 VISA Concentrators, and others by permission of the instructor. 10 seats available during pre-registration. Students who are not admitted during pre-registration or were unable to pre-register should attend the first meeting.

Fall  VISA1240  S01  16094  MW  1:00-4:50(06)  (L. Tarentino)

**VISA 1250. Art of the Book.**  
Will examine the artist’s book from the printer/publisher perspective. Students will learn the basics of book design, traditional typography and the letterpress printing, as they consider the book and its related printed matter in the service of content. The course will be run as a fine press publishing house in which students will produce individual and group projects, including bookplates, broadsides, and books. Studio work will be augmented with field trips, artist visits, and guided exploration of the special collections at the John Hay Library. Prerequisite: VISA 0100 or 0110, and VISA 1240. This course restricted to 15 students. 5 seats will be available during pre-registration. Students who are not admitted during pre-registration or were unable to pre-register should attend the first meeting.

Spr  VISA1250  S01  25108  MW  1:00-4:50(06)  (L. Henderson)

**VISA 1310. Painting I.**  
Painting 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 build stretchers, cover basic color principles, and painting techniques. Slides, related books, articles are discussed. Individual criticism is given; participation in group discussions is required. Pre-req: VISA 0100 or 0110. Restricted to 14 VISA Concentrators, others by permission of the instructor. Students not admitted during pre-registration should attend the first class. Not all restrictions apply to students registering for the Summer term through the Office of Continuing Education.

Fall  VISA1310  S01  16095  TTh  1:00-3:50(10)  (L. Tarentino)

Spr  VISA1310  S01  25109  TTh  1:00-3:50(10)  (L. Tarentino)

**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  16194  MW  1:00-4:50(06)  (W. Edwards)

**VISA 1410. Sculpture: Material Investigations.**  
This studio course addresses basic sculptural methods, i.e., additive and subtractive modeling, casting, and assemblage, and common sculptural materials, i.e., wood, metal, plaster, and found objects. Demonstrations and workshops on a number of sculptural tools and materials form the foundation for this studio. Students develop sculptural solutions to a given set of problems. Contemporary issues raised in critiques and readings. Extensive outside work is expected. Students are invited to take this course more than once, as the problems can be customized for those with more experience. Pre-req: VISA 0100 or 0110 or VISA 0130. 10 seats will be available during pre-registration. Students who are not admitted during pre-registration or were unable to pre-register should attend the first meeting of the class.

Fall  VISA1410  S01  16097  TTh  1:00-4:50(10)  (P. Myoda)

**VISA 1420. Sculpture II: Conceptual Propositions.**  
This studio course explores a number of contemporary sculptural theories and practices. Contemporary issues raised in critiques and readings. Completion of VISA1410 is suggested, but not required. Demos and workshops on a number of tools and materials will be given as needed. Students may take this course more than once, as the problems can be customized for those with more experience. Extensive outside work expected. Prerequisite: VISA 0100 or VISA 0110 or VISA 0130. Permission of instructor. Please attend first day of class.

Spr  VISA1420  S01  25110  MW  1:00-4:50(06)  "To Be Arranged"

**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. Pre-requisite: VISA 0100 or 0110.

Spr  VISA1510  S01  25111  MW  9:00-11:50(02)  (T. Ganz)

**VISA 1520. Digital Photography.**  
A thematic photography course oriented around landscape photography and related art forms. Readings and slide presentations will explore important concepts in the history of landscape photography including the sublime, the picturesque, the document, ideas of place and displacement, war and environmentalism. Class will be discussion, slideshow, studio and critique. Several field trips and exploration of historical photographic methods including cyanotype, pinhole and large format photography.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Prior experience in photography preferred not required. A digital SLR type camera may be checked out from the Department. Prerequisite: VISA 0100, VISA 0110.

Fall VISA1520 S02 16820 MW 1:00-4:50(06) (K. Almanas)

Spr VISA1520 S01 25112 MW 1:00-3:50(06) (T. Ganz)

**VISA 1710. New Genre: Site and Sound.**

This studio course provides an overview of contemporary sound art and sound installation, facilitates the development of site-based sonic artwork, and encourages a critical approach to sound and audio practice. Work will be developed for and from specific sites with special emphasis placed on modes of listening and the physical characteristics of sound itself. Examples of site-specific sound work in a variety of formats including performance, installation, sculpture, literature, and radio are presented and analyzed. Readings and assignments will coincide with these areas and regular listening exercises are incorporated throughout the class. The format for the class includes lectures and discussions, lab time, and technical training in sound production as necessary for the production of sound-based works. Prerequisite: VISA 0120. This course restricted to 15 students. 10 seats will be available during pre-registration. Students who are not admitted during pre-registration should attend the first meeting. May be repeated once for credit.

Spr VISA1710 S01 26062 MW 1:00-4:50(06) (E. Osborn)

**VISA 1720. New Genre: Physical Computing.**

This semester will focus on the theme of Physical Computing. This studio course is an intensive introduction to electronic devices for use in artmaking and includes hands-on experience working with sensors, motors, switches, gears, lights, simple circuits, microprocessors and hardware-store devices to create kinetic and interactive works of art. Demonstrations, lectures and critical discussion of work will be given to develop concepts and technical skills. Prerequisite: VISA 0120. This course restricted to 15 students. 10 seats will be available during pre-registration. Students who are not admitted during pre-registration should attend the first meeting. May be repeated once for credit.

Fall VISA1720 S01 16101 MW 1:00-4:50(06) (E. Osborn)

**VISA 1800A. Accessorizing Painting: The Exalted Surface.**

This studio course will examine the crossover between decorative arts and painting. Drawing upon sources such as fashion, textiles, adornments, jewelry, furniture, hair and architecture we will study how design aesthetics demonstrate class, position, lineage or a particular period in the history of painting and embellishment. Students will be encouraged to experiment with a wide variety of media and work on projects based on their selected researched subject areas. Enrollment limited to 14 Visual Art concentrators. Prerequisite: VISA 1310.

Spr VISA1800A S01 25113 MW 1:00-4:50(06) (W. Edwards)

**VISA 1800C. Honors Seminar.**

Required for students who have been accepted as candidates for honors. The seminar meets weekly to discuss readings and for group critiques. Includes group trips to New York and Boston, to visit galleries, museums, and artists’ studios. Instructor permission required. WRIT

Fall VISA1800C S01 16100 TTh 9:00-11:50(08) (L. Bostrom)

**VISA 1800P. Art/Work: Professional Practice for Visual Artists.**

Visual artists don’t have agents or managers—you have to do it all yourself. This class covers business basics including tracking inventory and preparing invoices; taking legal precautions like registering a copyright and drafting consignment forms; using promotional tools; and making decisions such as choosing the right venue for your work. Grants, residencies, and relationships with galleries & nonprofit institutions will be discussed in depth. Work will emphasize community the practical, skills to thrive as a visual artist. Enrollment limited to 20 juniors and seniors in Visual Art. WRIT

Spr VISA1800P S01 25114 F 1:00-4:50(06) (H. Bhandari)

**VISA 1910. Individual Study Project in the Practice of Art.**

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.
**Africana Studies**

The concentration in Africana Studies critically examines the artistic, historical, literary, and theoretical expressions of the peoples and cultures of Africa and the African Diaspora. Central to the work of students and faculty in the concentration is the close collaboration of artists, scholars, and writers in examining relationships between academic and artistic knowledge about the world and human experience. Concentrators work closely with faculty members in developing new knowledge about the world and human existence through the critical and comprehensive study of the peoples and cultures of Africa and the African Diaspora. Concentrators are encouraged to study abroad in Africa, the Caribbean, and/or Latin America and to acquire language competency in a language other than English spoken in Africa and the diaspora.

In order to develop requisite competency, Africana Studies concentrators must complete eight (8) semester-long courses offered by or cross-listed with the Department. Concentrators may also petition the Department to accept other appropriate courses.

Of these courses, the following two Africana Studies courses are required:
- AFRI 0090 An Introduction to Africana Studies (Fall ONLY)
- AFRI 1360 Africana Studies: Knowledge, Texts and Methodology—Senior Capstone Seminar (Spring ONLY)

The Department strongly encourages foreign study in Africa, the Caribbean, and Latin America, during the student's junior year. While the department actively supports programs in South Africa, Tanzania, Ethiopia, Brazil, and the English-Speaking Caribbean, concentrators must complete at least six (6) courses in residence at Brown (that is, they must carry AFRI prefixes).

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 (https://vivo.brown.edu/display/lbraun), Director of Undergraduate Studies.

**Honors**

Africana Studies' concentrators with outstanding records may be admitted to the department's Honors Program.

Students interested in pursuing honors should identify a faculty sponsor in Africana Studies in their 6th semester and begin working on their thesis project during the summer before their senior year. By the end of the second week of Semester I of their senior year, while working in consultation with a faculty advisor, the student must prepare a work plan/proposal. Please visit department website for proposal guidelines. This plan should include a timeline for completion of the thesis and is not to exceed (3) typewritten pages. The student should also identify a second reader at this point. The work plan/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. The thesis sponsor should inform the Director of Undergraduate Studies by email after approval of the proposal.

By the time the proposal is submitted, the Honor's candidate should be familiar with the secondary works in the field. (Secondary readings should be extensive and be incorporated into the proposal.) The Honor's candidate is also expected to complete research paper of distinguished quality while enrolled in an independent study with their faculty advisor during the first semester of the senior year. In most cases, this paper will be one or two chapters in their thesis. 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 November 10, 2015. Final drafts must be submitted by December 1, 2015. For students completing graduation requirements by Semester II (Spring), the first complete draft of the thesis should be submitted by March 14, 2016. The final draft of the thesis should be submitted by April 20, 2016.

Students must submit bound copies of the final thesis to the department and to each of the readers, along with an electronic copy of the completed thesis to Ms. Deborah Bowen. All students will present their thesis projects to the Department of Africana Studies on the last Friday of April 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 Prof. Debbie Weinstein (deborah_fran_weinstein@brown.edu), the concentration advisor during spring 2016.

A concentrator in American Studies will be able to:
- Analyze texts, contexts, and data from multiple disciplinary and historical perspectives
- Synthesize research as verbal, visual and/or digital presentations
- Explore the theory and/or practice of the engagement of scholarship with a broader public
- Understand how American society and cultures have been and are being shaped by global flows of people, goods and ideas
- Experiment with new media as critical tools for scholarship

Concentrators have gone on to a vast variety of careers, including law, public humanities, politics, public service, academics, business, creative arts, and medicine.

Each concentrator will take 10 courses including a Junior Seminar as one of four seminars. Courses are organized by the four themes and four approaches that define America Studies at Brown. Each concentrator will use this framework to create an individual focus in consultation with the Concentration Advisor.

The focus is the flexible core of the concentration. Here each student builds a coherent and dynamic interdisciplinary structure of related courses that develops his or her compelling interest in some aspect of American experience. The four themes and four approaches provide the foundation on which each student builds a unique concentration in American Studies.

All seniors in the class of 2013 forward will be required to do a capstone electronic portfolio. Some concentrators may elect to do an Honors Thesis. Study abroad is supported and encouraged.

**Four Themes and Four Approaches**

American Studies at Brown is concerned with four broad themes:
- Social Structures and the Practices of Identity: How do communities and individuals come to define themselves, and how do others define them, in terms of, among other categories, nation, region, class, race, ethnicity, gender, sex, religion, age and sexuality? How do organizations and institutions function socially and culturally? What are the roles of social movements, economic structures, politics and government?
- Space and Place: How is space organized, and how do people make place? This includes the study of natural and built environments; local, regional, national and transnational communities; and international and inter-regional flows of people, goods, and ideas.
- Production and Consumption of Culture: How do people represent their experiences and ideas as culture? How is culture transmitted,
appropriate and consumed? What is the role of artists and the expressive arts, including literature, visual arts and performance?

- **Science, Technology, and Everyday Life:** How does work and the deployment of science and technology shape American culture? How do everyday social practices of work, leisure and consumption provide agency for people?

### How we study

American Studies at Brown emphasizes four intersecting approaches that are critical tools for understanding these themes:

- **Cultural and Social Analysis:** Reading and analyzing different kinds of texts, including literary, visual, aural, oral, material objects and landscapes. Examining ethnic and racial groups, institutions, organizations and social movements.

- **Global/International Contextualization:** Comprehending the United States as a society and culture that has been shaped by the historical and contemporary flows of people, goods and ideas from around the world and in turn, learning about the various ways in which America has shaped the world.

- **New Media Understandings:** Understanding the creation of new forms of discourse, new ways of knowing and new modes of social organization made possible by succeeding media revolutions. Using new media as a critical tool for scholarship.

- **Publicly Engaged Scholarship:** Connecting the theory and the practice of publicly-engaged research, understanding and presentation, from community-based scholarship to ethnography, oral history, and museum exhibits. Civic engagement might include structured and reflective participation in a local community or communities or the application of general theoretical knowledge to understanding social issues.

### Anthropology

Anthropology is the study of human beings from all times and all places, offering holistic, comparative, international, and 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, anthropological linguistics, and biological anthropology.

Concentrators should select their courses in anthropology in consultation with the concentration advisor. At least nine courses in anthropology are required, including:

Select one of the following sociocultural/linguistic anthropology classes:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 1010</td>
<td>Introduction to Cultural Anthropology</td>
</tr>
<tr>
<td>ANTH 1110</td>
<td>Anthropology and Global Social Problems: Environment, Development, and Governance</td>
</tr>
<tr>
<td>ANTH 0200</td>
<td>Culture and Human Behavior</td>
</tr>
<tr>
<td>ANTH 0300</td>
<td>Culture and Health</td>
</tr>
<tr>
<td>ANTH 0800</td>
<td>Sound and Symbols: Introduction to Linguistic Anthropology</td>
</tr>
</tbody>
</table>

Select one of the following biological anthropology/archaeology classes:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 0310</td>
<td>Human Evolution</td>
</tr>
<tr>
<td>ANTH 0500</td>
<td>Past Forward: Discovering Anthropological Archaeology</td>
</tr>
</tbody>
</table>

Select one of the following, normally taken in junior or sophomore year:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 1621</td>
<td>Material Culture Practicum</td>
</tr>
<tr>
<td>ANTH 1900</td>
<td>History of Anthropology: Anthropological Theories</td>
</tr>
<tr>
<td>ANTH 1940</td>
<td>Ethnographic Research Methods</td>
</tr>
<tr>
<td>ANTH 1950</td>
<td>Archaeological Field Work</td>
</tr>
</tbody>
</table>

A course from the ANTH 1910 Series (Normally taken in senior year) 1

Five additional Anthropology courses.

Total Credits 9

1 Of the required courses, at least five courses counted toward the concentration must be offered at the 1000-level or above and one course must be on a particular world area.

### Honors

Candidates for honors should apply to the concentration advisor by the end of his or her 6th semester, but no later than the 4th week of the 7th semester. An application consists of a brief statement addressing the focus of a proposed thesis and the names and signatures of two faculty members from the Department of Anthropology who have agreed to serve as the student’s honors committee—one as honors thesis advisor, the other as a reader. Candidates for honors are required to:

1. Fulfill the standard concentration requirements.
2. Take two additional courses, usually, which may be used for thesis preparation.
3. Have a majority of A’s in the concentration.
4. Submit an approved honors thesis.

### Field Work

Concentrators interested in archaeology are urged to obtain training in field archaeology by participating in Brown-sponsored field research, or by participating in an archaeological field school elsewhere.

### Applied Mathematics

The concentration in Applied Mathematics allows students to investigate the mathematics of problems arising in the physical, life and social sciences as well as in engineering. The basic mathematical skills of Applied Mathematics come from a variety of sources, which depend on the problems of interest: the theory of ordinary and partial differential equations, matrix theory, statistical sciences, probability and decision theory, risk and insurance analysis, among others. Applied Mathematics appeals to people with a variety of different interests, ranging from those with a desire to obtain a good quantitative background for use in some future career, to those who are interested in the basic techniques and approaches in themselves. The standard Applied Mathematics concentration leads to either the A.B. or Sc.B. degree. Students may also choose to pursue a joint program with biology, computer science or economics. The undergraduate concentration guide is available here (http://www.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**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0090</td>
<td>Introductory Calculus, Part I</td>
</tr>
<tr>
<td>MATH 0100</td>
<td>Introductory Calculus, Part II</td>
</tr>
<tr>
<td>MATH 0100</td>
<td>APMA 0350 Applied Ordinary Differential Equations and Methods of Applied Mathematics I, II</td>
</tr>
</tbody>
</table>

Select one course on programming from the following: 4

**Program**

Ten additional semester courses approved by the Division of Applied Mathematics. These classes must include:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0180</td>
<td>Intermediate Calculus</td>
</tr>
<tr>
<td>MATH 0520</td>
<td>Linear Algebra</td>
</tr>
<tr>
<td>APMA 0350</td>
<td>Applied Ordinary Differential Equations and Methods of Applied Mathematics I, II</td>
</tr>
</tbody>
</table>

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
APMA 0090 Introduction to Mathematical Modeling
APMA 0160 Introduction to Scientific Computing
CSCI 0040 Introduction to Scientific Computing and Problem Solving
CSCI 0150 Introduction to Object-Oriented Programming and Computer Science
CSCI 0170 Computer Science: An Integrated Introduction

Five additional courses, of which four should be chosen from the 1000-level courses taught by the Division of Applied Mathematics.

Total Credits 10

1 Substitution of alternate courses for the specific requirements is subject to approval by the division.
2 Concentrators are urged to consider MATH 0540 as an alternative to MATH 0520.
3 APMA 0330, APMA 0340 will sometimes be accepted as substitutes for APMA 0350, APMA 0360.
4 Concentrators are urged to complete their introductory programming course before the end of their sophomore year.

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 Introductory Calculus, Part I & MATH 0100 and Introductory Calculus, Part II 2
MATH 0180 Intermediate Calculus 1
MATH 0520 Linear Algebra 2
APMA 0350 Applied Ordinary Differential Equations 2 & APMA 0360 and Methods of Applied Mathematics I, II 3
Select one senior seminar from the APMA 1930 or APMA 1940 series, or an approved equivalent.

Select one course on programming from the following: 4
APMA 0090 Introduction to Mathematical Modeling
APMA 0160 Introduction to Scientific Computing
CSCI 0040 Introduction to Scientific Computing and Problem Solving
CSCI 0150 Introduction to Object-Oriented Programming and Computer Science
CSCI 0170 Computer Science: An Integrated Introduction

Ten additional courses, of which six should be chosen from the 1000-level or higher level courses taught by the Division of Applied Mathematics.

Total Credits 18

1 Substitution of alternate courses for the specific requirements is subject to approval by the division.
2 Concentrators are urged to consider MATH 0540 as an alternative to MATH 0520.
3 APMA 0330, APMA 0340 will sometimes be accepted as substitutes for APMA 0350, APMA 0360.
4 Concentrators are urged to complete their introductory programming course before the end of their sophomore year.

Applied Mathematics-Biology

The Applied Math - Biology concentration recognizes that mathematics is essential to address many modern biological problems in the post genomic era. Specifically, high throughput technologies have rendered vast new biological data sets that require novel analytical skills for the most basic analyses. These technologies are spawning a new “data-driven” paradigm in the biological sciences and the fields of bioinformatics and systems biology. The foundations of these new fields are inherently mathematical, with a focus on probability, statistical inference, and systems dynamics. These mathematical methods apply very broadly in many biological fields including some like population growth, spread of disease, that predate the genomics revolution. Nevertheless, the application of these methods in areas of biology from molecular genetics to evolutionary biology has grown very rapidly in with the availability of vast amounts of genomic sequence data. Required coursework in this program aims at ensuring expertise in mathematical and statistical sciences, and their application in biology. The program culminates in a senior capstone experience that pairs student and faculty in creative research collaborations.

Standard program for the Sc.B. degree

Required coursework in this program aims at ensuring expertise in mathematical and statistical sciences, and their application in biology. The students will focus in particular areas of biology. The program culminates in a senior capstone experience that pairs student and faculty in creative research collaborations. Applied Math – Biology concentrators are prepared for careers in medicine, public health, industry and academic research.

Required Courses:
Students are required to take all of the following courses.

Select one of the following sequences: 2

APMA 0350 Applied Ordinary Differential Equations
& APMA 0360 and Methods of Applied Mathematics I, II
APMA 0330 Methods of Applied Mathematics I, II
& APMA 0340 and Methods of Applied Mathematics I, II
APMA 1650 Statistical Inference I
One (1) additional APMA approved 1000-level course.
MATH 0090 Introductory Calculus, Part I (or equivalent placement)
MATH 0100 Introductory Calculus, Part II (or equivalent placement)
or MATH 0170 Advanced Placement Calculus
MATH 0180 Intermediate Calculus
MATH 0520 Linear Algebra (or an approved applied math course)
CHEM 0330 Equilibrium, Rate, and Structure 1
PHYS 0030 Basic Physics
or PHYS 0050 Foundations of Mechanics
PHYS 0040 Basic Physics
or PHYS 0060 Foundations of Electromagnetism and Modern Physics

Additional Courses

In addition to required courses listed above, students must take the following:

Two additional courses in applied math, biology, chemistry, math, or physics. At least one of these must be a directed research course that reflects the theme of this program, for example:

APMA 1970 Independent Study
BIOL 1950 Directed Research/Independent Study
or BIOL 1960 Directed Research/Independent Study

Four biology courses agreed upon by the student and advisor, for example:

Areas of Emphasis and Suggested Courses:
A breadth of courses in multiple areas is suggested. For students with particular interests, the following areas of emphasis can be considered.

Biochemistry

BIOL 0280 Introductory Biochemistry
CHEM 0350/0360 Organic Chemistry
CHEM 1230 Chemical Biology
CHEM 1240 Biochemistry

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

The Sc.B. concentration in Applied Math-Computer Science provides a foundation of basic concepts and methodology of mathematical analysis and computation and prepares students for advanced work in computer science, applied mathematics, and scientific computation. Concentrators must complete courses in mathematics, applied math, computer science, and an approved English writing course. While the concentration in Applied Math-Computer Science allows students to develop the use of quantitative methods in thinking about and solving problems, knowledge that is valuable in all walks of life, students who have completed the concentration have pursued graduate study, computer consulting and information industries, and scientific and statistical analysis careers in industry or government. This degree offers a standard track and a professional track.

### Requirements for the Standard Track of the Sc.B. degree.

**Prerequisites - two semesters of Calculus, for example**
- **MATH 0090** Introductory Calculus, Part I
- **MATH 0100** Introductory Calculus, Part II
- **MATH 0170** Advanced Placement Calculus

**Concentration Requirements (17 courses)**

**Core-Math:**
- **MATH 0180** Intermediate Calculus 1
- **MATH 0350** Honors Calculus
- **MATH 0520** Linear Algebra 1
- **MATH 0540** Honors Linear Algebra
- **CSCI 0530** Directions: The Matrix in Computer Science

**Core-Applied Mathematics:**
- **APMA 0350** Applied Ordinary Differential Equations
- **APMA 0360** Methods of Applied Mathematics I, II
- **APMA 1170** Introduction to Computational Linear Algebra
- **APMA 1180** Introduction to Numerical Solution of Differential Equations

**Core-Computer Science:**
Select one of the following Series:

- **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

- **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:
- **CSCI 0220** Introduction to Discrete Structures and Probability (math)
- **CSCI 0320** Introduction to Software Engineering (systems)
- **CSCI 0310** Introduction to Computer Systems
- **CSCI 0330** Introduction to Computer Systems
- **CSCI 0510** Models of Computation (math)

Three 1000-level Computer Science courses. These three courses must include a pair of courses with a coherent theme. A list of approved pairs may be found at the approved-pairs web page. You are not restricted to the pairs on this list, but any pair not on the list must be approved by the director of undergraduate studies.

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 1650/1660.

A capstone course: a one-semester course, normally taken in the student’s last undergraduate year, in which the student (or group of students) use a significant portion of their undergraduate education, broadly interpreted, in studying some current topic in depth, to produce a culminating artifact such as a paper or software project.

Note: CSCI 1450 may be used either as a math-oriented core course or as an advanced course. 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 may be used in place of CSCI 1450. However, concentration credit will be given for only one of Applied Math 1650 and CSCI 1450.

**Total Credits** 17

---

1 It is recommended that some concentrators take organic chemistry or biochemistry.
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) - through the class of 2015:**

**Prerequisites:**

<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>
</tbody>
</table>

**Course Requirements:**

**Applied Math Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>APMA 0350</td>
<td>Applied Ordinary Differential Equations and Methods of Applied Mathematics I, II</td>
</tr>
<tr>
<td>&amp; APMA 0360</td>
<td></td>
</tr>
</tbody>
</table>

Select one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>APMA 0160</td>
<td>Introduction to Scientific Computing</td>
</tr>
<tr>
<td>CSCI 0040</td>
<td>Introduction to Scientific Computing and Problem Solving</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 Code</th>
<th>Course Name</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>
<tr>
<td>APMA 1650</td>
<td>Statistical Inference I</td>
</tr>
</tbody>
</table>

**Economics Requirements:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1130</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>
</tbody>
</table>

Two 1000-level courses from the "mathematical-economics" group, below:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1170</td>
<td>Welfare Economics and Social Choice Theory</td>
</tr>
<tr>
<td>ECON 1225</td>
<td>Advanced Macroeconomics: Monetary, Fiscal, and Stabilization Policies</td>
</tr>
<tr>
<td>ECON 1465</td>
<td>Market Design: Macroeconomics; Monetary, Fiscal, and Stabilization Policies</td>
</tr>
<tr>
<td>ECON 1470</td>
<td>Bargaining Theory and Applications</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 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>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 additional 1000-level economics course. 1

**Total Credits** 12

1 No course may be used to simultaneously satisfy (a) and (b).
2 APMA 0330 and APMA 0340 may be substituted with advisor approval.
3 Or ECON 1110 with permission.

**Standard program for the Sc.B. degree (Advanced Economics track) - through the class of 2015:**

**Prerequisites:**

<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>
</tbody>
</table>

**Course requirements:**

**Applied Mathematics requirements:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>APMA 0350</td>
<td>Applied Ordinary Differential Equations and Methods of Applied Mathematics I, II</td>
</tr>
<tr>
<td>&amp; APMA 0360</td>
<td></td>
</tr>
</tbody>
</table>

Select one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>APMA 0160</td>
<td>Introduction to Scientific Computing</td>
</tr>
<tr>
<td>CSCI 0040</td>
<td>Introduction to Scientific Computing and Problem Solving</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 Code</th>
<th>Course Name</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>
<tr>
<td>APMA 1650</td>
<td>Statistical Inference I</td>
</tr>
</tbody>
</table>

**Economics requirements:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1130</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>
</tbody>
</table>

Select two of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</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>
<tr>
<td>APMA 1660</td>
<td>Statistical Inference II</td>
</tr>
<tr>
<td>APMA 1670</td>
<td>Statistical Analysis of Time Series</td>
</tr>
<tr>
<td>APMA 1680</td>
<td>Nonparametric Statistics</td>
</tr>
<tr>
<td>APMA 1700</td>
<td>The Mathematics of Insurance</td>
</tr>
<tr>
<td>APMA 1740</td>
<td>Recent Applications of Probability and Statistics</td>
</tr>
<tr>
<td>MATH 1010</td>
<td>Analysis: Functions of One Variable</td>
</tr>
</tbody>
</table>

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
ECON 1210 Intermediate Macroeconomics 1
ECON 1630 Econometrics I 1

Three 1000-level courses from the "mathematical-economics" group, below:

ECON 1170 Welfare Economics and Social Choice Theory
ECON 1225 Advanced Macroeconomics: Monetary, Fiscal, and Stabilization Policies
ECON 1465 Market Design: Theory and Applications
ECON 1470 Bargaining Theory and Applications
ECON 1640 Econometrics II
ECON 1650 Financial Econometrics
ECON 1750 Investments II
ECON 1759 Data, Statistics, Finance
ECON 1810 Economics and Psychology
ECON 1820 Behavioral Economics
ECON 1850 Theory of Economic Growth
ECON 1860 The Theory of General Equilibrium
ECON 1870 Game Theory and Applications to Economics

Two additional 1000-level economics courses. 2

Total Credits 15

1 No course may be used to simultaneously satisfy (a) and (b).
2 APMA 0330 and APMA 0340 may be substituted with advisor approval.
3 Or ECON 1110 with permission.

Standard program for the A.B. degree (Mathematical Finance track) - through the class of 2015:

Prerequisites:
- MATH 0100 Introductory Calculus, Part II
- MATH 0520 Linear Algebra

Requirements:
- Applied Mathematics requirements:
  (a) APMA 0350 & APMA 0360 Applied Ordinary Differential Equations and Methods of Applied Mathematics I, II 1
  Select one of the following: 1
  - APMA 0160 Introduction to Scientific Computing
  - CSCI 0040 Introduction to Scientific Computing and Problem Solving
  - CSCI 0150 Introduction to Object-Oriented Programming and Computer Science
  - CSCI 0170 Computer Science: An Integrated Introduction
  - APMA 1200 Operations Research: Probabilistic Models 1
  - APMA 1650 Statistical Inference I 1
  (b) Select one of the following: 1
  - APMA 1180 Introduction to Numerical Solution of Differential Equations
  - APMA 1330 Methods of Applied Mathematics III, IV
  - APMA 1660 Statistical Inference II
  - APMA 1670 Statistical Analysis of Time Series
  - APMA 1680 Nonparametric Statistics
  - APMA 1690 Computational Probability and Statistics
  - APMA 1700 The Mathematics of Insurance
  - APMA 1720 Monte Carlo Simulation with Applications to Finance (most preferred in this list)
  - APMA 1740 Recent Applications of Probability and Statistics
  - MATH 1010 Analysis: Functions of One Variable

Economics Requirements:
- ECON 1130 Intermediate Microeconomics (Mathematical) 2
- ECON 1210 Intermediate Macroeconomics
- ECON 1630 Econometrics I

Select two 1000-level courses from the "financial economics" group. 3
- ECON 1650 Financial Econometrics
- ECON 1710 Investments I
- ECON 1720 Corporate Finance
- ECON 1750 Investments II
- ECON 1759 Data, Statistics, Finance
- ECON 1760 Financial Institutions
- ECON 1765 Finance, Regulation, and the Economy: Research
- ECON 1770 Fixed Income Securities
- ECON 1780 Corporate Strategy
- ECON 1790 Corporate Governance and Management

Two additional 1000-level economics courses. 2

Total Credits 12

1 APMA 0330 and APMA 0340 may be substituted with advisor approval.
2 Or ECON 1110 with permission.
3 No course may be used to simultaneously satisfy the "financial economics" and the "mathematical economics" requirements.

Standard program for the Sc.B. degree (Mathematical Finance track) - through the class of 2015:

Prerequisites:
- MATH 0100 Introductory Calculus, Part II
- MATH 0520 Linear Algebra

Course requirements:
- Applied Mathematics requirements:
  (a) APMA 0350 & APMA 0360 Applied Ordinary Differential Equations and Methods of Applied Mathematics I, II 1
  Select one of the following: 1
  - APMA 0160 Introduction to Scientific Computing
  - CSCI 0040 Introduction to Scientific Computing and Problem Solving
  - CSCI 0150 Introduction to Object-Oriented Programming and Computer Science
  - CSCI 0170 Computer Science: An Integrated Introduction
  - APMA 1200 Operations Research: Probabilistic Models 1
  - APMA 1650 Statistical Inference I 1

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

(b) Select two of the following:

APMA 1180 Introduction to Numerical Solution of Differential Equations
APMA 1330 Methods of Applied Mathematics III, IV
APMA 1660 Statistical Inference II
APMA 1670 Statistical Analysis of Time Series
APMA 1680 Nonparametric Statistics
APMA 1690 Computational Probability and Statistics
APMA 1700 The Mathematics of Insurance
APMA 1720 Monte Carlo Simulation with Applications to Finance (most preferred in this list)
APMA 1740 Recent Applications of Probability and Statistics
MATH 1010 Analysis: Functions of One Variable

Economics requirements:
ECON 1130 Intermediate Microeconomics (Mathematical) 2
ECON 1210 Intermediate Macroeconomics 1
ECON 1630 Econometrics I 1

Select three 1000-level courses from the "financial economics" group: 3

ECON 1650 Financial Econometrics
ECON 1710 Investments I
ECON 1720 Corporate Finance
ECON 1750 Investments II
ECON 1759 Data, Statistics, Finance
ECON 1760 Financial Institutions
ECON 1765 Finance, Regulation, and the Economy: Research
ECON 1770 Fixed Income Securities
ECON 1780 Corporate Strategy
ECON 1790 Corporate Governance and Management

Select two 1000-level courses from the "mathematical economics" group: 2

ECON 1170 Welfare Economics and Social Choice Theory
ECON 1225 Advanced Macroeconomics: Monetary, Fiscal, and Stabilization Policies
ECON 1465 Market Design: Theory and Applications
ECON 1470 Bargaining Theory and Applications
ECON 1640 Econometrics II
ECON 1650 Financial Econometrics
ECON 1750 Investments II
ECON 1759 Data, Statistics, Finance
ECON 1810 Economics and Psychology
ECON 1820 Behavioral Economics
ECON 1850 Theory of Economic Growth
ECON 1860 The Theory of General Equilibrium
ECON 1870 Game Theory and Applications to Economics

Total Credits 15

1 APMA 0330 and APMA 0340 may be substituted with advisor approval.
2 Or ECON 1110 with permission.
3 No course my be used to simultaneously satisfy the "financial economics" and the "mathematical economics" requirements.

Standard Program for the A.B. degree (Advanced Economics track) - class of 2016 and beyond:

Prerequisites:
MATH 0100 Introductory Calculus, Part II

MATH 0520 Linear Algebra

Course Requirements:

Applied Mathematics Requirements

(a) 1
APMA 0350 & APMA 0360 Applied Ordinary Differential Equations and Methods of Applied Mathematics I, II 2
Select one of the following:
APMA 0160 Introduction to Scientific Computing (preferred)
CSCI 0040 Introduction to Scientific Computing and Problem Solving (preferred)
CSCI 0150 Introduction to Object-Oriented Programming and Computer Science
CSCI 0170 Computer Science: An Integrated Introduction

Select one of the following:
APMA 1200 Operations Research: Probabilistic Models
APMA 1210 Operations Research: Deterministic Models
APMA 1650 Statistical Inference I 1

(b) 1
Select one of the following:
APMA 1200 Operations Research: Probabilistic Models
APMA 1210 Operations Research: Deterministic Models
APMA 1660 Statistical Inference II
APMA 1670 Statistical Analysis of Time Series
APMA 1680 Nonparametric Statistics
APMA 1690 Computational Probability and Statistics
APMA 1700 The Mathematics of Insurance
APMA 1740 Recent Applications of Probability and Statistics
MATH 1010 Analysis: Functions of One Variable

Economics Requirements:
ECON 1130 Intermediate Microeconomics (Mathematical) 3
ECON 1210 Intermediate Macroeconomics 1
ECON 1630 Econometrics I 1

Two 1000-level courses from the "mathematical-economics" group: 4

ECON 1170 Welfare Economics and Social Choice Theory
ECON 1225 Advanced Macroeconomics: Monetary, Fiscal, and Stabilization Policies
ECON 1465 Market Design: Theory and Applications
ECON 1470 Bargaining Theory and Applications
ECON 1640 Econometrics II
ECON 1650 Financial Econometrics
ECON 1750 Investments II
ECON 1759 Data, Statistics, Finance
ECON 1810 Economics and Psychology
ECON 1820 Behavioral Economics
ECON 1850 Theory of Economic Growth
ECON 1860 The Theory of General Equilibrium
ECON 1870 Game Theory and Applications to Economics

One 1000-level course from the "data methods" group: 4

ECON 1305 Economics of Education: Research
ECON 1310 Labor Economics
ECON 1360 Health Economics
ECON 1410 Urban Economics
ECON 1510 Economic Development
ECON 1520 The Economic Analysis of Institutions
ECON 1530 Health, Hunger and the Household in Developing Countries
ECON 1640 Econometrics II
ECON 1650 Financial Econometrics

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

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

ECON 1759 Data, Statistics, Finance
ECON 1765 Finance, Regulation, and the Economy: Research
One additional 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.
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
(Advanced Economics track) - class of 2016 and beyond

Prerequisites:
MATH 0100 Introductory Calculus, Part II
MATH 0520 Linear Algebra

Course Requirements:
Applied Mathematics Requirements
(a) 1
APMA 0350 & APMA 0360 Applied Ordinary Differential Equations and Methods of Applied Mathematics I, II 2
Select one of the following:
APMA 0160 Introduction to Scientific Computing (preferred)
CSCI 0040 Introduction to Scientific Computing and Problem Solving (preferred)
CSCI 0150 Introduction to Object-Oriented Programming and Computer Science
CSCI 0170 Computer Science: An Integrated Introduction
Select one of the following:
APMA 1200 Operations Research: Probabilistic Models
APMA 1210 Operations Research: Deterministic Models
APMA 1650 Statistical Inference I 1
(b) 1
Select two of the following:
APMA 1200 Operations Research: Probabilistic Models
APMA 1210 Operations Research: Deterministic Models
APMA 1660 Statistical Inference II
APMA 1670 Statistical Analysis of Time Series
APMA 1680 Nonparametric Statistics
APMA 1690 The Mathematics of Insurance
APMA 1700 The Mathematics of Insurance
APMA 1740 Recent Applications of Probability and Statistics
MATH 1010 Analysis: Functions of One Variable

Economics Requirements:
ECON 1130 Intermediate Microeconomics (Mathematical) 3 1
ECON 1210 Intermediate Macroeconomics 1
ECON 1630 Econometrics I 1
Three 1000-level courses from the "mathematical-economics" group: 4 3
ECON 1170 Welfare Economics and Social Choice Theory
ECON 1225 Advanced Macroeconomics: Monetary, Fiscal, and Stabilization Policies
ECON 1465 Market Design: Theory and Applications
ECON 1470 Bargaining Theory and Applications
ECON 1640 Econometrics II
ECON 1650 Financial Econometrics
ECON 1750 Investments II

Standard program for the A.B. degree
(Mathematical Finance track) - class of 2016 and beyond

Prerequisites:
MATH 0100 Introductory Calculus, Part II
MATH 0520 Linear Algebra

Course Requirements:
Applied Mathematics Requirements
(a)
APMA 0350 & APMA 0360 Applied Ordinary Differential Equations and Methods of Applied Mathematics I, II 1
Select one of the following:
APMA 0160 Introduction to Scientific Computing (preferred)
CSCI 0040 Introduction to Scientific Computing and Problem Solving (preferred)
CSCI 0150 Introduction to Object-Oriented Programming and Computer Science
CSCI 0170 Computer Science: An Integrated Introduction
APMA 1200 Operations Research: Probabilistic Models
APMA 1210 Operations Research: Deterministic Models
APMA 1650 Statistical Inference I 1
(b) 1
Select one of the following:
APMA 1180 Introduction to Numerical Solution of Differential Equations
APMA 1330 Methods of Applied Mathematics III, IV
APMA 1660 Statistical Inference II
APMA 1670 Statistical Analysis of Time Series
APMA 1680 Nonparametric Statistics
APMA 1690 Computational Probability and Statistics
APMA 1700 The Mathematics of Insurance

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

APMA 1720  Monte Carlo Simulation with Applications to Finance (preferred)
APMA 1740  Recent Applications of Probability and Statistics
MATH 1010  Analysis: Functions of One Variable

**Prerequisites:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0100</td>
<td>Introductory Calculus, Part II</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0520</td>
<td>Linear Algebra</td>
<td>1</td>
</tr>
</tbody>
</table>

**Course Requirements:**

- **Applied Mathematics requirements:**
  - (a) APMA 0350 & APMA 0360
    - Applied Ordinary Differential Equations and Methods of Applied Mathematics I, II
  - Select one of the following:
    - APMA 0160  Introduction to Scientific Computing (preferred)
    - CSCI 0040  Introduction to Scientific Computing and Problem Solving (preferred)
    - CSCI 0150  Computer Science: An Integrated Introduction
    - CSCI 0170  Introduction to Object-Oriented Programming and Computer Science
    - APMA 1200  Operations Research: Probabilistic Models
    - APMA 1650  Statistical Inference I
  - (b) Select two of the following:
    - APMA 1180  Introduction to Numerical Solution of Differential Equations
    - APMA 1330  Methods of Applied Mathematics III, IV
    - APMA 1660  Statistical Inference II
    - APMA 1670  Statistical Analysis of Time Series
    - APMA 1680  Nonparametric Statistics
    - APMA 1690  Computational Probability and Statistics
    - APMA 1720  Monte Carlo Simulation with Applications to Finance (preferred)
    - APMA 1740  Recent Applications of Probability and Statistics
    - MATH 1010  Analysis: Functions of One Variable

**Economics Requirements:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1130</td>
<td>Intermediate Microeconomics (Mathematical)</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1210</td>
<td>Intermediate Macroeconomics</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1630</td>
<td>Econometrics I</td>
<td>1</td>
</tr>
</tbody>
</table>

Select two 1000-level courses from the "financial economics" group:

- ECON 1650  Financial Econometrics
- ECON 1670  Financial Institutions
- ECON 1675  Finance, Regulation, and the Economy: Research
- ECON 1690  Game Theory and Applications to Economics
Select one 1000-level course from the "mathematical economics" group:

- ECON 1170  Welfare Economics and Social Choice Theory
- ECON 1225  Advanced Macroeconomics: Monetary, Fiscal, and Stabilization Policies
- ECON 1465  Market Design: Theory and Applications
- ECON 1470  Bargaining Theory and Applications
- ECON 1490  Econometrics II

Select three 1000-level courses from the "financial economics" group:

- ECON 1650  Financial Econometrics
- ECON 1670  Financial Institutions
- ECON 1675  Finance, Regulation, and the Economy: Research
- ECON 1690  Game Theory and Applications to Economics

**Total Credits**: 13 Credit Hours

---

1. APMA 0330 and APMA 0340 may be substituted with advisor approval.
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.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1650</td>
<td>Financial Econometrics</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>Behavioral Economics</td>
</tr>
<tr>
<td>ECON 1850</td>
<td>Theory of Economic Growth</td>
</tr>
<tr>
<td>ECON 1860</td>
<td>The Theory of General Equilibrium</td>
</tr>
<tr>
<td>ECON 1870</td>
<td>Game Theory and Applications to Economics</td>
</tr>
</tbody>
</table>

Select one 1000-level course from the "data methods" group: 2

1. ECON 1305 Economics of Education: Research
2. ECON 1310 Labor Economics
3. ECON 1360 Health Economics
4. ECON 1410 Urban Economics
5. ECON 1510 Economic Development
6. ECON 1520 The Economic Analysis of Institutions
7. ECON 1530 Health, Hunger and the Household in Developing Countries
8. ECON 1640 Econometrics II
9. ECON 1650 Financial Econometrics
10. ECON 1759 Data, Statistics, Finance
11. ECON 1765 Finance, Regulation, and the Economy: Research

Total Credits: 16

1. APMA 0330 and APMA 0340 may be substituted with advisor approval.
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.

Honors and Capstone Requirement

Admission to candidacy for honors in the concentration is granted on the following basis: 3.7 GPA for Economics courses, and a 3.5 GPA overall. To graduate with honors, a student must write an honors thesis in the senior year following the procedures specified by the concentration (see Economics Department website). Beginning with the class of 2016, students not writing an honors thesis must complete an alternative senior capstone project and obtain the approval of a faculty sponsor.

Professional Track

The requirements for the professional track include all those of the standard track, as well as the following:

Students must complete two two-to-four month full-time professional experiences, doing work that is related to their concentration programs. Such work is normally done within an industrial organization, but may also be at a university under the supervision of a faculty member.

On completion of each professional experience, the student must write and upload to ASK a reflective essay about the experience addressing the following prompts, to be approved by the student's concentration advisor:

- Which courses were put to use in your summer's work? Which topics, in particular, were important?
- In retrospect, which courses should you have taken before embarking on your summer experience? What are the topics from these courses that would have helped you over the summer if you had been more familiar with them?
- Are there topics you should have been familiar with in preparation for your summer experience, but are not taught at Brown? What are these topics?
- What did you learn from the experience that probably could not have been picked up from course work?
- Is the sort of work you did over the summer something you would like to continue doing once you graduate? Explain.
- Would you recommend your summer experience to other Brown students? Explain.

Archaeology and the Ancient World

The concentration in Archaeology and the Ancient World provides an opportunity to explore the multi-faceted discipline of archaeology while examining the critical early civilizations of the so-called 'Old World'—that is, the complex societies of the Mediterranean, Egypt, and Ancient Western Asia. Students will learn about the art, architecture, and material culture of the ancient world, exploring things of beauty and power, as well as the world of the everyday. Concentrators will also learn "how to do" archaeology - the techniques of locating, retrieving and analyzing ancient remains - and consider how material culture shapes our understanding of the past. Concentrators are encouraged to pursue research opportunities through summer fieldwork, museum experience, or independent study projects.

The concentration, with its three distinct but overlapping tracks, is intended to allow students flexibility in structuring their own path through this diverse field of study. The concentration is also designed to allow students to build progressively upon what they have learned, moving from introductory courses to upper level seminars.

The three tracks are: Archaeology and the Ancient World; Classical Archaeology; and Egyptian and Ancient Western Asian Archaeology. Archaeology and the Ancient World is the most exploratory of the concentration tracks, and this option emphasizes material culture studies across the full spectrum of the ancient world. Classical Archaeology is intended for those interested chiefly in the ‘classic’ civilizations of the Mediterranean (Greece and Rome), as well as for those interested in both earlier (prehistoric) and later (medieval) periods in that geographic region. Egyptian and Ancient Western Asian Archaeology is intended for those interested chiefly in the cultures of Egypt and Ancient Western Asia (the ancient ‘Near East’ – Anatolia, the Levant, Mesopotamia), from prehistoric through Islamic times.

Required Courses:
The student must take a total of 10 courses, including:

Core Requirements:
One introductory course in archaeological methodology, history and/or theoretical approaches, for example:

- ARCH 0100 Field Archaeology in the Ancient World
- ARCH 1900 The Archaeology of College Hill

One introductory course in the methodology, history and/or theoretical approaches of ancient art history, for example:

- ARCH 0030 Art in Antiquity: An Introduction
- ARCH 0420 Archaeologies of the Greek Past
- HIAA 0010 A Global History of Art and Architecture

Two cognate courses, not listed primarily by the Joukowsky Institute, which EITHER relate to the study of the ancient world OR to the discipline of archaeology. Outside courses are chosen with the approval of the concentration advisor from appropriate 1000-level (or above) offerings in other departments such as, but not limited to: Anthropology, Classics, Early Cultures, Egyptology and Ancient Western Asian Studies, Environmental Studies, Geological Sciences, History, History of Art and Architecture, Religious Studies. One term of language study, in any ancient language, may also be counted toward this requirement.

Track Requirements:

Archeology and the Ancient World:

Two courses in Egyptian or Ancient Western Asian archaeology and art. 1

Two courses in Mediterranean (prehistoric, Greek, Roman, medieval) archaeology and art. 1

Two additional courses, in EITHER Mediterranean (prehistoric, Greek, Roman, medieval) archaeology OR Egyptian or Ancient Western Asian archaeology and art, at or above the 1000-level.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Classical Archaeology:
One course in Egyptian or Ancient Western Asian archaeology and art.
Three courses in Mediterranean (prehistoric, Greek, Roman, medieval) archaeology and art, at least two of which must be at or above the 1000-level.
One course in ancient Greek or Roman history, for example:
CLAS 1210 The History of Greece from Archaic Times to the Death of Alexander
CLAS 1220 The Fall of Empires and Rise of Kings: Greek History 479 to 323 BC
CLAS 1310 Roman History I: The Rise and Fall of an Imperial Republic
CLAS 1320 Roman History II: The Roman Empire and Its Impact
One course in either Ancient Greek or Latin, at a level beyond the first year of study, for example:
GREK 0300/0400 Introduction to Greek Literature
LATN 0300/0400 Introduction to Latin Literature

Egyptian and Ancient Western Asian Archaeology:
One course in Mediterranean (Bronze Age, Greek, or Roman) archaeology and art.
Three courses in Egyptian and Near Eastern archaeology and art, at least two of which must be at or above the 1000-level.
Two terms of course work in a pertinent ancient language (e.g. Aramaic, Akkadian, Coptic, Classical Hebrew, Middle Egyptian).

Total Credits 10

1 At least two of the courses selected to satisfy these requirements must be at or above the 1000-level.

Capstone Experience and Study Abroad
For each of the tracks, a capstone experience may be substituted for one of these required courses. With the permission of the concentration advisor, up to three successfully completed courses, from relevant and accredited study abroad programs, may be counted towards the concentration requirements.

Honors Concentrations
An Honors concentration in any of these tracks requires the successful completion of all the standard requirements with the addition of an Honors thesis. For the preparation of this thesis, students will ordinarily enroll in ARCH 1970 during the first semester of the senior year and ARCH 1990 during the second semester of the senior year (these courses may not be taken S/NC, nor may they be used to satisfy the standard requirements of the concentration). In order to qualify for honors, students must have received more A's than B's in concentration courses completed.
Honors concentrations are recommended for students considering graduate work in the discipline of archaeology. Any student interested in a course of graduate study should speak to the undergraduate concentration advisor as soon as possible, not least for advice about additional forms of preparation. Graduate work in the archaeology of the ancient world, for example, requires knowledge of appropriate ancient, as well as modern, languages. Students should start work on acquiring these skills as early as possible.

The Honors Thesis
The Honors thesis is an extended essay, usually of between 40 and 60 pages in length, written under the supervision of a faculty advisor and second reader. (Where appropriate, the advisor or the reader, but not both of them, may be in a unit other than the Joukowsky Institute for Archaeology and the Ancient World.) 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. Details on deadlines for a thesis prospectus, for thesis drafts and for a final public presentation of the work are available on request to the Director of Undergraduate Studies. The completed thesis will be evaluated by the advisor and second reader, who will discuss its strengths and weaknesses with the student; they will also agree a grade for ARCH 1970 and ARCH 1990.

Evaluation
The Director of Undergraduate Studies will review the student's overall record, in addition to the thesis evaluations. If all requirements have been successfully met, the recommendation will be made that the student graduates with Honors.

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
PHYS 0160 Introduction to Relativity and Quantum Physics
PHYS 0270 Introduction to Astronomy

Select one of the following Series: 1-2
MATH 0170 Advanced Placement Calculus
& MATH 0180 and Intermediate Calculus
MATH 0190 Advanced Placement Calculus (Physics/ Engineering)
& MATH 0200 and Intermediate Calculus (Physics/Engineering)
MATH 0350 Honors Calculus (or equivalent)
PHYS 0470 Electricity and Magnetism

Program
Select one of the following mathematics courses:
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:
PHYS 1100 Introduction to General Relativity
PHYS 1250 Stellar Structure and the Interstellar Medium
PHYS 1270 Extragalactic Astronomy and High-Energy Astrophysics
PHYS 1280 Introduction to Cosmology

Three additional 1000- or 2000-level courses in physics or a related field, suggestions:
APMA 1670 Statistical Analysis of Time Series
ENGN 1860 Advanced Fluid Mechanics
GEOL 0810 Planetary Geology
GEOL 1710 Remote Sensing of Earth and Planetary Surfaces
GEOL 1810 Physics of Planetary Evolution
MATH 1060 Differential Geometry
PHYS 0500 Advanced Classical Mechanics
PHYS 0560 Experiments in Modern Physics
PHYS 1410 Quantum Mechanics A
PHYS 1510 Advanced Electromagnetic Theory
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, development 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. Students also have the opportunity to participate in directed research or independent study with a faculty member. Many students are also involved in research sponsored by Advanced Placement credit.

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.

Three courses in mathematics, statistics and/or computer science, typically including MATH 0090, MATH 0100, or equivalent) 1

Two courses in physics, typically: 1

PHYS 0030 Basic Physics
or PHYS 0050 Foundations of Mechanics
or ENGN 0030 Introduction to Engineering

PHYS 0040 Basic Physics
or PHYS 0060 Foundations of Electromagnetism and Modern Physics
or ENGN 040 Dynamics and Vibrations

Three courses in physical and organic chemistry: 3

CHEM 0330 Equilibrium, Rate, and Structure
or CHEM 0350/0360 Organic Chemistry

CHEM 0400 Biophysical and Bioinorganic Chemistry
or CHEM 0500 Inorganic Chemistry
or CHEM 1660 Instrumental Analysis with Environmental Applications

One course in biophysical or related chemistry: 1

CHEM 0430 Advanced Physical Chemistry
or CHEM 0530 Dynamic and Thermodynamic Chemistry
or CHEM 1670 Instrumental Analysis with Environmental Applications

-or-

GEOL 1660 Instrumental Analysis with Environmental Applications

Three courses in biochemistry: 3

BIOL 0280 Introductory Biochemistry
BIOL 1270 Advanced Biochemistry
or CHEM 1230 Chemical Biology
or CHEM 1240 Biochemistry

Select two semester courses of independent research approved by a concentration advisor: 2

BIOL 1950/1960 Directed Research/Independent Study

-or-

CHEM 0970/0980 Undergraduate Research

Suggested Elective Courses:

Students are required to take six (6) elective courses: four (4) taken from the chart below and two (2) from any science or mathematics course relevant to biochemistry, cell and molecular biology from the suggested courses below:

Biology Electives:

BIOL 0200 The Foundation of Living Systems
BIOL 0470 Genetics
BIOL 0500 Cell and Molecular Biology
BIOL 0530 Principles of Immunology
BIOL 0800 Principles of Physiology
BIOL 1050 Biology of the Eukaryotic Cell
BIOL 1090 Polymer Science for Biomaterials
BIOL 1100 Cell Physiology and Biophysics
BIOL 1110 Topics in Signal Transduction
BIOL 1200 Protein Biophysics and Structure
BIOL 1150 Stem Cell Engineering
BIOL 1260 Physiological Pharmacology
BIOL 1290 Cancer Biology
BIOL 1540 Molecular Genetics
BIOL 1560 Virology

Neuroscience Electives: 2

NEUR 1020 Principles of Neurobiology
NEUR 1670 Neuropharmacology and Synaptic Transmission

Chemistry Electives:

CHEM 0500 Inorganic Chemistry
CHEM 1140 Physical Chemistry: Quantum Chemistry
CHEM 1220 Computational Tools in Biochemistry and Chemical Biology
CHEM 1230 Chemical Biology
CHEM 1240 Biochemistry
CHEM 1450 Advanced Organic Chemistry

Quantitative Science or Mathematics Electives: 2

Select two electives from any quantitative science or mathematics course relevant to biochemistry (including courses on the preceding list) and approved by a concentration advisor.

Total Credits 20

1 Note that the mathematics and physics requirements may be satisfied by Advanced Placement credit.
2 or any NEUR course in Cell, Genetics, Molecular Biology, or Development.

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/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.

Biology

The Biology concentration invites students to study, in depth and in breadth, the science of life and living matter. Whether pursuing the A.B. or Sc.B. in biology, students can expect to learn broadly in the
discipline through a selection of courses in three areas: cell and molecular biology, structure and function, and organismal biology. In addition, students pursuing the 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/ Biototechnology; Cell and Molecular Biology; Physical Sciences; Marine Biology (through 2016). 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)

Or a statistics course, to be approved by the concentration advisor.

**Ten Core Courses:**

- BIOL 0200 The Foundation of Living Systems (Required course; AP credit or similar IB or A-levels accepted, placement test available.)
- BIOL 0280 Introductory Biochemistry
- BIOL 0470 Genetics
- BIOL 0500 Cell and Molecular Biology
- BIOL 0510 Introductory Microbiology
- BIOL 0530 Principles of Immunology
- BIOL 1050 Biology of the Eukaryotic Cell
- BIOL 1310 Developmental Biology
- NEUR 1020 Principles of Neurobiology

The Area requirement must be fulfilled by taking at least one course in each of these groups:

1. **Area 1 (Cell/Molecular Biology)**
   - BIOL 0280 Introductory Biochemistry
   - BIOL 0470 Genetics
   - BIOL 0500 Cell and Molecular Biology
   - BIOL 0510 Introductory Microbiology
   - BIOL 0530 Principles of Immunology
   - BIOL 1050 Biology of the Eukaryotic Cell
   - BIOL 1310 Developmental Biology
   - NEUR 1020 Principles of Neurobiology

2. **Area 2 (Structure/Function)**
   - BIOL 0400 Biological Design: Structural Architecture of Organisms
   - BIOL 0410 Invertebrate Zoology
   - BIOL 0440 Plant Organism
   - BIOL 0800 Principles of Physiology
   - BIOL 1120 Biomaterials
   - BIOL 1310 Developmental Biology
   - BIOL 1330 Biology of Reproduction
   - BIOL 1880 Comparative Biology of the Vertebrates
   - NEUR 0010 The Brain: An Introduction to Neuroscience

3. **Area 3 (Organismal Biology)**
   - BIOL 0140K Conservation Medicine
   - 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 0415 Microbes in the Environment
   - BIOL 0420 Principles of Ecology
   - BIOL 0430 The Evolution of Plant Diversity
   - BIOL 0480 Evolutionary Biology
   - BIOL 1880 Comparative Biology of the Vertebrates
   - ENVS 0490 Environmental Science in a Changing World

Six additional courses chosen from BIOL and/or NEUR offerings for concentrators. At least two at the advanced (1000-2000) level. The Core may include up to two related sciences, with advisor approval.

Total Credits: 10

1. AP scores of 4 or above may substitute Math courses.
2. At least two biology and/or neuroscience courses must be at the advanced level (between 1000-2999). EXCLUSIONS: BIOL 0920 series courses, BIOL 1070, & BIOL 1920 series courses. *Courses numbered below BIOL 0100 do not carry concentration credit. At least three of the Biology and/or Neuroscience courses must include laboratory or fieldwork. BIOL 1950/BIOI 1960, (Directed Research) may be included, but is not required. If a lab project, this can count for ONE of the three lab course requirements, and one advanced course.
3. No substitutions per above Area list. If a course is listed in more than one area, it may be used to fulfill one of those, the other must be fulfilled by a different course.
4. Biology courses for concentration credit include those numbered greater than 0100 with some exceptions noted within the course descriptions. Courses numbered over 3000 do not count towards Undergraduate requirements either quantity or for concentration.

**Honors:** Honors in biology requires a thesis and presentation based on a research project (conducted via BIOL 1950/BIOI 1960), and quality grades in the concentration. Guidelines and information on faculty research opportunities 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/BIOI 1960), which should reflect the advanced cluster.

As of the 2014-15 academic year, 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:**

- MATH 0090 Introductory Calculus, Part I (or placement. MATH 0050/MATH 0060 may be substituted for MATH 0090)
- MATH 0100 Introductory Calculus, Part II or MATH 0170 Advanced Placement Calculus
- CHEM 0330 Equilibrium, Rate, and Structure (or IB credit)
- CHEM 0350 Organic Chemistry
- CHEM 0360 Organic Chemistry or BIOL 0280 Introductory Biochemistry

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

Core Courses: 2, 3
BIOL 0200 The Foundation of Living Systems (or placement) 1

The Area requirement must be fulfilled by taking at least one course in each of these groups:

Area 1 (Cell/Molecular Biology)
BIOL 0280 Introductory Biochemistry
BIOL 0470 Genetics
BIOL 0500 Cell and Molecular Biology
BIOL 0510 Introductory Microbiology
BIOL 0530 Principles of Immunology
BIOL 1050 Biology of the Eukaryotic Cell
BIOL 1310 Developmental Biology
NEUR 1020 Principles of Neurobiology

Area 2 (Structure/Function)
BIOL 0400 Biological Design: Structural Architecture of Organisms
BIOL 0410 Invertebrate Zoology
BIOL 0440 Plant Organization
BIOL 0800 Principles of Physiology
BIOL 1120 Biomaterials
BIOL 1310 Developmental Biology
BIOL 1330 Biology of Reproduction
BIOL 1880 Comparative Biology of the Vertebrates
NEUR 0010 The Brain: An Introduction to Neuroscience

Area 3 (Organismal Biology)
BIOL 0140K Conservation Medicine
BIOL 0210 Diversity of Life
BIOL 0350 The Fossil Record: Life through Time on Earth
BIOL 0370 - Experimental Evolution
BIOL 0410 Invertebrate Zoology
BIOL 0415 Microbes in the Environment
BIOL 0420 Principles of Ecology
BIOL 0430 The Evolution of Plant Diversity
BIOL 0480 Evolutionary Biology
BIOL 1880 Comparative Biology of the Vertebrates
ENVS 0490 Environmental Science in a Changing World

Five additional courses chosen from BIOL and/or NEUR offerings for concentrators. Alternatively, students may include up to two related (non-BIOL/NEUR) sciences suitable for science concentrators. 4

RESEARCH: 5
Typically, two courses in Track is advanced level research (BIOL 1950, 1960).

TRACK: 3
The Track consists of three additional biological sciences courses (not including BIOL 1950/1960 research) that form a Track. Tracks include: Immuno/Pathobiology; Ecology and Evolutionary Biology; Physiology and Biotechnology; Neurobiology; Physical Sciences; Marine Biology; Cell and Molecular Biology.

Total Credits 13-14

1 AP scores of 4 or 5 may substitute Math courses.
2 At least two biology and/or neuroscience courses numbered at the 1000 or 2000 level. EXCLUSIONS: BIOL 0920 series courses, BIOL 1070, or BIOL 1920 series courses. Courses numbered below BIOL 0100 do not carry concentration credit. At least three of the biology and/or neuroscience courses must include laboratory or fieldwork. No substitutions per above Area lists. If a course is listed in more than one area, it may be used to fulfill one of those; the other must be fulfilled by a different course
3 Biology courses for concentration credit include those numbered greater than 0100 with some exceptions noted within the course descriptions. Courses numbered over 3000 do not count towards Undergraduate requirements either quantity or for concentration.
4 See listing at http://biology.brown.edu/bug/ for options. Related sciences must be above prerequisite level, and suitable for science concentrators.
5 For double concentrations, no more than two courses may overlap (i.e., be used to meet requirements of both) programs, prerequisites excepted.
6 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.

Honors: Honors in biology requires a thesis and presentation based on a research project (usually 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 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, prerequisites excepted.
2. No more than two semesters of directed research may be used as concentration credits. Each does count as an individual core towards the program, but only carry one lab credit towards the three required.
3. 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 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>ENGN 0040</td>
<td>Dynamics and Vibrations</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 0510</td>
<td>Electricity and Magnetism</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 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 ¹</td>
<td>1</td>
</tr>
<tr>
<td>or NEUR 0010</td>
<td>The Brain: An Introduction to Neuroscience</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 0800</td>
<td>Principles of Physiology</td>
<td>1</td>
</tr>
<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>MATH 0190</td>
<td>Advanced Placement Calculus (Physics/Engineering)²</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 0170</td>
<td>Advanced Placement Calculus</td>
<td>1</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>1</td>
</tr>
<tr>
<td>or MATH 0350</td>
<td>Honors Calculus</td>
<td>1</td>
</tr>
<tr>
<td>APMA 0330</td>
<td>Methods of Applied Mathematics I, II</td>
<td>1</td>
</tr>
<tr>
<td>or APMA 0350</td>
<td>Applied Ordinary Differential Equations</td>
<td>1</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>1</td>
</tr>
</tbody>
</table>

2. Upper Level Biomedical Engineering Curriculum

<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>1</td>
</tr>
<tr>
<td>ENGN 1210</td>
<td>Biomechanics</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 1230</td>
<td>Instrumentation Design</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 1490</td>
<td>Biomaterials</td>
<td>1</td>
</tr>
</tbody>
</table>

Three Additional Upper Level Biomedical Engineering Courses ³

Select at least one of the following:³

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1140</td>
<td>Tissue Engineering</td>
<td>1</td>
</tr>
<tr>
<td>or ENGN 1220</td>
<td>Neuroengineering</td>
<td></td>
</tr>
<tr>
<td>or ENGN 1400</td>
<td>Analytical Methods in Biomaterials</td>
<td></td>
</tr>
<tr>
<td>or ENGN 1930B</td>
<td>Photonics and Biophotonics</td>
<td></td>
</tr>
<tr>
<td>or ENGN 1930R</td>
<td>Molecular and Cell Biology for Engineers</td>
<td></td>
</tr>
<tr>
<td>or ENGN 2910S</td>
<td>Cancer Nanotechnology</td>
<td></td>
</tr>
</tbody>
</table>

Select at most two of the following:⁴

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1150</td>
<td>Stem Cell Engineering</td>
<td></td>
</tr>
<tr>
<td>or BIOL 1210</td>
<td>Synthetic Biological Systems</td>
<td></td>
</tr>
<tr>
<td>or BIOL 1800</td>
<td>Animal Locomotion</td>
<td></td>
</tr>
<tr>
<td>or BIOL 2110</td>
<td>Drug and Gene Delivery</td>
<td></td>
</tr>
<tr>
<td>or BIOL 2130</td>
<td>Techniques in Molecular and Cell Science</td>
<td></td>
</tr>
</tbody>
</table>

3. Capstone Design ⁵

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 1930L</td>
<td>Biomedical Engineering Design, Research and</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Modeling</td>
<td></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 Students with advanced biology backgrounds may replace with BIOL 0470, BIOL 0530, or other biology courses.
² Students with advanced math backgrounds may replace with CHEM 0360.
³ Or other advanced bioengineering courses (e.g. ENGN 1510 and ENGN 1520), subject to concentration advisor approval.
⁴ Or other advanced bioengineering courses, subject to concentration advisor approval.
⁵ Biomedical engineering students are also encouraged to pursue independent research with faculty members in the School of Engineering or the Division of Biology & Medicine.

**Biophysics**

Biophysics is that it is a quantitative science that requires a significant level of competence in physics, chemistry, mathematics, and biology. These areas therefore form the required background coursework for this program, and serve as a springboard to an advanced focus, developed in consultation with a concentration advisor. Advanced foci may include structure-function relations of macromolecules, biomechanics of cell cytoskeleton, biotechnology for drug and gene delivery, molecular mechanisms of membrane transport, sensory signal transduction, for examples. The program also requires a capstone research project that reflects this focus and may be drawn from collaborative research opportunities offered by faculty in biology, chemistry, or physics departments.

Additional detailed information about the field of Biophysics may be found at: [http://www.biophysics.org/AboutUs/Biophysics/tabid/517/Default.aspx](http://www.biophysics.org/AboutUs/Biophysics/tabid/517/Default.aspx).

**Standard program for the Sc.B. degree**

**Requirements**

Select one of the following Series:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0050</td>
<td>Foundations of Mechanics</td>
<td></td>
</tr>
<tr>
<td>or PHYS 0060</td>
<td>Foundations of Electromagnetism and Modern</td>
<td></td>
</tr>
<tr>
<td>Physics</td>
<td>Physics</td>
<td></td>
</tr>
<tr>
<td>PHYS 0070</td>
<td>Analytical Mechanics</td>
<td></td>
</tr>
<tr>
<td>or PHYS 0160</td>
<td>Introduction to Relativity and Quantum Physics</td>
<td></td>
</tr>
<tr>
<td>PHYS 0470</td>
<td>Electricity and Magnetism</td>
<td>1</td>
</tr>
<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>
</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>CHEM 0400</td>
<td>Biophysical and Bioinorganic Chemistry</td>
<td></td>
</tr>
<tr>
<td>CHEM 1140</td>
<td>Physical Chemistry: Quantum Chemistry</td>
<td></td>
</tr>
<tr>
<td>PHYS 1530</td>
<td>Thermodynamics and Statistical Mechanics</td>
<td></td>
</tr>
<tr>
<td>PHYS 1610</td>
<td>Biological Physics</td>
<td></td>
</tr>
<tr>
<td>MATH 0100</td>
<td>Introductory Calculus, Part II (or equivalent)</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0180</td>
<td>Intermediate Calculus (or equivalent)</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 0200</td>
<td>The Foundation of Living Systems</td>
<td>1</td>
</tr>
</tbody>
</table>

Select two additional biology courses chosen with approval of the advisor. Examples include courses in:

**Cell Biology**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 0500</td>
<td>Cell and Molecular Biology</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>
</tbody>
</table>

**Physiology**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 0800</td>
<td>Principles of Physiology</td>
<td></td>
</tr>
<tr>
<td>BIOL 1100</td>
<td>Cell Physiology and Biophysics</td>
<td></td>
</tr>
<tr>
<td>BIOL 1190</td>
<td>Synaptic Transmission and Plasticity</td>
<td></td>
</tr>
<tr>
<td>NEUR 1020</td>
<td>Principles of Neurobiology</td>
<td></td>
</tr>
</tbody>
</table>

**Pharmacology**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1260</td>
<td>Physiological Pharmacology</td>
<td></td>
</tr>
</tbody>
</table>

**Biotechnology**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1090</td>
<td>Polymer Science for Biomaterials</td>
<td></td>
</tr>
<tr>
<td>BIOL 1120</td>
<td>Biomaterials</td>
<td></td>
</tr>
<tr>
<td>BIOL 1140</td>
<td>Tissue Engineering</td>
<td></td>
</tr>
</tbody>
</table>

Select six additional intermediate or advanced level courses, chosen from biology (e.g., biochemistry, genetics, physiology, physics, chemistry, and/or computer sciences and mathematics). Examples include:

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

**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>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>Advanced Microeconomics</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>
</tbody>
</table>

One Data Methods-intensive course from the following list:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1710</td>
<td>Financial Econometrics</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1720</td>
<td>Corporate Finance</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1750</td>
<td>Data, Statistics, Finance</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1759</td>
<td>Finance, Regulation, and the Economy: Research</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1765</td>
<td>Finance, Regulation, and the Economy: Research</td>
<td>1</td>
</tr>
</tbody>
</table>

Capstone: one-semester required (must be taken fall of senior year)

<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: 19

---

### Organizational Studies Track

**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>
</tbody>
</table>

Total Credits: 15

---

1 Or an optional two-semester capstone from the BEO 1930 and 1940 series
or APMA 0650
or ECON 1620

**Track Requirements**

One Introduction to Research Methods course (selected from the following):

- SOC 1050 Methods of Research in Organizations
- SOC 1020 Methods of Social Research

One Advanced Research Methods course (selected from the following):

- SOC 1120 Market and Social Surveys
- SOC 1117 Focus Groups for Market and Social Research
- SOC 1118 Context Research for Innovation
- SOC 1260 Market Research in Public and Private Sectors
- SOC 1340 Principles and Methods of Geographic Information Systems

**Math and Statistics Requirements**

- MATH 0200 Calculus II
- SOC 1100 Linear Algebra
- ECON 1630 Microeconomics I
- EDUC 1100 Research Methods for Social Scientists
- PHP 1320 Survey Research in the Health Care Context

**PLCY 1200**

Policy Analysis and Program Evaluation

One Advanced Organization Studies course (selected from the following):

- SOC 1060 Leadership in Organizations
- SOC 1080 Groups in Organizations
- SOC 1540 Human Needs and Social Services
- SOC 1870A Social Organizations
- SOC 1871M Social Theory
- SOC 1870A Social Organization
- SOC 2060 Complex Organizations and Health Policy
- SOC 2960M Sociology of Organizations Graduate Seminar
- CLPS 1730 Psychology in Business and Economics
- PLCY 1700V Nonprofit Organizations
- PLCY 1700B Social Welfare Policy in the United States
- PLCY 1700K Health Policy Challenges
- PLCY 1700R Urban Revitalization: Lessons from the Providence Plan
- PLCY 1701D Aging and Public Policy: The Impact of an Aging Society on Public and Private Sector Organizations

**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
- ECON 1110 Intermediate Microeconomics
- SOC 1311 Micro-Organizational Theory: Social Behavior in Organizations
- SOC 1315 Macro-Organizational Theory: Organizations in Social Context
- ENGN 0030 Introduction to Engineering
- ENGN 1010 The Entrepreneurial Process: Innovation in Practice

**Math and Statistics Requirements**

- MATH 0200 Intermediate Calculus (Physics/Engineering)
- APMA 0330 Methods of Applied Mathematics I, II
- SOC 1100 Introductory Statistics for Social Scientists
- APMA 0650 Advanced Statistical Methods
- ECON 1620 Econometrics

**Track Requirements**

One gateway course in Engineering or another physical science 

Five courses that develop expertise in a technical subfield 

Capstone: two-semesters required (must be taken fall of senior year)

**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. 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 and Quantum Physics\(^1\)
- PHYS 0470 Electricity and Magnetism\(^1\)
- Select one of the following laboratory courses:\(^1\)
  - CHEM 1160 Physical Chemistry Laboratory
  - PHYS 0560 Experiments in Modern Physics
  - PHYS 1560 Modern Physics Laboratory
- Select one course in statistical mechanics:\(^1\)
  - CHEM 1150 Physical Chemistry: Thermodynamics and Statistical Mechanics
  - PHYS 1530 Thermodynamics and Statistical Mechanics
- MATH 0190 Advanced Placement Calculus (Physics/Engineering)\(^1\)
- MATH 0200 Intermediate Calculus (Physics/Engineering)\(^1\)
- MATH 0520 Linear Algebra\(^1\)
- Select two semesters of independent study:\(^2\)
  - CHEM 0970/0980 Undergraduate Research
  - PHYS 1990 Senior Conference Course

Total Credits: 21

\(^1\) Other approved courses in applied mathematics, biology, computer science, geological sciences, or engineering may be substituted for some of the twenty-one. Students are advised to take at least six courses in the humanities and social sciences.

### Chemistry

The Chemistry concentration offers courses and research opportunities that range from fundamental studies involving the characterization and preparation of synthetic and naturally occurring molecules, to interdisciplinary studies at the interfaces of chemistry with biology, medicine, physics, engineering, and nanoscience. As early as their first year, undergraduates are able to work one-on-one or in small groups with faculty members on cutting edge research projects. The Sc.B. degree provides a thorough foundation for further graduate study or for entry-level technical positions in each area. Students seeking the Sc.B. may either pursue the standard Chemistry concentration or one of the two optional tracks: Chemical Biology or Materials Chemistry. Students may also pursue the A.B. degree in Chemistry, which provides a core education in the discipline.

### Standard program for the A.B. degree

<table>
<thead>
<tr>
<th>Course 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(^1)</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 1150</td>
<td>Physical Chemistry: Thermodynamics and Statistical Mechanics(^1)</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 1160</td>
<td>Physical Chemistry Laboratory(^1)</td>
<td>1</td>
</tr>
</tbody>
</table>

Two advanced science/math electives.\(^2\)

Total Credits: 9

\(^1\) Note that the physical chemistry courses (CHEM 1140, CHEM 1150, CHEM 1160) have mathematics and physics prerequisites.

\(^2\) At least one must be a chemistry course. BIOL 0280 is credited as an elective for the chemistry concentration.

### Standard program for the Sc.B. degree

The Chemistry Department offers three tracks for the Sc.B. Chemistry Concentration – a Chemistry track, a Chemical Biology track and a Materials Chemistry track. These tracks are not separate concentrations – your degree will still be an Sc.B. in Chemistry. The Chemical Biology track is designed for students who have a strong interest in the interface of chemistry with biology. The Materials Chemistry track is designed for students who have a strong interest in the interface of chemistry with nanoscience and materials science.

### Concentrating in Chemistry – Three tracks

The required/recommended courses for the three tracks are given below.

#### 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 1140</td>
<td>Physical Chemistry: Quantum Chemistry(^1)</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 1150</td>
<td>Physical Chemistry: Thermodynamics and Statistical Mechanics(^1)</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 1160</td>
<td>Physical Chemistry Laboratory(^1)</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0180 or equivalent(^3)</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Two Physics courses</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Seven electives (at least three must be in Chemistry)(^1)</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits: 19

#### Chemical Biology 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 0400</td>
<td>Biophysical and Bioinorganic 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 1140</td>
<td>Physical Chemistry: Quantum Chemistry(^1)</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 1230</td>
<td>Chemical Biology</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 1240</td>
<td>Biochemistry</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 0280</td>
<td>Introductory Biochemistry</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0180 or equivalent(^3)</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Two Physics courses</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Select three of the following:(^4)</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits: 19

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

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

Four Latin courses on the 1000-level or above, at least one of which is to be:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>LATN 1810</td>
<td>Survey of Republican Literature</td>
</tr>
<tr>
<td>or LATN 1820</td>
<td>Survey of Roman Literature II: Empire</td>
</tr>
</tbody>
</table>

Four Greek courses on the 1000-level or above, at least one of which is to be:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GREK 1810</td>
<td>Early Greek Literature</td>
</tr>
<tr>
<td>or GREK 1820</td>
<td>Fifth Century Survey</td>
</tr>
<tr>
<td>CLAS 1210</td>
<td>The History of Greece from Archaic Times to the Death of Alexander</td>
</tr>
<tr>
<td>CLAS 1220</td>
<td>The Fall of Empires and Rise of Kings: Greek History 479 to 323 BC</td>
</tr>
<tr>
<td>CLAS 1310</td>
<td>Roman History I: The Rise and Fall of an Imperial Republic</td>
</tr>
<tr>
<td>CLAS 1320</td>
<td>Roman History II: The Roman Empire and Its Impact</td>
</tr>
</tbody>
</table>

**South Asian Classics**

At least one Sanskrit course above Sanskrit 0300 and three of the Sanskrit Classics Courses in Translation and 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.

Total Credits: 12

**Sanskrit**

Two Sanskrit courses at the 1000-level or above and two of the Sanskrit Classics Courses in Translation and 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.

Total Credits: 8

**Greek and Sanskrit**

Four Sanskrit courses at any level and four Greek courses on the 1000-level or above, at least one of which is to be:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GREK 1810</td>
<td>Early Greek Literature</td>
</tr>
<tr>
<td>or GREK 1820</td>
<td>Fifth Century Survey</td>
</tr>
<tr>
<td>CLAS 1210</td>
<td>The History of Greece from Archaic Times to the Death of Alexander</td>
</tr>
<tr>
<td>CLAS 1220</td>
<td>The Fall of Empires and Rise of Kings: Greek History 479 to 323 BC</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

**Latin and Sanskrit**

Four Sanskrit courses at any level and four Latin courses on the 1000-level or above, at least one of which is to be:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>LATN 1810</td>
<td>Survey of Republican Literature</td>
</tr>
<tr>
<td>or LATN 1820</td>
<td>Survey of Roman Literature II: Empire</td>
</tr>
<tr>
<td>CLAS 1310</td>
<td>Roman History I: The Rise and Fall of an Imperial Republic</td>
</tr>
<tr>
<td>CLAS 1320</td>
<td>Roman History II: The Roman Empire and Its Impact</td>
</tr>
</tbody>
</table>

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Students must choose two laboratory courses. Please note that due to enrollment limits in some lab courses, priority may be given to concentrators in that department. Students should therefore be prepared to choose from the other laboratory options.

**Related Electives:**
- CLPS 0210 Human Thinking and Problem-Solving
- CLPS 0220 Making Decisions
- CLPS 0500 Perception and Mind
- CLPS 0600 Child Development
- CLPS 0610 Children's Thinking: The Nature of Cognitive Development
- CLPS 0800 Language and the Mind
- CLPS 1100 Animal Cognition
- CLPS 1130 Psychology of Timing
- CLPS 1140 Psychophysiology of Sleep and Dreams
- CLPS 1200 Thinking
- CLPS 1210 Human Memory and Learning
- CLPS 1220 Concepts and Categories
- CLPS 1230 Seminar in Decision Making
- CLPS 1240 Reasoning and Problem Solving
- CLPS 1241 Causal Reasoning
- CLPS 1320 The Production, Perception, and Analysis of Speech
- CLPS 1385 Topics in Language Acquisition: Language Acquisition and Cognitive Development
- CLPS 1389 Discourse Processing
- CLPS 1500 Perception and Action
- CLPS 1510 Psychology of Hearing
- CLPS 1520 Computational Vision
- CLPS 1530 3D Shape Perception
- CLPS 1590 Visualizing Vision
- CLPS 1610 Cognitive Development
- CLPS 1611 Cognitive Development in Infancy
- CLPS 1650 Child Language Acquisition
- CLPS 1730 Psychology in Business and Economics
- CLPS 1800 Language Processing
- CLPS 1810 Syntactic Theory and Syntactic Processing
- CLPS 1930N Region of Interest: An In-Depth Analysis of One Brain Area
- CLPS 1930F Brain Interfaces for Humans
- CLPS 1930G Disease, Mechanism, Therapy: Harnessing Basic Biology for Therapeutic Development

**Core Cognitive Neuroscience Electives:**
- CLPS 0410 Principles of Behavioral Neuroscience
- CLPS 0640 Developmental Psychopathology
- CLPS 1150 Memory and the Brain
- CLPS 1180B Biology of Communication
- CLPS 1400 The Neural Bases of Cognition
- CLPS 1470 Mechanisms of Motivated Decision Making
- CLPS 1480A Cognitive Neuroscience of Emotion
- CLPS 1480B Cognitive Aging and Dementia
- CLPS 1480C Cognitive Control Functions of the Prefrontal Cortex
- CLPS 1480D Cognitive Neuropsychiatry
- CLPS 1560 Visually-Guided Action and Cognitive Processes
- CLPS 1570 Perceptual Learning
- CLPS 1571 Visual Consciousness
- CLPS 1620 Developmental Cognitive Neuroscience
- CLPS 1621 The Developing Brain
- CLPS 1680B Topics in Development - Developmental Disorders
- CLPS 1820 Language and the Brain
- CLPS 1821 Neuroimaging and Language
- NEUR 0650 Biology of Hearing
- NEUR 1540 Neurobiology of Learning and Memory
- NEUR 1740 The Diseased Brain: Mechanisms of Neurological and Psychiatric Disorders
- NEUR 1930A Cognitive Neuroscience: Motor Learning
- NEUR 1940I Neural Correlates of Consciousness
- NEUR 1930B From Neurophysiology to Perception
- NEUR 1940D Higher Cortical Function

Electives:

Students must take four additional courses around a particular theme. Electives can be characterized as either core cognitive neuroscience courses which focus directly on the intersection of mind and brain, or related courses which focus primarily on either the mind or brain. Electives may be chosen from either group.

Normally only one elective course that is below the 1000-level may count towards the elective courses required. An appropriate (but additional) laboratory course may be used in lieu of one of the four elective courses. Appropriate Topics course offerings (not listed below) may also count as electives with the approval of the Concentration Advisor.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
One senior seminar course CLPS 1900 or an independent research course.

**Total Credits**

16

**Honors**

Students who would like to pursue a degree with honors are normally expected to have half of their grades as A (or equivalent) within the concentration and are required to satisfactorily complete a written thesis and an oral presentation.

**Cognitive Science**

The field of Cognitive Science uses scientific methods of experimentation, computational modeling, and brain imaging to study mental abilities such as perception, action, memory, cognition, speech, and language, as well as the development and evolution of those processes. Students must become knowledgeable in four areas of emphasis: perception, cognition, language, and cognitive neuroscience, as well as a set of methods relevant to Cognitive Science research. Students then create their own focus area of study, potentially integrating coursework from the Cognitive, Linguistic, and Psychological Sciences department with a diverse subset of fields including Computer Science, Neuroscience, Philosophy, Anthropology, Applied Math and Education. The A.B. program is primarily for students interested in studying human mental processes and acquiring a research orientation to the study of the mind. The Sc.B. program is designed for students who wish to develop a stronger background in Cognitive Science and requires students to engage in a specific research project in the focus area of their choosing. We recommend that prospective concentrators register for one of the gateway courses and at least one other core course in their first or second year.

### I. Standard program for the A.B. degree: 13 courses

#### Gateway

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLPS 0020</td>
<td>Approaches to the Mind: Introduction to Cognitive Science</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Required core courses

**CORE IN COGNITION**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLPS 0200</td>
<td>Human Cognition</td>
<td>1</td>
</tr>
</tbody>
</table>

**CORE IN LINGUISTICS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLPS 0030</td>
<td>Introduction to Linguistic Theory</td>
<td>1</td>
</tr>
</tbody>
</table>

**CORE IN PERCEPTION**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLPS 0500</td>
<td>Perception and Mind</td>
<td>1</td>
</tr>
</tbody>
</table>

Select one of the following:

**CORE IN COGNITIVE NEUROSCIENCE**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEUR 0010</td>
<td>The Brain: An Introduction to Neuroscience</td>
<td>1</td>
</tr>
<tr>
<td>CLPS 0040</td>
<td>Mind and Brain: Introduction to Cognitive Neuroscience</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Required courses in skills and methodology

One Experimental Laboratory such as:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLPS 1090</td>
<td>Research Methods in Psychology</td>
<td>1</td>
</tr>
<tr>
<td>CLPS 1190</td>
<td>Techniques in Physiological Psychology</td>
<td>1</td>
</tr>
<tr>
<td>CLPS 1290</td>
<td>Laboratory in Cognitive Processes</td>
<td>1</td>
</tr>
<tr>
<td>CLPS 1490</td>
<td>Functional Magnetic Resonance Imaging: Theory and Practice</td>
<td>1</td>
</tr>
<tr>
<td>CLPS 1590</td>
<td>Visualizing Vision</td>
<td>1</td>
</tr>
<tr>
<td>CLPS 1690</td>
<td>Laboratory in Developmental Psychology</td>
<td>1</td>
</tr>
<tr>
<td>CLPS 1890</td>
<td>Laboratory in Psycholinguistics</td>
<td>1</td>
</tr>
</tbody>
</table>

One Basic Computation Course such as:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLPS 1291</td>
<td>Computational Methods for Mind, Brain and Behavior</td>
<td>1</td>
</tr>
<tr>
<td>CLPS 1491</td>
<td>Neural Modeling Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>CLPS 1492</td>
<td>Computational Cognitive Neuroscience</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 0040</td>
<td>Introduction to Scientific Computing and Problem Solving</td>
<td></td>
</tr>
<tr>
<td>CSCI 0150</td>
<td>Introduction to Object-Oriented Programming and Computer Science</td>
<td></td>
</tr>
<tr>
<td>CSCI 0170</td>
<td>Computer Science: An Integrated Introduction</td>
<td></td>
</tr>
<tr>
<td>CSCI 0180</td>
<td>Computer Science: An Integrated Introduction</td>
<td></td>
</tr>
</tbody>
</table>

One course in Statistical Analysis such as: 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLPS 0900</td>
<td>Quantitative Methods in Psychology</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Required Capstone

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLPS 1900</td>
<td>Senior Seminar in Cognitive Science</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Electives 2

Choose four from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 1800</td>
<td>Sociolinguistics, Discourse and Dialogue</td>
<td></td>
</tr>
<tr>
<td>APMA 1360</td>
<td>Topics in Chaotic Dynamics</td>
<td></td>
</tr>
<tr>
<td>APMA 1650</td>
<td>Statistical Inference I</td>
<td></td>
</tr>
<tr>
<td>APMA 1760</td>
<td>Statistical Inference II</td>
<td></td>
</tr>
<tr>
<td>APMA 1670</td>
<td>Statistical Analysis of Time Series</td>
<td></td>
</tr>
<tr>
<td>APMA 1680</td>
<td>Nonparametric Statistics</td>
<td></td>
</tr>
<tr>
<td>APMA 1690</td>
<td>Computational Probability and Statistics</td>
<td></td>
</tr>
<tr>
<td>BIOL 0480</td>
<td>Evolutionary Biology</td>
<td></td>
</tr>
<tr>
<td>NEUR 0650</td>
<td>Biology of Hearing</td>
<td></td>
</tr>
<tr>
<td>NEUR 1030</td>
<td>Neural Systems</td>
<td></td>
</tr>
<tr>
<td>NEUR 1040</td>
<td>Introduction to Neurogenetics</td>
<td></td>
</tr>
<tr>
<td>NEUR 1660</td>
<td>Neural Basis of Cognition</td>
<td></td>
</tr>
<tr>
<td>NEUR 1680</td>
<td>Computational Neuroscience</td>
<td></td>
</tr>
<tr>
<td>CLPS 1100</td>
<td>Animal Cognition</td>
<td></td>
</tr>
<tr>
<td>CLPS 1130</td>
<td>Psychology of Timing</td>
<td></td>
</tr>
<tr>
<td>CLPS 1200</td>
<td>Thinking</td>
<td></td>
</tr>
<tr>
<td>CLPS 1210</td>
<td>Human Memory and Learning</td>
<td></td>
</tr>
<tr>
<td>CLPS 1211</td>
<td>Human and Machine Learning</td>
<td></td>
</tr>
<tr>
<td>CLPS 1220</td>
<td>Concepts and Categories</td>
<td></td>
</tr>
<tr>
<td>CLPS 1240</td>
<td>Reasoning and Problem Solving</td>
<td></td>
</tr>
<tr>
<td>CLPS 1241</td>
<td>Causal Reasoning</td>
<td></td>
</tr>
<tr>
<td>CLPS 1400</td>
<td>The Neural Bases of Cognition</td>
<td></td>
</tr>
<tr>
<td>CLPS 1470</td>
<td>Mechanisms of Motivated Decision Making</td>
<td></td>
</tr>
<tr>
<td>CLPS 1500</td>
<td>Perception and Action</td>
<td></td>
</tr>
<tr>
<td>CLPS 1510</td>
<td>Psychology of Hearing</td>
<td></td>
</tr>
<tr>
<td>CLPS 1520</td>
<td>Computational Vision</td>
<td></td>
</tr>
<tr>
<td>CLPS 1530</td>
<td>3D Shape Perception</td>
<td></td>
</tr>
<tr>
<td>CLPS 1600</td>
<td>History and Theories of Child Development (EDUC 1710)</td>
<td></td>
</tr>
<tr>
<td>CLPS 1610</td>
<td>Cognitive Development</td>
<td></td>
</tr>
<tr>
<td>CLPS 1730</td>
<td>Psychology in Business and Economics</td>
<td></td>
</tr>
<tr>
<td>CLPS 1800</td>
<td>Language Processing</td>
<td></td>
</tr>
<tr>
<td>CLPS 1810</td>
<td>Syntactic Theory and Syntactic Processing</td>
<td></td>
</tr>
<tr>
<td>CLPS 1820</td>
<td>Language and the Brain</td>
<td></td>
</tr>
<tr>
<td>CLPS 1821</td>
<td>Neuroimaging and Language</td>
<td></td>
</tr>
<tr>
<td>CSCI 0220</td>
<td>Introduction to Discrete Structures and Probability</td>
<td></td>
</tr>
<tr>
<td>CSCI 0510</td>
<td>Models of Computation</td>
<td></td>
</tr>
<tr>
<td>CSCI 1230</td>
<td>Introduction to Computer Graphics</td>
<td></td>
</tr>
<tr>
<td>CSCI 1410</td>
<td>Applied Artificial Intelligence</td>
<td></td>
</tr>
<tr>
<td>CSCI 1480</td>
<td>Building Intelligent Robots</td>
<td></td>
</tr>
<tr>
<td>EDUC 1260</td>
<td>Emotion, Cognition, Education</td>
<td></td>
</tr>
<tr>
<td>EDUC 1270</td>
<td>Adolescent Psychology</td>
<td></td>
</tr>
<tr>
<td>ENG 1220</td>
<td>Neuroengineering</td>
<td></td>
</tr>
<tr>
<td>ENG 1570</td>
<td>Linear System Analysis</td>
<td></td>
</tr>
<tr>
<td>ENG 1580</td>
<td>Communication Systems</td>
<td></td>
</tr>
</tbody>
</table>

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
II. Standard program for the Sc.B. degree: 18 Courses

Gateway:
CLPS 0020 Approaches to the Mind: Introduction to Cognitive Science (or alternative, with permission of the Concentration Advisor)

Require Core Courses:
CORE IN COGNITION
CLPS 0200 Human Cognition

CORE IN LINGUISTICS
CLPS 0030 Introduction to Linguistic Theory

CORE IN PERCEPTION
CLPS 0500 Perception and Mind

Select one of the following:

CORE IN COGNITIVE NEUROSCIENCE
NEUR 0010 The Brain: An Introduction to Neuroscience
CLPS 0040 Mind and Brain: Introduction to Cognitive Neuroscience

Required courses in skills and methodology:
One Experimental Laboratory course such as:
CLPS 1090 Research Methods in Psychology
CLPS 1190 Techniques in Physiological Psychology
CLPS 1290 Laboratory in Cognitive Processes
CLPS 1490 Functional Magnetic Resonance Imaging: Theory and Practice
CLPS 1590 Visualizing Vision
CLPS 1690 Laboratory in Developmental Psychology
CLPS 1890 Laboratory in Psycholinguistics

One Basic Computation Course such as:
CLPS 1291 Computational Methods for Mind, Brain and Behavior
CLPS 1491 Neural Modeling Laboratory
CLPS 1492 Computational Cognitive Neuroscience
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

One course in Statistical Analysis, such as: 1
CLPS 0900 Quantitative Methods in Psychology
APMA 1650 Statistical Inference I

Required Capstone:
CLPS 1900 Senior Seminar in Cognitive Science

Electives 2
Choose four from the following:
ANTH 1800 Sociolinguistics, Discourse and Dialogue
APMA 1360 Topics in Chaotic Dynamics
APMA 1650 Statistical Inference I
APMA 1660 Statistical Inference II
APMA 1670 Statistical Analysis of Time Series
APMA 1680 Nonparametric Statistics
APMA 1690 Computational Probability and Statistics
BIOL 0480 Evolutionary Biology
NEUR 0650 Biology of Hearing
NEUR 1030 Neural Systems
NEUR 1040 Introduction to Neurogenetics
NEUR 1660 Neural Basis of Cognition
NEUR 1680 Computational Neuroscience
CLPS 1100 Animal Cognition
CLPS 1130 Psychology of Timing
CLPS 1200 Thinking
CLPS 1210 Human Memory and Learning
CLPS 1211 Human and Machine Learning
CLPS 1220 Concepts and Categories
CLPS 1240 Reasoning and Problem Solving
CLPS 1241 Causal Reasoning
CLPS 1400 The Neural Bases of Cognition
CLPS 1470 Mechanisms of Motivated Decision Making
CLPS 1500 Perception and Action
CLPS 1510 Psychology of Hearing
CLPS 1520 Computational Vision
CLPS 1530 3D Shape Perception
CLPS 1600 History and Theories of Child Development (EDUC 1710)
CLPS 1610 Cognitive Development
CLPS 1611 Cognitive Development in Infancy
CLPS 1620 Developmental Cognitive Neuroscience
CLPS 1621 The Developing Brain
CLPS 1630 Perceptual Development
CLPS 1650 Child Language Acquisition
CLPS 1730 Psychology in Business and Economics
CLPS 1800 Language Processing
CLPS 1810 Syntactic Theory and Syntactic Processing
CLPS 1820 Language and the Brain
CLPS 1821 Neuroimaging and Language
CLPS 1970 Directed Reading in Cognitive, Linguistic and Psychological Sciences

MOST TOPICS IN COURSES IN CLPS (See Concentration Advisor for details)
CSCI 0220 Introduction to Discrete Structures and Probability
CSCI 0510 Models of Computation
CSCI 1230 Introduction to Computer Graphics
CSCI 1410 Applied Artificial Intelligence
CSCI 1480 Building Intelligent Robots

Total Credits: 13

1 Note: Students cannot use an AP Statistics course in lieu of this requirement. APMA 0650 and SOC 1100 will not fulfill this requirement.

2 In most cases, electives must be at the 1000-level and must show coherence and provide the concentrator with depth in one or more focus areas. Only one course below the 1000-level can be included in this list, and only with permission of the concentration advisor. Students are strongly encouraged to work out their program of electives with the concentration advisor.
EDUC 1260 Emotion, Cognition, Education
EDUC 1270 Adolescent Psychology
ENGN 1220 Neuroengineering
ENGN 1570 Linear System Analysis
ENGN 1580 Communication Systems
ENGN 1610 Image Understanding
PHIL 1520 Consciousness
PHIL 1550 Decision Theory: Foundations and Applications
PHIL 1590 Philosophy of Science
PHIL 1630 Mathematical Logic
PHIL 1690 The Problem of Free Will
PHIL 1700 British Empiricists
PHIL 1750 Epistemology
PHIL 1760 Philosophy of Language
PHIL 1770 Philosophy of Mind
PHIL 1780 Philosophy of Biology
PHIL 1880 Advanced Deductive Logic

At least one semester of Independent Study CLPS 1970, OR participation in a directed reading related to Cognitive Sciences (CLPS 1980) OR participation in an ISP or GISP related to Cognitive Science (subject to approval from the concentration advisor). See Section IV for more details.

A coherent program of at least four (4) additional courses in the life sciences (e.g., cognitive science, psychology, or biology), physical sciences, mathematics, and/or applied mathematics that supports the student's area(s) of study.

Total Credits 18

III. Degrees with Honors

Students interested in honors under either the A.B. or ScB. programs should identify a faculty honors sponsor and sign up with the concentration advisor during Semester 6. Although there is no minimum grade point average to enter the program, admission to the program is limited to students who have accumulated a strong academic record and are at the discretion of the department. It is expected that honors candidates will conduct a year-long research project under the direction of a faculty sponsor in the CLPS department culminating in a written thesis and oral examination at the end of Semester 8. Students doing honors work must enroll for CLPS 1980 or for two terms, typically in semesters 7 and 8.

IV. Independent Study

Independent Study is encouraged for the A.B. degree and required for the Sc.B. degree. Students should sign up for CLPS 1970 or CLPS 1980 with a faculty advisor who is a member of the CLPS Department. Arrangements should be made in Semester 6 for students expecting to do independent study during Semesters 7 and/or 8. CLPS1970 or CLPS1980 can count as electives for the concentration requirements.

Cognitive Science concentrators may use at most two credits of CLPS 1970 or CLPS 1980 towards their degree. Students in the A.B. program can use these two credits to satisfy electives. Students in the Sc.B. program must use one of these credits to satisfy the Independent Study requirement (Requirement B in Section II above), and may use the second to satisfy an elective or one of the four additional courses (Requirement C in Section II).

V. Comments

Both the A.B. and the Sc.B. programs in Cognitive Science reflect recent national trends in the field and the breadth of the course offerings and faculty research interests at Brown. A broadly trained cognitive scientist must possess certain methodological skills, including knowledge of computational methods and research methods (statistics and laboratory techniques), which are incorporated in our skills and methodology requirement. In addition, a cognitive scientist must be conversant in the four major focus areas studied in the field: perception, cognition, languages and cognitive neuroscience. Electives ensure that concentrators have the opportunity to investigate at least one particular area in depth. Finally, the concentration provides an integrative experience to all of its concentrators through the capstone senior seminar. The program is designed to provide the flexibility for each student to design a program that will meet her/his needs and interests.

The Sc.B. program is designed for students who wish to bring a stronger background in general science and a research orientation to their study of cognitive science. Sc.B. candidates must also acquire first-hand experience in doing cognitive science research through an independent study project.

Community Health

Community Health is an interdisciplinary concentration through which students examine a variety of issues, including population health and disease, health policy, cross-cultural and international aspects of health, the organizational and social structures through which health services are delivered and received, and the public health system. Courses in the concentration allow students to explore the ways in which the social, political, behavioral and biological sciences contribute to the understanding of patterns of population distributions of health and disease. The concentration also provides students with courses in basic research methods and statistics necessary for problem solving and critical thinking in the emerging emphasis on evidence-based health care and public health.

The requirements listed below are specific to the AB Community Health concentrators in the class of 2015 and earlier. Students in the class of 2016 and beyond, please visit http://bulletin.brown.edu/the-college/concentrations/pubh/ for the AB Public Health concentration requirements. Students interested in the combination AB Community Health/MPH degree should visit http://brown.edu/academics/public-health/education-training/masters/mph-program-about-us/combined-programs/abmph/abmph-required-courses for a list of those requirements.

Required Courses:

- PHP 0310 Health Care in the United States 1
  This course should be taken as a freshman or sophomore.
- PHP 0320 Introduction to Public Health 1
  This course should be taken as a freshman or sophomore.
- PHP 1320 Survey Research in Health Care 1
  This requirement should be fulfilled by the end of the junior year.
- PHP 1910 Public Health Senior Seminar 1
  This requirement should be taken during the senior year.

Environmental Health and Policy Electives (Students must select one of the following):

- PHP 1700 Current Topics in Environmental Health 1
- BIOL 1820 Environmental Health and Disease 1
- ENV S 0410 Environmental Stewardship 1
- ENV S 1410 Environmental Law and Policy 1
- ENV S 1710 Environmental Health and Policy 1
- ENV S 1720 Environmental Justice: The Science and Political Economy of Environmental Health and Social Justice 1
- ETHN 1890J Native American Environmental Health Movements 1

U.S. Health Care Organization and Policy Electives (Students must select one of the following):

- PHP 1520 Emergency Medical Systems: An Anatomy of Critical Performance 1
- PHP 1530 Case Studies in Public Health: The Role of Governments, Communities and Professions 1
- ECON 1360 Health Economics 1
- SOC 1315 Macro-Organizational Theory: Organizations in Social Context 1
- SOC 1540 Human Needs and Social Services 1

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCI 1500</td>
<td>Sociology of Medicine</td>
</tr>
<tr>
<td>PHP 1070</td>
<td>The Burden of Disease in Developing Countries</td>
</tr>
<tr>
<td>PHP 1100</td>
<td>Comparative Health Care Systems</td>
</tr>
<tr>
<td>PHP 1500</td>
<td>Global Health Nutrition</td>
</tr>
<tr>
<td>ANTH 0300</td>
<td>Culture and Health</td>
</tr>
<tr>
<td>ANTH 1020</td>
<td>AIDS in Global Perspective</td>
</tr>
<tr>
<td>ANTH 1310</td>
<td>International Health: Anthropological Perspectives</td>
</tr>
<tr>
<td>HMAN 1970G</td>
<td>International Perspectives on NGOs, Public Health, and Health Care Inequalities</td>
</tr>
<tr>
<td>PHP 1010</td>
<td>Doctors and Patients- Clinical Communication in Medicine</td>
</tr>
<tr>
<td>PHP 1400</td>
<td>HIV/AIDS in Africa: A Multidisciplinary Approach to Support HIV/AIDS Care and Treatment Programs</td>
</tr>
<tr>
<td>PHP 1540</td>
<td>Alcohol Use and Misuse</td>
</tr>
<tr>
<td>PHP 1600</td>
<td>Obesity in the 21st Century: Causes, Consequences and Countermeasures</td>
</tr>
<tr>
<td>PHP 1680N</td>
<td>Tobacco, Smoking, and the Evil Empire</td>
</tr>
<tr>
<td>PHP 1680T</td>
<td>Translation, Diffusion and Cultural Relevance of Health Promotion Interventions</td>
</tr>
<tr>
<td>PHP 1740</td>
<td>Principles of Health Behavior and Health Promotion Interventions</td>
</tr>
<tr>
<td>PHP 1920</td>
<td>Social Determinants of Health</td>
</tr>
<tr>
<td>PHP 2310</td>
<td>Physical Activity and Public Health</td>
</tr>
<tr>
<td>PHP 2320</td>
<td>Environmental and Policy Influences on the Obesity Epidemic</td>
</tr>
<tr>
<td>PHP 2330</td>
<td>Behavioral and Social Approaches to HIV Prevention</td>
</tr>
<tr>
<td>PHP 2340</td>
<td>Behavioral and Social Science Theory for Health Promotion</td>
</tr>
<tr>
<td>PHP 2360</td>
<td>Designing and Evaluating Public Health Interventions</td>
</tr>
<tr>
<td>PHP 2380</td>
<td>Health Communication</td>
</tr>
<tr>
<td>SOC 1871H</td>
<td>Social Perspectives on HIV/AIDS</td>
</tr>
<tr>
<td>BIOL 0030</td>
<td>Principles of Nutrition</td>
</tr>
<tr>
<td>BIOL 0200</td>
<td>The Foundation of Living Systems</td>
</tr>
<tr>
<td>BIOL 0470</td>
<td>Genetics</td>
</tr>
<tr>
<td>BIOL 0530</td>
<td>Principles of Immunology</td>
</tr>
<tr>
<td>BIOL 0800</td>
<td>Principles of Physiology</td>
</tr>
<tr>
<td>NEUR 0010</td>
<td>The Brain: An Introduction to Neuroscience</td>
</tr>
<tr>
<td>APMA 0650</td>
<td>Essential Statistics</td>
</tr>
<tr>
<td>BIOL 0495</td>
<td>Statistical Analysis of Biological Data</td>
</tr>
<tr>
<td>CLPS 0900</td>
<td>Quantitative Methods in Psychology</td>
</tr>
<tr>
<td>ECON 1620</td>
<td>Introduction to Econometrics</td>
</tr>
<tr>
<td>ECON 1630</td>
<td>Econometrics I</td>
</tr>
<tr>
<td>MATH 1610</td>
<td>Probability</td>
</tr>
<tr>
<td>POLS 1600</td>
<td>Political Research Methods</td>
</tr>
<tr>
<td>SOC 1100</td>
<td>Introductory Statistics for Social Research</td>
</tr>
<tr>
<td>APMA 0650</td>
<td>Essential Statistics</td>
</tr>
<tr>
<td>BIOL 0495</td>
<td>Statistical Analysis of Biological Data</td>
</tr>
<tr>
<td>CLPS 0900</td>
<td>Quantitative Methods in Psychology</td>
</tr>
<tr>
<td>ECON 1620</td>
<td>Introduction to Econometrics</td>
</tr>
<tr>
<td>ECON 1630</td>
<td>Econometrics I</td>
</tr>
<tr>
<td>MATH 1610</td>
<td>Probability</td>
</tr>
<tr>
<td>POLS 1600</td>
<td>Political Research Methods</td>
</tr>
<tr>
<td>SOC 1100</td>
<td>Introductory Statistics for Social Research</td>
</tr>
</tbody>
</table>

The two additional electives may be selected from the approved courses in four areas listed above (Environmental Health & Policy; US Health Organization & Policy; Global Health; or Social & Behavioral Science for Prevention) or the approved general electives listed below.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHP 0030</td>
<td>Health of Hispaniola</td>
</tr>
<tr>
<td>PHP 1680I</td>
<td>Pathology to Power: Disability, Health and Community</td>
</tr>
<tr>
<td>PHP 1680J</td>
<td>The Race To Inner Space: Conflating Science, Politics, and Economics To Promote Brain Health</td>
</tr>
<tr>
<td>PHP 1680K</td>
<td>Introduction to Conducting Clinical Research</td>
</tr>
<tr>
<td>PHP 1680M</td>
<td>The Epidemiology of Violence and its Consequences</td>
</tr>
<tr>
<td>ANTH 1242</td>
<td>Bioethics and Culture</td>
</tr>
<tr>
<td>ANTH 1300</td>
<td>Anthropology of Addictions and Recovery</td>
</tr>
<tr>
<td>BIOL 0040</td>
<td>Nutrition for Fitness and Physical Activity</td>
</tr>
<tr>
<td>BIOL 0180</td>
<td>The Biology of AIDS</td>
</tr>
<tr>
<td>BIOL 0190E</td>
<td>Botanical Roots of Modern Medicine</td>
</tr>
<tr>
<td>BIOL 0860</td>
<td>Diet and Chronic Disease</td>
</tr>
<tr>
<td>BIOL 1920B</td>
<td>Health Inequality in Historical Perspective</td>
</tr>
<tr>
<td>BIOL 1920C</td>
<td>Social Contexts of Disease</td>
</tr>
<tr>
<td>BIOL 1920D</td>
<td>Race, Difference and Biomedical Research: Historical Considerations</td>
</tr>
<tr>
<td>ENVS 0490</td>
<td>Environmental Science in a Changing World</td>
</tr>
<tr>
<td>GNSS 1960B</td>
<td>Health and Healing in American History</td>
</tr>
<tr>
<td>PLCY 1700J</td>
<td>GIS and Public Policy</td>
</tr>
<tr>
<td>PLCY 1700K</td>
<td>Health Policy Challenges</td>
</tr>
<tr>
<td>PLCY 1700V</td>
<td>Nonprofit Organizations</td>
</tr>
<tr>
<td>PLCY 1700Y</td>
<td>Crisis Management</td>
</tr>
<tr>
<td>SOC 0300B</td>
<td>Environment and Society</td>
</tr>
<tr>
<td>SOC 0300E</td>
<td>HIV/AIDS: Politics, Culture and Society</td>
</tr>
<tr>
<td>SOC 0300F</td>
<td>Unequal From Birth: Child Health From a Social Perspective</td>
</tr>
<tr>
<td>SOC 0300K</td>
<td>Inequalities and Health</td>
</tr>
<tr>
<td>SOC 1250</td>
<td>Perceptions of Mental Illness</td>
</tr>
<tr>
<td>SOC 1410</td>
<td>Aging and the Quality of Life</td>
</tr>
<tr>
<td>SOC 1870D</td>
<td>Aging and Social Policy</td>
</tr>
<tr>
<td>SOC 1871N</td>
<td>Military Health: The Quest for Healthy Violence</td>
</tr>
</tbody>
</table>

Total Credits: 12

Honors. An Honors track is available for students who qualify. Honors track students are also required to enroll in PHP 1980 in both semesters of their senior year to conduct research and write the honors thesis.

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.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
There are three concentration tracks in Comparative Literature, as follows:

**Track 1: Concentration in Comparative Literature with two languages**

- Complete prerequisites(s) for taking 1000-level courses in your two languages by Semester V (students working in non-European languages may be allowed more latitude; be sure to consult a concentration advisor about constructing an individualized plan).
- Comparative Literature 1210, Introduction to the Theory of Literature.
- TEN advanced literature courses (generally 1000-level courses), including Comparative Literature 1210 and:
  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, 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, Introduction to the Theory of Literature.
- Comparative Literature 1710 (Comparative Literature 2720 strongly urged).
- ONE course or MORE in Linguistics, drawn from among these courses: Cognitive, Linguistic and Psychological Sciences 0410, Anthropology 0800, English 1210, Hispanic Studies 1210 or an acceptable substitute.
- FIVE or SIX advanced literature courses (generally 1000-level courses), including Comparative Literature 1210 and:
  a. At least TWO courses in the literature of each of your languages, and the remainder drawn chiefly from among the offerings of Comparative Literature and English, and other national literature departments.
  b. ONE COURSE chiefly devoted to EACH of the three major literary genres: poetry, drama and narrative.
  c. ONE literature course chiefly devoted to EACH OF THREE of the following five historical periods:
     - Antiquity
     - Middle Ages
     - Renaissance/Early Modern
     - Enlightenment
     - Modern. Please note that the 19th, 20th, and 21st centuries count as one period, the Modern Period.
  d. TWO workshops or MORE in Creative Writing
  e. A senior project to consist of:
     A substantial work in translation (length will vary depending upon language and genre);
     A critical introduction outlining the method used and specific problems encountered, and commenting on the history of the original work together with other translations, if any. For thesis, the student may register for COLT 1990, which will be taken in addition to the ten required courses listed above. Successful completion of the thesis constitutes Honors. (See Guidelines for Honors Theses).

For additional information, please visit the Comparative Literature website (http://www.brown.edu/Departments/Comparative_Literature/) or see the Director of Undergraduate Studies, Professor Stephanie Merrim.

**Computational Biology**

Computational biology involves the analysis and discovery of biological phenomena using computational tools, and the algorithmic design and analysis of such tools. The field is widely defined and includes foundations in computer science, applied mathematics, statistics, biochemistry, molecular biology, genetics, ecology, evolution, anatomy, neuroscience, and visualization.

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 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 Introductory Biochemistry or BIOL 0500 Cell and Molecular Biology

**General Core Requirements: Chemistry**

- CHEM 0330 Equilibrium, Rate, and Structure 1

**General Core Requirements: Computer Science**

- CSC1 0150 Introduction to Object-Oriented Programming and Machine Concepts
- & CSC1 0160 Computer Science and Introduction to Algorithms and Data Structures
- CSC1 0170 Computer Science: An Integrated Introduction OR
- & CSC1 0180 Computer Science: An Integrated Introduction OR
- CSC1 0190 Accelerated Introduction to Computer Science
- & CSC1 0180 and Computer Science: An Integrated Introduction
- & CSC1 0320 and Introduction to Software Engineering
- & CSC1 0330 and Introduction to Computer Systems

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

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

#### Requirements for the Professional Track of the Sc.B. degree.

The requirements for the professional track include all those of the standard track, as well as the following:

Students must complete two two-to-four-month full-time professional experiences, doing work that is related to their concentration programs. Such work is normally done within an industrial organization, but may also be at a university under the supervision of a faculty member.

On completion of each professional experience, the student must write and upload to ASK a reflective essay about the experience addressing the following prompts, to be approved by the student's concentration advisor:

- Which courses were put to use in your summer's work? Which topics, in particular, were important?
- In retrospect, which courses should you have taken before embarking on your summer experience? What are the topics from these courses that would have helped you over the summer if you had been more familiar with them?
- Are there topics you should have been familiar with in preparation for your summer experience, but are not taught at Brown? What are these topics?
- What did you learn from the experience that probably could not have been picked up from course work?
- Is the sort of work you did over the summer something you would like to continue doing once you graduate? Explain.
- Would you recommend your summer experience to other Brown students? Explain.

#### Requirements for the Standard Track of the A.B. degree

**Prerequisites**

Two semesters of Calculus, for example:

- MATH 0090 Introductory Calculus, Part I
- MATH 0100 and Introductory Calculus, Part II
- MATH 0170 Advanced Placement Calculus

**Concentration Requirements (9 courses)**

Core Computer Science:

Select one of the following series:

1. **Series A**
   - CSCI 0150 Introduction to Object-Oriented Programming and
   - CSCI 0160 Computer Science and Introduction to Algorithms and Data Structures

2. **Series B**
   - CSCI 0170 Computer Science: An Integrated Introduction
   - CSCI 0180 and Computer Science: An Integrated Introduction

3. **Series C**
   - CSCI 0190 Accelerated Introduction to Computer Science
   - and an additional CSCI course not otherwise used to satisfy a concentration requirement (this course may be CSCI 0180, an intermediate-level CSCI course, or a 1000 level course)

Three intermediate courses from the following, of which one must be math-oriented and one must be systems-oriented:

- CSCI 0220 Introduction to Discrete Structures and Probability (math)
- CSCI 0320 Introduction to Software Engineering (systems)
- CSCI 0330 Introduction to Computer Systems (systems)
- or CSCI 0310 Introduction to Computer Systems
- CSCI 0510 Models of Computation (math)
- CSCI 0530 Directions: The Matrix in Computer Science (math)
- CSCI 1450 Probability and Computing

---

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 1950H</td>
<td>Computational Topology</td>
</tr>
<tr>
<td>CSCI 1950J</td>
<td>Introduction to Computational Geometry</td>
</tr>
<tr>
<td>CSCI 1820</td>
<td>Algorithmic Foundations of Computational Biology</td>
</tr>
</tbody>
</table>

Select one artificial intelligence course:  2

- CSCI 1410 Applied Artificial Intelligence
- CSCI 1420 Machine Learning
- CSCI 1430 Computer Vision
- CSCI 1450 Probability and Computing
- CSCI 1460 Computational Linguistics
- CSCI 1480 Building Intelligent Robots
- CSCI 1490 Introduction to Combinatorial Optimization
- CSCI 1580 Information Retrieval and Web Search

Select one computer science systems course:  2

- CSCI 1230 Introduction to Computer Graphics
- CSCI 1260 Compilers and Program Analysis
- CSCI 1270 Database Management Systems
- CSCI 1290 Computational Photography
- CSCI 1310 Fundamentals of Computer Systems
- CSCI 1320 Creating Modern Web Applications
- CSCI 1340 - Innovating Game Development
- CSCI 1380 Distributed Computer Systems
- CSCI 1600 Real-Time and Embedded Software
- CSCI 1610 Building High-Performance Servers
- CSCI 1660 Introduction to Computer Systems Security
- CSCI 1670 Operating Systems
- CSCI 1680 Computer Networks
- CSCI 1730 Design and Implementation of Programming Languages
- CSCI 1900 Software System Design

Four additional advanced computer science courses  4

A capstone course  1

Math: Two semesters of Mathematics or Applied Mathematics beyond MATH 0100/0170. One of these courses must be a linear algebra course

- MATH 0520 Linear Algebra
- MATH 0540 Honors Linear Algebra
- CSCI 0530 Directions: The Matrix in Computer Science

**Total Credits**: 15

---

1. Normally these advanced courses must be at the 1000-level or higher, though an intermediate-level course not used to satisfy a core requirement may be used.

2. These courses must include two pairs of courses with each pair forming a coherent theme. A list of pre-approved pairs may be found at the approved-pairs web page (http://cs.brown.edu/ugrad/concentrations/approvedpairs.html). You are not restricted to pairs on this list, but any pair not on the list must be approved by the director of undergraduate studies.

3. Five of the eight courses must be computer science courses.

---

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Four additional courses in computer science or related areas are required.  

Total Credits 9

1. Three must be advanced courses (at the 1000-level or higher), the fourth may be either an intermediate-level course not used to satisfy a core requirement or an advanced course. These three courses must include a pair of courses forming a coherent theme. A list of pre-approved pairs may be found at the approved-pairs web page (http://cs.brown.edu/ugrad/concentrations/approvedpairs.html). You are not restricted to pairs on this list, but any pair not on the list must be approved by the director of undergraduate studies.

2. CSCI 1450 may be used either as a math-oriented intermediate course or as an advanced course. CSCI 1450 was formerly known as CSCI 450; they are the same course and hence the one may be used for credit. Applied Math 1650 may be in place of CSCI 1450. However, concentration credit will be given for only one of Applied Math 1650 and CSCI 1450.

Requirements for the Professional Track of the A.B. degree.

The requirements for the professional track include all those of the standard track, as well as the following:

Students must complete two two-to-four-month full-time professional experiences, doing work that is related to their concentration programs. Such work is normally done within an industrial organization, but may also be at a university under the supervision of a faculty member.

On completion of each professional experience, the student must write and upload to ASK a reflective essay about the experience addressing the following prompts, to be approved by the student's concentration advisor:

- Which courses were put to use in your summer's work? Which topics, in particular, were important?
- In retrospect, which courses should you have taken before embarking on your summer experience? What are the topics from these courses that would have helped you over the summer if you had been more familiar with them?
- Are there topics you should have been familiar with in preparation for your summer experience, but are not taught at Brown? What are these topics?
- What did you learn from the experience that probably could not have been picked up from course work?
- Is the sort of work you did over the summer something you would like to continue doing once you graduate? Explain.
- Would you recommend your summer experience to other Brown students? Explain.

Computer Science-Economics

The joint Computer Science-Economics concentration exposes students to the theoretical and practical connections between computer science and economics. It prepares students for professional careers that incorporate aspects of economics and computer technology and for academic careers conducting research in areas that emphasize the overlap between the two fields. Concentrators may choose to pursue either the A.B. or the Sc.B. degree. While the A.B. degree allows students to explore the two disciplines by taking advanced courses in both departments, its smaller number of required courses is compatible with a liberal education. The Sc.B. degree achieves greater depth in both computer science and economics by requiring more courses, and it offers students the opportunity to creatively integrate both disciplines through a design requirement. In addition to courses in economics, computer science, and applied mathematics, all concentrators must fulfill the Computer Science department's writing requirement by passing a course that involves significant expository writing.


Prerequisites (3 courses):

MATH 0100 Introductory Calculus, Part II
MATH 0520 Linear Algebra
or MATH 0540 Honors Linear Algebra

or CSCI 0530 Directions: The Matrix in Computer Science
ECON 0110 Principles of Economics

Required Courses (17 courses):

Select one of the following Series:

<table>
<thead>
<tr>
<th>Series A</th>
<th>Series B</th>
<th>Series C</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 1450 Probability and Computing</td>
<td>CSCI 1450 Probability and Computing</td>
<td>CSCI 0190 Accelerated Introduction to Computer Science</td>
</tr>
<tr>
<td>CSCI 0150 Introduction to Object-Oriented Programming and &amp; CSCI 0160 Computer Science and Introduction to Algorithms and Data Structures</td>
<td>CSCI 0170 Computer Science: An Integrated Introduction &amp; CSCI 0180 and Computer Science: An Integrated Introduction</td>
<td></td>
</tr>
<tr>
<td>CSCI 0220 Introduction to Discrete Structures and Probability (math)</td>
<td>CSCI 0220 Introduction to Discrete Structures and Probability (math)</td>
<td>CSCI 0190 Accelerated Introduction to Computer Science</td>
</tr>
<tr>
<td>CSCI 0320 Introduction to Software Engineering (systems)</td>
<td>CSCI 0320 Introduction to Software Engineering (systems)</td>
<td>CSCI 0190 Accelerated Introduction to Computer Science</td>
</tr>
<tr>
<td>CSCI 0330 Introduction to Computer Systems (systems)</td>
<td>CSCI 0330 Introduction to Computer Systems (systems)</td>
<td>CSCI 0190 Accelerated Introduction to Computer Science</td>
</tr>
<tr>
<td>CSCI 0310 Introduction to Computer Systems</td>
<td>CSCI 0310 Introduction to Computer Systems</td>
<td>CSCI 0190 Accelerated Introduction to Computer Science</td>
</tr>
<tr>
<td>CSCI 0510 Models of Computation (math)</td>
<td>CSCI 0510 Models of Computation (math)</td>
<td>CSCI 0190 Accelerated Introduction to Computer Science</td>
</tr>
</tbody>
</table>

A pair of CS courses with a coherent theme, 1

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) 2 1
ECON 1210 Intermediate Macroeconomics 1
ECON 1630 Econometrics I 1

Three courses from the "mathematical economics" group: 3

ECON 1170 Welfare Economics and Social Choice Theory
ECON 1225 Advanced Macroeconomics: Monetary, Fiscal, and Stabilization Policies
ECON 1465 Market Design: Theory and Applications
ECON 1470 Bargaining Theory and Applications
ECON 1640 Econometrics II
ECON 1650 Financial Econometrics
ECON 1750 Investments II
ECON 1759 Data, Statistics, Finance
ECON 1810 Economics and Psychology
ECON 1820 Behavioral Economics
ECON 1850 Theory of Economic Growth
ECON 1860 The Theory of General Equilibrium
ECON 1870 Game Theory and Applications to Economics and any graduate Economics course

Two additional 1000-level Economics courses 2

Capstone Course in either Computer Science or Economics 3 1

Total Credits 17

1 A list of pre-approved pairs may be found at the approved-pairs web page (http://www.cs.brown.edu/ugrad/concentrations/approvedpairs.html). You are not restricted to pairs on this list, but any pair not on the list must be approved by the CS director of undergraduate studies. CSCI 1450 may not be used to satisfy this requirement.

2 Or ECON 1110, with permission.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
A one-semester course, normally taken in the student's last undergraduate year, in which the student (or group of students) use a significant portion of their undergraduate education, broadly interpreted, in studying some current topic (preferably at the intersection of computer science and economics) in depth, to produce a culminating artifact such as a paper or software project.

**Standard Program for the A.B. degree:**

**Prerequisites (3 courses):**
- MATH 0100 Introductory Calculus, Part II
- MATH 0520 Linear Algebra
  or MATH 0540 Honors Linear Algebra
  or CSCI 0530 Directions: The Matrix in Computer Science
- ECON 0110 Principles of Economics

**Required Courses (13 courses):**
Select one of the following series:
- CSCI 1450 Probability and Computing 2
  or APMA 1650 Statistical Inference I

**Series A**
- CSCI 0150 Introduction to Object-Oriented Programming and Computer Science
  & CSCI 0160 Introduction to Algorithms and Data Structures

**Series B**
- CSCI 0170 Computer Science: An Integrated Introduction
  & CSCI 0180 Computer Science: An Integrated Introduction

**Series C**
- CSCI 0190 Accelerated Introduction to Computer Science

and an additional CS course not otherwise used to satisfy a concentration requirement; this course may be CSCI 0180, an intermediate-level course, or a 1000-level course.

Two of the following intermediate courses, one of which must be math-oriented and one systems-oriented:
- CSCI 0220 Introduction to Discrete Structures and Probability (math)
- CSCI 0320 Introduction to Software Engineering (systems)
- CSCI 0330 Introduction to Computer Systems (systems)
- CSCI 0310 Introduction to Computer Systems
- CSCI 0510 Models of Computation (math)

Two additional CS courses; at least one must be at the 1000-level. The other must either be at the 1000-level or be an intermediate course not already used to satisfy concentration requirements.

- ECON 1130 Intermediate Microeconomics (Mathematical)
  1
- ECON 1210 Intermediate Macroeconomics
  1
- ECON 1630 Econometrics I
  1

Three courses from the "mathematical-economics" group:
- ECON 1170 Welfare Economics and Social Choice Theory
- ECON 1225 Advanced Macroeconomics: Monetary, Fiscal, and Stabilization Policies
- ECON 1465 Market Design: Theory and Applications
- ECON 1470 Bargaining Theory and Applications
- ECON 1640 Econometrics II
- ECON 1650 Financial Econometrics
- ECON 1750 Investments II
- ECON 1759 Data, Statistics, Finance
- ECON 1810 Economics and Psychology
- ECON 1820 Behavioral Economics
- ECON 1850 Theory of Economic Growth
- ECON 1860 The Theory of General Equilibrium
- ECON 1870 Game Theory and Applications to Economics
  or any graduate Economics course

**Total Credits** 13

1 Or ECON 1110, with permission.

**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 total including Senior Capstone Seminar)**

- UNIV 0540 Introduction to Contemplative Studies
  1

Two science courses that focus on the cognitive neurological functioning of the human brain and how contemplative practices affect it

Select one from the following list:

- CLPS 0040 Mind and Brain: Introduction to Cognitive Neuroscience
- CLPS 0200 Human Cognition
- CLPS 0500 Perception and Mind
- NEUR 0010 The Brain: An Introduction to Neuroscience

Select one from following list:

- UNIV 0090 Meditation and the Brain: Applications in Basic and Clinical Science
- UNIV 1000 Cognitive Neuroscience of Meditation

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Two humanities courses that introduce students to contemplative religious traditions and to the philosophical analysis of the key questions of human existence from following list:

ANTH 1240 Religion and Culture
CLAS 1120G The Idea of Self
CLAS 1140 Classical Philosophy of India
PHIL 0010 The Place of Persons
PHIL 0020 Mind and Matter
PHIL 0350 Ancient Philosophy
RELS 0040 Great Contemplative Traditions of Asia
RELS 0065 On Being Human: Religious and Philosophical Conceptions of Self
RELS 0120 The Classical Chinese Philosophy of Life
RELS 0130 Religions of Classical India

Senior Capstone Seminar (UNIV 1010) 1

Track Requirements (6 additional courses)

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 in-depth understanding of the scientific methods used to investigate the cognitive neuroscience of contemplative practice. 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.

Three thematic science courses drawn primarily from NEUR and CLPS, at least two of which must be 1000-level

APMA 0410 Mathematical Methods in the Brain Sciences
CLPS 0400 Brain Damage and the Mind
CLPS 1291 Computational Methods for Mind, Brain and Behavior
CLPS 1400 The Neural Bases of Cognition
CLPS 1492 Computational Cognitive Neuroscience
NEUR 1020 Principles of Neurobiology
NEUR 1030 Neural Systems

One statistics course (others with approval) 1

APMA 1650 Statistical Inference I
CLPS 0900 Quantitative Methods in Psychology
CLPS 2906 Experimental Design

Two semesters of laboratory research in an established lab (e.g. BIOL 1950/1960) 2

Humanities Track

The Humanities track explores the origin and development of contemplative practices within specific religious, cultural, and historical contexts and gives students a foundation in the Philosophy of Mind relevant to the scientific study of contemplative practice. Students will choose a concentration program that includes three intermediate and three advanced seminars drawn from the two areas below. While it is recommended that students focus primarily on one of these two areas, the precise balance of the individual concentration program for each student will be established with the concentration advisor when the student applies to enter the concentration, normally in their fourth semester of study.

Six Courses total from across the two areas below: 6

Contemplative Religious Traditions

CLAS 0850 Mythology of India

Track Requirements (6 additional courses)

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 in-depth understanding of the scientific methods used to investigate the cognitive neuroscience of contemplative practice. 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.

Three thematic science courses drawn primarily from NEUR and CLPS, at least two of which must be 1000-level

APMA 0410 Mathematical Methods in the Brain Sciences
CLPS 0400 Brain Damage and the Mind
CLPS 1291 Computational Methods for Mind, Brain and Behavior
CLPS 1400 The Neural Bases of Cognition
CLPS 1492 Computational Cognitive Neuroscience
NEUR 1020 Principles of Neurobiology
NEUR 1030 Neural Systems

One statistics course (others with approval) 1

APMA 1650 Statistical Inference I
CLPS 0900 Quantitative Methods in Psychology
CLPS 2906 Experimental Design

Two semesters of laboratory research in an established lab (e.g. BIOL 1950/1960) 2

Humanities Track

The Humanities track explores the origin and development of contemplative practices within specific religious, cultural, and historical contexts and gives students a foundation in the Philosophy of Mind relevant to the scientific study of contemplative practice. Students will choose a concentration program that includes three intermediate and three advanced seminars drawn from the two areas below. While it is recommended that students focus primarily on one of these two areas, the precise balance of the individual concentration program for each student will be established with the concentration advisor when the student applies to enter the concentration, normally in their fourth semester of study.

Six Courses total from across the two areas below: 6

Contemplative Religious Traditions

CLAS 0850 Mythology of India
Seminar in Sociology of Development

DEVL 1000/ SOC 1871D  Sophomore Seminar in Sociology of Development (SOC 1871D) (Pre-requisites: sophomore or junior standing, and completion of SOC 1620, POLS 1240, or ANTH 0110)  1

Development Economics - Choose ONE of the following: (ECON 0510 for students with little to no Econ background, ECON 1510 for students with strong Econ backgrounds or double-concentrating in Econ)

ECON 0510  Development and the International Economy (Prerequisite: ECON 0110, or AP Microeconomics 4 and AP Macroeconomics 4, or IB HL Economics 6))  1

ECON 1510  Economic Development (Prerequisite: ECON 1110 or ECON 1130; and APMA 1650 or ECON 1620 or ECON 1630)  1

Research Methods and Design

DEV 1500  Methods in Development Research (junior year)  1

Regional Courses

Two courses that focus on the same region of the developing world. Should complement the student's foreign language.  2

Elective Courses

Three courses chosen from a list of pre-approved electives or by special approval.  3

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.

Early Cultures

The Program in Early Cultures is an interdisciplinary concentration that integrates the cultures, religions, and histories of ancient civilizations. Geographically, the “ancient world” includes early China and India, West Asia (Mesopotamia, Iran, Anatolia, and Israel), Egypt, the Mediterranean (especially Greece and Italy), the early Islamic and Byzantine worlds, and the Pre-Columbian Mesoamerican civilizations. Students in Early Cultures gain in-depth knowledge of the history, religions, languages, and literatures of two or more ancient civilizations. In consultation with a concentration advisor, students design their own areas of study. Examples of possible topics include: cultural contacts between Greece and Egypt/ West Asia; animal sacrifice in Greece and Israel; comparative legal studies: Israel, Hatti, and Mesopotamia; gender roles in Rome and Egypt; Wisdom literature in Egypt, Israel, and Mesopotamia; and the historiography of the exact sciences in India and Greece.

Faculty from a variety of academic units (Anthropology, Classics, Comparative Literature, Egyptology, History, History of Art and Architecture, the Joukowsky Institute for Archaeology and the Ancient World, Judaic Studies, Philosophy, Religious Studies) offer courses relevant to Early Cultures.

Concentration patterns:

1. Ancient History (standard and honors)
2. Ancient Religions (standard and honors)
3. Languages and Literatures of Greece, Rome, North Africa, pre-Islamic West and South Asia (honors only)

General Requirements

Each nonhonors concentrator will choose to focus on either ancient history or ancient religions and will complete the Concentrators Seminar (ERLY 1000) in both the junior and the senior years, and eight other courses, four in each of two civilizations, or eight in a variety of civilizations.

Honors Requirements:

1. Ancient History or Ancient Religions (total of up to 12 courses)
   a. The Concentrators Seminar (ERLY 1000) in both the junior and senior years
   b. Two courses on the history or religions of two civilizations (four courses)
   c. Two courses in one ancient language
   d. Two related courses
   e. The honors thesis (one or two courses)

2. Languages and Literatures of Greece, Rome, North Africa, pre-Islamic West and South Asia (total of up to 12 courses)
   i. The Concentrators Seminar (two courses)
   ii. Two 1000-level courses requiring knowledge of Greek or Latin; and two courses requiring knowledge of Egyptian, Hebrew, Aramaic, Akkadian, Sanskrit, or Phoenician (Four courses: two of each of two languages)
   iii. Two courses in the literature or culture associated with each of the two languages (For one of these languages, the two courses must be at the advanced level)
   iv. The honors thesis (one or two courses)

b. Languages and Literatures of North Africa and pre-Islamic West, South, or East Asia (total of up to 12 courses)
   i. The Concentrator's Seminar (two courses)
   ii. Two courses requiring knowledge of two different North African, West or South Asian languages. Egyptian, Hebrew, Aramaic, Akkadian, Phoenician, Sanskrit or Chinese. For one of these languages, the two courses must be at the advanced level. (Four courses: two of each of two languages.)
   iii. Two courses in the literature or culture associated with each of the two languages (four courses: two each for two languages). 
   iv. The honors thesis (one or two 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 complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
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)**

<table>
<thead>
<tr>
<th>Chinese</th>
<th>Japanese</th>
<th>Korean</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHIN 0100 Basic Chinese &amp; CHIN 0200 and Basic Chinese</td>
<td>JAPN 0100 Basic Japanese &amp; JAPN 0200 and Basic Japanese</td>
<td>KREA 0100 Korean &amp; KREA 0200 and Korean</td>
</tr>
<tr>
<td>CHIN 0500 Advanced Modern Chinese I &amp; CHIN 0600 and Advanced Modern Chinese I</td>
<td>JAPN 0500 Advanced Japanese I &amp; JAPN 0600 and Advanced Japanese I</td>
<td></td>
</tr>
</tbody>
</table>

**Language Electives (language courses that may be counted for concentration credit)**

<table>
<thead>
<tr>
<th>Chinese</th>
<th>Japanese</th>
<th>Korean</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHIN 0700 Advanced Modern Chinese II &amp; CHIN 0800 Advanced Modern Chinese II (either course may be taken for one semester)</td>
<td>JAPN 0700 Advanced Japanese II &amp; JAPN 0800 Advanced Japanese II (either course may be taken for one semester)</td>
<td>KREA 0920B Media Korean &amp; KREA 0920A Korean Culture and Society</td>
</tr>
<tr>
<td>CHIN 0910B Introduction to Classical Chinese</td>
<td>JAPN 0910A Classical Japanese</td>
<td>KREA 0910B Media Korean</td>
</tr>
<tr>
<td>CHIN 0910C Introduction to Modern Chinese Prose</td>
<td>JAPN 0910B Japanese Cities: Tokyo and Kyoto</td>
<td>KREA 0920A Korean Culture and Society</td>
</tr>
<tr>
<td>CHIN 1040 Modern Chinese Literature</td>
<td>JAPN 0920A Business Japanese</td>
<td></td>
</tr>
<tr>
<td></td>
<td>JAPN 0920B Business Japanese</td>
<td></td>
</tr>
</tbody>
</table>

**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; 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**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EAST 0180</td>
<td>Japan: Nature, Ritual, and the Arts</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>EAST 1010</td>
<td>From Basho to Banana: Four Centuries of Japanese Literature</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>EAST 1012</td>
<td>Expanding the Canon: A Survey of 20th Century Japanese Literature</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>EAST 1070</td>
<td>China Modern: An Introduction to the Literature of Twentieth-Century China</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>EAST 1100</td>
<td>Korean Culture and Film</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>EAST 1200</td>
<td>Pop, Political and Patrician: Culture in Japan and the Koreas</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>EAST 1270</td>
<td>China Through the Lens: History, Cinema, and Critical Discourse</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>EAST 1400</td>
<td>The Floating World: Early Modern Japanese Culture</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>EAST 1420</td>
<td>The Confucian Mind</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

For additional elective choices, visit [http://brown.edu/academics/east-asian-studies/courses/more-course-offerings](http://brown.edu/academics/east-asian-studies/courses/more-course-offerings).

**Advanced Research Seminars**

At least one of the eight elective courses must be an advanced research seminar, taken in the senior year. The research seminar will normally provide students with the opportunity to develop a project or paper focusing on one or more of their areas of inquiry within the concentration. Students are strongly encouraged to find ways to incorporate the use of Chinese, Japanese or Korean language materials in their research and learning in these courses. Courses falling into this category include the East Asian Studies 1950 series as well as designated seminars offered by faculty in such departments as History, Religious Studies, and Comparative Literature among others. The Department will provide a list of pre-approved advanced seminars every semester. Students wishing to add courses to that list must submit their requests in writing to the Director of Undergraduate Studies at the start of the semester.

**Sample advanced seminars offered by East Asian Studies**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>EAST 1950B</td>
<td>Chinese Women, Gender and Feminism from Historical and Transnational Perspectives</td>
<td>1</td>
</tr>
<tr>
<td>EAST 1950F</td>
<td>The Karma of Words</td>
<td>1</td>
</tr>
</tbody>
</table>
EAST 1950G  Market Economy, Popular Culture, and Mass Media in Contemporary China  1
EAST 1950H  Translating Japanese: Short Fiction, Poetry, Film and Manga  1
EAST 1950X  Queer Japan: Culture, History and Sexuality  1
EAST 1950W  Translating Korean: Fiction, Poetry, Film and K-Pop  1

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 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; Chinese (CHIN), Japanese (JAPN), or Korean (KREA) courses at the 1000-level and above may also count toward this requirement
  • At least one of the eight electives must focus on an East Asian country or culture other than those associated with the language the student is using to satisfy the concentration’s language requirement. A concentrator studying 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 1130), macroeconomics (ECON 1210), and econometrics (ECON 1620) round out the list of foundation courses for the concentration. Economics students must also fulfill a calculus requirement. The economics department sponsors a number of concentration options. The most popular is the standard economics concentration, described below. Three additional concentration options are administered jointly with other departments and are described separately under their respective titles. They are the concentrations in applied mathematics–economics, in mathematical economics, and in computer science–economics. The first two are especially recommended for students interested in graduate study in economics.

The department offers many of the required courses in an interdepartmental concentration called Business, Entrepreneurship and Organizations (BEO). BEO is jointly run by the departments of economics and sociology, and the school of engineering. BEO has three possible "tracks," of which the business economics track is most closely related to economics. Please contact the BEO administrator for more details, including information about advising in that concentration.

Standard Economics Concentration (through the Class of 2015)

Mathematics Course Requirements (select one of the following): 1
MATH 0060 Analytic Geometry and Calculus 1
MATH 0070 Calculus with Applications to Social Science 1
MATH 0090 Introductory Calculus, Part I

A higher-level math course.

Economics Course Requirements:
ECON 0110 Principles of Economics 1
or ECON 1130 Intermediate Microeconomics (Mathematical)
ECON 1210 Intermediate Macroeconomics 1
ECON 1620 Introduction to Econometrics 1
or ECON 1630 Econometrics I

at least five additional 1000-level Economics courses. 2

Total Credits

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 0090, without actually taking that higher level course, does not satisfy the requirement. The AP mathematics credit must appear on your Brown transcript.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
2. Note that ECON 1960 (thesis) and ECON 1940 do not count for concentration credit.

### Standard Economics Concentration (for students in the Class of 2016 and beyond)

**Mathematics Course Requirements:**
- MATH 0100 Introductory Calculus, Part II or a higher-level math course.

**Economics Course Requirements:**
- ECON 0110 Principles of Economics
- ECON 1110 Intermediate Microeconomics
- ECON 1210 Intermediate Macroeconomics
- ECON 1620 Introduction to Econometrics
- ECON 1629 Applied Research Methods for Economists
- ECON 1630 Econometrics I

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 1940 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 Studies takes a multidisciplinary, liberal arts approach to the field of education while focusing on the study of human learning and development, the history of education, teaching, school reform, and education policy. Concentrators choose an area of emphasis, either History/Policy or Human Development. History/Policy 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. Additionally, the Department offers teacher certification programs in elementary and secondary education. Luther Spoehr (luther_spoehr@brown.edu) is the Director of Undergraduate Studies, and advisor to all seniors and to juniors on the History/Policy track. Yoko Yamamoto (yoko_yamamoto@brown.edu) advises all sophomores and juniors on the Human Development track.

### Concentration Requirements beginning with the class of 2017

The concentration in Education Studies requires a total of 10 courses. At least eight must be taken in the Education Department at Brown University. One course must either be a qualitative methods course (EDUC 1100) or a quantitative methods course (EDUC 1110 or an approved equivalent in another department). Five courses must be taken in one of the two Areas of Emphasis, either Human Development or Policy-and-History. Electives may be additional Brown University Education courses, courses chosen from a list of pre-approved Brown University outside the Education Department, or courses at Brown or other universities that receive specific approval in advance from the Director of Undergraduate Studies.

Students in the Human Development Area of Emphasis should note that because they must take a foundational course in History and another in Political Science and Economics, they will need only two additional Electives to meet the ten-course requirement. Students in the Policy-and-History Area of Emphasis must take one foundational course in Human Development plus one additional Education course outside Policy-and-History, plus two Electives.

Beginning with the Class of 2017 (students enrolled in fall 2013 and thereafter), concentrators will be required to take at least one foundational course in each of four Core Categories: Human Development, History, Political Science and Economics, and Research Methods. Foundational courses taken in the Area of Emphasis count toward the total of 5 required for that Area of Emphasis.

### Foundational courses available in each of the required Core Categories:

#### Human Development
- EDUC 0800 Introduction to Human Development and Education
- EDUC 1450 The Psychology of Teaching and Learning

#### History
- EDUC 1020 The History of American Education
- EDUC 1200 History of American School Reform

#### Political Science & Economics
- EDUC 1060 Politics and Public Education
- EDUC 1130 Economics of Education I

#### Methods
- EDUC 1100 Introduction to Qualitative Research Methods

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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 0900</td>
<td>Fieldwork and Seminar in Secondary Education</td>
</tr>
<tr>
<td>EDUC 0950</td>
<td>Learning About Learning: Classrooms in Context</td>
</tr>
<tr>
<td>EDUC 1010</td>
<td>The Craft of Teaching</td>
</tr>
<tr>
<td>EDUC 1030</td>
<td>Comparative Education</td>
</tr>
<tr>
<td>EDUC 1090</td>
<td>Adolescent Literature</td>
</tr>
<tr>
<td>EDUC 1560</td>
<td>Philosophy of Education: Educational Thought and Practice</td>
</tr>
</tbody>
</table>

10 - Course Requirement in Area of Emphasis

Human Development

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 0410E</td>
<td>Empowering Youth: Insights from Research on Urban Adolescents</td>
</tr>
<tr>
<td>EDUC 0800</td>
<td>Introduction to Human Development and Education</td>
</tr>
<tr>
<td>EDUC 1260</td>
<td>Emotion, Cognition, Education</td>
</tr>
<tr>
<td>EDUC 1270</td>
<td>Adolescent Psychology</td>
</tr>
<tr>
<td>EDUC 1430</td>
<td>The Psychology of Race, Class, and Gender</td>
</tr>
<tr>
<td>EDUC 1450</td>
<td>The Psychology of Teaching and Learning</td>
</tr>
<tr>
<td>EDUC 1580</td>
<td>Cross-Cultural Perspectives on Child Development</td>
</tr>
<tr>
<td>EDUC 1700</td>
<td>The Asian American Experience in Higher Education</td>
</tr>
<tr>
<td>EDUC 1710</td>
<td>History and Theories of Child Development</td>
</tr>
<tr>
<td>EDUC 1750</td>
<td>Contemporary Social Problems: Views from Human Development and Education</td>
</tr>
<tr>
<td>EDUC 1850</td>
<td>Moral Development and Education</td>
</tr>
<tr>
<td>EDUC 1860</td>
<td>Social Context of Learning and Development</td>
</tr>
<tr>
<td>EDUC 0800</td>
<td>Introduction to Human Development and Education</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 1110</td>
<td>Introductory Statistics for Education Research and Policy Analysis (or an approved equivalent in another department)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Electives</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Foundational course in Human Development</td>
<td>1</td>
</tr>
<tr>
<td>1 additional Education course outside Policy -and-History</td>
<td>1</td>
</tr>
<tr>
<td>1 Methods course</td>
<td>1</td>
</tr>
<tr>
<td>2 Electives</td>
<td>2</td>
</tr>
<tr>
<td>Total Credits</td>
<td>10</td>
</tr>
</tbody>
</table>

History -and-Policy

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 0400</td>
<td>The Campus on Fire: American Colleges and Universities in the 1960's</td>
</tr>
<tr>
<td>EDUC 0410B</td>
<td>Controversies in American Education Policy: A Multidisciplinary Approach</td>
</tr>
<tr>
<td>EDUC 0610</td>
<td>Brown v. Board of Education</td>
</tr>
<tr>
<td>EDUC 0850</td>
<td>History of Intercollegiate Athletics</td>
</tr>
<tr>
<td>EDUC 1020</td>
<td>The History of American Education</td>
</tr>
<tr>
<td>EDUC 1030</td>
<td>Comparative Education</td>
</tr>
<tr>
<td>EDUC 1040</td>
<td>Sociology of Education</td>
</tr>
<tr>
<td>EDUC 1050</td>
<td>History of African-American Education</td>
</tr>
<tr>
<td>EDUC 1060</td>
<td>Politics and Public Education</td>
</tr>
<tr>
<td>EDUC 1130</td>
<td>Economics of Education I</td>
</tr>
<tr>
<td>EDUC 1150</td>
<td>Education, the Economy and School Reform</td>
</tr>
<tr>
<td>EDUC 1160</td>
<td>Evaluating the Impact of Social Programs</td>
</tr>
<tr>
<td>EDUC 1200</td>
<td>History of American School Reform</td>
</tr>
<tr>
<td>EDUC 1630</td>
<td>Strategic Management for School System Excellence</td>
</tr>
<tr>
<td>EDUC 1650</td>
<td>Policy Implementation in Education</td>
</tr>
<tr>
<td>EDUC 1720</td>
<td>Urban Schools in Historical Perspective</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 1110</td>
<td>Introductory Statistics for Education Research and Policy Analysis (or an approved equivalent in another department)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Electives</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Foundational course in History</td>
<td>1</td>
</tr>
<tr>
<td>1 Foundational course in Political Science and Economics</td>
<td>1</td>
</tr>
<tr>
<td>1 Methods course</td>
<td>1</td>
</tr>
<tr>
<td>2 Electives</td>
<td>2</td>
</tr>
<tr>
<td>Total Credits</td>
<td>10</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 a minimum grade average that includes more A’s than B’s in Education courses; and successfully complete EDUC 1990 and EDUC 1991, 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.

Capstone

Capstones are voluntary, student-initiated projects or experiences outside the classroom that build on and contribute to students’ Education Studies concentration, and can take various forms, including a research project, website design, curriculum design, policy analysis, or scholarly paper. Capstones can be designed and executed your senior year, or can be based on a previous experience that you want to explore further in some way, such as an internship or teaching experience. While capstones do not confer departmental honors, students who complete capstones will be recognized at the department graduation ceremony and will have the opportunity to present 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.

Concentration Requirements for students entering Brown on or before Fall of 2012

Education Studies concentrators design a program that includes ten courses, of which at least eight are taken in the Education Department at Brown University. Within Education Studies, concentrators choose one of the two tracks, each designed to enable students to develop critical and creative skills for addressing issues involving children, schools, and education.

Course Requirements:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 1100</td>
<td>Introduction to Qualitative Research Methods</td>
</tr>
<tr>
<td>or EDUC 1110</td>
<td>Introductory Statistics for Education Research and Policy Analysis</td>
</tr>
</tbody>
</table>

At least five Education courses in the chosen area of emphasis. 5
At least two Education courses outside the chosen area of emphasis. 2
Two additional, related courses. 2
Total Credits 10

Honors

Concentrators seeking to graduate with honors must meet all requirements for the concentration, including a grade-point average established by the Department, and state their plans in writing by the end of their sixth semester. Finally, they must successfully complete EDUC 1990 - EDUC 1991 (Research and Writing in Education) in which they write a thesis (usually 60-70 pages) under the guidance of a thesis advisor.

Capstone

Capstones are voluntary, student-initiated projects or experiences outside the classroom that build on and contribute to students’ Education Studies concentration, and can take various forms, including a research project, website design, curriculum design, policy analysis, or scholarly paper.
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 the 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:**
  - ASYR 0800 Introduction to the Ancient Near East or ARCH 0370 Before the Islamic State: The Archaeologies of Ancient Mesopotamia or ARCH 1600 Archaeologies of the Near East
  - ASYR 0200 Introduction to Akkadian
  - ASYR 0210 Intermediate Akkadian

- **Foundational Courses:**
  - At least one course from each of the following three areas:
    - History and Culture of Ancient Western Asia:
      - ASYR 1100 Imagining the Gods: Myths and Myth-making in Ancient Mesopotamia (WRIT)
      - ASYR 1500 Ancient Babylonian Magic and Medicine
      - ASYR 2310B Assyriology I (WRIT)
      - ASYR 2310C Assyriology II (WRIT)
      - ASYR 2600 Topics in Cuneiform Studies
    - Ancient Scholarship in Western Asia:
      - ASYR 1600 Astronomy Before the Telescope
      - ASYR 1650 Time in the Ancient World (WRIT)
      - ASYR 1700 Astronomy, Divination and Politics in the Ancient World (WRIT)
      - ASYR 1750 Divination in Ancient Mesopotamia (WRIT)
      - ASYR 2310A Ancient Scientific Texts: Akkadian
    - Archaeology of Ancient Western Asia:
      - ARCH 1200F City and the Festival: Cult Practices and Architectural Production in the Ancient Near East (WRIT)
      - ARCH 1200I Material Worlds: Art and Agency in the Near East and Africa
      - ARCH 1810 Under the Tower of Babel: Archaeology, Politics, and Identity in the Modern Middle East (WRIT)
      - ARCH 2010C Architecture, Body and Performance in the Ancient Near Eastern World (WRIT)
      - ARCH 2300 The Rise of the State in the Near East

- **Depth Requirement:** At least two additional courses offered in AWAS or ARCH dealing with ancient Western Asia. These courses must be approved by the undergraduate concentration advisor.

- **Breadth Requirement:** At least one course offered in EGYT or ARCH on the archaeology, art, history, culture, or language of ancient Egypt.
Introduction to Egyptian Archaeology and Art
Archaeologies of the Near East

Both the content and 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 presentation should provide the content for the capstone presentation. If the concentrator is writing a thesis, 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 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.
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 Ancient Western Asian Studies (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 fail 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 in originality, it 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 consultation 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.

Organization 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, seven Sc.B. programs in biomedical, chemical and biochemical, civil through May 2016, computer, electrical, materials, and mechanical engineering are accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org/. Sc.B. degree programs in environmental engineering and engineering physics are also offered, but they are not accredited by ABET. (Note: The civil track has been discontinued for all students entering after fall 2012. 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 joint 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.

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 freshman year. Students with weak preparation in calculus may start in MATH 0100 and take MATH 0200 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
In exceptional circumstances, a student may petition the concentration committee 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. Students wishing to make substitutions of this nature should consult their concentration advisor for assistance with drafting their petition. Approval of the petition is subject to majority vote of the Engineering Concentration Committee.

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 approved 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.

Chemical and Biochemical Engineering Track:
The Chemical and Biochemical Engineering program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org. The education objectives of the Chemical and Biochemical Engineering program are to prepare graduates: (1) to pursue productive scientific and technical careers, beginning with entry-level engineering positions in industry, or graduate study in chemical or biochemical engineering or related fields; or to successfully pursue other careers that benefit from the analytical or quantitative skills acquired through the Brown CBE Program; (2) to effectively apply the principles of chemical and biochemical engineering, problem-solving skills, and critical and independent thinking to a broad range of complex, multidisciplinary technological and societal problems; (3) to communicate effectively, both orally and in writing, to professionals and audiences of diverse backgrounds, and to pursue technical approaches and innovations that address the needs of society in an ethical, safe, sustainable, and environmentally responsible manner. The student outcomes of this program are the ABET (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/).

1. Core Courses:
ENGN 0030 Introduction to Engineering 1
ENGN 0040 Dynamics and Vibrations 1
ENGN 0410 Materials Science 1
ENGN 0510 Electricity and Magnetism 1
ENGN 0520 Electrical Circuits and Signals 1
ENGN 0720 Thermodynamics 1
ENGN 0810 Fluid Mechanics 1
BIOL 0200 The Foundation of Living Systems 1
CHEM 0330 Equilibrium, Rate, and Structure 1
MATH 0190 Advanced Placement Calculus (Physics/Engineering) 1
or MATH 0170 Advanced Placement Calculus 1
MATH 0200 Intermediate Calculus (Physics/Engineering) 1
or MATH 0180 Intermediate Calculus 1
or MATH 0350 Honors Calculus 1
APMA 0330 Methods of Applied Mathematics I, II 1
or APMA 0350 Applied Ordinary Differential Equations 1
APMA 0340 Methods of Applied Mathematics I, II 1
or APMA 0360 Methods of Applied Mathematics I, II 1

2. Upper-Level Chemical & Biochemical Engineering Curriculum
ENGN 1110 Transport and Biotransport Processes 1
ENGN 1120 Chemical and Biochemical Reactor Design 1
ENGN 1130 Phase and Chemical Equilibria 1
ENGN 1710 Heat and Mass Transfer 1
CHEM 0350 Organic Chemistry 1
Advanced Chemistry elective course 2

CHEM 0360 Organic Chemistry 1
or CHEM 0400 Biophysical and Bioinorganic Chemistry 1
or CHEM 0500 Inorganic Chemistry 1
or CHEM 1140 Physical Chemistry: Quantum Chemistry 1
Advanced Natural Sciences elective course 3
3. Capstone Design Course
ENGN 1140 Chemical Process Design 1

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Civil Engineering Track (Available to students entering Brown on or before the Fall of 2012):

**Important Announcement**: Civil Engineering program will continue through May 2016, and will be available to all students currently enrolled at Brown, including those who arrived as Freshmen in the Fall of 2012 (the class of 2016). Students entering in the class of 2017 and later, with interest in Structural Engineering will be able to concentrate in this discipline through a Structures track within the Mechanical Engineering program. Students interested in Environmental Problems and Planning are directed to the programs in Chemical and Biochemical Engineering or Environmental Engineering.

The Civil Engineering program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org. The education objectives of the Civil Engineering program are to prepare graduates: (1) to have distinctive careers, beginning with either entry level positions in structural and environmental areas of civil engineering or graduate study in these fields; (2) to adapt to changing opportunities, both in engineering and in other professional and business pursuits; (3) to be ethically responsible, to engage in lifelong learning, and to be of service to the engineering community and to society at large. The student outcomes of this program are the ABET (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/).

1. Core courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 0030</td>
<td>Introduction to Engineering</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 0040</td>
<td>Dynamics and Vibrations</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 0310</td>
<td>Mechanics of Solids and Structures</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>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>
<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>1</td>
</tr>
<tr>
<td>or MATH 0350</td>
<td>Honors Calculus</td>
<td>1</td>
</tr>
<tr>
<td>APMA 0330</td>
<td>Methods of Applied Mathematics I, II</td>
<td>1</td>
</tr>
<tr>
<td>or APMA 0350</td>
<td>Applied Ordinary Differential Equations</td>
<td>1</td>
</tr>
<tr>
<td>APMA 0340</td>
<td>Methods of Applied Mathematics I, II</td>
<td>1</td>
</tr>
<tr>
<td>or APMA 0360</td>
<td>Methods of Applied Mathematics I, II</td>
<td>1</td>
</tr>
<tr>
<td>CSCI 0040</td>
<td>Introduction to Scientific Computing and Problem Solving</td>
<td>1</td>
</tr>
<tr>
<td>or CSCI 0150</td>
<td>Introduction to Object-Oriented Programming and Computer Science</td>
<td>1</td>
</tr>
<tr>
<td>or CSCI 0170</td>
<td>Computer Science: An Integrated Introduction</td>
<td>1</td>
</tr>
<tr>
<td>or CSCI 0190</td>
<td>Accelerated Introduction to Computer Science</td>
<td>1</td>
</tr>
</tbody>
</table>

2. Upper-Level Civil Engineering Curriculum

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 1300</td>
<td>Structural Analysis</td>
<td>4</td>
</tr>
<tr>
<td>ENGN 1340</td>
<td>Water Supply and Wastewater Treatment</td>
<td>1</td>
</tr>
</tbody>
</table>

3. Civil Engineering Specialty Options (Complete one of the following two course specialty sequences)

3a. Structures

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 1380</td>
<td>Design of Civil Engineering Structures</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 1310</td>
<td>Planning and Design of Systems</td>
<td>1</td>
</tr>
<tr>
<td>or ENGN 1370</td>
<td>Advanced Engineering Mechanics</td>
<td>1</td>
</tr>
<tr>
<td>or ENGN 1740</td>
<td>Computer Aided Visualization and Design</td>
<td>1</td>
</tr>
<tr>
<td>or ENGN 1750</td>
<td>Advanced Mechanics of Solids</td>
<td>1</td>
</tr>
<tr>
<td>or ENGN 1860</td>
<td>Advanced Fluid Mechanics</td>
<td>1</td>
</tr>
</tbody>
</table>

3b. Environmental Problems

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 1130</td>
<td>Phase and Chemical Equilibria</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 1310</td>
<td>Planning and Design of Systems</td>
<td>1</td>
</tr>
</tbody>
</table>

4. Capstone Design

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 1930D</td>
<td>Large Scale Engineering Design Project</td>
<td>1</td>
</tr>
</tbody>
</table>

Computer Engineering Track:

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 (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 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.

1. Core Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 0030</td>
<td>Introduction to Engineering</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 0040</td>
<td>Dynamics and Vibrations</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 0190</td>
<td>Advanced Placement Calculus (Physics/Engineering)</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 0165</td>
<td>Advanced Placement Calculus</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0170</td>
<td>Advanced Placement Calculus</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0200</td>
<td>Intermediate Calculus (Physics/Engineering)</td>
<td>1</td>
</tr>
<tr>
<td>or APMA 0340</td>
<td>Methods of Applied Mathematics I, II</td>
<td>1</td>
</tr>
<tr>
<td>or APMA 0350</td>
<td>Applied Ordinary Differential Equations</td>
<td>1</td>
</tr>
<tr>
<td>APMA 0330</td>
<td>Methods of Applied Mathematics I, II</td>
<td>1</td>
</tr>
<tr>
<td>or APMA 0360</td>
<td>Methods of Applied Mathematics I, II</td>
<td>1</td>
</tr>
<tr>
<td>CSCI 0040</td>
<td>Introduction to Scientific Computing and Problem Solving</td>
<td>1</td>
</tr>
<tr>
<td>or CSCI 0150</td>
<td>Introduction to Object-Oriented Programming and Computer Science</td>
<td>1</td>
</tr>
<tr>
<td>or CSCI 0170</td>
<td>Computer Science: An Integrated Introduction</td>
<td>1</td>
</tr>
<tr>
<td>or CSCI 0190</td>
<td>Accelerated Introduction to Computer Science</td>
<td>1</td>
</tr>
<tr>
<td>or CSCI 0150</td>
<td>Introduction to Object-Oriented Programming and Computer Science</td>
<td>1</td>
</tr>
<tr>
<td>&amp; CSCI 0160</td>
<td>and Introduction to Algorithms and Data Structures</td>
<td>2</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>Total Credits</th>
<th>21</th>
</tr>
</thead>
</table>

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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<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>1</td>
</tr>
<tr>
<td>CSCI 0330</td>
<td>Introduction to Computer Systems</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 1570</td>
<td>Linear System Analysis</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 1630</td>
<td>Digital Electronics Systems Design</td>
<td>1</td>
</tr>
</tbody>
</table>

3. Specialty Courses: (Complete one of the following 5-course specialty sequences)

3a. For the Computer Specialty:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 1620</td>
<td>Analysis and Design of Electronic Circuits</td>
</tr>
<tr>
<td>ENGN 1640</td>
<td>Design of Computing Systems</td>
</tr>
<tr>
<td>ENGN 1970</td>
<td>Advanced Placement Calculus</td>
</tr>
<tr>
<td>MATH 0180</td>
<td>Intermediate Calculus</td>
</tr>
<tr>
<td>APMA 0330</td>
<td>Methods of Applied Mathematics I, II</td>
</tr>
</tbody>
</table>

3b. For the Multimedia Signal Processing Specialty:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>APMA 1170</td>
<td>Introduction to Computational Linear Algebra</td>
</tr>
</tbody>
</table>

4. Capstone Design

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 1650</td>
<td>Embedded Microprocessor Design</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. Student should consult with concentration advisor for recommendation and approval.

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

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 (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/).

1. Core Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 0000</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>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>
<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>Methods of Applied Mathematics I, II</td>
</tr>
<tr>
<td>CSCI 0150</td>
<td>Introduction to Object-Oriented Programming and Computer Science</td>
</tr>
<tr>
<td>or CSCI 0040</td>
<td>Introduction to Scientific Computing and Problem Solving</td>
</tr>
<tr>
<td>or CSCI 0170</td>
<td>Computer Science: An Integrated Introduction</td>
</tr>
<tr>
<td>or CSCI 0190</td>
<td>Accelerated Introduction to Computer Science</td>
</tr>
</tbody>
</table>

2. Upper-Level Electrical Engineering Curriculum

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</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>
</tbody>
</table>
### Environmental Engineering Track:

The Environmental Engineering program began in 2013. The program has not been reviewed by ABET and is not ABET-accredited. The education objectives of the Environmental Engineering program are 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 (a) - (k) Student Outcomes as defined by the "ABET Criteria for Accrediting Engineering Programs" (available online at [http://www.brown.edu/academics/engineering/undergraduate-study](http://www.brown.edu/academics/engineering/undergraduate-study)).

#### 1. Core Courses:
- **ENGN 0030** Introduction to Engineering  
- **ENGN 0040** Dynamics and Vibrations  
- **ENGN 0410** Materials Science  
- **ENGN 0510** Electricity and Magnetism  
- **ENGN 0720** Thermodynamics  
- **ENGN 0810** Fluid Mechanics  
- **BIOL 0200** The Foundation of Living Systems  
- **CHEM 0330** Equilibrium, Rate, and Structure  
- **ENVS 0490** Environmental Science in a Changing World  
- **MATH 0190** Advanced Placement Calculus (Physics/Engineering)  
- **MATH 0170** Advanced Placement Calculus  
- **MATH 0200** Intermediate Calculus (Physics/Engineering)  
- **MATH 0180** Intermediate Calculus  
- **APMA 0330** Methods of Applied Mathematics I, II  
- **APMA 0500** Applied Ordinary Differential Equations  
- **APMA 0650** Essential Statistics  
- **BIOL 0330** Equilibrium, Rate, and Structure  
- **CHEM 0330** Equilibrium, Rate, and Structure  
- **MATH 0190** Advanced Placement Calculus (Physics/Engineering)  
- **MATH 0200** Intermediate Calculus (Physics/Engineering)  
- **APMA 0330** Methods of Applied Mathematics I, II  
- **APMA 0500** Applied Ordinary Differential Equations  
- **APMA 0650** Essential Statistics  

#### 2. Advance Science Courses
- **GEOL 1370** Environmental Geochemistry  
- **GEOL 1580** Quantitative Elements of Physical Hydrology  
- **BIOC 0415** Microbes in the Environment (or an approved alternative Natural Science Course)  
- **OR BIOC 0420** Principles of Ecology  

#### 3. Environmental Engineering Specialty Options (Complete one of the following five course sequences)

**3a. Chemistry Specialty**
- At least three of the following:
  - **ENGN 1110** Transport and Biotransport Processes  
  - **ENGN 1130** Phase and Chemical Equilibria  
  - **ENGN 1340** Water Supply and Wastewater Treatment  
  - **ENGN 1710** Heat and Mass Transfer  
  - **ENGN 1931P** Fuels, Energy, Power and the Environment  
  - **ENGN 1930U** Renewable Energy Technologies  
  - **ENGN 1931P** Fuels, Energy, Power and the Environment  
  - **ENGN 1930U** Renewable Energy Technologies  

**3b. Energy Specialty**
- At least three of the following:
  - **ENGN 1340** Transport and Biotransport Processes  
  - **ENGN 1710** Heat and Mass Transfer  
  - **ENGN 1860** Advanced Fluid Mechanics  
  - **ENGN 1930U** Renewable Energy Technologies  
  - **ENGN 1931F** Introduction to Power Engineering  
  - **ENGN 1931A** Photovoltaics Engineering  
  - **ENGN 1931P** Fuels, Energy, Power and the Environment  
  - **ENGN 1930U** Renewable Energy Technologies  
  - **ENGN 0310** Mechanics of Solids and Structures  
  - **ENGN 0520** Electrical Circuits and Signals  

**3c. Computer Engineering**
- **CSCI 0330** and **ENGN 1640**; and one additional course from the following (ENGN 1580, ENGN 1600, ENGN 1610, ENGN 1650 or ENGN 2530)  

**3d. Multimedia Signal Processing**
- **ENGN 2530** or **ENGN 1610**; and two additional courses from the following (ENGN 1580, ENGN 1610, ENGN 1640, ENGN 1650, ENGN 2500, ENGN 2530, ENGN 2560 or CSCI 1230)  

**3e. Microelectronic Systems**
- **ENGN 1600**; **ENGN 1640**; and one additional course from the following (ENGN 1590, ENGN 1680, ENGN 2530 or ENGN 2912K)  

**3f. Solid State Electronics and Photonics**
- **ENGN 1590**; (ENGN 1560 or ENGN 1690); and one additional course from the following (ENGN 1450, ENGN 1560, ENGN 1600, ENGN 1680, ENGN 1690, ENGN 1931A or PHYS 1420)  

**4. Capstone Design**
- **ENGN 1650** Embedded Microprocessor Design  
- or **ENGN 1000** Projects in Engineering Design  

*In addition to program requirements above, students must take four courses in the humanities and social sciences.

**Total Credits**

1. Or 1000-level Physics course subject to concentration advisor approval.
2. Subject to approval by the concentration advisor, an independent study sequence 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](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 (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/).

1. Core Courses:
   ENGN 0030 Introduction to Engineering 1
   ENGN 0040 Dynamics and Vibrations 1
   ENGN 0410 Materials Science 1
   ENGN 0510 Electricity and Magnetism 1
   ENGN 0520 Electrical Circuits and Signals 1
   ENGN 0720 Thermodynamics 1
   ENGN 0310 Mechanics of Solids and Structures 1
   or ENGN 0810 Fluid Mechanics 1
   CHEM 0330 Equilibrium, Rate, and Structure 1
   MATH 0190 Advanced Placement Calculus (Physics/Engineering) 1
   or MATH 0170 Advanced Placement Calculus 1
   MATH 0200 Intermediate Calculus (Physics/Engineering) 1
   or MATH 0180 Intermediate Calculus 1
   or MATH 0350 Honors Calculus 1
   APMA 0330 Methods of Applied Mathematics I, II 1
   or APMA 0350 Applied Ordinary Differential Equations 1
   or APMA 0340 Methods of Applied Mathematics I, II 1
   or APMA 0360 Methods of Applied Mathematics I, II 1
   CHEM 0350 Organic Chemistry 1
   or CSCI 0040 Introduction to Scientific Computing and Problem Solving 1
   or CSCI 0150 Introduction to Object-Oriented Programming and Computer Science 1
   or CSCI 0170 Computer Science: An Integrated Introduction 1
   or CSCI 0190 Accelerated Introduction to Computer Science 1

2. Upper-Level Materials Engineering Curriculum
   ENGN 1410 Physical Chemistry of Solids 1
   ENGN 1420 Kinetics Processes in Materials Science and Engineering 1
   ENGN 1440 Mechanical Properties of Materials 1
   PHYS 0790 Physics of Matter 1
   or CHEM 1140 Physical Chemistry: Quantum Chemistry 1

Three of the following: 1
   ENGN 1450 Properties and Processing of Electronic Materials 3
   ENGN 1470 Structure and Properties of Nonmetallic Materials 3
   ENGN 1480 Metallic Materials 3
   ENGN 1490 Biomaterials 3

3. Capstone Design 2
   ENGN 1000 Projects in Engineering Design 1
   * 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 graduates: (1) to pursue scientific and technical careers beginning with either graduate study in mechanical engineering and related fields or mechanical engineering positions in industry; (2) to work on interdisciplinary teams that make use of the engineering problem solving method and a broad background in the liberal arts to address societal needs. 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/).

1. Core Courses:
   ENGN 0030 Introduction to Engineering 1
   ENNG 0040 Dynamics and Vibrations 1
   ENGN 0310 Mechanics of Solids and Structures 1
   MATH 0190 Advanced Placement Calculus (Physics/Engineering) 1
   or MATH 0170 Advanced Placement Calculus 1
   MATH 0200 Intermediate Calculus (Physics/Engineering) 1
   or MATH 0180 Intermediate Calculus 1
   or MATH 0350 Honors Calculus 1
   APMA 0330 Methods of Applied Mathematics I, II 1
   or APMA 0350 Applied Ordinary Differential Equations 1
   or APMA 0340 Methods of Applied Mathematics I, II 1
   or APMA 0360 Methods of Applied Mathematics I, II 1
   CHEM 0330 Equilibrium, Rate, and Structure 1
   MATH 0190 Advanced Placement Calculus (Physics/Engineering) 1
   or MATH 0170 Advanced Placement Calculus 1
   MATH 0200 Intermediate Calculus (Physics/Engineering) 1
   or MATH 0180 Intermediate Calculus 1
   or MATH 0350 Honors Calculus 1
   APMA 0330 Methods of Applied Mathematics I, II 1
   or APMA 0350 Applied Ordinary Differential Equations 1
   or APMA 0340 Methods of Applied Mathematics I, II 1
   or APMA 0360 Methods of Applied Mathematics I, II 1
   CHEM 0330 Equilibrium, Rate, and Structure 1
   or MATH 0190 Advanced Placement Calculus (Physics/Engineering) 1
   or MATH 0170 Advanced Placement Calculus 1
   MATH 0200 Intermediate Calculus (Physics/Engineering) 1
   or MATH 0180 Intermediate Calculus 1
   or MATH 0350 Honors Calculus 1
   APMA 0330 Methods of Applied Mathematics I, II 1
   or APMA 0350 Applied Ordinary Differential Equations 1
   or APMA 0340 Methods of Applied Mathematics I, II 1
   or APMA 0360 Methods of Applied Mathematics I, II 1
   CHEM 0330 Equilibrium, Rate, and Structure 1
   or MATH 0190 Advanced Placement Calculus (Physics/Engineering) 1
   or MATH 0170 Advanced Placement Calculus 1
   MATH 0200 Intermediate Calculus (Physics/Engineering) 1
   or MATH 0180 Intermediate Calculus 1
   or MATH 0350 Honors Calculus 1
   APMA 0330 Methods of Applied Mathematics I, II 1
   or APMA 0350 Applied Ordinary Differential Equations 1
   or APMA 0340 Methods of Applied Mathematics I, II 1
   or APMA 0360 Methods of Applied Mathematics I, II 1
   CHEM 0330 Equilibrium, Rate, and Structure 1
   or MATH 0190 Advanced Placement Calculus (Physics/Engineering) 1
   or MATH 0170 Advanced Placement Calculus 1
   MATH 0200 Intermediate Calculus (Physics/Engineering) 1
   or MATH 0180 Intermediate Calculus 1
   or MATH 0350 Honors Calculus 1
   APMA 0330 Methods of Applied Mathematics I, II 1
   or APMA 0350 Applied Ordinary Differential Equations 1
   or APMA 0340 Methods of Applied Mathematics I, II 1
   or APMA 0360 Methods of Applied Mathematics I, II 1
   CHEM 0330 Equilibrium, Rate, and Structure 1
   or MATH 0190 Advanced Placement Calculus (Physics/Engineering) 1
   or MATH 0170 Advanced Placement Calculus 1
   MATH 0200 Intermediate Calculus (Physics/Engineering) 1
   or MATH 0180 Intermediate Calculus 1
   or MATH 0350 Honors Calculus 1
   APMA 0330 Methods of Applied Mathematics I, II 1
   or APMA 0350 Applied Ordinary Differential Equations 1
   or APMA 0340 Methods of Applied Mathematics I, II 1
   or APMA 0360 Methods of Applied Mathematics I, II 1
   CHEM 0330 Equilibrium, Rate, and Structure 1
   or MATH 0190 Advanced Placement Calculus (Physics/Engineering) 1
   or MATH 0170 Advanced Placement Calculus 1
   MATH 0200 Intermediate Calculus (Physics/Engineering) 1
   or MATH 0180 Intermediate Calculus 1
   or MATH 0350 Honors Calculus 1
   APMA 0330 Methods of Applied Mathematics I, II 1
   or APMA 0350 Applied Ordinary Differential Equations 1
   or APMA 0340 Methods of Applied Mathematics I, II 1
   or APMA 0360 Methods of Applied Mathematics I, II 1
   CHEM 0330 Equilibrium, Rate, and Structure 1

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
2. Upper-Level Mechanical Engineering Curriculum

Specialty Options (Complete one of the following seven course specialty sequences)

2a. Aerospace Applications

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0790</td>
<td>Physics of Matter</td>
</tr>
<tr>
<td>ENGN 1370</td>
<td>Advanced Engineering Mechanics</td>
</tr>
<tr>
<td>ENGN 1700</td>
<td>Jet Engines and Aerospace Propulsion</td>
</tr>
<tr>
<td>ENGN 1720</td>
<td>Design of Engines and Turbines</td>
</tr>
<tr>
<td>or ENGN 1760</td>
<td>Design of Space Systems</td>
</tr>
<tr>
<td>ENGN 1860</td>
<td>Advanced Fluid Mechanics</td>
</tr>
</tbody>
</table>

One of the following:

- ENGN 1710 Heat and Mass Transfer
- or ENGN 1300 Structural Analysis
- or ENGN 1740 Computer Aided Visualization and Design
- or ENGN 1750 Advanced Mechanics of Solids

Capstone Design

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 1000</td>
<td>Projects in Engineering Design</td>
</tr>
<tr>
<td>or ENGN 1930M</td>
<td>Industrial Design</td>
</tr>
<tr>
<td>or ENGN 1931D</td>
<td>Design of Mechanical Assemblies</td>
</tr>
</tbody>
</table>

2b. Biomechanics

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 0800</td>
<td>Principles of Physiology</td>
</tr>
<tr>
<td>ENGN 1210</td>
<td>Biomechanics</td>
</tr>
<tr>
<td>ENGN 1230</td>
<td>Instrumentation Design</td>
</tr>
<tr>
<td>ENGN 1370</td>
<td>Advanced Engineering Mechanics</td>
</tr>
</tbody>
</table>

One of the following courses:

- ENGN 1700 Jet Engines and Aerospace Propulsion
- or ENGN 1710 Heat and Mass Transfer
- or ENGN 1860 Advanced Fluid Mechanics

One of the following courses:

- ENGN 1220 Neuroengineering
- or ENGN 1300 Structural Analysis
- or ENGN 1490 Biomaterials
- or ENGN 1740 Computer Aided Visualization and Design
- or ENGN 1750 Advanced Mechanics of Solids

Capstone Design

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 1000</td>
<td>Projects in Engineering Design</td>
</tr>
<tr>
<td>or ENGN 1930M</td>
<td>Industrial Design</td>
</tr>
<tr>
<td>or ENGN 1931D</td>
<td>Design of Mechanical Assemblies</td>
</tr>
</tbody>
</table>

2c. Energy Conversion: Fluids and Thermal Systems

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0790</td>
<td>Physics of Matter</td>
</tr>
<tr>
<td>ENGN 1700</td>
<td>Jet Engines and Aerospace Propulsion</td>
</tr>
<tr>
<td>ENGN 1710</td>
<td>Heat and Mass Transfer</td>
</tr>
<tr>
<td>ENGN 1720</td>
<td>Design of Engines and Turbines</td>
</tr>
<tr>
<td>ENGN 1860</td>
<td>Advanced Fluid Mechanics</td>
</tr>
</tbody>
</table>

One of the following courses:

- ENGN 1750 Advanced Mechanics of Solids
- or ENGN 1300 Structural Analysis
- or ENGN 1370 Advanced Engineering Mechanics

Capstone Design

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 1000</td>
<td>Projects in Engineering Design</td>
</tr>
<tr>
<td>or ENGN 1930M</td>
<td>Industrial Design</td>
</tr>
</tbody>
</table>

2d. Engineering Mechanics

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0790</td>
<td>Physics of Matter</td>
</tr>
<tr>
<td>ENGN 1370</td>
<td>Advanced Engineering Mechanics</td>
</tr>
<tr>
<td>ENGN 1710</td>
<td>Heat and Mass Transfer</td>
</tr>
<tr>
<td>ENGN 1750</td>
<td>Advanced Mechanics of Solids</td>
</tr>
<tr>
<td>ENGN 1860</td>
<td>Advanced Fluid Mechanics</td>
</tr>
</tbody>
</table>

One of the following:

- ENGN 1300 Structural Analysis
- or ENGN 1360 Soil Mechanics and Principles of Foundation Engineering
- or ENGN 1420 Kinetics Processes in Materials Science and Engineering
- or ENGN 1700 Jet Engines and Aerospace Propulsion
- or ENGN 1740 Computer Aided Visualization and Design

Capstone Design

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 1000</td>
<td>Projects in Engineering Design</td>
</tr>
<tr>
<td>or ENGN 1930M</td>
<td>Industrial Design</td>
</tr>
<tr>
<td>or ENGN 1931D</td>
<td>Design of Mechanical Assemblies</td>
</tr>
</tbody>
</table>

Up to one of the following:

- ENGN 1230 Instrumentation Design
- or ENGN 1300 Structural Analysis
- or ENGN 1380 Design of Civil Engineering Structures
- or ENGN 1720 Design of Engines and Turbines
- or ENGN 1760 Design of Space Systems

2e. Mechanical Systems: Dynamics, Materials, and Design

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0790</td>
<td>Physics of Matter</td>
</tr>
<tr>
<td>ENGN 1370</td>
<td>Advanced Engineering Mechanics</td>
</tr>
<tr>
<td>ENGN 1750</td>
<td>Advanced Mechanics of Solids</td>
</tr>
</tbody>
</table>

One of the following courses:

- ENGN 1380 Design of Civil Engineering Structures
- or ENGN 1720 Design of Engines and Turbines
- or ENGN 1760 Design of Space Systems

One or two of the following courses:

- ENGN 1700 Jet Engines and Aerospace Propulsion
- or ENGN 1710 Heat and Mass Transfer
- or ENGN 1720 Design of Engines and Turbines
- or ENGN 1860 Advanced Fluid Mechanics

Capstone Design

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 1000</td>
<td>Projects in Engineering Design</td>
</tr>
<tr>
<td>or ENGN 1930M</td>
<td>Industrial Design</td>
</tr>
<tr>
<td>or ENGN 1931D</td>
<td>Design of Mechanical Assemblies</td>
</tr>
</tbody>
</table>

2f. Structural Mechanics

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0790</td>
<td>Physics of Matter</td>
</tr>
<tr>
<td>ENGN 1300</td>
<td>Structural Analysis</td>
</tr>
<tr>
<td>ENGN 1370</td>
<td>Advanced Engineering Mechanics</td>
</tr>
<tr>
<td>ENGN 1710</td>
<td>Heat and Mass Transfer</td>
</tr>
<tr>
<td>ENGN 1860</td>
<td>Advanced Fluid Mechanics</td>
</tr>
</tbody>
</table>

One of the following courses:

- ENGN 1230 Instrumentation Design
- or ENGN 1300 Structural Analysis
- or ENGN 1380 Design of Civil Engineering Structures
- or ENGN 1440 Mechanical Properties of Materials
- or ENGN 1620 Analysis and Design of Electronic Circuits
- or ENGN 1740 Computer Aided Visualization and Design

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 1740</td>
<td>Computer Aided Visualization and Design</td>
<td></td>
</tr>
<tr>
<td>or ENGN 1750</td>
<td>Advanced Mechanics of Solids</td>
<td></td>
</tr>
<tr>
<td>or ENGN 1760</td>
<td>Design of Space Systems</td>
<td></td>
</tr>
<tr>
<td>Capstone Design</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENGN 1380</td>
<td>Design of Civil Engineering Structures</td>
<td></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 Or another advanced science course, subject to concentration advisor approval.

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

3 An ENGN course of equivalent level may be substituted subject to concentration advisor approval.

## 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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 0330</td>
<td>Introduction to Engineering</td>
<td></td>
</tr>
<tr>
<td>&amp; ENGN 0040</td>
<td>Dynamics and Vibrations</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>
<tr>
<td>PHYS 0070</td>
<td>Analytical Mechanics</td>
<td></td>
</tr>
<tr>
<td>&amp; PHYS 0160</td>
<td>and Introduction to Relativity and Quantum Physics</td>
<td></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>Select three additional higher-level math, applied math, or mathematical physics (PHYS 0720) courses.</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CSCI 0040</td>
<td>Introduction to Scientific Computing and Problem Solving</td>
<td>1</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>
<tr>
<td>or CSCI 0190</td>
<td>Accelerated Introduction to Computer Science</td>
<td></td>
</tr>
<tr>
<td>ENGN 0510</td>
<td>Electricity and Magnetism</td>
<td></td>
</tr>
<tr>
<td>or PHYS 0470</td>
<td>Electricity and Magnetism</td>
<td></td>
</tr>
<tr>
<td>ENGN 1560</td>
<td>Applied Electromagnetics</td>
<td></td>
</tr>
<tr>
<td>or PHYS 1510</td>
<td>Advanced Electromagnetic Theory</td>
<td></td>
</tr>
<tr>
<td>PHYS 0500</td>
<td>Advanced Classical Mechanics</td>
<td></td>
</tr>
<tr>
<td>or ENGN 1370</td>
<td>Advanced Engineering Mechanics</td>
<td></td>
</tr>
<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 1530</td>
<td>Thermodynamics and Statistical Mechanics</td>
<td></td>
</tr>
<tr>
<td>or ENGN 0720</td>
<td>Thermodynamics</td>
<td></td>
</tr>
<tr>
<td>ENGN 1620</td>
<td>Analysis and Design of Electronic Circuits</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 0330</td>
<td>Equilibrium, Rate, and Structure</td>
<td></td>
</tr>
<tr>
<td>or ENGN 0310</td>
<td>Mechanics of Solids and Structures</td>
<td></td>
</tr>
<tr>
<td>or ENGN 0810</td>
<td>Fluid Mechanics</td>
<td></td>
</tr>
<tr>
<td>or PHYS 1600</td>
<td>Computational Physics</td>
<td></td>
</tr>
<tr>
<td>ENGN 0410</td>
<td>Materials Science</td>
<td></td>
</tr>
<tr>
<td>or ENGN 1690</td>
<td>Photonics and Applications</td>
<td></td>
</tr>
<tr>
<td>or PHYS 0560</td>
<td>Experiments in Modern Physics</td>
<td></td>
</tr>
<tr>
<td>PHYS 1560</td>
<td>Modern Physics Laboratory</td>
<td></td>
</tr>
<tr>
<td>or ENGN 1590</td>
<td>Introduction to Semiconductors and Semiconductor Electronics</td>
<td>1</td>
</tr>
</tbody>
</table>

A thesis under the supervision of a physics or engineering faculty member:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1990</td>
<td>Senior Conference Course</td>
<td>1</td>
</tr>
<tr>
<td>or ENGN 1970</td>
<td>Independent Studies in Engineering</td>
<td></td>
</tr>
<tr>
<td>or ENGN 1971</td>
<td>Independent Study in Engineering</td>
<td></td>
</tr>
</tbody>
</table>

* Students are also encouraged to take courses dealing with the philosophical, ethical, or political aspects of science and technology.

## English

English concentrators analyze language and form in the ongoing history of literatures in English, learning how literature shapes and is shaped by the world. We promote original work on new questions of history, criticism, and theory. And we invite practices of reading and writing that challenge the creation of knowledge in our fields. The curriculum includes courses from the range of literatures in English and in addition to the regular concentration offers a "track" in Nonfiction Writing, which attends to critical writing, the research paper, journalism, creative writing, and nonfiction writing. One of the largest humanities concentrations at Brown, English provides a strong foundation for a liberal education and for careers in many sectors of the changing spectrum of employment: the media, teaching, finance, government, corporate research and administration. English concentrators routinely go on to law, medical, and professional schools as well as to graduate education in literature and the arts.

## About the Concentration

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 "How Literature Matters" course (ENGLO100): 1
2. ONE course before 1700: 1
3. ONE course after 1700: 1

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Students apply to the Honors Program early in the second semester of their junior year. Interested concentrators are encouraged to speak to the Honors Advisor early in their junior year to discuss their plans. Specific deadlines for admission are announced annually and are available in the department office. Students who are studying off campus are expected to meet the application submission deadline.

Admission to the English Honors Program depends on evidence of availability 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.

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 Director.

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 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.

December graduates take the following sequence of additional thesis courses instead:

In the 7th semester (Spring), students must take one of the following courses, within which they begin to research and write their theses: --An Independent Study with their thesis advisor --or ENGL 1140A: The Literary Scholar Either course must be taken S/NC.

In the 8th semester (Fall), students must take ENGL 1992 for a grade, as they complete their theses. Half-year graduates should consult with the Honors Director for information about deadlines.

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 such a grade and wishes to continue in the program must complete a comparable course with a grade higher than C.

The Honors Thesis

The Honors thesis is an extended essay, usually between 50 and 80 pages, written under the supervision of a department faculty advisor and second reader. (Where appropriate, the advisor or the reader, but not both, may be in another department.) The thesis may be an interdisciplinary or creative project, but it is usually an essay on a scholarly or critical problem dealing with works of literature in English. 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.

Honors in Nonfiction Writing

The Nonfiction Writing 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 must have taken either one intermediate course, or two advanced writing courses by the end of their sixth semester 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 at the latest. Interested students should already have made contact with at least one member of the Nonfiction Writing faculty and should meet with the Honors Advisor to discuss their proposed project.

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. See procedures and application (http://brown.edu/academics/english/nonfiction-honors-procedures) for more details.

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/JC; 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 first reader, with assistance from the student’s second reader. 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. The work typically is in a genre chosen from Nonfiction Writing’s spectrum: critical analysis, literary journalism, memoir, lyric essay, or narrative based on travel, science, history, or cultural critique.

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 and 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 its first reader and second reader, each of whom provides written commentary and suggests a grade for ENGL 1994.

Half-year graduates will take ENGL 1200 in the spring of their final year and ENGL 1994 in the fall. (Half-year graduates should consult with the Honors Advisor for information on deadlines.)

Evaluation
The English Department reviews the academic record as well as the thesis evaluations for each senior completing the Nonfiction Writing Honors Program. Following a successful review, the student will be eligible to graduate with Honors in Nonfiction Writing.

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 four tracks of study. 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 administrative manager.

Standard program 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. Land, Water & Food Security
4. Sustainability in Development

Requirements for the A.B. in Environmental Studies:
Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Track Specific Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 0110</td>
<td>Principles of Economics</td>
<td>1</td>
</tr>
<tr>
<td>ENVS 0490</td>
<td>Environmental Science in a Changing World</td>
<td>1</td>
</tr>
<tr>
<td>ENVS 0495</td>
<td>Introduction to Environmental Social Science</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 0240</td>
<td>Earth: Evolution of a Habitable Planet</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 0210</td>
<td>Diversity of Life</td>
<td>1</td>
</tr>
</tbody>
</table>

Track Specific Requirements

<table>
<thead>
<tr>
<th>Track</th>
<th>Core Courses</th>
<th>Additional Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - Air, Climate, and Energy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Climate:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GEOL 1350</td>
<td>Weather and Climate</td>
<td></td>
</tr>
<tr>
<td>Physics:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHYS 0050</td>
<td>Foundations of Mechanics</td>
<td></td>
</tr>
<tr>
<td>Energy Technology:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENGN 1930U</td>
<td>Renewable Energy Technologies</td>
<td></td>
</tr>
<tr>
<td>PHYS 0114</td>
<td>The Science and Technology of Energy</td>
<td></td>
</tr>
<tr>
<td>Policy:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENVS 1410</td>
<td>Environmental Law and Policy</td>
<td></td>
</tr>
<tr>
<td>ENVS 1415</td>
<td>Power, Justice, and Climate Change</td>
<td></td>
</tr>
<tr>
<td>ENVS 1615</td>
<td>Making Connections: The Environmental Policy Process</td>
<td></td>
</tr>
<tr>
<td>ENVS 1755</td>
<td>Globalization and the Environment</td>
<td></td>
</tr>
<tr>
<td>ENVS 1925</td>
<td>Energy Policy and Politics</td>
<td></td>
</tr>
<tr>
<td>Sustainable Infrastructure:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENVS 1400</td>
<td>Sustainable Design in the Built Environment</td>
<td></td>
</tr>
<tr>
<td>ENVS 1580</td>
<td>Environmental Stewardship and Resilience in Urban Systems</td>
<td></td>
</tr>
</tbody>
</table>

Track 2 - Conservation Science and Policy

Ecology:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 0420</td>
<td>Principles of Ecology</td>
</tr>
</tbody>
</table>

Conservation:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1470</td>
<td>Conservation Biology</td>
</tr>
</tbody>
</table>

Marine Conservation: choose 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVS 0455</td>
<td>Coastal Ecology and Conservation</td>
</tr>
<tr>
<td>ENVS 1455</td>
<td>Marine Conservation Science and Policy</td>
</tr>
</tbody>
</table>

Policy: choose 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVS 0510</td>
<td>International Environmental Law and Policy</td>
</tr>
<tr>
<td>ENVS 1410</td>
<td>Environmental Law and Policy</td>
</tr>
<tr>
<td>ENVS 1615</td>
<td>Making Connections: The Environmental Policy Process</td>
</tr>
</tbody>
</table>

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
## Statistics: Choose 1
- APMA 0650 Essential Statistics
- APMA 1650 Statistical Inference I
- BIOL 0495 Statistical Analysis of Biological Data
- ECON 1620 Introduction to Econometrics

## Track 3 - Land, Water & Food Security

### Climate:
- GEOL 1350 Weather and Climate

### Biology: choose 1
- BIOL 0210 Diversity of Life
- BIOL 0190H Plants, Food, and People
- BIOL 0420 Principles of Ecology
- ENV 0455 Coastal Ecology and Conservation

### Environmental History: choose 1
- ENV 1530 From Locke to Deep Ecology: Property Rights and Environmental Policy

### Policy: choose 1
- ENV 0510 International Environmental Law and Policy
- ENV 1350 Environmental Economics and Policy
- ENV 1410 Environmental Law and Policy
- ENV 1455 Marine Conservation Science and Policy
- ENV 1615 Making Connections: The Environmental Policy Process

### Tools: Choose 1
- 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 4 - Sustainability in Development

#### Environment and Development: choose 2
- ECON 1410 Urban Economics
- ECON 1530 Health, Hunger and the Household in Developing Countries
- ENV 1580 Environmental Stewardship and Resilience in Urban Systems
- ENV 1415 Power, Justice, and Climate Change
- ENV 1555 Urban Agriculture: The Importance of Localized Food Systems
- ENV 1755 Globalization and the Environment

#### Policy: choose 2
- ENV 0510 International Environmental Law and Policy
- ENV 1350 Environmental Economics and Policy
- ENV 1410 Environmental Law and Policy
- ENV 1455 Marine Conservation Science and Policy
- ENV 1615 Making Connections: The Environmental Policy Process

### Analysis Tools: Choose 1
- ECON 1620 Introduction to Econometrics
- ANTH 1940 Ethnographic Research Methods
- EDU 1100 Introduction to Qualitative Research Methods
- GEOL 1320 Introduction to Geographic Information Systems for Environmental Applications
- SOC 1100 Introductory Statistics for Social Research
- SOC 1117 Focus Groups for Market and Social Research

### Electives
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.

## Methods Course
- ENVS 1920 Methods for Interdisciplinary Environmental Research 1

## Capstone
This requirement can be met with a two-semester thesis (ENVS 1970 and ENVS 1971), one or two semester practicum (ENVS 1970 and/or ENVS 1971), one-semester research project (ENVS 1970 or ENVS 1971), or an approved capstone course. Approved capstone courses are project-based senior seminars.

### Total Credits
14-15

1. Students with AP scores of 4 or 5 in Macroeconomics plus a 4 or 5 in Microeconomics may place out of ECON 0110. Students who place out of ECON 0110 must substitute this course with an additional environmental elective.
2. Concentrators with an AP score of 5 in Environmental Science may waive out of ENVS 0490. Students who place out of ENVS 0490 must substitute an additional environmental elective.
3. Students pursuing the Sc.B. must take ECON 1620.

## Requirements for the Sc.B. in Environmental Science:

Requires ALL 14-15 course requirements as listed in the A.B. Program 14-15

### Additional Track specific requirements for the Sc.B. 5

## Track 1 - Air, Climate, and Energy

#### Math: (both required)
- MATH 0090 Introductory Calculus, Part I
- MATH 0100 Introductory Calculus, Part II

#### Environmental Economics:
- ENVS 1350 Environmental Economics and Policy

#### Advanced Climate: choose 1
- GEOL 1510 Introduction to Atmospheric Dynamics
- GEOL 1520 Ocean Circulation and Climate

#### Thermal/Chem.: choose 1
- ENGN 0720 Thermodynamics
- GEOL 1370 Environmental Geochemistry

## Track 2 - Conservation Science and Policy

#### Math:
- MATH 0090 Introductory Calculus, Part I

#### Evolution:
- BIL 0480 Evolutionary Biology

#### Organismal Diversity: choose 1
- BIL 0410 Invertebrate Zoology
- BIL 0430 The Evolution of Plant Diversity
- BIL 0940C Sophomore Seminar: Insect Biology

#### Env. Econ.:
- ENVS 1350 Environmental Economics and Policy

### Tools: choose 1
- GEOL 1320 Introduction to Geographic Information Systems for Environmental Applications
- GEOL 1330 Global Environmental Remote Sensing

## Track 3 - Land, Water & Food Security

#### Math:
- MATH 0090 Introductory Calculus, Part I

#### Chemistry:
- CHEM 0330 Equilibrium, Rate, and Structure

#### Earth/Life Systems: choose 3
- BIL 1470 Conservation Biology
- BIL 1475 Biogeography

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
BIOL 1480 Terrestrial Biogeochemistry and the Functioning of Ecosystems  
ENVS 1491 SES-Terrestrial Ecosystem Analysis  
ENVS 1492 SES-Aquatic Ecosystem Analysis  
GEOL 0240 Earth: Evolution of a Habitable Planet  
GEOL 1110 Estuarine Oceanography  
GEOL 1130 Ocean Biogeochemical Cycles  
GEOL 1370 Environmental Geochemistry  
GEOL 1510 Introduction to Atmospheric Dynamics  
GEOL 1660 Instrumental Analysis with Environmental Applications

**Track 4 - Sustainability in Development**

- Sociology and Politics: choose 1  
  - SOC 1870K Demographics and Development  
  - POLS 0400 Introduction to International Politics  
  - ENVS 1755 Globalization and the Environment

- Critical Perspectives on Development: choose 1:  
  - ANTH 0110 Anthropology and Global Social Problems: Environment, Development, and Governance  
  - SOC 1871D Sophomore Seminar in Sociology of Development

- Economic Perspectives: choose 2  
  - ECON 1110 Intermediate Microeconomics  
  - ENVS 1355 Environmental Issues in Development Economics  
  - ECON 1510 Economic Development  
  - ECON 1530 Health, Hunger and the Household in Developing Countries  
  - ECON 1560 Economic Growth  

- Climate:  
  - GEOL 1350 Weather and Climate

Total Credits: 19-20

1. Students with an AP exam of 4 or 5 on Calc AB may place out of MATH 0090. Students with an AP exam score of 4 or 5 on Calc BC may place out of MATH 0090 and MATH 0100. Students who place out of these courses must substitute an additional environmental elective.

**Honors**

Candidates for honors must have a minimum GPA of 3.3 in their concentration courses at the end of their 6th semester, and must have completed a successful thesis or practicum proposal. Students may apply during the first month of their 7th semester. Honors will be conferred upon the successful completion of the thesis or practicum.

**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.

Each concentrator is required to study the history and experience of more than one group. The focus may be either a United States-based comparative analysis or a United States/international analysis. Each program is to be organized around a set of core courses that help students to identify a set of historical and theoretical questions to be investigated and provide the tools necessary to address those questions. Each concentrator pursues work in either literature and arts, the humanities, or the social sciences, or some combination of these. The work is to be systematic and well-defined. A faculty advisor works closely with the student to ensure that the work is rigorous and intellectually sound. The primary advisors for ethnic studies concentrators are the members of the Ethnic Studies Executive Committee.

**Requirements:**

- ETHN 0500 Introduction to American/Ethnic Studies  
- Any two introductory courses in Latino/a, 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).

- Any three courses drawn from a list of related courses (as approved by the concentration advisor).

- A course from the ETHN 1900 series.

- Students in the concentration should also take a WRIT course from within the concentration, from a list of cross-listed courses, or from a course approved by their advisor.

- Students should also be sure to take a methods course.

Total Credits: 10

1. To be taken in the first semester of the student's final year. The senior seminar is the capstone course and is required of all concentrators.

**French Studies**

The below concentration structure only applies to students who declared prior to the spring 2014 semester. For new declarations please consult the program in French and Francophone Studies.

The Department of French Studies offers three standard concentration tracks. Please note that the following apply to the French Civilization, French Literature and French Language tracks:

1. FREN 0600 or equivalent is a prerequisite.
2. The overall requirement is for a minimum of nine courses (ten for Honors).
3. Up to four courses taken abroad may count for concentration credit.
4. The senior seminar (FREN 1900) must be taken during the senior year. (Requirement for Civilization and Literature concentrations only).

**French Civilization Track**

The concentration in civilization enables students to develop a multifaceted understanding of French and Francophone cultures, histories and contemporary issues. While based in French Studies, the program...
is interdisciplinary, calling for the integration of elective courses in departments such as History, Africana Studies, History of Art, International Relations, Political Science, etc. A minimum of seven courses are to be taken in French Studies.

### Required courses

- An upper-level language course from the FREN 1510 or FREN 1610 series
- A course from the FREN 0750 series
- A course from the FREN 1900 series

### Electives

- Six courses: Four must be in French Studies. A maximum of two may be in other departments, at the 1000-level or higher.¹

| Total Credits | 9 |

¹ French Studies electives are numbered FREN 0760, FREN 1000, and higher. A course from the FREN 1410 series is highly encouraged. A non-exhaustive list of extra-departmental electives is posted on the department's web site.

### French Literature Track

The literature concentration provides a comprehensive view of French and Francophone literature and various types of literary analysis. Introductory courses acquaint students with methods of intellectual inquiry and basic critical approaches. Upper-level courses explore a particular author, literary genre, period, or special topic. Students learn how to use diverse analytical approaches, including semiotic, philosophical, psychological, feminist, and reader-oriented methods of criticism.

### Required courses

- An upper-level language course from the FREN 1510 or FREN 1610 series
- A course from the FREN 0760 series
- A course from the FREN 1000 series
- A course from the FREN 1900 series

### Electives

- Select five courses from the FREN 0750 and FREN 1010 series and higher.

| Total Credits | 9 |

### French Language Track

The concentration in language combines advanced linguistic proficiency with the study of language as a human phenomenon. It combines course work in French Studies with disciplines that analyze the functioning of language (Cognitive and Linguistic Sciences), use linguistic models to study other fields of human behavior (Anthropology), or provide other specialized insight (e.g., Comparative Literature, Philosophy, Modern Communication and Media).

### Required courses

- A course from the FREN 1510 series
- A course from the FREN 1610 series
- A course from the FREN 1020 series
- A course from the FREN 1610 series

### Electives

- An upper-level language course from the FREN 1510 or FREN 1610 series
- A course from the FREN 1410 series

| Total Credits | 9 |

### The Honors Program

Candidacy for honors in French Studies presupposes an outstanding academic record, particularly in the major field. Any of the programs may be expanded into Honors Concentrations with these differences: the student will take a minimum of ten courses and write an Honors Thesis. While normally taken only in the seventh semester, students may opt to re-enroll in FREN 1990 (Senior Thesis) during the last semester, in which case eleven courses are required.

Further information on French Concentration Tracks and the Honors Programs is available on the department's web site or from the Director of Undergraduate Studies.

## French and Francophone Studies

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 following concentration program became effective in the spring 2014 semester and replaces the French Studies concentration.

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 thus achieve advanced proficiency in the language. By the time they graduate, they will have learned to read with knowledge and nuance and produced a varied body of critical work in French.

### 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 from study in France or a Francophone country may count toward the concentration, from either a single semester or an entire year. A year or semester of study abroad in France or a Francophone country is considered an integral part of the concentration and is therefore highly recommended. Our concentrators 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. Through the Brown-in-France program ([http://brown.edu/academics/french-studies/undergraduate/brown-france-program](http://brown.edu/academics/french-studies/undergraduate/brown-france-program)), administered by OIP and departmental faculty, students can enroll directly in French institutions.

<table>
<thead>
<tr>
<th>FREN 0600</th>
<th>Writing and Speaking French II (is accepted for concentration credit)</th>
</tr>
</thead>
</table>

### Required Courses

- One and no more than two of the following 0720, 0750, 0760 series gateway courses: ¹
  - FREN 0720A \(\text{De l'Amour courtois au désir postmoderne}\)
  - FREN 0750A \(\text{Lost in Translation: Les voyageurs français en Amérique de Chateaubriand à Baudrillard}\)
  - FREN 0750B \(\text{Au carrefour des sciences sociales: introduction à l'interprétation de la fiction littéraire}\)
  - FREN 0750C \(\text{Cinéma et histoire}\)
  - FREN 0750D \(\text{Nous et les autres: les Français et le monde de la Renaissance à la Révolution}\)
  - FREN 0750E \(\text{Lost in Translation: Representations of America by French Writers}\)
  - FREN 0750F \(\text{L'idée de l'empire dans l'imaginaire français}\)
  - FREN 0760A \(\text{Introduction à l'analyse littéraire}\)

- One of the following: ¹
  - FREN 1510A \(\text{Advanced Oral and Written French: Traduction}\)

---

¹ A non-exhaustive list of extra-departmental electives is posted on the department's web site.
At least two 1000-level courses offered in the Department of French Studies (excluding FREN 1510 and FREN 1900) are required.

Up to two 1000-level courses taught in English offered by French Studies or other departments at Brown are eligible for concentration credit. (Appropriate courses on French or Francophone topics from other departments must be approved by the concentration advisor. Departments in which electives are typically taken include Africana Studies, Anthropology, Art History, Comparative Literature, English, History, Linguistics, Modern Culture and Media.)

At least one course must cover a pre-Revolutionary period.

FREN 1030A L’univers de la Renaissance: XVe et XVIe siècles
FREN 1030B The French Renaissance: The Birth of Modernity?
FREN 1040A Civilité et littérature
FREN 1040B Pouvoirs de la scène: le théâtre du XVIIe siècle
FREN 1040C Le Grand Siècle à l’écran
FREN 1040D Molîère et son monde
FREN 1050A “Family Values”: Représentations littéraires de la famille au 18ème siècle
FREN 1050B Fictions de l’individu
FREN 1050C Le Siècle des Lumières: Culture, Pensée, Société
FREN 1050D The Age of Voltaire: Culture, Pensée, Société
FREN 1050E French Lovers: Séduction et libertinage sous l’Ancien Régime
FREN 1050F Espace public; espace privé
FREN 1050G Le corps des Lumières
FREN 1050H The Age of Voltaire: Lumières et modernité
FREN 1100F Contes et nouvelles du Moyen Âge
FREN 1100G Old French Language and Literature Seminar
FREN 1100I Hostages and Prisoners of War in Medieval French Literature
FREN 1100J Histoires et contes du Moyen Age

At least one course a post-Revolutionary period.

FREN 1060A Décadence
FREN 1060B Gender and the Novel
FREN 1060C La texte réaliste
FREN 1060D L’Orient littéraire
FREN 1060E Gender, Sexuality and the Novel
FREN 1060F Paris: Capital of the 19th Century
FREN 1060G Boulevard du crime
FREN 1070A Avant-Gardes
FREN 1070B Emergent literature: Postcolonial Nations and Cultural Identity
FREN 1070C Figures du roman français au XX siècle
FREN 1070D Le roman français au présent
FREN 1070E Littérature, appartenance et identité
FREN 1070F Nations of Writers
FREN 1070G Writing the Self: Memory, Childhood and the Novel
FREN 1070H Literature and Social Thought: Le Roman Policier
FREN 1070I Histoires d’animaux

Total Credits 10

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search.
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

Select three of the following:

- CHEM 0330 Equilibrium, Rate, and Structure (or advanced placement)
- MATH 0090 Introductory Calculus, Part I
- PHYS 0050 Foundations of Mechanics
- PHYS 0060 Foundations of Electromagnetism and Modern Physics (or more advanced)
- ENGN 0030 Introduction to Engineering
- ENGN 0040 Dynamics and Vibrations (or more advanced)
- BIOL 0200 The Foundation of Living Systems (or more advanced)

Concentration courses

- GEOL 0220 Physical Processes in Geology
- GEOL 0230 Geochemistry: Earth and Planetary Materials and Processes
- GEOL 0240 Earth: Evolution of a Habitable Planet
- Select two of the following:
  - GEOL 1410 Mineralogy
  - GEOL 1420 Petrology
  - GEOL 1450 Structural Geology
- Select two of the following:
  - GEOL 0310 Fossil Record
  - GEOL 1110 Estuarine Oceanography
  - GEOL 1240 Stratigraphy and Sedimentation
  - GEOL 1330 Global Environmental Remote Sensing
  - GEOL 1350 Weather and Climate
  - GEOL 1370 Environmental Geochemistry
- A field course

Select two additional courses from upper level geological sciences, mathematics, or supporting sciences with approval from the departmental concentration advisor.

Total Credits 13

Standard program for the Sc.B. degree

This program is recommended for students interested in graduate study and careers in the geosciences and related fields.

Basic supporting science courses

Select two courses in mathematics at the level of:

- MATH 0090 Introductory Calculus, Part I
- MATH 0100 Introductory Calculus, Part II (or more advanced)

or another more advanced math or statistics course

- CHEM 0330 Equilibrium, Rate, and Structure (or advanced placement)

Select one of the following Series:

- PHYS 0050 Foundations of Mechanics
- PHYS 0060 Foundations of Electromagnetism and Modern Physics (or more advanced)
- ENGN 0030 Introduction to Engineering
- & ENGN 0040 Dynamics and Vibrations (or more advanced)

Concentration courses

- GEOL 0220 Physical Processes in Geology
- GEOL 0230 Geochemistry: Earth and Planetary Materials and Processes
- GEOL 0240 Earth: Evolution of a Habitable Planet
- GEOL 0310 Fossil Record
- GEOL 1240 Stratigraphy and Sedimentation
- GEOL 1410 Mineralogy
- GEOL 1420 Petrology
- GEOL 1450 Structural Geology
- A field course

Select four courses from upper level geological sciences, mathematics, or supporting sciences with approval from the departmental concentration advisor.

GEOL 1970 Individual Study of Geologic Problems (Senior Research Thesis)

Total Credits 19

1 Advanced placement may be substituted for the first semester of physics.

Geology-Biology

Geology-Biology involves study of the interactions of the Earth and its hydrosphere and atmosphere with the great diversity of life forms, and how they have evolved and influenced one another over the entire history of the Earth. Many courses emphasize climate and biogeochemistry; this concentration is a good one for students interested in quantitative approaches to environmental science. Students take a basic suite of geoscience courses and at least 4 bio courses of their choosing, plus some supporting math and science courses; the AB degree requires a total of 14 courses and the ScB degree requires a total of 19, including one semester of research. There is a strong emphasis on active and collaborative learning, and on practice in communication. There are many opportunities for students to do research work (typically in paid positions) during the academic year or in the summer, in areas such as determining the causes of major extinctions, and using paleoenvironmental records to determine the vulnerability of different regions of the globe to droughts and other processes that strongly affect society.

Standard program for the A.B. degree

This program provides a broad introduction to the geologic and biologic processes that shape the Earth and our environment. It is recommended for students seeking a liberal education and a general understanding of Earth processes, including the evolution of climate and the environment, global environmental change and Earth history. The program prepares students for careers in environmental science, geology, ecology, oceanography, and global change.

Basic supporting science courses

- BIOL 0200 The Foundation of Living Systems (or more advanced)
- CHEM 0330 Equilibrium, Rate, and Structure (or advanced placement)

Select two courses in mathematics and/or physics at the level of:

- MATH 0090 Introductory Calculus, Part I (or more advanced)
- PHYS 0050 Foundations of Mechanics (or more advanced)
- ENGN 0030 Introduction to Engineering (or more advanced, or courses in data analysis and statistics)

Concentration courses

- GEOL 0220 Physical Processes in Geology
- GEOL 0230 Geochemistry: Earth and Planetary Materials and Processes
- GEOL 0240 Earth: Evolution of a Habitable Planet
- GEOL 1240 Stratigraphy and Sedimentation
- SELECT three Biology courses from the following:
  - BIOL 0390 Vertebrate Evolution and Diversity
  - BIOL 0410 Invertebrate Zoology

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Standard program for the Sc.B. degree

This program is recommended for students interested in graduate study and careers in the Earth, Environmental, or Biological Sciences. It is relevant for students interested in environmental science, paleoclimate, Earth systems science, biogeochemistry, oceanography, or paleobiology.

Five basic supporting science courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 0415</td>
<td>Microbes in the Environment</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 0420</td>
<td>Principles of Ecology</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 0430</td>
<td>The Evolution of Plant Diversity</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 0440</td>
<td>Plant Organism</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 0480</td>
<td>Evolutionary Biology</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 1470</td>
<td>Conservation Biology</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 1480</td>
<td>Terrestrial Biogeochemistry and the Functioning of Ecosystems</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 1500</td>
<td>Plant Physiological Ecology</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 1880</td>
<td>Comparative Biology of the Vertebrates</td>
<td>1</td>
</tr>
</tbody>
</table>

Three geological sciences courses from the following: 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 0580</td>
<td>Foundations of Physical Hydrology</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 1110</td>
<td>Estuarine Oceanography</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 1120</td>
<td>Paleoeochemanography</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 1130</td>
<td>Ocean Biogeochemical Cycles</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 1150</td>
<td>Limnology: The Study of Lakes</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 1330</td>
<td>Global Environmental Remote Sensing</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 1350</td>
<td>Weather and Climate</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 1370</td>
<td>Environmental Geochemistry</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 1380</td>
<td>Environmental Stable Isotopes</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 1510</td>
<td>Introduction to Atmospheric Dynamics</td>
<td>1</td>
</tr>
</tbody>
</table>

Fourteen (14) concentration courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 0220</td>
<td>Physical Processes in Geology</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 0230</td>
<td>Geochemistry: Earth and Planetary Materials and Processes</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 0240</td>
<td>Earth: Evolution of a Habitable Planet</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 1240</td>
<td>Stratigraphy and Sedimentation</td>
<td>1</td>
</tr>
</tbody>
</table>

Three biology courses from the following: 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 0390</td>
<td>Vertebrate Evolution and Diversity</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 0410</td>
<td>Invertebrate Zoology</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 0415</td>
<td>Microbes in the Environment</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 0420</td>
<td>Principles of Ecology</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 0430</td>
<td>The Evolution of Plant Diversity</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 0440</td>
<td>Plant Organism</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 0480</td>
<td>Evolutionary Biology</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 1470</td>
<td>Conservation Biology</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 1480</td>
<td>Terrestrial Biogeochemistry and the Functioning of Ecosystems</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 1500</td>
<td>Plant Physiological Ecology</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 1880</td>
<td>Comparative Biology of the Vertebrates</td>
<td>1</td>
</tr>
</tbody>
</table>

Three geological sciences courses from the following: 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 0580</td>
<td>Foundations of Physical Hydrology</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Credits 14

Geology-Chemistry

Geochemistry involves two different emphases. Low-temperature geochemistry involves study of chemical and biochemical processes on and near Earth's surface, including land, oceans and freshwater bodies, and how the geochemical record reflects climate conditions. High-temperature geochemistry includes study of formation and evolution of the Earth and other planets, magma formation and properties, volcanic activity, and metamorphism. The AB degree requires a total of 14 courses, including 5 geoscience courses and 4 chemistry courses, and a few supporting math and physics courses. The ScB degree requires a total of 20 courses, including 7 geoscience courses and 4 chemistry courses, either with an organic or an inorganic focus, plus some supporting math and physics courses and one research course. Geoscience courses emphasize a process-oriented approach, with hands-on experiences in labs and on field trips. There is a strong emphasis on active and collaborative learning, and on practice in communication. There are many opportunities for students to do research work for pay during the academic year or in the summer, in areas such as experimental studies of magma formation, and analyzing lunar rock samples for water content.

Standard program for the A.B. degree

Recommended for students seeking a liberal education and interested in applying physical and chemical principles toward an understanding of Earth history, Earth processes, and environmental and resource issues.

Basic supporting science courses

Select two courses in mathematics at the level of: 2

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0090</td>
<td>Introductory Calculus, Part I</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0100</td>
<td>Introductory Calculus, Part II or advanced courses in data analysis</td>
<td>1</td>
</tr>
</tbody>
</table>

Concentration courses

Select one of the following Series: 2

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 1110</td>
<td>Estuarine Oceanography</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 1120</td>
<td>Paleoeochemanography</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 1130</td>
<td>Ocean Biogeochemical Cycles</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 1150</td>
<td>Limnology: The Study of Lakes</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 1330</td>
<td>Global Environmental Remote Sensing</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 1350</td>
<td>Weather and Climate</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 1370</td>
<td>Environmental Geochemistry</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 1380</td>
<td>Environmental Stable Isotopes</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 1510</td>
<td>Introduction to Atmospheric Dynamics</td>
<td>1</td>
</tr>
</tbody>
</table>

Two additional courses from upper level geological sciences, math, or supporting sciences with approval from the department concentration advisor. 2

Total Credits 14
Standard program for the Sc.B. degree

This program is recommended for students interested in graduate study and careers in geochemistry and related fields.

**Basic Supporting Science Courses:**
Select two courses in mathematics at the level of:  
MATH 0090 Introductory Calculus, Part I (or more advanced)  
MATH 0100 Introductory Calculus, Part II (or more advanced)  
CHEM 0330 Equilibrium, Rate, and Structure  

Select one of the following series:  
2

<table>
<thead>
<tr>
<th>Physics Courses</th>
<th>Chemistry Courses</th>
</tr>
</thead>
</table>
| PHYS 0050 & PHYS 0060 Foundations of Mechanics & Foundations of Electromagnetism and Modern Physics  
ENG 0030 Introduction to Engineering & ENG 0040 Dynamics and Vibrations  
or a more advanced course |

**Concentration Courses:**
Either the geochemistry/inorganic option or the geochemistry/organic option:  
10

**Geochemistry/Inorganic Option:**

<table>
<thead>
<tr>
<th>GEOL 0220</th>
<th>Physical Processes in Geology</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 0230</td>
<td>Geochemistry: Earth and Planetary Materials and Processes</td>
</tr>
<tr>
<td>GEOL 0240</td>
<td>Earth: Evolution of a Habitable Planet</td>
</tr>
<tr>
<td>GEOL 1130</td>
<td>Ocean Biogeochemical Cycles</td>
</tr>
<tr>
<td>or GEOL 1370</td>
<td>Environmental Geochemistry</td>
</tr>
<tr>
<td>GEOL 1410</td>
<td>Mineralogy</td>
</tr>
<tr>
<td>GEOL 1420</td>
<td>Petrology</td>
</tr>
<tr>
<td>GEOL 1240</td>
<td>Stratigraphy and Sedimentation</td>
</tr>
<tr>
<td>GEOL 1330</td>
<td>Global Environmental Remote Sensing</td>
</tr>
<tr>
<td>GEOL 1450</td>
<td>Structural Geology</td>
</tr>
<tr>
<td>CHEM 0350</td>
<td>Organic Chemistry</td>
</tr>
<tr>
<td>CHEM 0500</td>
<td>Inorganic Chemistry</td>
</tr>
<tr>
<td>CHEM 1060</td>
<td>Advanced Inorganic Chemistry</td>
</tr>
<tr>
<td>CHEM 1140</td>
<td>Physical Chemistry: Quantum Chemistry</td>
</tr>
<tr>
<td>CHEM 1150</td>
<td>Physical Chemistry: Thermodynamics and Statistical Mechanics</td>
</tr>
</tbody>
</table>

**Geochemistry/Organic Option:**

<table>
<thead>
<tr>
<th>GEOL 0220</th>
<th>Physical Processes in Geology</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 0230</td>
<td>Geochemistry: Earth and Planetary Materials and Processes</td>
</tr>
<tr>
<td>GEOL 0240</td>
<td>Earth: Evolution of a Habitable Planet</td>
</tr>
<tr>
<td>GEOL 1130</td>
<td>Ocean Biogeochemical Cycles</td>
</tr>
<tr>
<td>GEOL 1370</td>
<td>Environmental Geochemistry</td>
</tr>
<tr>
<td>GEOL 1410</td>
<td>Mineralogy</td>
</tr>
<tr>
<td>GEOL 1240</td>
<td>Stratigraphy and Sedimentation</td>
</tr>
<tr>
<td>GEOL 1330</td>
<td>Global Environmental Remote Sensing</td>
</tr>
<tr>
<td>GEOL 1380</td>
<td>Environmental Stable Isotopes</td>
</tr>
<tr>
<td>CHEM 0350</td>
<td>Organic Chemistry</td>
</tr>
<tr>
<td>CHEM 0360</td>
<td>Organic Chemistry</td>
</tr>
</tbody>
</table>

Plus one chemistry course:  

| GEOL 1970 | Individual Study of Geologic Problems |

Total Credits: 20

---

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 4 math and applied courses; students can choose courses from both solid Earth geophysics and environmental geophysics. Geoscience courses emphasize an analytical and process-oriented approach, with hands-on experiences in labs and on field trips. Active and collaborative learning is encouraged, as is practice in written and oral communication. There are many opportunities for students to engage in research (typically in paid positions) during the academic year or in the summer, in areas such as analysis of seismic waves in subduction zones, theoretical modeling of convection in the Earth's mantle, interpreting the cause of gravity anomalies in southern California, and remote sensing of warming in Narragansett Bay.

**Standard program for the A.B. degree**

Recommended for students seeking a liberal education and interested in applying physical and mathematical principles toward an understanding of the planets, Earth and the environment.

**Basic supporting science courses**
Select one of the following Series:  
2

<table>
<thead>
<tr>
<th>Physics Courses</th>
<th>Chemistry Courses</th>
</tr>
</thead>
</table>
| PHYS 0050 & PHYS 0060 Foundations of Mechanics & Foundations of Electromagnetism and Modern Physics  
ENG 0030 Introduction to Engineering & ENG 0040 Dynamics and Vibrations  
or a more advanced course |

**Concentration courses**

<table>
<thead>
<tr>
<th>GEOL 0220</th>
<th>Physical Processes in Geology</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 0230</td>
<td>Geochemistry: Earth and Planetary Materials and Processes</td>
</tr>
<tr>
<td>GEOL 0240</td>
<td>Earth: Evolution of a Habitable Planet</td>
</tr>
<tr>
<td>GEOL 1130</td>
<td>Ocean Biogeochemical Cycles</td>
</tr>
<tr>
<td>GEOL 1370</td>
<td>Environmental Geochemistry</td>
</tr>
<tr>
<td>GEOL 1410</td>
<td>Mineralogy</td>
</tr>
<tr>
<td>GEOL 1420</td>
<td>Petrology</td>
</tr>
<tr>
<td>GEOL 1240</td>
<td>Stratigraphy and Sedimentation</td>
</tr>
<tr>
<td>GEOL 1330</td>
<td>Global Environmental Remote Sensing</td>
</tr>
<tr>
<td>GEOL 1450</td>
<td>Structural Geology</td>
</tr>
<tr>
<td>CHEM 0350</td>
<td>Organic Chemistry</td>
</tr>
<tr>
<td>CHEM 0500</td>
<td>Inorganic Chemistry</td>
</tr>
<tr>
<td>CHEM 1060</td>
<td>Advanced Inorganic Chemistry</td>
</tr>
<tr>
<td>CHEM 1140</td>
<td>Physical Chemistry: Quantum Chemistry</td>
</tr>
<tr>
<td>CHEM 1150</td>
<td>Physical Chemistry: Thermodynamics and Statistical Mechanics</td>
</tr>
</tbody>
</table>

Total Credits: 14

**Standard program for the Sc.B. degree**

This program is recommended for students interested in graduate study and careers in geophysics and related fields.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Basic supporting science courses
Select one of the following Series:

PHYS 0050 & PHYS 0060 Foundations of Mechanics and Foundations of Electromagnetism and Modern Physics
PHYS 0070 & PHYS 0160 Analytical Mechanics and Introduction to Relativity and Quantum Physics
ENGN 0030 & ENGN 0040 Introduction to Engineering and Dynamics and Vibrations
CHEM 0330 Equilibrium, Rate, and Structure (or advanced placement)

Concentration courses
GEOL 0220 Physical Processes in Geology
GEOL 0230 Geochemistry: Earth and Planetary Materials and Processes
GEOL 0250 Computational Approaches to Modelling and Quantitative Analysis in Natural Sciences: An Introduction
GEOL 1450 Structural Geology
GEOL 1610 Solid Earth Geophysics
GEOL 1620 Continuum Physics of the Solid Earth

Select two of the following:

GEOL 1410 Mineralogy
GEOL 1420 Petrology
GEOL 1560 Global Tectonics
GEOL 1650 Earthquake Seismology
GEOL 1810 Physics of Planetary Evolution
GEOL 0240 Earth: Evolution of a Habitable Planet
GEOL 1330 Global Environmental Remote Sensing
GEOL 1350 Weather and Climate
GEOL 1580 Quantitative Elements of Physical Hydrology

A field course

Select one of the following Series:

PHYS 0470 & PHYS 0500 Electricity and Magnetism and Advanced Classical Mechanics
ENGN 0510 & ENGN 1370 Electricity and Magnetism and Advanced Engineering Mechanics

Four courses in mathematics, including:

APMA 0330 & APMA 0340 Methods of Applied Mathematics I, II

Two additional courses from upper level geological sciences, mathematics, or supporting sciences with approval from the departmental concentration advisor.

GEOL 1970 Individual Study of Geologic Problems

Total Credits 20

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 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.

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 coursework 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:**

Four (4) courses including:

- MATH 0090 Introductory Calculus, Part I (or equivalent placement)
- OR MATH 0050 Analytic Geometry and Calculus and MATH 0060 Analytic Geometry and Calculus
- OR MATH 0100 Introductory Calculus, Part II or MATH 0170 Advanced Placement Calculus
- CHEM 0330 Equilibrium, Rate, and Structure
- BIOL 0200 The Foundation of Living Systems

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Statistics course chosen with advisor's help. 1

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:
Five (5) courses, including: 5
Genetics, which can be fulfilled in the following ways:
- OR -
  BIOL 0470 Evolutionary Biology
  & BIOL 0500 and Cell and Molecular Biology
- OR -
  BIOL 0480 Evolutionary Biology
  & BIOL 0510 and Introductory Microbiology
- OR -
  BIOL 0480 Evolutionary Biology
  & BIOL 0280 and Introductory Biochemistry
Select one course in structure/function/development such as:
  BIOL 0400 Biological Design: Structural Architecture of Organisms
  BIOL 0800 Principles of Physiology
  BIOL 1310 Developmental Biology
  BIOL 1800 Animal Locomotion
  BIOL 1880 Comparative Biology of the Vertebrates
  NEUR 0010 The Brain: An Introduction to Neuroscience

One course in organisinal/population biology such as:
  BIOL 0370 - Experimental Evolution
  BIOL 0380 The Ecology and Evolution of Infectious Disease
  BIOL 0390 Vertebrate Evolution and Diversity
  BIOL 0400 Biological Design: Structural Architecture of Organisms
  BIOL 0410 Invertebrate Zoology
  BIOL 0415 Microbes in the Environment
  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

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: 4

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

1) Advisor approved senior seminar or advanced course related to the theme

2) One semester of independent research/independent study (BIOL 1950 or BIOL 1960); in the case of a senior honors thesis, both BIOL 1950 and BIOL 1960 can be used as the capstone.

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.

APPROVED COURSES:
- 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.

CAPSTONE: See http://www.brown.edu/academics/biology/undergraduate-education/ for more information on the Capstone Activity.

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 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 Department of Hispanic Studies offers a standard concentration program in Hispanic Literatures and Culture, which requires comprehensive work in the Spanish language and in-depth study of Hispanic literatures and cultures. 700 level courses provide basic tools for critical analysis and opportunities for advanced Spanish language skill-development, while upper (1000) level courses offer opportunities to explore a particular author, genre, period, or special topic, and to master diverse analytical approaches. The overall requirement is a minimum of ten courses.

Prerequisite
HISP 0600 Advanced Spanish II (Pre-requisite)

Required courses: one of the following 0700 level courses
HISP 0730 Early and Contemporary Writers of Spanish America
HISP 0740 Intensive Survey of Spanish Language
HISP 0760 Transatlantic Crossings: Readings in Hispanic Literatures

Up to two more 0700 level courses including, additionally:
HISP 0710 Culture and Advanced Spanish Language (any course in the series)
HISP 0750 Topics in Hispanic Culture/Civilization (any course in the series)

Elective 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.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Concentrators are reminded that up to four related courses from Study Abroad, transfer credit, and other departments at Brown (e.g., Comparative Literature, History, Ethnic Studies, Anthropology) may be applied toward the concentration in Hispanic Studies as long as they deal with Spanish or Latin American themes and/or Peninsular or Latin American culture. While there is a list of acceptable related Brown courses on the Hispanic Studies website, individual courses may be discussed with the Concentration Advisor on a case by case basis.

Total Credits = 10

**E-Portfolio:** All Hispanic Studies concentrators will be expected to complete the required sections of the concentration E-Portfolio in ASK. 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.

Students should begin thinking about an Honors Thesis or Project in their third year at Brown. Those who study in Spain or Latin America in the spring of their junior year may want to write to professors they might want to work with, indicating their potential thesis interests. Ideally, students will begin to research topics and prepare a reading list for the thesis during the summer before their senior year.

The Department expects students to have two readers for their honors thesis or project. Typically, the first reader and advisor for the project will be a faculty member in Hispanic Studies. Both readers and the students will agree on the amount of consultation required and deadlines for submitting drafts and completing readings. It is important that all parties have a clear sense of procedures and deadlines.

Students planning to write an Honors Thesis in Hispanic Studies must submit the titles and abstracts of their project, along with the names and signatures of their advisor and second reader by October 14. If the honors proposal is accepted, students will register in HISP 1980 for the spring semester.

Most students require two semesters to plan and complete an Honors Thesis or Project. Students will complete at least an outline and a bibliography for their project during the fall semester. Optimally, a substantial portion of the writing will also be submitted to the advisor before Winter Break. The second semester is devoted to completing the writing or the project work, and a full draft of the thesis or project must be submitted to the advisor by March 13.

The final, complete version of the thesis or project must be submitted by April 13. Students should submit one copy to each reader and one electronic and one hard copy to the Department.

**Important dates:**

- October 14: Honors Thesis Proposal due
- December 14: Detailed outline and bibliography due
- March 13: Full draft of thesis to Advisor
- April 13: Final, complete version of the thesis due

**Concentration Advisor:**

Professor Beth Bauer is the Concentration Advisor for the Department.

**History**

History is the study of how societies and cultures across the world change over time. History concentrators learn to write and think critically, and to understand issues from a variety of perspectives. The department offers a wide variety of courses concerned with changes in human experience through time, ranging from classical Greek and Roman civilizations to the histories of Europe, the Americas, and Asia. While some courses explore special topics, others concentrate on the history of a particular country (e.g., Russia or France) or period of time (e.g., the Middle Ages or the Renaissance). By taking advantage of our diverse course offerings, students can engage in and develop broad perspectives on the past and the present.

**Concentration Requirements (for students graduating after spring 2015)**

1. **Basic Requirement:** A concentration in History consists of a minimum of ten semester-long courses; of these, at least eight must be offered by the Brown University History Department, including cross-listed courses. (Students who spend more than one semester at another institution, must take at least 7 HIST courses - see “Transferring Courses” below.)

2. **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.

3. **Field of Focus:** Upon declaring a concentration in History, students must define the area that will be the primary focus of their program. The primary field of focus must include a minimum of four courses. Students who choose a geographical focus must provide a thematic or chronological rationale for the coherence of courses with a broad chronological span.

4. **Geographical Distribution:** Concentrators must take at least two courses in three different geographic areas. These are:

   - 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.

5. **Chronological Distribution:** All concentrators must complete at least two courses designated as “P” (for pre-modern).

6. **Capstone Seminar:** All concentrators must complete at least one capstone seminar (these will be HIST 1960s and HIST 1970s series courses in the new numbering system.) 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.

7. **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; courses
transferred from other institutions may be applied toward the chronological distribution requirement so long as they clearly are history courses.

It is normally expected that students will have declared their intention to concentrate in History and have their concentration programs approved before undertaking study elsewhere. Students taking courses in Brown-run programs abroad automatically receive University transfer credit, but concentration credit is granted only with the approval of a concentration advisor. Students taking courses in other foreign-study programs or at other universities in the United States must apply to the Transfer Credit Advisor. Final transfer and concentration credit will not be granted until the student successfully completes the course(s) and returns to Brown. Approval by the department advisor for transfer credit will be contingent on satisfactory course content and performance (to be demonstrated by documents such as a transcript showing the grade, syllabi, notes, papers, exams, etc.).

8. 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.

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.” Students who complete honors requirements of HIST 1992 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.” Students who contemplate enrolling in the honors program in History should consult the honors 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 receive essential training in perceptual, historical, and critical analysis. Concentrators often study abroad for first-hand knowledge of works of art and monuments as well as for exposure to foreign languages and cultures. Study abroad should be planned in consultation with the concentration advisor in order to make sure that foreign course work will relate meaningfully to the concentrator’s program of study.

Four core general lecture courses, numbered HIAA 0020 – HIAA 0940. The courses should be distributed between the three of the seven available areas of the discipline: Ancient; Medieval; Islamic; East Asian; Latin American; Early Modern (ca. 1400-1800); Modern, Contemporary.

Two core seminar courses, numbered between HIAA 1040 and HIAA 1890.

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

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/IB-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.

One seminar or independent study in architectural history, numbered between HIAA 1100 and HIAA 1890, and marked with an “A” in the course description.

A project seminar from the HIAA 1910 series. This must be taken in the junior or senior year.

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

You will be expected to demonstrate reading proficiency in a language other than English. By learning the language of another culture you will gain a deeper understanding of its art, literature and history. Aside from this, knowledge of a foreign language will equip you with a skill essential for pursuing art historical studies in a professional environment or graduate school. The requirement can be fulfilled by either passing an 0500 level language course at Brown or by demonstrating an 0500 level reading ability in a placement test administered by Brown University language department. (Students who declared their concentration before August 2013 are expected to demonstrate proficiency at the 0400 level).

Self Assessment

All concentrators are required to write an essay when they file for the concentration that lays out what they expect to gain from the course of study they propose. All second semester seniors will be required to write a final essay that takes measure of what they have learned from the concentration, including their capstone and other experiences relating to their study of the history of art and architecture. For students doing a capstone, their capstone director will read this essay. A department subcommittee will read essays written by students not electing to do a capstone. The self-assessment should be turned in with a revised list of courses actually taken and the final paperwork for concentration approval.

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 resume 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

Although Brown offers nearly 80 concentrations, a small number of students have academic interests that fall beyond the scope of these offerings. Brown allows these students to design their own concentrations through the Independent Concentration (IC) program. The IC program is for exceptionally dedicated students who are willing to spend extra time and effort creating a “new” concentration, representing a coherent field of study that Brown does not offer. Such fields may include emerging topics, such as “sustainable technology,” or broader interdisciplinary areas, such as “Deaf and Disability Studies.” Students interested in pursuing an Independent Concentration are strongly encouraged to review the IC website (http://brown.edu/academics/college/advising/curricular-resource-center/independent-concentrations/independent-concentrations), speak with the Curricular Resource Center (http://brown.edu/Administration/Dean_of_the_College/crc)’s IC Coordinator and with the IC Dean (Dean Chang (margaret_chang@brown.edu)) and to review previous proposals in the CRC’s library.

Independent concentration proposals are reviewed and approved by the College Curriculum Council.

Pre-Approved Tracks: If the track is jointly offered it requires sign off from both departments. Prospective concentrators should complete the declaration process in ASK by selecting Independent Concentration, followed by the appropriate track and track advisor.

Modern Culture and Media-French Track (This pre-approved track has been discontinued effective Spring 2014)

This track is offered jointly by the Department of French Studies and the Department of Modern Culture and Media. It is intended for students who wish to receive special preparation in French language and literature, with emphasis on contemporary semiotic theory, and those students whose primary interest is in theory and who wish to strengthen their knowledge of French language, literature, and culture. In addition to a Senior Thesis, students will take five courses in French and five in Modern Culture and Media. Students wishing to declare this concentration must select an advisor from each of the two sponsoring departments.

Required courses:

Select two of the following:

- FREN 0500 Writing and Speaking French I
- FREN 0520 Introduction to the Literary Experience
- FREN 0600 Writing and Speaking French II
- A course from the FREN 1510 series

Three upper level courses in French literature, language and civilization.

- MCM 0110 Theory and Analysis of Modern Culture and Media
- Two or three additional courses in semiotic theory
- One or two courses in semiotic production

Total Credits: 9-11

Honors: Students who qualify for Honors in the Independent Concentration, Modern Culture and Media-French track are eligible to apply to do an Honors project or thesis. Applications will be screened by both MCM and French Studies. (Application forms should be submitted by prospective honors students in the beginning of the 7th semester. They are available in the MCM office.) If approved, a student must then register for or FREN 1990, a one-credit thesis course in which they complete the Honors project.

Modern Culture and Media-German Track (This pre-approved track has been discontinued effective Spring 2014)

This track is offered jointly by the Department of German Studies and the Department of Modern Culture and Media. It offers interested students an opportunity to explore the phenomenon of “Germany” using the approaches of cultural theory. Students will take a number of required courses through which they learn the basic theories and approaches to issues of language and meaning, subjectivity and identity, ideology and consciousness, gender and sexuality, and theories of narrativity. Other courses offer the student an overview of the German textual traditions in literature, philosophy, music, film, and the fine arts. German language proficiency is expected of all participants in the program and may be gained by a variety of approaches available within the German Studies Department. Overseas study at Berlin’s Humboldt University or in special cases at an equivalent institution is considered a normal part of this joint concentration. All students will be required to complete a final project.

Requirements in addition to Senior Thesis:

Twelve courses are required.

Prerequisites

Select two of the following:

- MCM 0110 Theory and Analysis of Modern Culture and Media
- MCM 0230 Digital Media
- MCM 0240 Television Studies
- MCM 0250 Visuality and Visual Theories
- MCM 0260 Cinematic Coding and Narrativity
- MCM 1110 The Theory of the Sign

A course from the GRMN 0900 series

Requirements

Two courses in German Studies at the 1000-level with topics relevant to the focus area.

- GRMN 1990 Senior Conference or MCM 1990 Honors Thesis/Project in Modern Culture and Media

Select six of the following:

- COLT 1210 Introduction to the Theory of Literature (strongly recommended)
- HIAA 0850 Modern Architecture
- A course from the GRMN 1440 series: Studies in Literary Genre
- A course from the GRMN 1450 series: Seminars in German Literature
- A course from the MCM 1200 series: Special Topics in Modern Culture and Media
- A course from the MCM 1500 Series: Senior Seminars in Modern Culture and Media
- PHIL 1660 Metaphysics

Total Credits: 12

Students are encouraged to examine the course offerings carefully in consultation with their advisors to select courses that augment their concentration and, in particular, inform their final projects. In addition, students will normally complete two to four of these electives while studying in Berlin or at another location approved by the concentration advisor.

Students who are unable to study in Germany will be required to demonstrate reading knowledge of German.

Students are encouraged to consult with the concentration advisors for German Studies and Modern Culture and Media as early as possible in order to begin planning their course work sequences and their final project.

Modern Culture and Media-Italian Track (This pre-approved track has been discontinued effective Spring 2014)

This track is offered jointly by the Italian Studies Department and the Department of Modern Culture and Media. The program includes 11 courses.

Requirements in addition to Senior Thesis:

Six courses from the Italian Studies Department

- ITAL 0950 Introduction to Italian Cinema: Italian Film and History

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
A course from the ITAL 1000 series: Studies in Contemporary Italian Culture 1
A course from the ITAL 1060 series: Realism and Utopia in Italian Film 1
Select three of the following: 3

ITAL 1340 The Panorama and 19th-Century Visual Culture
ITAL 1390 Modern Italy
A course from the ITAL 1350 series: Contemporary Italian Literature

Five courses from the Modern Culture and Media Department
Any three of the following: 3

MCM 0110 Theory and Analysis of Modern Culture and Media
MCM 0230 Digital Media
MCM 0240 Television Studies
MCM 0250 VISU Studio
MCM 0260 Cinematic Coding and Narrativity
MCM 1110 The Theory of the Sign

At least one course from the MCM 1200 series 1
At least one course from the MCM 1500 series 1
Total Credits 11

Students are encouraged to consider study at the University of Bologna through the Brown Program in Bologna, though this is by no means a requirement for fulfillment of the program. Courses taken at the University of Bologna may substitute for Italian Studies and MCM courses (no more than 2 from either department) at the discretion of the student's advisors.

Honors: Honors will require a thesis and will normally be undertaken by signaling intent during the junior year.

Statistics Track
Statistics has a theoretical core surrounded by a large number of domains of application in diverse fields, including economics, psychology, biology and medicine, sociology, population sciences, government, anthropology, astronomy, physics, chemistry, geology, engineering, and computer science. At Brown, graduate training in Biostatistics is available in the Department of Biostatistics and in Mathematical Statistics in the Division of Applied Mathematics. In addition, several other departments are offering introductory and even advanced courses in statistical methodology, including the Departments of Economics, Sociology, Cognitive, Linguistic and Psychological Sciences, Political Science and Computer Science. The Undergraduate program in Statistics, established in 1997, is an interdepartmental program, administered by the Department of Biostatistics and leading to the Sc.B. degree. The program is constructed on several premises: that statistics is a scientific discipline in its own right, with its characteristic methodology and body of knowledge; that it is essentially concerned with the art and science of the analysis of data; and that it is best taught in conjunction with specific substantive applications. To this end, the concentration is designed to provide a foundation of basic concepts and methodology, requiring students to take core courses in the discipline itself, and to expose students to a cross-section of statistical applications, through courses (of their own selection and subject to approval) in the social, biological, and natural sciences. In a senior honors thesis, each student will be required to carry out a major project of statistical data analysis in one of these disciplines. The program prepares students for careers in industry and government, for graduate study in statistics or biostatistics and other sciences, as well as for professional study in law, medicine, business, or public administration.

Requirements in addition to Senior Thesis:
The program begins with a foundation in mathematics and computing, combined with an elementary introduction to statistical thinking and practice. A set of three core courses builds on this foundation by providing a comprehensive account of the fundamentals of statistical theory and data analysis. At this point, the students in the concentration are ready to delve into more advanced material covering important areas of statistical methodology. In addition to formal coursework, students will have opportunities to acquire practical experience in study design, data management, and statistical analysis by working as undergraduate research assistants in projects in one of the participating academic departments or research centers at Brown.

The program requires twelve one-semester courses and participation in the senior seminar. The required courses are as follows:

Foundations courses:
Mathematics
Three courses, including courses in multivariate calculus and linear algebra 3

Computing
APMA 0160 Introduction to Scientific Computing 1
Introduction to statistical thinking and practice
Select one of the following: 1

SOC 1100 Introductory Statistics for Social Research
ECON 1620 Introduction to Econometrics
APMA 0650 Essential Statistics

Core Courses in Theory and Data Analysis
Choose one of the following series: 2

APMA 1650 Statistical Inference I
& APMA 1660 Statistical Inference II
MATH 1610 Probability
& MATH 1620 Mathematical Statistics

Advanced Courses in Statistical Methods
APMA 1690 Computational Probability and Statistics 1
PHP 2511 Applied Regression Analysis 1
Total Credits 2
Two electives from the following courses: 2

Social Sciences:
ECON 1630 Econometrics I
ECON 2030 Introduction to Econometrics I
ECON 2040 Econometric Methods
ECON 2630 Econometric Theory
ECON 2640 Microeconometrics
SOC 2010 Multivariate Statistical Methods I
SOC 2220 Advanced Quantitative Methods of Sociology Analysis
SOC 2230 Techniques of Demographic Analysis
SOC 2960G Spatial Data Analysis Techniques in the Social Sciences

Biostatistics:
APMA 1710 Information Theory
APMA 2810R Computational Biology Methods for Gene/Protein Networks and Structural Proteomics
BIOL 1420 Experimental Design in Ecology
PHP 2620 Statistical Methods in Bioinformatics, I
PHP 2200 Intermediate Methods in Epidemiologic Research
PHP 2520 Statistical Inference I
PHP 2030 Clinical Trials Methodology
PHP 2603 Analysis of Longitudinal Data
PHP 2530 Bayesian Statistical Methods
Total Credits 12

Prospective students will be able to obtain Advanced Placement credit for the requirements in mathematics, computing, and introductory statistics. Students who have already completed an introductory course in statistics will be granted permission to proceed to Level II core courses if they meet the prerequisites in mathematics and computing.

Honors: Honors work in the Independent Concentration, Statistics track requires the completion of a senior thesis and a superior record in the program.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
The program is administered by the Department of Biostatistics, located at 121 South Main Street, 7th floor.

For additional information please contact: Roe Gutman, Box G-S-121-7; Telephone: 401-863-2682; Fax: 401-863-9182; e-mail: Roe Gutman

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.

Requirements

The IR concentration requires 14 courses and the equivalent of 3 years study of a second language.

Core Courses

Students must take all 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 1
ECON 0110 Principles of Economics 1
HIST 1900 American Empire Since 1890 1
POLS 0400 Introduction to International Politics 1
or POLS 0200 Introduction to Comparative Politics 1
SOC 1620 Globalization and Social Conflict (WRIT) 1

Track Requirements (five courses from ONE track distributed between the sub-themes): 1

Security and Society:
INTL 1443 History of American Intervention 1
INTL 1700 International Law 1
INTL 1802C Cyber Conflict and Internet Freedom 1
POLS 1500 The International Law and Politics of Human Rights 1
POLS 1560 American Foreign Policy 1
POLS 1822A Nuclear Weapons and International Politics 1
Society (two or three courses): EXAMPLES
ANTH 1232 War and Society 1
ANTH 1233 Ethnographies of Global Connection: Politics, Culture and International Relations 1
ANTH 1411 Nations within States 1
HIST 1350 Modern Genocide and Other Crimes against Humanity 1
INTL 1400 Religion and Global Politics 1
POLS 1380 Ethnic Politics and Conflict 1
SOC 1270 Race, Class, and Ethnicity in the Modern World 1

Political Economy and Society:
ECON 1110 Intermediate Microeconomics 1
ECON 1210 Intermediate Macroeconomics 1
Plus an International Economics course: EXAMPLES
ECON 1500 Current Global Macroeconomic Challenges 1
ECON 1540 International Trade 1
ECON 1550 International Finance 1
Political Economy (two or three courses): EXAMPLES

Research Methods

Prior to 7th semester. Quantitative or qualitative course from approved list.

Regional Focus

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

a.) Senior seminar paper (see website for approved senior seminars) WRIT, OR
b.) Independent Study Research Project WRIT, OR
c.) Honors thesis (two courses: INTL 1910, INTL 1920) WRIT

Total Credits 1

1 This is only a subset of the more comprehensive list of applicable courses. See IR website for current list.

Detailed lists of courses that satisfy these requirements may be obtained from the IR program website. (http://brown.edu/academics/international-relations/node/227)

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 Italian 0600 (or the equivalent), students enroll in a variety of advanced courses, reflecting the interdisciplinary nature of the concentration. Junior concentrators often study abroad in the Brown Program in Bologna. All senior concentrators participate in the “senior conference” by delivering brief presentations on academic topics of their choice in Italian Studies. Concentrators might also pursue capstone research, writing, or multimedia projects.

The concentration requires that students demonstrate proficiency in the Italian language by completing up to ITAL 0600 (or the equivalent in Bologna), ITAL 0600 is the first language course that counts toward the eight required courses for the concentration. At least four of the eight courses should be taken in Italian.

Italian Studies Concentration and the Brown Program in Bologna

Concentrators who enroll in the Brown in Bologna program should fulfill the requirements according to the following sequence: prior to departure, the student should complete the level of Italian language study required (ITAL 0300) and enroll in one of the courses in the four distribution areas -- Italian literature; Italian History; history of Italian art and architecture; film or performance. Upon return from Bologna, the student should enroll in at least one advanced course offered by the department, preferably a course taught in Italian. Any student returning from the Bologna program must enroll in a course above the language level of ITAL 0600.
Credits toward the Italian Studies concentration may also be transferred from the Brown in Bologna Program. Concentrators may count three courses per semester toward the concentration (or six courses total for the year), although the course content must focus on Italy if the student wishes to count the course toward the concentration requirements. Concentrators should consult the concentration advisor to know which courses may or may not transfer as credits toward the concentration.

Honors in Italian Studies
Concentrators are encouraged to expand their understanding of Italian language, history, or culture through independent research that will result in a thesis, a translation, or a multimedia project, developed in consultation with the undergraduate concentration advisor and the individual faculty member who will advise the student’s project. The Honors thesis in Italian Studies is a two-semester thesis. Students who intend to complete an honors project should enroll for the first semester in ITAL 1920 (Independent Study), and have their project approved by their advisor by October 15. During the second semester, honors students enroll in ITAL 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 (JUDS 0100/JUDS 0200) or the equivalent as determined by a proficiency examination. Fulfillment of the Hebrew requirement through examination does not reduce the requirement to take ten courses for the concentration.
3) Upon declaring a concentration in Judaic Studies, each student must define his or her primary disciplinary track (History, Religious Studies, or Language/Literature). Concentrators will then be assigned a faculty mentor in that discipline (within the Judaic Studies faculty) to help students select courses and construct a coherent concentration plan.

Program in History or Religious Studies:
For this track, students are expected to complete a minimum of four courses in their area of disciplinary focus (History or Religious Studies), at least one of which must and no more than two of which may be outside the Program in Judaic Studies in the department of disciplinary focus (preferably methods courses, such as in the History department or RELS 1000). Students in this track, in consultation with the concentration advisor and faculty mentor, may apply up to two additional Hebrew language courses (JUDS 0300, JUDS 0400, or JUDS 0500) to the additional four required courses for the concentration.

Program in Language/Literature:
For this track, students are expected to complete five courses in Hebrew language (JUDS 0100/JUDS 0200; JUDS 0300/JUDS 0400; JUDS 0500). In addition, students will take Israeli Literature in Hebrew (JUDS 1810) and one further course in Judaic Studies (within the disciplinary focus). Two additional courses in the disciplinary focus, at least one of which must be outside the Program in Judaic Studies in a department of shared disciplinary focus (e.g., English or Comparative Literature), are also required. Fulfillment of the Hebrew requirement through proficiency examination does not reduce the requirement to take ten courses for the concentration.

4) Of the courses required in the Program in Judaic Studies, at least one should focus on the ancient period and one should focus on the modern period.
5) Each student, in discussion with his/her mentor, is required to designate an advanced course (1000 level) in his/her senior year either within the Judaic Studies program or in the corresponding disciplinary department as the capstone for his/her concentration. Within the frame of this capstone course, the concentrator will write a final paper on a topic in Judaic Studies that displays in an appropriate way the theoretical and interpretive issues of the concentration focus. If 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 the main argument) as well as the quality and precision of its writing.

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. It should be submitted no later than April 15 for May graduates and November 15 for December completers.

**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 degree 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 sources?
- 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 is designed to help students develop an interdisciplinary understanding of culture, history, and contemporary issues in Latin America. Social, political, economic, scientific, literary, and cultural factors combine to explain the Latin American and Caribbean societies of today. The concentration in Latin American and Caribbean Studies provides the opportunity to integrate the methods of various disciplines. Requirements are intentionally broad and flexible to accommodate the interests of students in understanding the diverse reality of Latin America, yet the concentration also encourages focus. Concentration requirements cover four general areas: language and literature, area studies, research, and internship / service work. Competency in Spanish or Portuguese is developed through intermediate and advanced coursework. Many concentrators also study abroad in Latin America and the Caribbean (http://www.brown.edu/academics/latin-american-caribbean-studies/undergraduate/study-abroad-latin-america-and-caribbean) for one or both semesters during their junior year to advance their language skills.

Requirements are intentionally broad and flexible to accommodate the interests of students in understanding the diverse reality of Latin America and the Caribbean, yet the concentration also encourages focus. Concentration requirements cover four general areas: language and literature, area studies, independent research, and out of classroom experience.

**Language**

Basic competence in either Spanish or Portuguese is required. Each student must take either HISP 0100, HISP 0200, POBS 0110 or any more advanced Spanish or Portuguese language course. This requirement may be satisfied by examination, but the examination will not count as a course. No more than one advanced language course (not including literature courses) may be counted among the ten courses required for the concentration.

**Literature**

Some familiarity with the literature of the region is required. Each concentrator must take at least one of the following: HISP 0730, POBS 0610, or a 1000-level Spanish or Portuguese literature course dealing with Latin America.

**Area Studies**

6 courses: Two types of area-focused courses are required: (1) courses specifically designated "Latin American Studies" (LAST, not including LAST 1990-1991), and (2) courses in several departmental programs that demonstrate the ways in which various disciplines have contributed to our understanding of Latin America. Approved area studies courses for the concentration are listed in Appendix B of the Concentration Guide.

At least 2 disciplines (not including Latin American Studies) must be represented among the six area studies courses. Other 1000-level courses dealing with related subjects that are especially pertinent to the study of Latin America may be substituted with approval.
Senior Thesis or Project

2 courses: A Senior Thesis or Project is optional for concentrators. It includes course credit for a reading and research course (LAST 1990-LAST 1991). In order to integrate the diverse perspectives gained in courses and readings, seniors may elect to complete a Senior Thesis or Project under the direction of one faculty member. Seniors will also choose one additional faculty member to serve as a reader. The reader will receive a draft and a finished copy of the student's thesis or project, which the reader will be responsible to grade. The reader may be involved in the earlier development of the thesis or project depending upon the arrangement made by the student with the reader. The Senior Thesis or Project will normally consist of a major research paper. A student may, with prior permission of the Latin American and Caribbean Studies Concentration Advisor, present a film, videotape, museum exhibition, or other appropriate project, together with a paper that clearly demonstrates the academic relevance of the project. Only the Senior Thesis qualifies the student (along with a minimum B+ average) for Honors. The Senior Project is quite often of a more personal nature, such as observations on practice teaching or a survey of social resources on Latin America. Near the beginning of the seventh semester, students should submit to the concentration advisor a 5 to 8 page prospectus accompanied by the signature of one faculty member indicating that he or she is willing to serve as primary advisor on the project.

If a concentrator chooses to do neither a senior thesis nor a senior project, then a research paper must be written in an advanced undergraduate seminar (1000-level). The seminar must be among the approved area studies courses listed in Appendix B of the Latin American Studies Concentration Guide, and will count as one of the ten courses required for the concentration. Research papers will typically be 20-30 pages in length and must be approved by the Concentration Advisor. Students who choose this option do not take LAST 1990 or LAST 1991. The seminar counts as the research component of the program. The distribution requirements for this option are: 2 language courses, 7 area studies courses and 1 research course (i.e. the seminar for which the paper is written).

Internships/Community Service

The Concentration in Latin American and Caribbean Studies requires students to complete an internship or volunteer service work in Latin America or with a local organization that works primarily with Spanish or Portuguese speaking peoples. The Center maintains a database of local and international internship opportunities. Students are also strongly encouraged to consult with the Swearer Center for Public Service. Internships and community service work are available to Brown students who study abroad at the Brown programs in Mexico (Universidad de las Americas) and in Brazil (Catholic University of Rio de Janeiro). Examples of local service work performed by concentrators in previous years include: helping compile a Spanish language guide to welfare service agencies, preparing for such a venture. Popular programs with Latin American concentrators include Universidad de las Americas-Puebla, Mexico, and the Catholic University (PUC-Rio) of Rio de Janeiro, Brazil. Up to three courses taken abroad may be counted toward the ten courses required for the concentration. A list of Brown programs and approved non-Brown programs is available from the Office of International Programs (OIP) located in Rhode Island Hall. Feel free to consult the Latin American and Caribbean Studies concentration advisor about study abroad.

Honors

Qualified undergraduates may pursue work towards the B.A. with Honors. The requirements for graduation with Honors are the following:

1. Maintenance of at least a B+ average in the ten courses counting for the concentration.
2. Maintenance of at least a B+ average in all course work done for the B.A. at Brown.
3. Completion of a Senior Thesis approved by the primary advisor and reader as acceptable for Honors. The senior thesis should be "A" level work, although an "A" thesis does not automatically qualify for honors.

Prizes and Awards: Graduating seniors in Latin American Studies are eligible for an award administered by the concentration for outstanding Senior Thesis.

Foreign Study

Study abroad (normally in the junior year) is encouraged as an important part of the concentration. Interested students should begin early to prepare for such a venture. Popular programs with Latin American concentrators include Universidad de las Americas-Puebla, Mexico, and the Catholic University (PUC-Rio) of Rio de Janeiro, Brazil. Up to three courses taken abroad may be counted toward the ten courses required for the concentration. A list of Brown programs and approved non-Brown programs is available from the Office of International Programs (OIP) located in Rhode Island Hall. Feel free to consult the Latin American and Caribbean Studies concentration advisor about study abroad.

Linguistics

The concentration in linguistics is designed both for students interested in the discipline itself and for those wishing to use their understanding of linguistic structure to pursue other disciplines. Linguists are concerned with such issues as the commonalities of human languages, why languages change, how our linguistic abilities interact with our cognitive abilities, how language is learnable, and developing formal models of linguistic structure. Fields as diverse as anthropology, legal reasoning, language pathology, technical writing and editing, and Artificial Intelligence (AI) all rely heavily upon methods and models developed in linguistics. Required courses examine linguistic theory, phonology, syntax, and semantics, while electives may focus on computational, mathematical, or socio-linguistics, the philosophy of language, and biology and the evolution of language.

Requirements (10 courses)

Prerequisite Course

CLPS 0030 Introduction to Linguistic Theory (may be waived in special instances)

Required Courses

CLPS 1310 Introduction to Phonological Theory 1
CLPS 1330 Introduction to Syntax 1
Select one additional course in phonetics, phonology, syntax, semantics or pragmatics including the following courses:

CLPS 1320 The Production, Perception, and Analysis of Speech
CLPS 1341 Lexical Semantics
CLPS 1342 Formal Semantics
CLPS 1381 Topics in Phonetics and Phonology: Intonational Phonology
Select one of the following courses in psycholinguistics:

CLPS 1385 Topics in Language Acquisition: Language Acquisition and Cognitive Development
CLPS 1389 Discourse Processing
CLPS 1650 Child Language Acquisition
CLPS 1800 Language Processing
CLPS 1810 Syntactic Theory and Syntactic Processing
CLPS 1820 Language and the Brain
CLPS 1890 Laboratory in Psycholinguistics

Electives (select five): 2

CLPS 0800 Language and the Mind
CLPS 1320 The Production, Perception, and Analysis of Speech
CLPS 1341 Lexical Semantics
CLPS 1342 Formal Semantics

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Degrees with Honors (12 Courses)
Candidates for Honors in Linguistics will take a minimum of 10 courses for the concentration which will consist of all requirements for the standard program plus 2 additional courses in Linguistics or related disciplines. One of these courses may be an independent study project upon which the thesis is based. Honors candidates should formalize their projects in consultation with their advisors by the end of Semester 6.

Although no specific grade-point average has been set for acceptance into the Honors Program, only students with a good record and an advisor willing to work with them will be allowed into the Honors Program.

Independent Study
Independent study is encouraged for the A.B. degree. Students should sign up for CLPS 1970 with a faculty advisor who is a member of the Department of Cognitive and Linguistic Sciences. Arrangements should be made in Semester 6 for students expecting to do independent study during Semesters 7 and/or 8.

Comments:
Foreign language courses will generally not count towards the concentration requirements, except those which focus on the structure or history of the language. Students are, however, advised to gain familiarity with a foreign language, and are encouraged to take at least one course which deals with the structure of a language other than English. It is strongly recommended that students take CLPS 1310 and CLPS 1330 before Semester 7.

Literary Arts
Brown's Program in Literary Arts provides a home for innovative writers of fiction, poetry, playwriting, screenwriting, literary translation, electronic writing and mixed media. The concentration allows student writers to develop their skills in one or more genres while deepening their understanding of the craft of writing. Many courses in this concentration require a writing sample; students should consult a concentration advisor or the concentration website for strategies on getting into the appropriate course(s).

Candidates for the Bachelor of Arts degree with concentration in Literary Arts will be expected to complete the following course work:

1. At least four creative writing workshops from among the following series: LITR 0100, LITR 0110, LITR 0210, LITR 0310, LITR 0610, LITR 1010, LITR 1110, and LITR 1150. At least two genres must be covered within the four courses taken. An independent study in literary arts (LITR 1310) may count toward the workshop requirement. Other writing-intensive courses may also count, at the discretion of the advisor.

2. Six elective reading and research in literary arts courses, which must include:
   - a course in literary theory or the history of literary criticism
   - a course that primarily covers readings and research in literary arts created before 1800
   - a course that primarily covers readings and research in literary arts created between 1800 and 1900
   - a course that primarily covers readings and research in literary arts created after 1900

   These courses, selected in consultation with a concentration advisor, may come from (but are not limited to) the following departments: Africana Studies, American Civilization, Classics, Comparative Literature, East Asian Studies, Egyptology, French Studies, German Studies, Hispanic Studies, Italian Studies, Judaic Studies, Linguistics, Literatures and Cultures in English, Middle East Studies, Modern Culture and Media, Music, Portuguese and Brazilian Studies, Slavic Studies, South Asian Studies, Theatre, Speech and Dance, Visual Arts. With approval from the concentration advisor, courses covering pre-20th century time periods may be distributed in a variant manner, so long as they cover two distinct literary time periods that precede the 20th century.

3. Among the ten required courses, at least four must be at the 1000-level or above. No more than a total of four classes (workshops or reading/research courses) may be taken outside of the Literary Arts Department at Brown (whether at another institution or within another department's curriculum). No more than two of the ten required courses for the concentration may also count toward fulfilling a second concentration.

4. During the senior year, all students must take at least one course within the Literary Arts course offerings (courses with LITR designation by the Registrar, or courses approved by the concentration advisor).

Honors in Creative Writing: Course requirements are the same as those for the regular concentration (four workshops, six elective literature-reading courses), with the following changes and additions: honors candidates must include two 1000-level workshops or independent studies among their courses; and complete a thesis. Students who are enrolled in or have completed at least one 1000-level workshop (or independent study) may submit honors applications to the Literary Arts Department from the first day of the fall semester to 2 September. Interested students should obtain information from the office of the Literary Arts Department.

Marine Biology
Marine biology encompasses the study of living organisms in the ocean or other marine or brackish bodies of water. Because marine organisms play an important role in sustaining life on earth, and because of the diverse habitats studied by marine biologists, concentrators must study broadly in the basic sciences and become familiar with the varied research techniques required in the field. Consequently, students must begin their learning with foundational courses in biology, mathematics, chemistry, and physics. Subsequent coursework in the concentration exposes students to a range of topics in biology (e.g., Invertebrate Zoology, Ecology, Physiology, Conservation) and courses in other sciences, including geological sciences, computer science, and engineering. Students are encouraged to spend a summer or semester conducting research at a field station. The field experience is a key feature of this program and provides scholarly interaction with leaders in the field so that students are mentored at the cutting edge.

Note: This concentration program is being phased out for Class of 2017 students and greater in favor of a track program within the Sc.B. in Biology.

Standard program for the Sc.B. degree
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Level</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 0330</td>
<td>Equilibrium, Rate, and Structure</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 0030</td>
<td>Basic Physics (or equivalent)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 0040</td>
<td>Basic Physics (or equivalent)</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
Undergraduate Concentrations

<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 (or equivalent)</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0100</td>
<td>Introductory Calculus, Part II (or equivalent)</td>
<td>1</td>
</tr>
</tbody>
</table>

Two additional courses in physics, chemistry, mathematics, applied mathematics, computer science, engineering, or geological sciences, as approved by advisor.

Select four of the following biology courses: 4

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 0410</td>
<td>Invertebrate Zoology</td>
</tr>
<tr>
<td>BIOL 0420</td>
<td>Principles of Ecology</td>
</tr>
<tr>
<td>BIOL 0510</td>
<td>Introductory Microbiology</td>
</tr>
<tr>
<td>BIOL 0800</td>
<td>Principles of Physiology</td>
</tr>
<tr>
<td>BIOL 1180</td>
<td>Comparative Animal Physiology</td>
</tr>
<tr>
<td>BIOL 1440</td>
<td>Marine Biology</td>
</tr>
<tr>
<td>BIOL 1880</td>
<td>Comparative Biology of the Vertebrates</td>
</tr>
</tbody>
</table>

Select three additional biology courses, highly recommended are: 3

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 0200</td>
<td>The Foundation of Living Systems</td>
</tr>
<tr>
<td>BIOL 0470</td>
<td>Genetics</td>
</tr>
<tr>
<td>BIOL 0480</td>
<td>Evolutionary Biology</td>
</tr>
<tr>
<td>BIOL 0500</td>
<td>Cell and Molecular Biology</td>
</tr>
<tr>
<td>BIOL 1180</td>
<td>Comparative Animal Physiology</td>
</tr>
<tr>
<td>BIOL 1310</td>
<td>Developmental Biology</td>
</tr>
<tr>
<td>BIOL 1410</td>
<td>Evolutionary Genetics</td>
</tr>
<tr>
<td>BIOL 1420</td>
<td>Experimental Design in Ecology</td>
</tr>
<tr>
<td>BIOL 1470</td>
<td>Conservation Biology</td>
</tr>
<tr>
<td>ENVS 0490</td>
<td>Environmental Science in a Changing World</td>
</tr>
</tbody>
</table>

Select two of the following group of related science courses: 1

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 0040</td>
<td>Introduction to Scientific Computing and Problem Solving</td>
</tr>
<tr>
<td>GEOL 0070</td>
<td>Introduction to Oceanography</td>
</tr>
<tr>
<td>GEOL 0310</td>
<td>Fossil Record</td>
</tr>
<tr>
<td>GEOL 1110</td>
<td>Estuarine Oceanography</td>
</tr>
<tr>
<td>GEOL 1120</td>
<td>Paleooceanography</td>
</tr>
<tr>
<td>GEOL 1130</td>
<td>Ocean Biogeochemical Cycles</td>
</tr>
<tr>
<td>GEOL 1240</td>
<td>Stratigraphy and Sedimentation</td>
</tr>
<tr>
<td>GEOL 1330</td>
<td>Global Environmental Remote Sensing</td>
</tr>
<tr>
<td>GEOL 1580</td>
<td>Quantitative Elements of Physical Hydrology</td>
</tr>
<tr>
<td>CHEM 0350</td>
<td>Organic Chemistry</td>
</tr>
<tr>
<td>CHEM 0360</td>
<td>Organic Chemistry</td>
</tr>
</tbody>
</table>

An approved course in statistics

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1950/1960</td>
<td>Directed Research/Independent Study (conducted at Brown or an approved marine lab or field station.)</td>
</tr>
</tbody>
</table>

Total Credits 17

1 Or substitutions as approved by the concentration advisor.
2 A summer or semester at a field station is recommended. Please note that some recommended courses are offered every other year; others have limited enrollment and require early sign-up.

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): 2

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0180</td>
<td>Intermediate Calculus</td>
</tr>
<tr>
<td>&amp; MATH 0520</td>
<td>Linear Algebra</td>
</tr>
<tr>
<td>MATH 0180</td>
<td>Intermediate Calculus</td>
</tr>
<tr>
<td>&amp; MATH 0540</td>
<td>Honors Linear Algebra</td>
</tr>
<tr>
<td>MATH 0200</td>
<td>Intermediate Calculus (Physics/Engineering)</td>
</tr>
<tr>
<td>&amp; MATH 0520</td>
<td>Linear Algebra</td>
</tr>
<tr>
<td>MATH 0350</td>
<td>Honors Calculus</td>
</tr>
<tr>
<td>&amp; MATH 0540</td>
<td>Honors Linear Algebra</td>
</tr>
</tbody>
</table>

Or the equivalent

Program:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1530</td>
<td>Abstract Algebra</td>
</tr>
<tr>
<td></td>
<td>Five other 1000- or 2000-level Mathematics courses</td>
</tr>
</tbody>
</table>

Total Credits 8

Standard program for the Sc.B. degree

Prerequisites:

Multivariate calculus and linear algebra (choose one of the following sequences): 2

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0180</td>
<td>Intermediate Calculus</td>
</tr>
<tr>
<td>&amp; MATH 0520</td>
<td>Linear Algebra</td>
</tr>
<tr>
<td>MATH 0180</td>
<td>Intermediate Calculus</td>
</tr>
<tr>
<td>&amp; MATH 0540</td>
<td>Honors Linear Algebra</td>
</tr>
<tr>
<td>MATH 0200</td>
<td>Intermediate Calculus (Physics/Engineering)</td>
</tr>
<tr>
<td>&amp; MATH 0520</td>
<td>Linear Algebra</td>
</tr>
<tr>
<td>MATH 0350</td>
<td>Honors Calculus</td>
</tr>
<tr>
<td>&amp; MATH 0540</td>
<td>Honors Linear Algebra</td>
</tr>
</tbody>
</table>

Or the equivalent

Program:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1130</td>
<td>Functions of Several Variables</td>
</tr>
<tr>
<td>&amp; MATH 1140</td>
<td>and Functions Of Several Variables</td>
</tr>
<tr>
<td>MATH 1530</td>
<td>Abstract Algebra</td>
</tr>
<tr>
<td>MATH 1540</td>
<td>Topics in Abstract Algebra</td>
</tr>
<tr>
<td>or MATH 1560</td>
<td>Number Theory</td>
</tr>
</tbody>
</table>

Four other 1000- or 2000- level Mathematics courses. 4

Four additional courses in mathematics, science, economics, or applied mathematics approved by the concentration advisor. 4

Total Credits 14

Honors

Honors degrees may be recommended for students who have exhibited high achievement in mathematics. Candidates must complete at least eight mathematics courses at the 1000 or 2000 level with sufficiently good grades and must write an honors thesis under the guidance of a faculty member. The honors thesis is usually written while the candidate is enrolled in MATH 1970. The candidate should consult with the concentration advisor for the precise grade requirements.

Those interested in graduate study in mathematics are encouraged to take:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1130</td>
<td>Functions of Several Variables</td>
</tr>
<tr>
<td>MATH 1140</td>
<td>Functions Of Several Variables</td>
</tr>
<tr>
<td>MATH 1260</td>
<td>Complex Analysis</td>
</tr>
<tr>
<td>MATH 1410</td>
<td>Combinatorial Topology</td>
</tr>
<tr>
<td>MATH 1540</td>
<td>Topics in Abstract Algebra</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three semesters of MATH 0180, MATH 0200, or MATH 0350</td>
<td>3</td>
</tr>
<tr>
<td>MATH 0520 Linear Algebra</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 0540 Honors Linear Algebra</td>
<td></td>
</tr>
</tbody>
</table>

### Core Courses

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1530 Abstract Algebra</td>
<td>1</td>
</tr>
</tbody>
</table>

Select one of the following series:

**Series A**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 0150 &amp; CSCI 0160</td>
<td>2</td>
</tr>
<tr>
<td>Introduction to Object-Oriented Programming and Computer Science and Introduction to Algorithms and Data Structures</td>
<td></td>
</tr>
</tbody>
</table>

**Series B**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 0170 &amp; CSCI 0180</td>
<td></td>
</tr>
<tr>
<td>Computer Science: An Integrated Introduction and Computer Science: An Integrated Introduction</td>
<td></td>
</tr>
</tbody>
</table>

**Series C**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 0190</td>
<td></td>
</tr>
<tr>
<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 CS course, or a 1000-level CS course</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 0320</td>
<td></td>
</tr>
<tr>
<td>Introduction to Software Engineering</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 0330</td>
<td></td>
</tr>
<tr>
<td>Introduction to Computer Systems</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 0220</td>
<td></td>
</tr>
<tr>
<td>Introduction to Discrete Structures and Probability</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>or CSCI 0510 Models of Computation</td>
<td></td>
</tr>
</tbody>
</table>

Three 1000-level Mathematics courses

Three advanced courses in Computer Science

Three additional courses different from any of the above chosen from Mathematics, Computer Science, Applied Mathematics, or related areas

A capstone course in Computer Science or Mathematics

Note: CSCI 1450 may be used either in place of CSCI 220 or 510 in the core courses or as an advanced course. 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 may be used in place of CSCI 1450. However, concentration credit will be given for only one of Applied Math 1650 and CSCI 1450.

### Total Credits

19

---

1. These courses must be at the 1000-level or higher. The three courses must include a pair of courses with a coherent theme. A list of pre-approved pairs may be found at the approved-pairs web page (http://cs.brown.edu/ugrad/concentrations/approvedpairs.html). You are not restricted to the pairs on this list, but any pair not on the list must be approved by the director of undergraduate studies.

2. These must be approved by a concentration advisor.

3. A one-semester course, normally taken in the student’s last undergraduate year, in which the student (or group of students) use a significant portion of their undergraduate education, broadly interpreted, in studying some current topic in depth, to produce a culminating artifact such as a paper or software project.

## Requirements for the Professional Track of the Sc.B. degree.

The requirements for the professional track include all those of the standard track, as well as the following:

Students must complete two two-to-four-month full-time professional experiences, doing work that is related to their concentration programs. Such work is normally done within an industrial organization, but may also be at a university under the supervision of a faculty member.

On completion of each professional experience, the student must write and upload to ASK a reflective essay about the experience addressing the following prompts, to be approved by the student’s concentration advisor:

- Which courses were put to use in your summer's work? Which topics, in particular, were important?
- In retrospect, which courses should you have taken before embarking on your summer experience? What are the topics from these courses that would have helped you over the summer if you had been more familiar with them?
- Are there topics you should have been familiar with in preparation for your summer experience, but are not taught at Brown? What are these topics?
- What did you learn from the experience that probably could not have been picked up from course work?
- Is the sort of work you did over the summer something you would like to continue doing once you graduate? Explain.
- Would you recommend your summer experience to other Brown students? Explain.

## Mathematics-Economics

The Mathematical Economics concentration is designed to give a background in economic theory plus the mathematical tools needed to analyze and develop additional theoretical constructions. The emphasis is on the abstract theory itself.

### Standard Mathematics-Economics Concentration (through the class of 2015):

#### Economics

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1130</td>
<td>Intermediate Microeconomics (Mathematical)</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1210</td>
<td>Intermediate Macroeconomics</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1630</td>
<td>Econometrics I</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1170</td>
<td>Welfare Economics and Social Choice Theory</td>
<td></td>
</tr>
<tr>
<td>ECON 1225</td>
<td>Advanced Macroeconomics: Monetary, Fiscal, and Stabilization Policies</td>
<td>2</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 1640</td>
<td>Econometrics II</td>
<td></td>
</tr>
<tr>
<td>ECON 1650</td>
<td>Financial Econometrics</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>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>

One additional 1000-level economics course

#### Mathematics

At least two calculus courses through MATH 0180 or its equivalent.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<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></td>
<td>Select one of the following Options:</td>
<td>3</td>
</tr>
<tr>
<td><strong>Option A</strong></td>
<td></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>One course from the &quot;advanced mathematics&quot; group, as follows:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 1010</td>
<td>Analysis: Functions of One Variable</td>
<td></td>
</tr>
<tr>
<td>MATH 1110</td>
<td>Ordinary Differential Equations</td>
<td></td>
</tr>
<tr>
<td>MATH 1120</td>
<td>Partial Differential Equations</td>
<td></td>
</tr>
<tr>
<td>MATH 1130</td>
<td>Functions of Several Variables</td>
<td></td>
</tr>
<tr>
<td>MATH 1140</td>
<td>Functions Of Several Variables</td>
<td></td>
</tr>
<tr>
<td><strong>Option B</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APMA 1650</td>
<td>Statistical Inference I</td>
<td></td>
</tr>
<tr>
<td>Two courses from the &quot;advanced mathematics&quot; group, as follows:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 1010</td>
<td>Analysis: Functions of One Variable</td>
<td></td>
</tr>
<tr>
<td>MATH 1110</td>
<td>Ordinary Differential Equations</td>
<td></td>
</tr>
<tr>
<td>MATH 1120</td>
<td>Partial Differential Equations</td>
<td></td>
</tr>
<tr>
<td>MATH 1130</td>
<td>Functions of Several Variables</td>
<td></td>
</tr>
<tr>
<td>MATH 1140</td>
<td>Functions Of Several Variables</td>
<td></td>
</tr>
</tbody>
</table>

**Total Credits: 12**

1 Or ECON 1110 with permission.

### Standard Mathematics-Economics Concentration (class of 2016 and beyond):

**Economics**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1130</td>
<td>Intermediate Microeconomics (Mathematical)</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1210</td>
<td>Intermediate Macroeconomics</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1630</td>
<td>Econometrics I</td>
<td>1</td>
</tr>
<tr>
<td>Two courses from the &quot;mathematical-economics&quot; group:</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>ECON 1170</td>
<td>Welfare Economics and Social Choice Theory</td>
<td></td>
</tr>
<tr>
<td>ECON 1225</td>
<td>Advanced Macroeconomics: Monetary, Fiscal, and Stabilization Policies</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 1640</td>
<td>Econometrics II</td>
<td></td>
</tr>
<tr>
<td>ECON 1650</td>
<td>Financial Econometrics</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>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>
<tr>
<td>One course from the &quot;data methods&quot; group:</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>ECON 1301</td>
<td>Economics of Education I</td>
<td></td>
</tr>
<tr>
<td>ECON 1305</td>
<td>Economics of Education: Research</td>
<td></td>
</tr>
<tr>
<td>ECON 1310</td>
<td>Labor Economics</td>
<td></td>
</tr>
<tr>
<td>ECON 1360</td>
<td>Health Economics</td>
<td></td>
</tr>
<tr>
<td>ECON 1410</td>
<td>Urban Economics</td>
<td></td>
</tr>
<tr>
<td>ECON 1480</td>
<td>Public Economics</td>
<td></td>
</tr>
<tr>
<td>ECON 1510</td>
<td>Economic Development</td>
<td></td>
</tr>
<tr>
<td>ECON 1520</td>
<td>The Economic Analysis of Institutions</td>
<td></td>
</tr>
<tr>
<td>ECON 1530</td>
<td>Health, Hunger and the Household in Developing Countries</td>
<td></td>
</tr>
<tr>
<td>ECON 1629</td>
<td>Applied Research Methods for Economists</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 1759</td>
<td>Data, Statistics, Finance</td>
<td></td>
</tr>
<tr>
<td>ECON 1765</td>
<td>Finance, Regulation, and the Economy: Research</td>
<td></td>
</tr>
</tbody>
</table>

Two additional 1000-level economics courses | 2

### Mathematics

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculus: MATH 0180 or higher</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Linear Algebra - one of the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 0520</td>
<td>Linear Algebra</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0540</td>
<td>Honors Linear Algebra</td>
<td>1</td>
</tr>
<tr>
<td>Probability Theory - one of the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 1610</td>
<td>Probability</td>
<td>1</td>
</tr>
<tr>
<td>MATH 1620</td>
<td>Mathematical Statistics</td>
<td>1</td>
</tr>
<tr>
<td>APMA 1650</td>
<td>Statistical Inference I</td>
<td>1</td>
</tr>
</tbody>
</table>

Analysis - one of the following: | 1

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1010</td>
<td>Analysis: Functions of One Variable</td>
<td></td>
</tr>
<tr>
<td>MATH 1110</td>
<td>Ordinary Differential Equations</td>
<td></td>
</tr>
<tr>
<td>MATH 1120</td>
<td>Partial Differential Equations</td>
<td></td>
</tr>
<tr>
<td>MATH 1130</td>
<td>Functions of Several Variables</td>
<td></td>
</tr>
<tr>
<td>MATH 1140</td>
<td>Functions Of Several Variables</td>
<td></td>
</tr>
</tbody>
</table>

### 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). Beginning with the class of 2016, students not writing an honors thesis must complete an alternative senior capstone project and obtain approval of a faculty sponsor.

### Professional Track (applies irrespective of graduation year):

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.

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

Medieval Cultures offers two distinct areas of historical focus: the Medieval and the Late Antique. The former focuses on the sixth through the fifteenth centuries, combining interdisciplinary perspectives with in-depth study of one or two related disciplines. Late Antique Cultures deals with the third through the ninth centuries, when ancient cultural forms were still in place but medieval cultures were beginning to take shape simultaneously. The first undergraduate degree of its kind in this country, Late Antique Cultures facilitates the study of human activity in all of its variety. A traditional area of study in Medieval Cultures is Western Europe, but students are encouraged to work in other cultural areas such as Byzantine, Islamic, Judaic and Slavic. The concentration serves students interested in the changing relation of cultural practices, social patterns, political and economic forms, and artistic and literary traditions in this important transitional period.

Medieval Cultures Track

It is recommended that prospective concentrators take the introductory course, Medieval Perspectives, during their freshman or sophomore year.

Requirements

Ten courses approved by the Program in Medieval Studies, including two courses in medieval history and one 1000- or 2000-level course that uses primary texts in a medieval language other than Middle English. Interested students are invited to discuss their plans with an appropriate faculty member of the Program. A concentration proposal should be prepared in consultation with the faculty advisor and submitted to the Program Chair for approval.

Honors

This is awarded to students who present a meritorious honors thesis in addition to completing the required courses of the concentration. The thesis permits the student to synthesize various disciplines or interests, or to pursue a new interest in greater depth. To be eligible for Honors, candidates must complete a minimum of six approved courses in Medieval Studies by the end of their third year with more grades of A than B. Students should apply for admission to Honors and should meet with their faculty advisor(s) no later than spring of the junior year to plan the thesis project. Accepted candidates write the thesis in a two-semester course sequence under the supervision of a director and second reader drawn from the Medieval Studies faculty. Interested students should contact the concentration advisor for further details or consultation (863-1994).

Late Antique Cultures Track

Requirements:

- One course in Roman history:
  - CLAS 1310 Roman History I: The Rise and Fall of an Imperial Republic 1
  - CLAS 1320 Roman History II: The Roman Empire and Its Impact (recommended) 1

- One class in medieval history
  - HIST 1030 Southern African 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. 6

Total Credits 9

1 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.

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

Middle East Studies (MES) is an interdisciplinary concentration that draws upon courses offered by a distinguished core faculty in the humanities and the social sciences. Regardless of one’s passions – whether history, religion, politics, culture, literature, modern media, philosophy or practices of everyday life – the Middle East is an ideal site for considering the diversity and complexity of the human experience. A growing number of exciting courses, creative and relevant programming, and a steady stream of post-docs and visiting professors offer unparalleled opportunities for MES concentrators who wish to understand this region and to engage with a broad range of issues that affect our world.

Standard Program for the AB Degree

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 1968</td>
<td>Approaches to The Middle East</td>
<td>1</td>
</tr>
<tr>
<td>Foundational Courses, to be elected from the courses below:</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>MES 0155</td>
<td>Cultures of the Contemporary Middle East or ANTH 1151</td>
<td></td>
</tr>
<tr>
<td>HIST 0240</td>
<td>Middle East Beginnings: Pre-Islamic Arabia to</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ottoman Europe</td>
<td></td>
</tr>
<tr>
<td>HIST 0243</td>
<td>Modern Middle East Roots: 1492 to the Present</td>
<td></td>
</tr>
<tr>
<td>HIST 1455</td>
<td>The Making of the Modern Middle East</td>
<td></td>
</tr>
<tr>
<td>RELS 0150</td>
<td>Islam Unveiled</td>
<td></td>
</tr>
<tr>
<td>POLS 1270</td>
<td>Middle East Politics</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Language Semesters: Basic competence in at least one of the modern Middle Eastern languages is required. This entails taking at least four semesters of coursework in one of the modern Middle Eastern languages such as Arabic, Persian, Hebrew, Turkish, etc. 4</td>
<td></td>
</tr>
<tr>
<td>Electives: Four courses chosen from the list of courses that are cross-listed by Middle East Studies and approved by the Concentration advisor. Students should acquire a good balance of courses by taking courses in the humanities and social sciences. Students should also seek a good balance between courses whose primary subject matter is pre-modern (ancient and medieval) and modern and contemporary Middle East. 4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Capstone/Honors Project: This can take many forms, such as:

- a. a paper of no less than 30 pages for an existing concentration-eligible (MES-coded or X-Listed) WRIT-designated course, undertaken with the permission of the instructor 1
- b. An independent study or project (artistic, research, or otherwise) supervised by at least one faculty member for at least one semester under MES 1970- Independent Study designation 2
- c. An Honors Thesis

Total Credits 12

1 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.

2 Two semesters of Independent Study (MES 1970) are required for honors and will raise the number of required courses to 13.

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
Undergraduate Concentrations

Modern Culture and Media

Modern Culture and Media (MCM) is an interdisciplinary concentration that explores the links 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-Cold war television, postcolonial theory and film, the changing form of the novel, theories of subjectivity and ideology, video games and theories of representation). These paths are united by a commitment to critical thinking/practice: rather than reproducing conventions, MCM concentrators learn how conventions emerge, what work they do, and explore ways to change them.

Track I

Track I concentrators may choose to study a particular historical moment, a medium, or a mode of textual production, in combination with theoretical studies that examine the categories of cultural analysis: for example, the distinction between high and low culture. Examples of areas of interest include but are not limited to film, gender/sexuality, digital media, television, post-coloniality, the novel, modern thought, the modern arts, sound, and theories of ideology and subjectivity. Productive work in some modern medium or textual mode is encouraged for all concentrators. MCM’s approach to production recognizes the inextricable link between theory and practice, and the possibility of a fruitful complicity between them. Production, in the sense defined here, is a theoretically informed sphere or practice, one within which acknowledged forms of cultural creation are tested and extended in close complementarity with the analyses conducted elsewhere in MCM.

Track I consists of 11 courses.

Core courses

- MCM 0110 Theory and Analysis of Modern Culture and Media 1
- Select two of the following: 1
  - MCM 0220 Print Cultures: Textuality and the History of Books
  - MCM 0230 Digital Media
  - MCM 0240 Television Studies
  - MCM 0250 Visuality and Visual Theories
  - MCM 0260 Cinematic Coding and Narrativity
  - MCM 1110 The Theory of the Sign

Additional courses 5

- 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. 2

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. An Honors degree reflects not only the completion of the thesis course and project, but generally distinguished performance in the concentration.

Honors:

Students who qualify for Honors in Track I are eligible to apply to do an Honors project or thesis. Prospective honors students submit the honors application in the beginning of the 7th semester. (Forms are available in the MCM office.) Applications are screened by the MCM Honors Committee. If approved, a student must then register in the 8th semester for MCM 1990, a one-credit thesis course, to complete the Honors project. An Honors degree reflects not only the completion of the thesis course and project, but generally distinguished performance in the concentration.

Track II

Track II concentration combines production courses with the critical study of the cultural role of practice. It aims to engage students in the analysis of theories of production elaborated within philosophical, artistic, and technological traditions, while encouraging them to produce works that interrogate these traditions.

Track II consists of 11 courses:

Two core courses:

- MCM 0110 Theory and Analysis of Modern Culture and Media 1

Select one of the following Introductory Practice or History of a Medium courses:

- MCM 0710 Introduction to Filmmaking: Time and Form
- MCM 0730 Introduction to Video Production: Critical Strategies and Histories
- MCM 0750 Art in Digital Culture
- VISA 0100 Studio Foundation
- VISA 0110 Advanced Studio Foundation
- VISA 0120 Foundation Media: Sound and Image
- MUSC 0200 Computers and Music
- CSCI 0150 Introduction to Object-Oriented Programming and Computer Science

A course from the LITR 0110 series

A course from the LITR 0210 series

HIAA 0010 A Global History of Art and Architecture
TAPS 0030 Introduction to Acting and Directing
MUSC 0010 Introduction to Western Music
MUSC 0040 World Music Cultures (Africa, America, Europe, Oceania)

One additional course from the following: 1

- MCM 0220 Print Cultures: Textuality and the History of Books
- MCM 0230 Digital Media
- MCM 0240 Television Studies
- MCM 0250 Visuality and Visual Theories
- MCM 0260 Cinematic Coding and Narrativity
- MCM 1110 The Theory of the Sign

Three additional courses from the MCM 1200 or MCM 1500 series 1

Four practice courses selected in consultation with an advisor. 2
One Senior Seminar from the MCM 1700 series or other equivalent in production 1

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:

Students who qualify for Honors in Track II are eligible to apply to do an Honors project or thesis. Prospective honors students submit the honors application in the beginning of the 7th semester. (Forms are available in the MCM office.) Applications are screened by the MCM Honors Committee. If approved, a student must then register in the 8th semester for MCM 1900, a one-credit thesis course, to complete the Honors project. An Honors degree reflects not only the completion of the thesis course and project, but generally distinguished performance in the concentration.

Music

The concentration in Music integrates theory, history, ethnomusicology, technology, composition, and performance. Students may select from among three tracks within the concentration: the first track emphasizes theory, history, and composition; a second track emphasizes ethnomusicology; and a third track focuses on computer music and multimedia. The Music curriculum is supported by the Orwig Music Library, a state-of-the-art facility with holdings of over 40,000 books and scores and an equal number of sound and video recordings. Concentrators are encouraged to participate in one or more of the departmentally sponsored performing organizations: Chorus, Orchestra, Jazz Band, Wind Symphony, Chamber Music Performance, Electroacoustic Ensemble, Sacred Harp/Shape-Note Singing, Old-time String Band, Javanese Gamelan, or Ghanaian Drumming.

MUSC 0550 and MUSC 0560 are prerequisite for many upper-level music courses and are required for all three concentration tracks. These courses lay the foundation for an understanding of the structure of Western music, and develop the musicianship and keyboard skills expected of all concentrators. Students considering a concentration in Music should complete this sequence as early as possible, preferably by the end of sophomore year.

The Department of Music does not award course credit for Advanced Placement (A.P.) courses. Students may receive placement credit for MUSC 0550 and/or MUSC 0560, however. Students interested in placing out of MUSC 0550-MUSC 0560 must take the theory placement test administered during the first class meeting of MUSC 0550 at the beginning of the fall semester. Each student who passes the test will consult with the director of the course to work out individual arrangements for placement credit.

Participation in one or more of the departmentally sponsored performing organizations is highly recommended: Chorus, Orchestra, Jazz Band, Wind Symphony, Chamber Music Performance, Electroacoustic Ensemble, Sacred Harp/Shape-Note Singing, Old-time String Band, Javanese Gamelan, Brazilian Choro Ensemble, or Ghanaian drumming. All music courses—including performance courses—are open to all Brown students, provided that they have satisfied the prerequisites.

Concentration Requirements:

**History/Theory/Composition Track:**

<table>
<thead>
<tr>
<th>Music Theory</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSC 0550</td>
</tr>
<tr>
<td>MUSC 0560</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>History</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select two of the following (the third is optional):</td>
</tr>
<tr>
<td>MUSC 0910</td>
</tr>
</tbody>
</table>

**Electives:**

Three upper-level courses are required (i.e., no course below MUSC 0570); 3

Total Credits 11

1 Prerequisite: MUSC 0560
2 Should be taken before the senior year.
3 1600-level seminars are preferred. Up to two full Applied Music or ensemble credits (i.e., four semesters) may be applied to the concentration requirements.

**Ethnomusicology Track:**

<table>
<thead>
<tr>
<th>Music Theory</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSC 0910</td>
</tr>
<tr>
<td>MUSC 0920</td>
</tr>
<tr>
<td>MUSC 0930</td>
</tr>
<tr>
<td>MUSC 0940</td>
</tr>
</tbody>
</table>

**Advanced Theory**

Select two of the following: 2

| MUSC 1020 | Modal Counterpoint (usually offered every other fall) |
| MUSC 1030 | Tonal Counterpoint (usually offered every other fall) |
| MUSC 1040 | Advanced Music Theory I (usually offered every other fall) |
| MUSC 1050 | Advanced Music Theory II (usually offered every other fall) |

**Advanced Musicianship**

| MUSC 1010 | Advanced Musicianship I (offered every fall) 1 |
| MUSC 1011 | Advanced Musicianship II (offered every spring) 1 |

**Ethnomusicology**

| MUSC 1900 | Introduction to Ethnomusicology (usually offered annually) 2 |

**Electives:**

Four additional courses in ethnomusicology numbered 1000 or higher are required. 4

Total Credits 10

1 Should be taken before the senior year.
2 For a list of qualifying courses, see the Concentration Advisor.

**Computer Music and Multimedia Track:**

<table>
<thead>
<tr>
<th>Music Theory</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSC 0550</td>
</tr>
<tr>
<td>MUSC 0560</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Computer Music Foundation</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSC 0200</td>
</tr>
<tr>
<td>MUSC 1200</td>
</tr>
<tr>
<td>MUSC 1210</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Musicology Ethnomusicology Elective</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSC 0900</td>
</tr>
</tbody>
</table>

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Electives:
Four elective courses selected in any combination from the following groups:
- Computer Music and Multimedia courses, MUSC 1220–1290 or MUSC 2220–2290
- Theory and composition courses, MUSC 1020–1190
- No more than one lower-level Computer Music and Multimedia course, MUSC 0210–0230
- No more than one electronic art production course (VISA or MCM) from approved list. 1

Total Credits 10

1 For a list of qualifying courses, see the concentration advisor.

Neuroscience

Neuroscience is an interdisciplinary field that seeks to understand the functions and diseases of the nervous system. It draws on knowledge from neurobiology as well as elements of psychology and cognitive science, and mathematical and physical principles involved in modeling neural systems. Through the Neuroscience concentration, students develop foundational knowledge through courses in biology, chemistry, and mathematics as well as three core courses in neuroscience. They are also required to develop facility with research methodologies (through courses in statistics and laboratory methods) before moving into specific topics in the field (e.g., visual physiology, neurochemistry and behavior, and synaptic transmission and plasticity). Members of the Neuroscience faculty are affiliated with the Brown Institute for Brain Science, a multidisciplinary program that promotes collaborative research about the brain. Prospective concentrators should contact Scott_Rathbun@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 0300 Basic Physics 1
- PHYS 0400 Basic Physics 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

1 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 (for declarations made January 2013 to present)

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.

- 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 British Empiricists
- PHIL 1710 17th 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 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

One seminar 1

A course from the PHIL 0990 series

Or any seminar at the 2000-level, which may be counted for one of the other requirements

Specialization: Three related courses from one single area of philosophy: e.g., logic and language; philosophy of science; epistemology; philosophy of mind; moral philosophy; political philosophy; ancient philosophy, etc. See Notes below for further details.

Capstone 1

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. A one-semester Reading Course may also be a first step towards writing an Honors Thesis.

Senior Seminar (PHIL 0990): Seminars aimed primarily at advanced undergraduates, on varying topics each year, requiring the completion of a substantial research paper.

Graduate Seminar (PHIL 2000-level): seminars mainly aimed at graduate students, but also open to advanced undergraduates, requiring the completion of a substantial research paper.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Honors Thesis: a piece of work expected to be more substantial than the above-mentioned research papers, typically researched and written over the course of the entire senior year (possibly starting with a relevant Reading Course in the first semester) under the supervision of a thesis advisor (possibly, though not necessarily, the specialization advisor). For honors, see below.

Notes:

• No more than one course may fulfill both a general distribution requirement and a specialization requirement.
• No more than two courses from departments other than the philosophy department may be counted among the ten courses required for the concentration; no more than one of these two outside courses may count toward the three specialization requirements.
• 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).
• Concentrators who aim at a general acquaintance with the discipline of philosophy may forgo a specialization and devise an appropriately balanced program of courses beyond the requirements with the approval of the DUS.

Honors Requirements:

• Philosophy GPA must be greater than 3.5. (This refers to the GPA at the beginning of the senior year in all philosophy courses, and including at least six courses).
• Thesis (see Capstone Options)

Prior Concentration Requirements

For declarations made prior to January 2013, there was one standard concentration in Philosophy with two optional tracks

Standard Concentration (Prior to January 2013)

Eight courses in philosophy, which may not include more than one course numbered below 0350. In addition, at least one of the courses must be an undergraduate or graduate seminar.

One course in Ancient Philosophy

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 0350</td>
<td>1</td>
</tr>
<tr>
<td>PHIL 1250</td>
<td>1</td>
</tr>
<tr>
<td>PHIL 1260</td>
<td>1</td>
</tr>
<tr>
<td>PHIL 1310</td>
<td>1</td>
</tr>
</tbody>
</table>

One course in Early Modern Philosophy

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 0360</td>
<td>1</td>
</tr>
<tr>
<td>PHIL 1700</td>
<td>1</td>
</tr>
<tr>
<td>PHIL 1710</td>
<td>1</td>
</tr>
<tr>
<td>PHIL 1720</td>
<td>1</td>
</tr>
</tbody>
</table>

Logic

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 0540</td>
<td>1</td>
</tr>
</tbody>
</table>

Ethics or Political Philosophy

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 0500</td>
<td>1</td>
</tr>
</tbody>
</table>

One course in Epistemology or Metaphysics

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 1660</td>
<td>1</td>
</tr>
<tr>
<td>PHIL 1750</td>
<td>1</td>
</tr>
<tr>
<td>PHIL 1770</td>
<td>1</td>
</tr>
</tbody>
</table>

Three additional courses is philosophy

Three courses in ethics or political philosophy at the level of 0400 or higher

Two additional philosophy courses

Total Credits: 8

Ethics and Political Philosophy

Eight courses in philosophy, which may not include more than one course numbered below 0350.

One course in Ancient Philosophy

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 0350</td>
<td>1</td>
</tr>
<tr>
<td>PHIL 1250</td>
<td>1</td>
</tr>
<tr>
<td>PHIL 1260</td>
<td>1</td>
</tr>
<tr>
<td>PHIL 1310</td>
<td>1</td>
</tr>
</tbody>
</table>

One course in Early Modern Philosophy

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 0360</td>
<td>1</td>
</tr>
<tr>
<td>PHIL 1700</td>
<td>1</td>
</tr>
<tr>
<td>PHIL 1710</td>
<td>1</td>
</tr>
<tr>
<td>PHIL 1720</td>
<td>1</td>
</tr>
</tbody>
</table>

Logic

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 0540</td>
<td>1</td>
</tr>
</tbody>
</table>

Ethics or Political Philosophy

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 0500</td>
<td>1</td>
</tr>
</tbody>
</table>

One course in Epistemology or Metaphysics

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 1660</td>
<td>1</td>
</tr>
<tr>
<td>PHIL 1750</td>
<td>1</td>
</tr>
<tr>
<td>PHIL 1770</td>
<td>1</td>
</tr>
</tbody>
</table>

Three additional courses is philosophy

Total Credits: 8

Optional tracks:

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
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>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0070 &amp; PHYS 0160</td>
<td>Analytical Mechanics and Introduction to Relativity and Quantum Physics</td>
</tr>
<tr>
<td>PHYS 0030 &amp; PHYS 0040</td>
<td>Basic Physics and Basic Physics</td>
</tr>
<tr>
<td>PHYS 0050 &amp; PHYS 0060</td>
<td>Foundations of Mechanics and Foundations of Electromagnetism and Modern Physics</td>
</tr>
<tr>
<td>PHYS 0470</td>
<td>Electricity and Magnetism</td>
</tr>
<tr>
<td>PHYS 0500</td>
<td>Advanced Classical Mechanics</td>
</tr>
<tr>
<td>PHYS 0560</td>
<td>Experiments in Modern Physics</td>
</tr>
<tr>
<td>PHYS 1410</td>
<td>Quantum Mechanics A</td>
</tr>
<tr>
<td>PHYS 1530</td>
<td>Thermodynamics and Statistical Mechanics</td>
</tr>
</tbody>
</table>

One additional 1000-level course or a mathematics course beyond the introductory level.

Total Credits: 1

**Program:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0470</td>
<td>Electricity and Magnetism</td>
</tr>
<tr>
<td>PHYS 0500</td>
<td>Advanced Classical Mechanics</td>
</tr>
<tr>
<td>PHYS 0560</td>
<td>Experiments in Modern Physics</td>
</tr>
<tr>
<td>PHYS 1410</td>
<td>Quantum Mechanics A</td>
</tr>
<tr>
<td>PHYS 1420</td>
<td>Quantum Mechanics B</td>
</tr>
<tr>
<td>PHYS 1510</td>
<td>Advanced Electromagnetic Theory</td>
</tr>
<tr>
<td>PHYS 1530</td>
<td>Thermodynamics and Statistical Mechanics</td>
</tr>
<tr>
<td>PHYS 1560</td>
<td>Modern Physics Laboratory</td>
</tr>
<tr>
<td>PHYS 1980</td>
<td>Undergraduate Research in Physics</td>
</tr>
</tbody>
</table>

One additional 1000 or 2000 level Physics course or upper level course in related fields of science chosen by the student with agreement of his or her advisor.

Four Mathematics courses beyond MATH 0190 or 0090, 0100 including choices from Applied Mathematics

PHYS 1990 | Senior Conference Course

Total Credits: 18

1 A senior thesis is required. This is to be prepared in connection with the direction of a faculty supervisor. The topic may be in a related department or of interdisciplinary nature. In any event, a dissertation must be submitted.

**Honors**

Candidates for honors in physics will be expected to pursue a more rigorous and extensive program than those merely concentrating in the subject. In addition they will be required to begin an honors thesis during the seventh semester and to complete it (as part of PHYS 1990) during the eighth semester. Honors candidates are also expected to take a special oral examination on the thesis at the end of the eighth semester. Further details about the program may be obtained from the chair of the department or the departmental honors advisor.

**Astrophysics Track for the Sc.B. degree**

**Prerequisites:**

Select one of the following Series:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0070 &amp; PHYS 0160</td>
<td>Analytical Mechanics and Introduction to Relativity and Quantum Physics</td>
</tr>
<tr>
<td>PHYS 0050 &amp; PHYS 0060</td>
<td>Foundations of Mechanics and Foundations of Electromagnetism and Modern Physics</td>
</tr>
<tr>
<td>PHYS 0270</td>
<td>Introduction to Astronomy</td>
</tr>
</tbody>
</table>

Select one of the following Math courses:

- MATH 0170 Advanced Placement Calculus (Physics/Engineering)
- MATH 0180 Advanced Placement Calculus (Physics/Engineering)
- MATH 0190 Advanced Placement Calculus (Physics/Engineering)
- MATH 0200 Advanced Placement Calculus (Physics/Engineering)

**Program:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1110</td>
<td>Ordinary Differential Equations</td>
</tr>
<tr>
<td>MATH 1120</td>
<td>Partial Differential Equations</td>
</tr>
<tr>
<td>PHYS 0500</td>
<td>Advanced Classical Mechanics</td>
</tr>
<tr>
<td>PHYS 0560</td>
<td>Experiments in Modern Physics</td>
</tr>
<tr>
<td>PHYS 1410</td>
<td>Quantum Mechanics A</td>
</tr>
<tr>
<td>PHYS 1530</td>
<td>Thermodynamics and Statistical Mechanics</td>
</tr>
<tr>
<td>PHYS 1100</td>
<td>Introduction to General Relativity</td>
</tr>
<tr>
<td>PHYS 1250</td>
<td>Stellar Structure and the Interstellar Medium</td>
</tr>
<tr>
<td>PHYS 1270</td>
<td>Extragalactic Astronomy and High-Energy Astrophysics</td>
</tr>
<tr>
<td>PHYS 1280</td>
<td>Introduction to Cosmology</td>
</tr>
</tbody>
</table>

Two additional 1000- or 2000-level courses in physics or a related field which are not listed as requirements.

PHYS 1990 | Senior Conference Course

Total Credits: 18

1 A senior thesis is required. This is to be prepared in connection with the direction of a faculty supervisor. The topic may be in a related department or of interdisciplinary nature. In any event, a dissertation must be submitted.

**Biological Physics Track for the Sc.B. degree**

**Foundations of Physics**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0070</td>
<td>Analytical Mechanics</td>
</tr>
<tr>
<td>or PHYS 0050</td>
<td>Foundations of Mechanics</td>
</tr>
</tbody>
</table>

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
or ENGN 0040 Dynamics and Vibrations
PHYS 0160 Introduction to Relativity and Quantum Physics
PHYS 0060 Foundations of Electromagnetism and Modern Physics
PHYS 0470 Electricity and Magnetism
PHYS 0500 Advanced Classical Mechanics
PHYS 1410 Quantum Mechanics A
PHYS 1530 Thermodynamics and Statistical Mechanics

Select one of the following Series: 1

Series A
PHYS 0720 Methods of Mathematical Physics

Series B
Select one of the following:
APMA 0330 Methods of Applied Mathematics I, II
APMA 0350 Applied Ordinary Differential Equations
MATH 1110 Ordinary Differential Equations
And select one of the following:
MATH 0180 Intermediate Calculus
MATH 0200 Intermediate Calculus (Physics/Engineering)
MATH 0350 Honors Calculus
MATH 0520 Linear Algebra
MATH 0540 Honors Linear Algebra

Basic Biology and Chemistry
BIOL 0200 The Foundation of Living Systems (or placement out of BIOL 0200)
BIOL 0500 Cell and Molecular Biology
CHEM 0330 Equilibrium, Rate, and Structure

Advanced Biophysical Topics and Techniques
PHYS 1610 Biological Physics
PHYS 1990 Senior Conference Course

Elective Courses (four chosen from the following list, with at least two 1000-level courses, or additional courses approved by the concentration advisor: 4
APMA 0360 Methods of Applied Mathematics I, II
APMA 0410 Mathematical Methods in the Brain Sciences
APMA 0650 Essential Statistics
APMA 1070 Quantitative Models of Biological Systems
APMA 1080 Inference in Genomics and Molecular Biology
BIOL 0280 Introductory Biochemistry
BIOL 0470 Genetics
BIOL 1050 Biology of the Eukaryotic Cell
BIOL 1200 Protein Biophysics and Structure
BIOL 1270 Advanced Biochemistry
BIOL 1870 Techniques in Pathobiology
CHEM 0350 Organic Chemistry
CHEM 0360 Organic Chemistry
MATH 0090 Introductory Calculus, Part I
MATH 0170 Advanced Placement Calculus
MATH 0190 Advanced Placement Calculus (Physics/Engineering)
MATH 1610 Probability
MATH 1620 Mathematical Statistics
PHYS 0560 Experiments in Modern Physics
PHYS 1510 Advanced Electromagnetic Theory
PHYS 1560 Modern Physics Laboratory
PHYS 2620F Selected Topics in Molecular Biophysics
PHYS 1990 Senior Conference Course 2

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:
MATH 0090 Introductory Calculus, Part I
or MATH 0100 Introductory Calculus, Part II
or MATH 0190 Advanced Placement Calculus (Physics/Engineering)
PHYS 0050 Foundations of Mechanics
or PHYS 0070 Analytical Mechanics

Mathematics Courses 1
MATH 0180 Intermediate Calculus
or MATH 0200 Intermediate Calculus (Physics/Engineering)
or MATH 0350 Honors Calculus
MATH 0520 Linear Algebra
or MATH 0540 Honors Linear Algebra
MATH 1110 Ordinary Differential Equations

Select at least one of the following:
MATH 1060 Differential Geometry
MATH 1120 Partial Differential Equations
MATH 1610 Probability

Physics Courses 1
PHYS 0060 Foundations of Electromagnetism and Modern Physics
or PHYS 0160 Introduction to Relativity and Quantum Physics
PHYS 0470 Electricity and Magnetism
PHYS 0500 Advanced Classical Mechanics
PHYS 0560 Modern Physics Laboratory

Select at least two of the following:
PHYS 1410 Quantum Mechanics A
PHYS 1420 Quantum Mechanics B
PHYS 1510 Advanced Electromagnetic Theory
PHYS 1530 Thermodynamics and Statistical Mechanics
PHYS 1560 Modern Physics Laboratory

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: 2
PHYS 0070 Analytical Mechanics
& PHYS 0160 and Introduction to Relativity and Quantum Physics
PHYS 0050 Foundations of Mechanics
& PHYS 0060 and Foundations of Electromagnetism and Modern Physics

Select one of the following:
MATH 0190 Advanced Placement Calculus (Physics/Engineering)
MATH 0090 Introductory Calculus, Part I
& MATH 0100 and Introductory Calculus, Part II

Required courses:
PHYS 0470 Electricity and Magnetism
PHYS 0500 Advanced Classical Mechanics

Total Credits 17-18

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
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 Science. It is strongly recommended that students complete at least one relevant history course.

There are 11 required courses (5 in Physics, 5 in Philosophy or History, one course in mathematics) and a final project. The choice of the courses is dictated by the following considerations. The field of physics with both deepest philosophical implications and deepest influence on the rest of physics is Quantum Mechanics. Thus, a 1000-level course in Quantum Mechanics or a closely related field such as Statistical Mechanics is indispensable. The second field of physics most relevant for the concentration is Relativity. This field touches upon and serves as a foundation for a broad list of subjects with major philosophical implications of their own, for example: PHYS 1170, PHYS 1280, PHYS 1510, PHYS 1100. This requires another 1000-level physics course in the concentration. 1000-level Physics courses cannot be taken without certain preliminary work, most importantly, PHYS 0470, which serves as a prerequisite for most higher-level physics courses and which relies in turn on PHYS 0160 or PHYS 0060. Another lower-level physics course is necessary for a student to develop familiarity with the tools which have been employed in producing the physics knowledge.

A natural introduction into philosophy of physics comes from a course in Early Modern Philosophy. To a large extent, Early Modern Philosophy was shaped by scholars who combined interest in philosophy and physics (e.g., Rene Descartes, Blaise Pascal, Gottfried Wilhelm Leibniz). The influence of the 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:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<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</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0200</td>
<td>and Intermediate Calculus (Physics/Engineering)</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0350</td>
<td>Honors Calculus</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0520</td>
<td>Linear Algebra</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0540</td>
<td>Honors Linear Algebra</td>
<td>1</td>
</tr>
<tr>
<td>MATH 1530</td>
<td>Abstract Algebra</td>
<td>1</td>
</tr>
<tr>
<td>Four additional 1000 or 2000 level Physics courses</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Two additional 1000 or 2000 level Math courses</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>PHYS 1990</td>
<td>Senior Conference Course</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Credits: 18-20

1 A senior thesis is required. This is to be prepared in connection with under the direction of a faculty supervisor.

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
### Calculus
Select one of the following:  
- MATH 0180 Intermediate Calculus  
- MATH 0200 Intermediate Calculus (Physics/Engineering)  
- MATH 0350 Honors Calculus

### Final Project
Select one of the following:  
- PHIL 1990 Independent Studies  
- PHYS 1990 Senior Conference Course  
- A course from the PHIL 0990 Senior Seminar series  
- Any graduate seminar in Philosophy

### Requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0180</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0200</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0350</td>
<td>1</td>
</tr>
<tr>
<td>PHIL 1990</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 1990</td>
<td>1</td>
</tr>
<tr>
<td>A course from the PHIL 0990 Senior Seminar series</td>
<td>1</td>
</tr>
<tr>
<td>Any graduate seminar in Philosophy</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Credits: 12

* Or one more Philosophy course.

### Honors

Students 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.

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:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLS 0010</td>
<td>1</td>
</tr>
<tr>
<td>POLS 0110</td>
<td>1</td>
</tr>
<tr>
<td>POLS 0200</td>
<td>1</td>
</tr>
<tr>
<td>POLS 0400</td>
<td>1</td>
</tr>
</tbody>
</table>

For the American politics and political theory tracks, select two courses from the following list. One of which must be the introductory course associated with the chosen track.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLS 0110</td>
<td>1</td>
</tr>
<tr>
<td>POLS 0200</td>
<td>1</td>
</tr>
<tr>
<td>POLS 0400</td>
<td>1</td>
</tr>
</tbody>
</table>

For the international and comparative politics track; the following two introductory courses are required:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLS 0200</td>
<td>1</td>
</tr>
<tr>
<td>POLS 0400</td>
<td>1</td>
</tr>
</tbody>
</table>

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:  
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

### 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 pre-requisite) 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 starting with the class of 2016

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>POBS 0610</td>
<td>Mapping Portuguese-Speaking Cultures: Brazil</td>
</tr>
<tr>
<td>POBS 0620</td>
<td>Mapping Portuguese-Speaking Cultures: Portugal and Africa</td>
</tr>
<tr>
<td>POBS 1030</td>
<td>Portuguese Stylistics: Advanced Language Study and Creative Writing</td>
</tr>
<tr>
<td>POBS 1800E</td>
<td>The Brazilian Puzzle: Confronting the Post-Colonial Legacy</td>
</tr>
<tr>
<td>or POBS 1800F</td>
<td>The Lusophone World and the Struggle for Modernity</td>
</tr>
</tbody>
</table>

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
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 8

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.

Requirements for the classes of 2014 and 2015

Using the Portuguese language as a basis, the concentration in Portuguese and Brazilian Studies allows students to develop their interests in the areas of language, literature, education, history or the social sciences in general. Beyond POBS 0400 or its equivalent as a prerequisite, the concentration consists of eight interrelated courses to be selected by the student, in consultation with the Concentration Advisor, from the offerings in Portuguese and Brazilian Studies as well as in other departments, such as History, Political Science, Africana Studies, Anthropology and Sociology. At least four courses must be conducted in Portuguese. Students may choose between two basic programs:

Program A (Language and literature focus):

POBS 0610 Mapping Portuguese-Speaking Cultures: Brazil 1
POBS 0620 Mapping Portuguese-Speaking Cultures: Portugal and Africa 1
At least two literature courses at the POBS 1500 level or higher. 2
POBS 1030 Portuguese Stylistics: Advanced Language Study and Creative Writing 1
A course from the POBS 1800 (Concentration Seminar) series 1
Electives 1 2

Total Credits 8

1 At least one elective should be a course outside the field of language and literature.

Program B (Interdisciplinary focus):

POBS 0610 Mapping Portuguese-Speaking Cultures: Brazil 1
POBS 0620 Mapping Portuguese-Speaking Cultures: Portugal and Africa 1
A course from the POBS 1800 (Concentration Seminar) series 1
Five courses to be selected from the offerings in Portuguese and Brazilian Studies and/or related departments, such as Africana Studies, Anthropology, History, Political Science, and Sociology. 5

Total Credits 8

Honors

Applicable to all concentrators, regardless of graduation year

Candidacy for honors in Portuguese and Brazilian Studies assumes a better than average record, particularly in the concentration. Candidates for honors are required to complete an honors thesis or other approved project. Normally honors candidates will register for POBS 1990 ("Research and Preparation of Honors Projects") in Semesters VII and VIII. These independent study units may not be used to satisfy the minimum course requirement for the concentration. Honors projects are evaluated by two faculty members. Detailed information on honors is available from the concentration advisor.

Foreign Study: Study either in Brazil or in Portugal (usually in the junior year or during the summer) is encouraged as an important part of the concentration. Up to four credits from participation in foreign-study programs can be applied towards the concentration. Students should begin to prepare early for participation in such programs.

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 senior 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.

Concentration Requirements

Introductory Psychology: Planning a concentration and choosing elective courses requires general knowledge about the topics psychologists study. Introductory Psychology (CLPS 0010) is required for the concentration. Students may satisfy the Introductory Psychology course requirement for the concentration. Students may satisfy the Introductory Psychology course requirement for the concentration. Students may satisfy the Introductory Psychology course requirement for the concentration. Students may satisfy the Introductory Psychology course requirement for the concentration.

Quantitative: Careers in Psychology and related fields require familiarity with statistics. Therefore, the Psychology concentration requires Quantitative Methods in Psychology (CLPS 0900). CLPS 0900 is a prerequisite for most of the laboratory courses, so concentrators should plan to take this course by their fourth semester. The department does not grant concentration credit for AP Statistics, regardless of score. Students who feel that CLPS 0900 is too elementary can complete APMA 1650 for concentration credit.

Course Distribution: Concentrators must take at least one laboratory course, which provides students with hands-on experience with research methods in a substantive area of psychology. Because the laboratory serves as the basis for independent research and is a prerequisite for the Honors program, concentrators should plan to take their lab before their senior year. This course must be taken in CLPS. Independent study or laboratory courses in other departments will not fulfill this requirement.

Advanced Seminar: Both A.B. and Sc.B. concentrations are required to take one advanced limited-enrollment seminar/critical readings course. The list of approved seminars varies yearly. Contact one of the concentration advisors for details.

AP and Transfer Credits: Students receiving AP credit for Introductory Psychology can place out of CLPS 0010, and can enroll directly in higher-level psychology courses. AP credits are not accepted for other concentration requirements. Students transferring from another college or university, or students studying abroad or at another US institution, may receive transfer credits for other concentration requirements. Please refer to our departmental policy on applying AP and transfer credits.

The A.B. degree requires 12 courses. The Sc.B. degree requires 17 courses. (Concentrators should complete either the A.B. or Sc.B. Concentration Worksheet before meeting with their Concentration Advisor.)

Requirements for the A.B. degree

CLPS 0010 Elementary Psychology: An Introduction to Mind and Behavior 1
CLPS 0900 Quantitative Methods in Psychology 1
Two courses in Perception and Cognition \(^2\) 2 1
Two courses in Comparative/Physiological \(^2\) 2
Two courses in Social/Personality/Developmental \(^2\) 2
One advanced laboratory course from the following: \(^3\) 1

| CLPS 1090 | Research Methods in Psychology |
| CLPS 1092 | Psychological Theory |
| CLPS 1190 | Techniques in Physiological Psychology |
| CLPS 1191 | Animal Behavior Laboratory |
| CLPS 1192 | Experimental Analysis of Animal Behavior and Cognition |
| CLPS 1193 | Laboratory in Genes and Behavior |
| CLPS 1194 | Sleep and Chronobiology Research |
| CLPS 1290 | Laboratory in Cognitive Processes |
| CLPS 1490 | Functional Magnetic Resonance Imaging: Theory and Practice |
| CLPS 1491 | Neural Modeling Laboratory |
| CLPS 1492 | Computational Cognitive Neuroscience |
| CLPS 1510 | Psychology of Hearing |
| CLPS 1690 | Laboratory in Developmental Psychology |
| CLPS 1790 | Personality and Clinical Assessment |
| CLPS 1791 | Laboratory in Social Cognition |

An advanced seminar/critical readings course in CLPS, numbered above 1000. \(^4\)

Two elective courses, with approval of the concentration advisor. \(^5\) 2

Total Credits 12

1 Or advanced placement with a score of 4 or 5, or transfer credit. If placement for CLPS 0010 is granted on the basis of AP or IB test scores, then another CLPS course (at any level) must be substituted.

2 The pre-approved courses in each area are listed on the concentration worksheets. A laboratory course or seminar (indicated on the worksheet) may be used to meet the area requirement only if it is the student's second lab course or second seminar. Independent study courses cannot be used for this requirement. First year seminars outside of CLPS cannot be counted for the area requirement.

3 The worksheets (http://www.brown.edu/Departments/CLPS/undergrad/psychology) include up-to-date lists of labs. Independent study courses and laboratory courses outside of CLPS cannot be used to satisfy this requirement.

4 Consult one of the concentration advisors for lists of approved courses.

5 The electives should complement the student's main area of interest in Psychology. These courses can be taken outside of CLPS. Only courses that carry concentration credit in the home department can be used for this requirement. In addition, independent study and GISP courses will not fulfill this requirement.

**Requirements Specific for the Sc.B. degree**

| CLPS 0010 | Elementary Psychology: An Introduction to Mind and Behavior \(^1\) |
| CLPS 0900 | Quantitative Methods in Psychology |
| CLPS 1090 | Research Methods in Psychology |
| CLPS 1092 | Psychological Theory |
| CLPS 1190 | Techniques in Physiological Psychology |
| CLPS 1191 | Animal Behavior Laboratory |

| CLPS 1192 | Experimental Analysis of Animal Behavior and Cognition |
| CLPS 1193 | Laboratory in Genes and Behavior |
| CLPS 1194 | Sleep and Chronobiology Research |
| CLPS 1290 | Laboratory in Cognitive Processes |
| CLPS 1490 | Functional Magnetic Resonance Imaging: Theory and Practice |
| CLPS 1491 | Neural Modeling Laboratory |
| CLPS 1492 | Computational Cognitive Neuroscience |
| CLPS 1510 | Psychology of Hearing |
| CLPS 1690 | Laboratory in Developmental Psychology |
| CLPS 1790 | Personality and Clinical Assessment |
| CLPS 1791 | Laboratory in Social Cognition |

An advanced seminar/critical readings course in CLPS, numbered above 1000. \(^4\)

Six supporting science courses should be selected from the following areas: Applied Mathematics, Biology, Chemistry, Computer Sciences, Engineering, Mathematics, Neuroscience, or Physics. \(^5\) CLPS 1980 Directed Research in Cognitive, Linguistic and Psychological Sciences \(^6\)

Total Credits 17

1 Or advanced placement with a score of 4 or 5, or transfer credit. If placement for CLPS 0010 is granted on the basis of AP or IB test scores, then another CLPS course (at any level) must be substituted.

2 The pre-approved courses in each area are listed on the concentration worksheets. A laboratory course or seminar (indicated on the worksheet) may be used to meet the area requirement only if it is the student's second lab course or second seminar. Independent study courses cannot be used for this requirement. First year seminars outside of CLPS cannot be counted for the area requirement.

3 The worksheets (http://www.brown.edu/Departments/CLPS/undergrad/psychology) include up-to-date lists of labs. Independent study courses and laboratory courses outside of CLPS cannot be used to satisfy this requirement.

4 Consult one of the concentration advisors for lists of approved courses.

5 The following courses cannot be used to meet the requirement for outside science courses: independent study or GISP courses, courses in science studies, or ENGN 0020, 0090, 0900, 1010. AP credit can substitute for only one of these courses.

6 CLPS 1980 typically involves one semester of independent research under the direct supervision of a faculty advisor in CLPS. This includes data collection and/or analysis, and a final written report. Upon department approval, the faculty advisor may be from another department or unit if the research program is within the field of psychology and approved by the concentration advisor as such. Contact the Sc.B. Concentration Advisor for further details. CLPS1980 cannot be counted for the lab requirement. The CLPS Undergraduate Concentration Committee oversees the concentration and receives petitions regarding concentration requirements.

**Honors**

Detailed information about the Psychology Honors program is available on a dedicated page.

**Public Health**

Public Health (formerly Community Health) is an interdisciplinary concentration through which students examine a variety of issues, including population health and disease, health policy, cross-cultural and international aspects of health, the organizational and social structures through which health services are delivered and received, and the public health system. Courses in the concentration allow students to explore the ways in which the social, political, behavioral and biological sciences contribute to the understanding of patterns of population distributions of
For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
Public Policy

Public Policy and American Institutions is housed in the A. Alfred Taubman Center, which is dedicated to teaching, research, and service in the areas of health care and social welfare policy, education policy, urban policy, law and criminal justice, and media and technology. Public policy refers to societal initiatives to remedy social problems. Because social problems typically emerge from complex, multi-faceted social conditions, the study of public policy requires students to become familiar with the insights of diverse academic disciplines into how institutions facilitate or inhibit societal problem-solving. The study of public policy is an excellent framework for integrating ideas drawn from several disciplines around issues of real world significance. Concentrators emerge with a sound understanding of institutional change and are well-equipped to contribute to processes of social change.

Required Courses:

Core Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLCY 0100</td>
<td>Introduction to Public Policy</td>
<td>1</td>
</tr>
<tr>
<td>Ethics and Public Policy or PLCY 1700T</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>POLS 1050</td>
<td>Ethics and Public Policy</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1110</td>
<td>Microeconomics</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1130</td>
<td>Intermediate Microeconomics (Mathematical)</td>
<td>1</td>
</tr>
<tr>
<td>EDUC 1130</td>
<td>Economics of Education I</td>
<td>1</td>
</tr>
<tr>
<td>Research Methods</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>POLS 1600</td>
<td>Political Research Methods</td>
<td>1</td>
</tr>
<tr>
<td>EDUC 1100</td>
<td>Introduction to Qualitative Research Methods</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1620</td>
<td>Introduction to Econometrics</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1630</td>
<td>Econometrics I</td>
<td>1</td>
</tr>
<tr>
<td>SOC 1100</td>
<td>Introductory Statistics for Social Research</td>
<td>1</td>
</tr>
<tr>
<td>Policy Analysis and Program Evaluation</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>PLCY 1200</td>
<td>Policy Analysis and Program Evaluation</td>
<td>1</td>
</tr>
<tr>
<td>or EDUC 1160</td>
<td>Evaluating the Impact of Social Programs</td>
<td></td>
</tr>
</tbody>
</table>

Elective Courses: 1

- Two courses in American Institutions: 2
- One course in Global Policy: 1
- Two courses in Policy Problems: 2

Total Credits: 11

1 Two of the five elective courses must have a primary listing in Public Policy. One of the five must be designated as a writing course.

Honors:

Candidates for honors should apply in the Spring term of their third year. Successful candidates will enroll in the Public Policy Colloquium and prepare a senior honors paper.

Religious Studies

Religious Studies seeks to understand and interpret religions in various historical, cultural, and social contexts. It fosters scholarly skills such as close reading (of texts and other social and material data), excellence in writing and verbal expression, interpretation of the past from written and physical evidence, and interpretation of contemporary society. By exploring the public and private concerns that religions engage—for example, the nature of community and solitude, suffering and death, good and evil—students discover new ways of interpreting the complex world in which they live. As students venture into the religions of Asia, the Middle East, Africa, the Americas, and Europe, they learn about the formation and transmission of beliefs, behaviors, values, rituals, texts, institutions, and forms of community. Students also learn about conflict and accord within and between religions, as well as between religious and non-religious perspectives.

Concentration in religious studies includes course work in RELS 1000 (junior seminar in methods in the study of religion) and eight other courses conforming to the following requirements.

Each student in consultation with appropriate faculty members devises a concentration program. The student presents (for approval by the concentration advisor) a written statement of the objectives of his or her concentration program and a list of the component courses. The program is expected to encompass the study of at least one religious tradition from each of the following groups. Ordinarily, this requirement is satisfied by two or more courses in each of these areas:

1. Traditions that emerge from West Asia and the Mediterranean world
2. Traditions that emerge from South and East Asia

The plan of study must take account of more than one approach to the study of religion, e.g., philosophical and historical; contain at least two Intermediate-level courses (0200-0999), RELS 1000, and two additional advanced-level courses (above 1000). This means that no more than four courses (out of nine) can be at the introductory level. Courses listed in other departments but taught by religious studies faculty count toward the program. Up to three courses that are outside the department and not taught by religious studies faculty can count toward the program.

No later than the end of spring registration in the junior year, the concentrator will determine whether he or she will write an honors thesis or complete a capstone project for the concentration. A capstone course will be selected in consultation with the concentration advisor and other faculty as appropriate. Within the frame of this capstone course, the concentrator will address the theoretical and interpretive issues of his or her particular focus in the religious studies concentration.

Honors:

A religious studies concentration with Honors requires, in addition to RELS 1000 and eight other courses, an Honors thesis (RELS 1999, during both semesters of the senior year). A thesis is an opportunity for students to conduct extended independent research under the guidance of faculty. 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 can elect to take no more than two of the concentration courses with the "S/NC" option, after declaring a Religious Studies concentration. (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 the "S/NC" limit). Writing the thesis is a necessary, but not sufficient, condition for receiving Honors. The thesis must earn an A from its readers for the student to receive Honors, and the student must have earned a grade point average of greater than 3.5 in the concentration (as well as satisfy all the other concentration requirements). Students who study abroad, or who petition to include Brown courses not cross-listed with Religious Studies, must still complete at least five courses in Religious Studies.

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

The Program in Renaissance and Early Modern Studies (REMS) encourages students to pursue interdisciplinary and multidisciplinary approaches to the study of Europe and its relation with the Americas and Asia in the early modern period. Students focus on the late fourteenth through the late eighteenth centuries—a time marked by scientific and agricultural revolutions, the Reformation, the development of capitalism, and the rise of cultural forms such as the novel, opera, Grub Street journalism and the art market. Concentrators examine the development of new cultural and political forms through the imitation and reworking of those of classical antiquity, the restructuring of patriarchal society, and the emergence of the sovereign nation state. Students take courses in more than a dozen departments affiliated with REMS.

Sponsoring departments include: Africana Studies, Archaeology and the Ancient World, Classics, Comparative Literature, English, French Studies, Hispanic Studies, History, History of Art and Architecture, History of Mathematics, Italian Studies, Judaic Studies, Music, Philosophy, Portuguese and Brazilian Studies, Slavic Languages, and Theatre Arts and Performance Studies. Students are invited to take advantage of this breadth of offerings in order to enhance their understanding of the period, as well as to gain a sense of the uses, limitations, and interrelationships of particular disciplinary approaches.

Requirements

Concentrators are required to take a minimum of 8 courses. These include the following:

1. Three courses on Renaissance and/or early modern topics in one field in which the student has primary interest or training, (for example, literature, history of art and architecture, or history).
2. Three courses related to the Renaissance and/or early modern period chosen from two other fields.
3. A senior project. (Credit will be granted through registration for Independent Study in the department in which the topic of research lies.)
4. Another relevant course of the student’s choosing.

In addition, the student must be able to demonstrate a reading knowledge of a relevant modern or ancient language other than English. This language requirement does not count as one of the 8 courses.

Honors

Interested and eligible students will petition to write a thesis and the faculty will choose the Honors group for that year from the applications, making every effort to accommodate all eligible proposals. Selection is based upon the quality of the application, the preparedness of the student to undertake the project, and the availability of appropriate advisors for the subject. Applications will be due to the Director of REMS in mid-April of the student’s junior year.

For those accepted, the Honors program will be administered as follows:

Students will sign up for REMS 1980 in the Fall and again in the Spring, with the section number of their advisor. Students must meet regularly with their advisors and second readers throughout the year according to a schedule determined by each student and advisor. Finished drafts of the thesis (which will be about 35 pages in length, not counting bibliography and visual or other supporting materials) will be due to the advisor and second reader on April 1 of the Spring semester. Comments will be returned to the students for final polishing and corrections at that point.

Students will receive Honors when both their primary advisor and their second reader have provided written statements in support of the finished project. The finished paper, which should be a polished and revised, edited, professional work of original research, will be made available to the entire REMS faculty at the Annmary Brown Memorial, with a folder for leaving constructive comments on the finished thesis for the concentrator. This is an optional engagement that we hope will become part of the culture of the program. There will be a public presentation of the Honors work at the end of the Spring semester.

Students planning a December graduation will not be eligible for the Honors Thesis program, although as always they are welcome to work out other ways to pursue projects of independent interest in consultation with an academic advisor.

Students wishing to write an honors thesis must have an A average in the concentration, which means that they will not have received more than one “B” or “S” in any course used for the concentration. Classes taken S/NC may be considered as qualifying the student for Honors if they are marked “S with distinction,” meaning that had the student taken the course for a grade, the grade would have been an “A.” It is advisable for them to have taken at least one class with the person who will advise the thesis, and have already written a research paper before choosing to undertake this year-long writing project. Honors students are strongly encouraged not to take more than 4 classes either semester of their senior year—the Honors class being considered one of the four classes.

Application process:

Each application shall consist of:

1. A very brief (one or two paragraph) cover letter identifying the most appropriate advisor and second readers, and stating also the student’s preparation is for the project. Second readers may be professors who work in areas related to the topic, or in some very special cases (and with advisor’s approval) may be practitioners with whom the student already worked closely, for example.
2. A 2 page double-spaced abstract stating and explaining the topic (subject and argument) of the research to be undertaken, written as clearly as possible.
3. A one-page working bibliography of the most relevant books and major articles to be consulted for the project.
4. A current resumé,
5. A printout of the most recent transcript

The senior project constitutes the capstone for all concentrators. Examples of possible senior projects are: a senior thesis (roughly equivalent to a senior seminar paper), the staging of an early modern play, the performance of early modern music, or an exhibition. The final project will be developed in consultation with two REMS faculty advisors who work closely with the student. Credit is granted through registration for Independent Study in the department for which the topic of research lies.

Liberal Learning

This concentration will help develop your aesthetic awareness, close reading skills, collaborative skills, cultural understanding, facility with symbolic languages, historical awareness, and your speaking and writing.

Science and Society

Science and Society is an interdisciplinary concentration that examines the processes of scientific discovery and the establishment of scientific policies and systems of belief from historical, philosophical, anthropological, and sociological perspectives. Concentrators analyze the practices, norms, and values that reflect and shape our deepest convictions about what is considered “science.” Students select courses in the physical sciences, life sciences, or mathematics and choose a thematic track that may include the history and philosophy of science, gender and science, race, science and ethnicity, health and medicine, environment and society, or they may create their own independent focus. Science and Society prepares students to follow, guide, and shape scientific knowledge as it travels from the laboratory into the public arena.

Requirements

Consisting of 12 courses, the program of study outlined below will be developed by each student in consultation with the concentration advisor. Where appropriate, independent reading, lab courses or GISPS may count for up to three of the twelve total courses. Students will take a minimum of 7 intermediate to advanced courses.

Required Courses (2)

The concentration has two required courses.
• SCSEO 1500: Gender, Science and Society, or equivalent introductory course; usually taken in the second or third year.
• SCSEO 1900: Senior Seminar, also open to non-majors with the proper background, usually taken senior year.

Thematic Track (3)
Students will organize their course of study around the choice of a thematic track. The theme may be thought of as the applied content portion of the concentration. Students will take a minimum of three courses, at least one of which must be at an advanced level, in one of the thematic areas listed below:
- History & Philosophy of Science
- Gender & Science
- Race, Science & Ethnicity
- Health & Medicine
- Representing Science in Literature & Culture
- Policy, Persuasion & the Rhetoric of Science
- Environment & Society
- Independent Focus

Science Track (4)
Students will take a minimum of four courses in one of the following scientific areas: physical sciences, life sciences, mathematics/computer science. The chosen area should provide appropriate background and support for the chosen concentration theme. The science courses will be sequenced such that a concentrator will move enough beyond the introductory level to gain some understanding of the world view of scientists within a chosen field. The particular sequence of courses which best meets the science requirement will be chosen in consultation with the concentration advisor. When necessary, the concentration advisor will seek guidance from faculty within the chosen scientific field.

Science and Technology Studies Theory (3)
Students will take three Science and Technology Studies-related courses in the social sciences and humanities. These courses, which will provide critical theoretical background for the study of Science and Society, should address questions of historiography, epistemology and methodology in the field of science and technology studies. A full list of such courses and sample concentrations may be found at http://www.brown.edu/Faculty/Science/COSTS.

Honors
To qualify for Honors a student must:
1. Apply for candidacy for Honors by the end of the student’s seventh semester.
2. Maintain a high level of excellence in courses within the concentration and above average performance in non-concentration courses. In the event that a student has taken a number of courses S/NC he or she will submit CPR’s for consideration by the concentration advisory committee, which will evaluate the student’s candidacy.
3. Complete an Honors Thesis judged by the advisor and an additional reader to be of superior quality.
4. Deliver an oral presentation based on thesis work that is favorably reviewed by the concentration faculty and the advisory committee.

Slavic Studies
Slavic Studies is concerned with the languages, literatures, and civilizations of the Slavic world. Built on sound knowledge of one or two Slavic languages (normally Russian or Czech) the program allows students to develop an in-depth appreciation and understanding of East European cultures and civilizations through a broad spectrum of interdisciplinary fields. Students take courses in literature, history, culture, theater, political science, economics, and international relations. Concentrators focusing on Russia learn one of the world’s most commonly spoken languages and study some of the world’s best-regarded authors and composers: Tolstoy and Dostoevsky, Gogol and Bukovskiy, Tchaikovsky and Mussorgsky, and Rachmaninoff and Stravinsky. Focusing on Czech allows students to explore, for example, how Czechs distinguished themselves by peacefully transitioning from communism to capitalism (the “Velvet Revolution”) and separating peacefully with the Slovak Republic (the “Velvet Divorce”). Most concentrators study abroad in a Slavic country, either during the academic year or the summer.

Requirements for the AB degree:
1. Six semesters of one Slavic language or the equivalent (normally Czech or Russian), or a combined total of eight semesters of two Slavic languages or the equivalent.
2. Seven 1000-level courses devoted to the study of the East European civilizations: literature, history, culture, theater, political science, economics, international relations. Typically, at least four of these courses will be from within the Department of Slavic Languages. Students’ choice of courses is subject to the approval of the concentration advisor.

Honors
Honors candidacy in Slavic studies assumes an excellent academic record, particularly in the concentration. Additional requirements are the same as those for a standard concentration, plus the writing of a senior thesis (SLAV 1990). For procedures and schedule for writing a senior thesis, please refer to the department guidelines.

Social Analysis and Research
The Sc.B. concentration in Social Analysis and Research provides both a conceptual and a working knowledge of the techniques for data collection and analysis used for social research in academic and non-academic environments. The centerpiece of the concentration is a rigorous and comprehensive collection of courses: (1) that develop an understanding of the principles underlying the processes of data collection and analysis; and (2) that train students in the application of advanced statistical techniques for data description and analysis. The concepts and skills learned in these courses are reinforced through engagement in applied research with Sociology faculty and/or internships with local organizations in the for profit and not-for-profit sectors.

Concentrators also take courses that provide grounding in the theoretical approaches to social phenomena that are foundational to social research. Graduates develop an understanding of the concepts and processes that underlie the issues studied by sociologists and the analytic techniques that allow sociologists to understand social relations and individual behavior.

Standard program for the Sc.B. degree

Required Core

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0990</td>
<td>Introductory Calculus, Part I</td>
<td>1</td>
</tr>
<tr>
<td>SOC 1100</td>
<td>Introductory Sociology</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>

Three (3) substantive or theory courses (non-methodological courses) in Sociology, two (2) of which must be at the 1000-level or above

Three (3) of the following advanced analysis courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 2110</td>
<td>Demographic Methodology I</td>
</tr>
<tr>
<td>SOC 2210</td>
<td>Demographic Methodology II</td>
</tr>
<tr>
<td>SOC 2230</td>
<td>Techniques of Demographic Analysis</td>
</tr>
<tr>
<td>SOC 2240</td>
<td>Multivariate Statistical Methods</td>
</tr>
<tr>
<td>SOC 2960G</td>
<td>Spatial Data Analysis Techniques in the Social Sciences</td>
</tr>
<tr>
<td>SOC 2960G</td>
<td>Spatial Data Analysis Techniques in the Social Sciences</td>
</tr>
</tbody>
</table>

Capstone Experience (1-2 courses)

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
A one-semester research internship (not for credit or for credit as SOC 1970 - Independent Study), or a summer research internship (not for credit)

Sociology Senior Seminar (SOC 1950)

Total Number of Courses (12-13)

Total Credits 12-13

Course Substitutions: Students may petition the Undergraduate Concentration Advisor to use one advanced analysis course taken in another department to count toward the three required advanced analysis courses.

Research Internship

A one semester or a summer research internship is required. The research internship is designed to provide students with hands-on experience in social research. Students will typically complete the research internship in their junior year or during the summer between their junior and senior years. Students need to submit an Internship Proposal Form to the Undergraduate Concentration Advisor for approval prior to starting the internship. Upon completion of the internship, students are required to submit to the Undergraduate Concentration Advisor a brief summary report of their experience, which must be signed by the supervisor of the student’s internship.

Academic research internships involve work on a faculty member’s research project. Activities may range from data collection, data entry, data file management, descriptive analyses, and more advanced model estimation. Students are encouraged to approach faculty about opportunities for working on their research projects. Off-campus research internships are arranged through the Sociology Department Students Affairs Coordinator or the Undergraduate Concentration Advisor. Academic and off-campus research internships will typically entail 5-10 hours of work per week and may or may not involve compensation.

Students may receive academic credit for academic research internships and off-campus internships completed during the academic year if they combine the internship experience with an academic component under the direction of a faculty advisor. Students taking an internship for credit should register for an Individual Research Project (SOC 1970).

The Senior Seminar

The concentration in Social Analysis and Research requires all concentrators to complete a thesis or project in their senior year as a capstone experience. The purpose of the thesis or project is to allow students an opportunity to apply the knowledge they acquired on a topic of their own interests. This capstone experience provides a hands-on experience through which students learn what can be done with sociological research methods. To fulfill the capstone requirement students enroll in SOC 1950 - Senior Seminar during the senior year. SOC 1950 is a one credit course that students take across two successive semesters. Students receive 0.5 credit in each semester. The senior seminar is focused on finalizing a senior project or thesis and giving a presentation of the completed work. Participation in this seminar allows each cohort of concentrators to discuss diverse interests and exposes them to a wide range of applications of sociological knowledge.

The senior thesis is supervised by a faculty member who serves as the primary advisor, and one additional faculty member who serves as a reader. The primary advisor and the reader are chosen by the student and approved by the Concentration Advisor. The reader will receive a draft and a finished copy of the students thesis, which the reader will be responsible to grade. The reader may be involved in the earlier development of the thesis depending upon the arrangement made by the student with the reader. The Senior thesis will normally consist of a major research project. By the end of the senior semester, students must submit a prospectus of the senior thesis to the concentration Advisor. At the start of the seventh semester students should submit to the Concentration Advisor a proposal (not more than four pages) accompanied by the signature of one faculty member indicating that he or she is willing to serve as primary advisor on the thesis. Only a senior thesis qualifies the student for Honors. A thesis typically includes one or two semesters of course credit through SOC 1980 - Senior Thesis/Project (fall semester) and/or SOC 1990 - Senior Thesis/Project (spring semester). SOC 1980 and SOC 1990 do not count toward the 12-13 course requirement for the concentration.

A senior project differs from a thesis in its scholarly content and form, and it depends only on the evaluation of the senior seminar instructor (although students may elect to have a faculty advisor for the project, in addition to the senior seminar instructor). Whereas the senior thesis follows the form of a conventional research paper, the project allows a wider array of research and creative outputs, including, but not limited to video documentaries, photographic exhibitions, and applied or policy related reports with an off-campus organization. Projects should be complemented by an analytical paper that situates the central subject matter of the project within the context of sociological scholarship.

You should decide your senior project in consultation with the Concentration Advisor and the instructor of the Senior Seminar. You may also need to approach a specific faculty member within the department to advise you on your project. At the beginning of your senior year you should file a written statement with the Concentration Advisor describing your senior project and listing your advisor for the project (if you opt to have one outside of the SOC 1950 instructor). Students who have a faculty advisor on their senior project may register for SOC 1980 Senior Thesis/Project (fall semester) and SOC 1990 Senior Thesis/Project (spring semester). SOC 1980 and SOC 1990 do not count toward the 12-13 course requirement for the concentration.

Due Dates

During the second week of March, a complete draft of the senior thesis must be given to the faculty advisor and the reader for comments, and the final version of the senior thesis is due during the second week of April (exact dates vary from year to year and are announced at the start of the academic year).

During the second week of March, a complete draft of the senior project must be given to the instructor of the senior seminar and the faculty advisor (if the student has one) for comments, and the final version of the senior project is due during the second week of April (the exact dates vary from year to year and are announced at the start of the academic year).

These deadlines are essential to allow the faculty time to evaluate theses for awards, and to notify the Registrar with recommendations for honors. NO EXTENSIONS WILL BE GRANTED.

Honors

In order to be considered for honors, students must receive a grade point average of at least 3.5 (A=4, B=3, C=2) on all concentration courses taken, and no more than one (1) of the concentration courses with the “S/NC” option. Honors also requires a senior thesis, with a recommendation of Honors by the advisor and reader, that demonstrates an understanding of empirical research.

Independent Study

Students can use no more than one (1) Independent Study course (SOC 1970 to meet the concentration course requirements. This course counts towards a 1000 level substantive requirement and will not serve as a substitute for any of the core concentration requirement.

Sociology

Sociology seeks to understand human behavior by studying how individuals connect to the groups and institutions in which they live. Sociologists analyze the interrelationship of social structures with political, economic, and cultural forces, from the micro to the macro level. As a discipline, sociology provides students with the conceptual and analytic tools to make sense of complex social structures in a rapidly changing global environment. Brown’s Sociology department brings together a dynamic group of scholars with international reputations for outstanding achievement in a range of important research areas -- social demography, health and medicine, environmental justice and environmental change, development, politics and democracy, urban and spatial analysis, and organizations and occupations.

Standard program for the A.B. degree

Ten courses are required:

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
You should decide your senior project in consultation with the Concentration Advisor and the instructor of the Senior Seminar. You may also need to approach a specific faculty member within the department to advise you on your project. At the beginning of your senior year you should file a written statement the Concentration Advisor describing your senior project (if you opt to have one outside of the instructor). Students who have a faculty advisor on their senior project may register for - Senior Thesis/Project (fall semester) and/or - Senior Thesis/Project (spring semester). SOC 1980 and SOC 1990 do not count towards the 10 course requirement for the concentration.

Due Dates
During the second week of March, a complete draft of the senior thesis must be given to the faculty advisor and the reader for comments, and the final version of the senior thesis is due during the second week of April (the exact dates vary from year to year and are announced at the start of the academic year).

During the second week of March, a complete draft of the senior project must be given to the instructor of the senior seminar and the faculty advisor (if the student has one) for comments, and the final version of the senior project is due during the second week of April (the exact dates vary from year to year and are announced at the beginning of the academic year).

These deadlines are essential to allow faculty time to evaluate theses for awards, and to notify the Registrar with recommendations for honors. NO EXCEPTIONS WILL BE GRANTED

Honor
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.

HIST1620 - Gandhi’s India: South Asia Before 1947
Select at least one of the following courses in pre-modern history, philosophy, religious studies and literature:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLAS 0180</td>
<td>Indian Civilization through Its Literature</td>
</tr>
<tr>
<td>CLAS 0800</td>
<td>Religious and Philosophical Thought in Ancient India</td>
</tr>
<tr>
<td>CLAS 1070</td>
<td>Epics of India</td>
</tr>
<tr>
<td>CLAS 0990</td>
<td>Concepts of the Self in Classical Indian Literature</td>
</tr>
<tr>
<td>CLAS 1140</td>
<td>Classical Philosophy of India</td>
</tr>
</tbody>
</table>

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
RELS 0140  Religions of South Asia  
RELS 0130  Religions of Classical India  
Select at least one of the following social science course:  
ANTH 1250  Film and Anthropology: Identity and Images of Indian Societies  
ANTH 1321  Impact on Colonialism: Gender and Nationalism in India  
ANTH 1131  Indian Issues in Anthropological Perspective  
ANTH 2321  Coming to Terms with India: Anthropology of Colonialism and Nationalism  
POLS 1280  Politics, Economy and Society in India  
At least one course in the visual arts, modern literature, music, film, or theatre of South Asia such as:  
HIAA 1410A  Topics in Islamic Art: Islamic Art and Architecture on the Indian Subcontinent  
HNDI 1080  Advanced Hindi-Urdu  
MUSC 1933  Music of India  
PRSN 1200  Iranian Cinema: Before and After the Islamic Revolution  
RELS 0910  Music, Drama and Religion in India  
TAPS 1270  Masking, Trancing, Performing, and Spectating in Non-Western and Circumpacific Performance  
An Honors Thesis or a Capstone Course taken in an appropriate Department.  
Five electives  
ANTH 0066K  International Perspectives of Women's Agency and Society  
ANTH 1131  Indian Issues in Anthropological Perspective  
ANTH 1220  Comparative Sex Roles  
ANTH 1250  Film and Anthropology: Identity and Images of Indian Societies  
ANTH 2320  Ideology of Development  
ANTH 2321  Coming to Terms with India: Anthropology of Colonialism and Nationalism  
CLAS 0180  Indian Civilization through Its Literature  
CLAS 0800  Religious and Philosophical Thought in Ancient India  
CLAS 0820  Epics of India  
CLAS 0990  Concepts of the Self in Classical Indian Literature  
CLAS 1140  Classical Philosophy of India  
Several courses in Development Studies are potentially appropriate; check to see if the course allows for a South Asian focus  
ECON 1520  The Economic Analysis of Institutions  
HIAA 1410A  Topics in Islamic Art: Islamic Art and Architecture on the Indian Subcontinent  
HIST 2971A  Science in a Colonial Context  
Several courses in International Relations are potentially appropriate; check to see if the course allows for a South Asian focus  
HNDI 0100  Beginning Hindi or Urdu  
HNDI 0200  Beginning Hindi or Urdu  
HNDI 0300  Intermediate Hindi-Urdu  
HNDI 0400  Intermediate Hindi-Urdu  
HNDI 1080  Advanced Hindi-Urdu  
MUSC 0041  World Music Cultures (Middle East and Asia)  
MUSC 1933  Music of India  
PHIL 0990  Philosophy East and West  
POLS 1280  Politics, Economy and Society in India  
POLS 1821O  Politics of Economic Development in Asia  
POLS 1380  Ethnic Politics and Conflict  
POLS 1430  Roots of Radical Islam  
PRSN 0100  Basic Persian  
PRSN 0200  Basic Persian  
PRSN 0300  Intermediate Persian Language and Culture  
PRSN 0400  Intermediate Persian Language and Culture  
PRSN 1200  Iranian Cinema: Before and After the Islamic Revolution  
RELS 0040  Great Contemplative Traditions of Asia  
RELS 0090B  Hindu and Christian Modes of Loving Devotion  
RELS 0100  Introduction to Buddhism  
RELS 0130  Religions of Classical India  
RELS 0140  Religions of South Asia  
RELS 0150  Islam Unveiled  
RELS 0500  The Theory and Practice of Buddhist Meditation  
RELS 0540  Buddhist Psychology  
RELS 0610  Sacrifice and Society  
RELS 0640  Dying To Be With God: Jihad, Past and Present  
RELS 0910  Music, Drama and Religion in India  
RELS 1520  Pilgrimage and Sacred Travel in the Lands of Islam  
RELS 1530A  Methods and Problems in Islamic Studies: Narratives  
RELS 1540  Monks, Mystics and Martyrs: Abrahamic Traditions Compared  
SANS 0100  Elementary Sanskrit I  
SANS 0200  Elementary Sanskrit II  
SANS 0300  Sanskrit Epic Narrative  
SANS 0400  Classical Sanskrit Story Literature  
SANS 1020  Early Sanskrit Philosophy and Religion  
SANS 1080  The Critical Episodes of the Mahabharata  
SANS 1100  Vedic Sanskrit  
SANS 1400  The Sanskrit Grammatical Tradition  
SANS 1800  Classical Schools of Indian Philosophy  
SANS 1910  Advanced Sanskrit  
SANS 1990  Conference: Especially for Honors Students  
TAPS 1270  Masking, Trancing, Performing, and Spectating in Non-Western and Circumpacific Performance  

Total Credits  
1  

1  Two of which may be language courses in Hindi/Urdu or Sanskrit taken in conjunction with the language requirement. This list is not exhaustive, as any class which allows the concentrator to complete a substantial final project on South Asia may be counted towards the concentration requirements. If course rotations or the introduction of new courses warrant, substitutions within these categories may be made with approval of the faculty advisor.  

Language Requirements  
Proficiency in a South Asian language is required for the concentration. Students who are not native speakers of a South Asian language may prove proficiency by taking two years of Hindi/Urdu or Sanskrit at Brown, by successfully passing a course at the intermediate (4th semester) level at Brown or the approved equivalent at another institution, or by successfully passing a special examination administered by an approved faculty member. Two courses taken to fulfill the language requirement may be counted among the elective courses required for concentration.  

Study Abroad  
All South Asian Studies concentrators are encouraged to take Hindi/Urdu and to participate in Brown in India, a junior-year study abroad program at St. Stephen's College and Lady Sri Ram College in Delhi. Students can also opt to enroll in any other Brown approved study-abroad program in South Asia.  

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

All concentrators other than honors concentrators will designate an upper-level course in the area of their primary focus as their capstone course. The student will take this course during the senior year and will produce as part of the written work for the course a substantial paper or annotated translation displaying the unique focus of his or her concentration.

Honors

A South Asian Studies Concentration with Honors requires a high B or A average in courses taken for the concentration as well as an honors thesis in the department of the student’s main focus. Candidates for the honors program should apply to the South Asia Faculty Group through their advisor by the middle of their sixth semester.

Theatre Arts and Performance Studies

The Department of Theatre Arts and Performance Studies (TAPS) is the intellectual and artistic center for the aesthetic, historical, literary, practical, and theoretical explorations of performance in global perspective – theatre, dance, speech, time-based art, and even performative “roles” in everyday life. The TAPS concentration offers three tracks with many points of overlap among them: Performance Studies, Theatre Arts, and Writing for Performance. Concentrators gain exposure to a broad spectrum of performance modes and methods – acting, directing, dance, and writing, and choose an avenue of focus among them. Everyone graduates having studied craft, gained familiarity with history, and investigated the role of performance arts in culture.

Theatre Arts Track

This concentration combines the study of dramatic literature, theatre history, performance theory, and studio work in the various theatre arts. All concentrators in Theatre Arts will gain practical experience through the study of acting and directing as well as in the technical production of plays, preparing students in the practical study of a cross-section of the vital aspects of theatre craft, including one class in either dance or speech. An essential aim of the concentration track is the engagement of students in performance procedures (acting, dancing, directing, choreography, design, playwriting, dramaturgy, etc.) in order to experience the inter-relationships among social contexts, dramatic texts and theatrical enactments. Along with practical study in craft, concentrators will graduate having studied theatre history and performance theory in global perspective. The study of theatre history provides a Theatre Arts concentrator with the necessary background to understand a variety of dramatic and theatrical forms. The study of performance theory enhances a student’s ability to ask fundamental questions about the role of theatre in social, political, cultural and cross-cultural arenas.

Of the ten courses required, at least four must be in theatre history and dramatic and theatrical theory that forms a backbone for further study in these areas. Students should take at least one course that exhibits geographic or topical breadth beyond what might loosely be called “mainstream” Euro-American tradition. Basic courses in technical theatre and design are required of all students, as is a senior seminar, taken by students in their seventh semester. The remaining three courses for the concentration may be taken in areas of applied theatre arts (though this is not a requirement); there are sequences of courses available in acting/directing, playwriting, design/technical theatre, and dance.

Students wishing to enroll as concentrators in Theatre Arts and Performance Studies and take the Theatre Arts track should see the undergraduate Theatre Arts track advisor, in order to discuss options that will best serve their interests.

Required Courses

TAPS 0230 Acting 1
TAPS 0250 Introduction to Technical Theatre and Production 1
TAPS 1230 Performance Theory and World Theatre History: Paleolithic to Medieval 1
TAPS 1240 Performance Historiography and Theatre History 1
TAPS 1250 Twentieth-Century Western Theatre and Performance 1
Select one of the following:
TAPS 0220 Persuasive Communication 1
Any dance history or practice course.
Any design or theatre production course.
Three electives to be selected from applied design, performance, or writing areas and/or from relevant theoretical and text-based studies throughout the university, at least one of which must show geographical breadth. These classes must be approved by the concentration advisor.
TAPS 1520 Seminar in Theatre Arts 1
Total Credits 10

Performance Studies Track

The Performance Studies track in the Theatre Arts and Performance Studies concentration offers a base for students interested in a variety of performance forms, performance media, or in intermedial art. A concentrator in this track will study the multiple modes in which live performance articulates culture, negotiates difference, constructs identity, and transmits collective historical traditions and memories. Because Performance Studies is not primarily invested in one performance mode over another (such as theatre or dance), a concentrator will gain exposure to a broad spectrum of performance modes. Studying ritual, play, game, festival, spectacle and a broad spectrum of “performance behaviors” under the umbrella of Performance Studies, a concentrator will graduate having investigated the role of performance in culture, including performative acts in everyday life, political enactment, ritual behavior, aesthetic or representational practices, and social role or the performance of subjectivity. The history of aesthetic performance practices (such as the histories of theatre and/or dance) will be an important part of this track, serving to ground inquiry into the broader spectrum of performance study.

Students will craft their electives on this track from a wide selection of courses both within the Department of Theatre 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 two of the ten required classes must show geographic or cultural breadth, and be approved as such by the undergraduate concentration advisor. Participation in practical classes in modes of performance is also required.

Students wishing to enroll as concentrators in Theatre Arts and Performance Studies and take the Performance Studies track should see the undergraduate Performance Studies track advisor, in order to discuss options that will best serve their interests.

Required Courses

TAPS 1230 Performance Theory and World Theatre History: Paleolithic to Medieval 1
TAPS 1240 Performance Historiography and Theatre History 1
Select three of the following (one of which must show geographical breadth). Other Department courses not on this list may be considered with approval of the Concentration Advisor:
TAPS 1250 Twentieth-Century Western Theatre and Performance 3
TAPS 1270 Masking, Trancing, Performing, and Spectating in Non-Western and Circumpacific Performance
TAPS 1280N New Theories for a Baroque Stage
TAPS 1280Y Issues in Performance Studies
TAPS 1281O Acting Outside the Box: Race, Class, Gender and Sexuality in Performance
TAPS 1330 Dance History: The 20th Century
TAPS 1380 Mise en Scene
TAPS 1390 Contemporary Mande Performance
TAPS 1430 Russian Theatre and Drama

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

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 theatre to other disciplines. Writing is viewed neither as an alienated expression, Visual Arts, or Music. These classes must be approved by the concentration advisor.

Two full credit courses based in performance craft in either Acting, Directing, Speech, Design, Literary Arts (with a performance emphasis), Visual Arts, or Music. These classes must be approved by the advisor.

Two additional courses in the academic study of performance and performance culture(s) to be culled from those listed above as well as other courses in the Department of Theatre Arts and Performance Studies or throughout the university in consultation with advisor. For example:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFRI 1070</td>
<td>RPM: Traditional and Contemporary Elements of Intertribal Indigenous Theater in America</td>
</tr>
<tr>
<td>AFRI 1120</td>
<td>African American Folk Traditions and Cultural Expression</td>
</tr>
<tr>
<td>ANTH 1212</td>
<td>The Anthropology of Play</td>
</tr>
<tr>
<td>CLAS 1930C</td>
<td>Parasites and Hypocrites</td>
</tr>
<tr>
<td>MCM 1502J</td>
<td>Race as Archive</td>
</tr>
<tr>
<td>MCM 1503W</td>
<td>Getting Emotional: Passionate Theories (ENGL 1560W)</td>
</tr>
<tr>
<td>MUSC 0040</td>
<td>World Music Cultures (Africa, America, Europe, Oceania)</td>
</tr>
<tr>
<td>RELS 0910</td>
<td>Music, Drama and Religion in India</td>
</tr>
<tr>
<td>RELS 1610</td>
<td>Sacrifice and Society</td>
</tr>
<tr>
<td>TAPS 1520</td>
<td>Seminar in Theatre Arts</td>
</tr>
</tbody>
</table>

Total Credits 10

Required Courses

TAPS 1610 Political Theatre of the Americas
TAPS 1630 Performativity and the Body: Staging Gender, Staging Race
TAPS 1640 Theatre and Conquest in Greater Mexico: From Cortes to NAFTA
TAPS 1650 21st Century American Drama
TAPS 1670 Latino/a Theatre and Performance
TAPS 1690 Performance, Art, and Everyday Life
AFRI 0990 Black Lavender: Black Gay/Lesbian Plays/Dramatic Constructions in the American Theatre
AFRI 1110 Voices Beneath the Veil
AFRI 1120 African American Folk Traditions and Cultural Expression
TAPS 0200 Playwriting II
TAPS 1500 Screenwriting
AFRI 0990 Black Lavender: Black Gay/Lesbian Plays/Dramatic Constructions in the American Theatre
AFRI 0990 Black Lavender: Black Gay/Lesbian Plays/Dramatic Constructions in the American Theatre
AFRI 1110 Voices Beneath the Veil
AFRI 1120 African American Folk Traditions and Cultural Expression
TAPS 2120 Revolution as a Work of Art
TAPS 2200A Abstraction and Resistance
TAPS 1520 Seminar in Theatre Arts

LITR 1010C Advanced Playwriting
LITR 1150S What Moves at the Margins
TAPS 0200 Playwriting II
A course from the TAPS 1500 series (A-Z)

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

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 Quantitative Methods in Psychology

**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 1236 Urban Life: Anthropology in and of the City
- ANTH 1255 Anthropology of Disasters
- ECON 1410 Urban Economics
- ECON 1590 The Economy of China since 1949
- ENGL 0700N City Novels
- ENGL 1760K Reading New York
- ENVS 1400 Sustainable Design in the Built Environment
- GEOL 1320 Introduction to Geographic Information Systems for Environmental Applications
- HIAA 0840 History of Rhode Island Architecture
- HIAA 0850 Modern Architecture
- HIAA 0860 Contemporary Architecture
- HIAA 1103 Introduction to Architectural Design
- HIAA 1850D Film Architecture
- HIST 1551 American Urban History, 1870-1965
- POLS 0220 City Politics
- SOC 1330 Remaking the City
- SOC 1340 Principles and Methods of Geographic Information Systems
- SOC 1640 Social Exclusion
- URBN 1200 The United States Metropolis, 1945-2000
- URBN 1210 Regional Planning
- URBN 1220 Planning Sustainable Cities
- URBN 1230 Crime and the City

**Seminar courses (choose three):**

- AMST 1903E City of the American Century: The Culture and Politics of Urbanism in Postwar New York City
- EDUC 1650 Policy Implementation in Education
- ENGL 1760F City, Culture, and Literature in the Early Twentieth Century
- ETHN 1870A Ethnic Los Angeles
- HIAA 1850H Berlin: Architecture, Politics and Memory
- HIAA 1910A Providence Architecture
- POLS 2220 Urban Politics
- PLCY 1700J GIS and Public Policy
- SOC 1871W Geographical Analysis of Society
- SOC 2960C Urban Sociology
- URBN 1000 Fieldwork in the Urban Community
- URBN 1010 Fieldwork in Urban Archaeology and Historical Preservation
- URBN 1870A American Culture and the City
- URBN 1870C The Environment Built: Urban Environmental History and Urban Environmentalism for the 21st Century
- URBN 1870D Downtown Development
- URBN 1870F Housing and Homelessness
- URBN 1870H Rivers and Cities
- URBN 1870I The Changing American City

For complete, up-to-date course information please see the Banner Schedule or Brown Course Search (http://selfservice.brown.edu/menu).
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>URBN 1870J</td>
<td>The Politics of Community Organizing</td>
</tr>
<tr>
<td>URBN 1870M</td>
<td>Urban Regimes in the American Republic</td>
</tr>
<tr>
<td>URBN 1870N</td>
<td>The Cultural and Social Life of the Built Environment</td>
</tr>
<tr>
<td>URBN 1870P</td>
<td>Representing the Twentieth-Century City</td>
</tr>
<tr>
<td>URBN 1870Q</td>
<td>Cities in Mind: Modern Urban Thought and Theory</td>
</tr>
<tr>
<td>URBN 1870R</td>
<td>Bottom-up Urbanism</td>
</tr>
<tr>
<td>URBN 1870S</td>
<td>The City, the River, and the Sea: Social and Environmental Change at the Water's Edge</td>
</tr>
<tr>
<td>URBN 1870T</td>
<td>Transportation: An Urban Planning Perspective</td>
</tr>
<tr>
<td>URBN 1900</td>
<td>Land Use Planning: The Future of the I-195 Parcels</td>
</tr>
</tbody>
</table>

**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:
   - AFRI 0600 Race, Gender, and Urban Politics
   - AFRI 0620 African-American Life in the City
   - AMST 0150B Boston: A City Through Time
   - AMST 0190D Popular Music and the City
   - AMST 1560C Renaissance Venice and the Veneto
   - AMST 1611A Making America: Twentieth-Century U.S. Immigrant/Ethnic Literature
   - AMST 1903G Oral History and Community Memory
   - AMST 1904M Charles Chapin and the Urban Public Health Movement
   - ANTH 0450 Inequality, Sustainability, and Mobility in a Car-Clogged World
   - ANTH 1301 Anthropology of Homelessness
   - ARCH 0400 City and Sanctuary in the Ancient World
   - ARCH 1150 Cities and Urban Space in the Ancient World
   - ARCH 1155 Cities, Colonies and Global Networks in the Western Mediterranean
   - ARCH 1200F City and the Festival: Cult Practices and Architectural Production in the Ancient Near East
   - ARCH 1600 Archaeologies of the Near East
   - ARCH 1720 How Houses Build People
   - ARCH 1900 The Archaeology of College Hill
   - COLT 0811Q Mediterranean Cities
   - COLT 1810H Tales of Two Cities: Havana - Miami, San Juan - New York
   - DEVL 1650 Urbanization in China: Megacities, Mass Migration, and Citizenship Struggles
   - EDUC 0410E Empowering Youth: Insights from Research on Urban Adolescents
   - EDUC 1150 Education, the Economy and School Reform
   - EDUC 1720 Urban Schools in Historical Perspective
   - ENGL 1710I Harlem Renaissance: The Politics of Culture
   - ENGR 1930S Land Use and Built Environment: An Entrepreneurial View
   - ENV S 0520 Wild Literature in the Urban Landscape
   - ENV S 1410 Environmental Law and Policy
   - ENV S 1555 Urban Agriculture: The Importance of Localized Food Systems
   - ENV S 1929 The Fate of the Coast: Land Use and Public Policy in an Era of Rising Seas
   - ETHN 1890A Seminar on Latino Politics in the United States
   - GRMN 1600B Berlin: A City Strives to Reinvent Itself
   - HIAA 0012 Theories of Architecture from Vitruvius to Venturi
   - HIAA 0550 Gold, Wool and Stone: Painters and Bankers in Renaissance Tuscany
   - HIAA 0560 Constructing the Eternal City: Popes and Pilgrims in Renaissance Rome
   - HIAA 1200D Pompeii
   - HIAA 1560C Renaissance Venice and the Veneto
   - HIAA 0770 Architecture and Urbanism of the African Diaspora
   - HIAA 1910D Water and Architecture
   - HIST 1140 Samurai and Merchants, Prostitutes and Priests: Japanese Urban Culture in the Early Modern Period
   - HIST 1670 History of Brazil
   - HIST 1961B Cities and Urban Culture in China
   - HM AN 1971B Paris Archive: The Capital of the Nineteenth Century, 1848-1871
   - JAPN 0910B Japanese Cities: Tokyo and Kyoto
   - POLS 1310 African American Politics
   - POLS 1760 Infrastructure Policy
   - PLCY 1200 Policy Analysis and Program Evaluation
   - PLCY 1700Q Urban Policy Challenges
   - PLCY 1700R Urban Revitalization: Lessons from the Providence Plan
   - SOC 0130 American Heritage: Democracy, Inequality, and Public Policy
   - SOC 1270 Race, Class, and Ethnicity in the Modern World
   - SOC 1540 Human Needs and Social Services
   - SOC 1611A Making America: Twentieth-Century U.S. Immigrant/Ethnic Literature
   - SOC 1700A Politics and Citizenship Struggles
   - SOC 1870J Urban Adolescents
   - SOC 1900 Policy and Planning, 1945-2000
   - SOC 1910D Water and Architecture
   - SOC 1920 How Houses Build People
   - SOC 1930S Land Use and Built Environment: An Entrepreneurial View
   - SOC 1940 City and Sanctuary in the Ancient World
   - SOC 1950 Cities and Urban Space in the Ancient World
   - SOC 1955 Cities, Colonies and Global Networks in the Western Mediterranean
   - SOC 1960F City and the Festival: Cult Practices and Architectural Production in the Ancient Near East
   - SOC 1970 Archaeologies of the Near East
   - SOC 1980 How Houses Build People
   - SOC 1990 The Archaeology of College Hill
   - COLT 0811Q Mediterranean Cities
   - COLT 1810H Tales of Two Cities: Havana - Miami, San Juan - New York
   - DEVL 1650 Urbanization in China: Megacities, Mass Migration, and Citizenship Struggles
   - EDUC 0410E Empowering Youth: Insights from Research on Urban Adolescents
   - EDUC 1150 Education, the Economy and School Reform
   - EDUC 1720 Urban Schools in Historical Perspective
   - ENGL 1710I Harlem Renaissance: The Politics of Culture
   - ENGR 1930S Land Use and Built Environment: An Entrepreneurial View
   - ENV S 0520 Wild Literature in the Urban Landscape
   - ENV S 1410 Environmental Law and Policy
   - ENV S 1555 Urban Agriculture: The Importance of Localized Food Systems
   - ENV S 1929 The Fate of the Coast: Land Use and Public Policy in an Era of Rising Seas
   - ETHN 1890A Seminar on Latino Politics in the United States
   - GRMN 1600B Berlin: A City Strives to Reinvent Itself
   - HIAA 0012 Theories of Architecture from Vitruvius to Venturi
   - HIAA 0550 Gold, Wool and Stone: Painters and Bankers in Renaissance Tuscany
   - HIAA 0560 Constructing the Eternal City: Popes and Pilgrims in Renaissance Rome

**Total Credits**: 10

1. There are also other statistics courses offered by other departments (e.g., Applied Mathematics, Cognitive Sciences, and Psychology). On occasion, an alternative research skills course may be approved for a specific concentration.

2. The courses provide opportunities to undertake research or fieldwork projects and all qualify as "capstone" experiences.

3. No more than two may be used to satisfy the requirements of this concentration. The RISD course is identified in the student’s record at Brown by a RISD course code.

**Off-Campus Courses**: Some courses taken outside Brown (e.g., in study abroad programs) may be used for credit towards the concentration if the material covered directly corresponds to that taught in Brown courses, or is relevant to the complementary curriculum. Such courses will be approved each semester by the concentration advisor.

**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. In fall semester, honors thesis students shall enroll in an independent reading and research course with their advisor (URBN 1970 in their advisor’s section) or take an additional research skills course, and in the Spring, they shall take the Honors Thesis Workshop (URBN 1981). 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.

**Concentration Program Requirements**

<table>
<thead>
<tr>
<th>Concentration Requirements:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>VISA 0100 Studio Foundation</td>
<td>1</td>
</tr>
<tr>
<td>or VISA 0110 Advanced Studio Foundation</td>
<td></td>
</tr>
<tr>
<td>VISA 1110 Drawing I</td>
<td>1</td>
</tr>
<tr>
<td>or VISA 1120 Drawing II</td>
<td></td>
</tr>
<tr>
<td>VISA 0120 Foundation Media: Sound and Image</td>
<td>1</td>
</tr>
<tr>
<td>HIAA 0010 A Global History of Art and Architecture</td>
<td>1</td>
</tr>
<tr>
<td>Five additional studio courses (in addition to VISA 0120 and VISA 0110 or VISA 1120)</td>
<td>5</td>
</tr>
<tr>
<td>One HIAA course covering Modern or Contemporary Art History.</td>
<td>1</td>
</tr>
<tr>
<td>Consult with your Concentration Advisor to take a course other than the 3 listed here:</td>
<td></td>
</tr>
<tr>
<td>HIAA 0801 Art After '68</td>
<td></td>
</tr>
<tr>
<td>or HIAA 0810 20th Century Sculpture</td>
<td></td>
</tr>
<tr>
<td>or HIAA 0870 20th Century British Art: Edwardian to Contemporary</td>
<td></td>
</tr>
<tr>
<td>One upper-level History of Art and Architecture course.</td>
<td>1</td>
</tr>
<tr>
<td>Senior Thesis Exhibition: which does not carry academic credit, is required for graduation (usually presented during the seventh or eighth semester).</td>
<td></td>
</tr>
<tr>
<td>Total Credits</td>
<td>11</td>
</tr>
</tbody>
</table>

1. VISA 0100 and VISA 0110 do not count as one of the 7 studio concentration requirements; VISA 0100 or VISA 0110 are prerequisites for all studio courses.

2. Qualifies as one of the 5 studio concentration requirements.

3. A minimum of four studio courses must be taken at Brown University. One must be drawing.

**Honors**

The project is a two-semester enterprise and counts as two courses taken for graduation credit VISA 1800C (Sem I) and VISA 1990 (Sem II) but will not count as two of the eleven courses needed for the visual art concentration. Students that are planning to complete their degree requirements in December must apply for honors by December 5 of the previous year.