Course Announcement
2016–2017
This drawing is one of a series relating to music that I listened to while working on a large series of black and white pen and brush drawings. Their titles reflect some of their musical associations.

– Walter Feldman
# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Calendar</td>
<td>3</td>
</tr>
<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>Ethnic Studies</td>
<td>20</td>
</tr>
<tr>
<td>Anthropology</td>
<td>21</td>
</tr>
<tr>
<td>Applied Mathematics</td>
<td>25</td>
</tr>
<tr>
<td>Archaeology and the Ancient World</td>
<td>28</td>
</tr>
<tr>
<td>Biology and Medicine</td>
<td>29</td>
</tr>
<tr>
<td>Classics</td>
<td>40</td>
</tr>
<tr>
<td>Classics</td>
<td>42</td>
</tr>
<tr>
<td>Greek</td>
<td>44</td>
</tr>
<tr>
<td>Latin</td>
<td>45</td>
</tr>
<tr>
<td>Modern Greek</td>
<td>45</td>
</tr>
<tr>
<td>Sanskrit</td>
<td>46</td>
</tr>
<tr>
<td>Cognitive, Linguistic and Psychological Sciences</td>
<td>46</td>
</tr>
<tr>
<td>Cognitive, Linguistic and Psychological Sciences</td>
<td>46</td>
</tr>
<tr>
<td>Comparative Literature</td>
<td>52</td>
</tr>
<tr>
<td>Computer Science</td>
<td>54</td>
</tr>
<tr>
<td>Development Studies</td>
<td>58</td>
</tr>
<tr>
<td>Early Cultures</td>
<td>58</td>
</tr>
<tr>
<td>East Asian Studies</td>
<td>58</td>
</tr>
<tr>
<td>Chinese</td>
<td>58</td>
</tr>
<tr>
<td>East Asian Studies</td>
<td>59</td>
</tr>
<tr>
<td>Japanese</td>
<td>60</td>
</tr>
<tr>
<td>Korean</td>
<td>61</td>
</tr>
<tr>
<td>Economics</td>
<td>62</td>
</tr>
<tr>
<td>Education</td>
<td>66</td>
</tr>
<tr>
<td>Egyptology and Assyriology</td>
<td>69</td>
</tr>
<tr>
<td>Assyriology</td>
<td>69</td>
</tr>
<tr>
<td>Egyptology</td>
<td>69</td>
</tr>
<tr>
<td>Engineering</td>
<td>70</td>
</tr>
<tr>
<td>English</td>
<td>78</td>
</tr>
<tr>
<td>Environmental Studies</td>
<td>85</td>
</tr>
<tr>
<td>French Studies</td>
<td>86</td>
</tr>
<tr>
<td>Gender and Sexuality Studies</td>
<td>89</td>
</tr>
<tr>
<td>Geological Sciences</td>
<td>90</td>
</tr>
<tr>
<td>German Studies</td>
<td>91</td>
</tr>
<tr>
<td>German Studies</td>
<td>91</td>
</tr>
<tr>
<td>Hispanic Studies</td>
<td>93</td>
</tr>
<tr>
<td>History</td>
<td>97</td>
</tr>
<tr>
<td>History of Art and Architecture</td>
<td>105</td>
</tr>
<tr>
<td>Humanities</td>
<td>51</td>
</tr>
<tr>
<td>International Relations</td>
<td>106</td>
</tr>
<tr>
<td>Italian Studies</td>
<td>107</td>
</tr>
<tr>
<td>Judaic Studies</td>
<td>108</td>
</tr>
<tr>
<td>Center for Language Studies</td>
<td>110</td>
</tr>
<tr>
<td>American Sign Language</td>
<td>110</td>
</tr>
<tr>
<td>Arabic</td>
<td>111</td>
</tr>
<tr>
<td>Catalan</td>
<td>111</td>
</tr>
<tr>
<td>English for Internationals</td>
<td>112</td>
</tr>
<tr>
<td>Haitian-Creole</td>
<td>112</td>
</tr>
<tr>
<td>Hindi-Urdu</td>
<td>112</td>
</tr>
<tr>
<td>Language Studies</td>
<td>112</td>
</tr>
<tr>
<td>Persian</td>
<td>113</td>
</tr>
<tr>
<td>Turkish</td>
<td>113</td>
</tr>
<tr>
<td>Latin American and Caribbean Studies</td>
<td>113</td>
</tr>
<tr>
<td>Literary Arts</td>
<td>114</td>
</tr>
<tr>
<td>Mathematics</td>
<td>115</td>
</tr>
<tr>
<td>Medieval Studies</td>
<td>118</td>
</tr>
<tr>
<td>Middle East Studies</td>
<td>118</td>
</tr>
<tr>
<td>Modern Culture and Media</td>
<td>119</td>
</tr>
<tr>
<td>Music</td>
<td>121</td>
</tr>
<tr>
<td>Philosophy</td>
<td>126</td>
</tr>
<tr>
<td>Physics</td>
<td>129</td>
</tr>
<tr>
<td>Political Science</td>
<td>131</td>
</tr>
<tr>
<td>Portuguese and Brazilian Studies</td>
<td>136</td>
</tr>
<tr>
<td>Public Health</td>
<td>138</td>
</tr>
<tr>
<td>Public Policy</td>
<td>144</td>
</tr>
<tr>
<td>Religious Studies</td>
<td>145</td>
</tr>
<tr>
<td>Contemplative Studies</td>
<td>145</td>
</tr>
<tr>
<td>Religious Studies</td>
<td>145</td>
</tr>
<tr>
<td>Renaissance and Early Modern Studies</td>
<td>147</td>
</tr>
<tr>
<td>Science and Society</td>
<td>147</td>
</tr>
<tr>
<td>Slavic Languages</td>
<td>148</td>
</tr>
<tr>
<td>Czech</td>
<td>148</td>
</tr>
<tr>
<td>Polish</td>
<td>148</td>
</tr>
<tr>
<td>Russian</td>
<td>148</td>
</tr>
<tr>
<td>Undergraduate Concentrations</td>
<td>Page</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Geological Sciences</td>
<td>214</td>
</tr>
<tr>
<td>Gender and Sexuality Studies</td>
<td>214</td>
</tr>
<tr>
<td>Early Cultures</td>
<td>194</td>
</tr>
<tr>
<td>Comparative Literature</td>
<td>187</td>
</tr>
<tr>
<td>Biology</td>
<td>175</td>
</tr>
<tr>
<td>Astronomy</td>
<td>173</td>
</tr>
<tr>
<td>Anthropology</td>
<td>164</td>
</tr>
<tr>
<td>Applied Mathematics</td>
<td>164</td>
</tr>
<tr>
<td>Applied Mathematics-Biology</td>
<td>165</td>
</tr>
<tr>
<td>Applied Mathematics-Computer Science</td>
<td>166</td>
</tr>
<tr>
<td>Applied Mathematics-Economics</td>
<td>167</td>
</tr>
<tr>
<td>Archaeology and the Ancient World</td>
<td>172</td>
</tr>
<tr>
<td>Astronomy</td>
<td>173</td>
</tr>
<tr>
<td>Biochemistry &amp; Molecular Biology</td>
<td>174</td>
</tr>
<tr>
<td>Biochemistry</td>
<td>175</td>
</tr>
<tr>
<td>Biomedical Engineering</td>
<td>177</td>
</tr>
<tr>
<td>Biophysics</td>
<td>177</td>
</tr>
<tr>
<td>Business, Entrepreneurship and Organizations</td>
<td>178</td>
</tr>
<tr>
<td>Chemical Physics</td>
<td>180</td>
</tr>
<tr>
<td>Chemistry</td>
<td>180</td>
</tr>
<tr>
<td>Classics</td>
<td>181</td>
</tr>
<tr>
<td>Cognitive Neuroscience</td>
<td>183</td>
</tr>
<tr>
<td>Cognitive Science</td>
<td>184</td>
</tr>
<tr>
<td>Comparative Literature</td>
<td>187</td>
</tr>
<tr>
<td>Computational Biology</td>
<td>188</td>
</tr>
<tr>
<td>Computer Science</td>
<td>189</td>
</tr>
<tr>
<td>Computer Science-Economics</td>
<td>191</td>
</tr>
<tr>
<td>Contemplative Studies</td>
<td>192</td>
</tr>
<tr>
<td>Development Studies</td>
<td>193</td>
</tr>
<tr>
<td>Early Cultures</td>
<td>194</td>
</tr>
<tr>
<td>East Asian Studies</td>
<td>194</td>
</tr>
<tr>
<td>Economics</td>
<td>196</td>
</tr>
<tr>
<td>Education Studies</td>
<td>197</td>
</tr>
<tr>
<td>Egyptology and Assyriology</td>
<td>199</td>
</tr>
<tr>
<td>Engineering</td>
<td>201</td>
</tr>
<tr>
<td>Engineering and Physics</td>
<td>207</td>
</tr>
<tr>
<td>English                                     ____________________________________________________________</td>
<td>208</td>
</tr>
<tr>
<td>Environmental Studies</td>
<td>210</td>
</tr>
<tr>
<td>Ethnic Studies</td>
<td>212</td>
</tr>
<tr>
<td>French and Francophone Studies</td>
<td>213</td>
</tr>
<tr>
<td>Gender and Sexuality Studies</td>
<td>214</td>
</tr>
<tr>
<td>Geological Sciences</td>
<td>214</td>
</tr>
<tr>
<td>Geology-Biology</td>
<td>215</td>
</tr>
<tr>
<td>Geology-Chemistry</td>
<td>216</td>
</tr>
<tr>
<td>Geology-Physics/Mathematics</td>
<td>217</td>
</tr>
<tr>
<td>German Studies</td>
<td>218</td>
</tr>
<tr>
<td>Health &amp; Human Biology</td>
<td>219</td>
</tr>
<tr>
<td>Hispanic Literatures and Culture</td>
<td>220</td>
</tr>
<tr>
<td>History                                    ____________________________________________________________</td>
<td>220</td>
</tr>
<tr>
<td>History of Art and Architecture</td>
<td>221</td>
</tr>
<tr>
<td>Independent Concentration</td>
<td>225</td>
</tr>
<tr>
<td>International Relations</td>
<td>226</td>
</tr>
<tr>
<td>Italian Studies</td>
<td>227</td>
</tr>
<tr>
<td>Judaic Studies</td>
<td>228</td>
</tr>
<tr>
<td>Latin American and Caribbean Studies</td>
<td>229</td>
</tr>
<tr>
<td>Linguistics</td>
<td>230</td>
</tr>
<tr>
<td>Literary Arts</td>
<td>231</td>
</tr>
<tr>
<td>Marine Biology</td>
<td>232</td>
</tr>
<tr>
<td>Mathematics</td>
<td>232</td>
</tr>
<tr>
<td>Mathematics-Computer Science</td>
<td>233</td>
</tr>
<tr>
<td>Medieval Cultures</td>
<td>234</td>
</tr>
<tr>
<td>Middle East Studies</td>
<td>236</td>
</tr>
<tr>
<td>Modern Culture and Media</td>
<td>237</td>
</tr>
<tr>
<td>Music                                      ____________________________________________________________</td>
<td>238</td>
</tr>
<tr>
<td>Neuroscience</td>
<td>239</td>
</tr>
<tr>
<td>Philosophy</td>
<td>239</td>
</tr>
<tr>
<td>Physics                                     ____________________________________________________________</td>
<td>240</td>
</tr>
<tr>
<td>Physics and Philosophy</td>
<td>242</td>
</tr>
<tr>
<td>Political Science</td>
<td>243</td>
</tr>
<tr>
<td>Portuguese and Brazilian Studies</td>
<td>244</td>
</tr>
<tr>
<td>Psychology</td>
<td>244</td>
</tr>
<tr>
<td>Public Health</td>
<td>245</td>
</tr>
<tr>
<td>Public Policy</td>
<td>247</td>
</tr>
<tr>
<td>Religious Studies</td>
<td>247</td>
</tr>
<tr>
<td>Renaissance and Early Modern Studies</td>
<td>248</td>
</tr>
<tr>
<td>Science and Society</td>
<td>249</td>
</tr>
<tr>
<td>Slavic Studies</td>
<td>250</td>
</tr>
<tr>
<td>Social Analysis and Research</td>
<td>250</td>
</tr>
<tr>
<td>Sociology</td>
<td>251</td>
</tr>
<tr>
<td>South Asian Studies</td>
<td>252</td>
</tr>
<tr>
<td>Theatre Arts and Performance Studies</td>
<td>254</td>
</tr>
<tr>
<td>Urban Studies</td>
<td>256</td>
</tr>
<tr>
<td>Visual Art</td>
<td>258</td>
</tr>
<tr>
<td>Academic Calendar</td>
<td></td>
</tr>
<tr>
<td>-------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Summer 2016</strong></td>
<td></td>
</tr>
<tr>
<td>April 1 - 21, 2016 Fri. - Thurs.</td>
<td>Pre-registration for Summer courses.</td>
</tr>
<tr>
<td>April 22 - May 2, 2016 Fri. - Mon.</td>
<td>Summer registration closed for Fall registration (online via Banner for continuing students).</td>
</tr>
<tr>
<td>May 3 - June 29, 2016 Tues. - Wed.</td>
<td>Late registration period for Summer courses.</td>
</tr>
<tr>
<td>June 27, 2016 Mon.</td>
<td>Summer Session begins.</td>
</tr>
<tr>
<td>June 29, 2016 Wed.</td>
<td>Last day to change courses. (All students MUST be in their registered courses by Thursday, June 30.)</td>
</tr>
<tr>
<td>July 12, 2016 Tues.</td>
<td>Last day to change grade options.</td>
</tr>
<tr>
<td>Aug 6 - 9, 2016 Sat. - Tues.</td>
<td>Reading period.</td>
</tr>
<tr>
<td>August 9, 2016 Tues.</td>
<td>Last day to drop a course. Last day to initiate a Course Performance Report via ASK.</td>
</tr>
<tr>
<td>August 12, 2016 Fri.</td>
<td>Summer Session ends.</td>
</tr>
<tr>
<td>August 13, 2016 Sat.</td>
<td>Residence halls close.</td>
</tr>
<tr>
<td><strong>Fall 2016</strong></td>
<td></td>
</tr>
<tr>
<td>Aug. 1, 2016 Mon.</td>
<td>Last day for payment of charges.</td>
</tr>
<tr>
<td>Sept. 6, 2016 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. 7, 2016 Wed.</td>
<td>Classes of the first semester begin. Web registration begins at 8:00 a.m.</td>
</tr>
<tr>
<td>Sept. 8, 2016 Thurs.</td>
<td>First day of RISD Fall Session.</td>
</tr>
<tr>
<td>Sept. 15, 2016 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. 20, 2016 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. 4, 2016 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. 11, 2016 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. 14, 2016 Fri.</td>
<td>Mid-semester deadline. Last day to change from credit to audit in a course (5:00 p.m. deadline).</td>
</tr>
<tr>
<td>Oct. 15, 2016 Sat.</td>
<td>Deadline for students currently on leave to apply for readmission for Semester II.</td>
</tr>
<tr>
<td>Oct. 17 - Oct. 28, 2016 Mon.- Fri.</td>
<td>Advising period for spring pre-registration. Students in their first three semesters will need to procure their advising PIN from their advisor in order to register.</td>
</tr>
<tr>
<td>Oct. 27, 2016 Thurs.</td>
<td>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).</td>
</tr>
<tr>
<td>Oct. 28 , 2016 Fri.</td>
<td>Deadline for submission of proposals for undergraduate group study projects (GISPs) for Semester II.</td>
</tr>
<tr>
<td>Nov. 1 - 8, 2016 Tues. - Tues.</td>
<td>Registration for Semester II. (Note: No student will be permitted to register for his or her fifth semester unless an approved declaration of concentration has been filed.)</td>
</tr>
<tr>
<td>Nov. 8, 2016 Tues.</td>
<td>End of the pre-registration period.</td>
</tr>
<tr>
<td>Nov. 28, 2016 Mon.</td>
<td>Classes resume.</td>
</tr>
<tr>
<td>Dec. 1, 2016 Thurs.</td>
<td>Deadline for undergraduates to declare a leave for Semester II.</td>
</tr>
<tr>
<td>Dec. 3, 2016 Sat.</td>
<td>Midyear Completion Celebration at 4:00 p.m. in Salomon De Ciccio Family Auditorium. Reception to follow in Sayles Hall.</td>
</tr>
<tr>
<td>Dec. 6, 2016 Tues.</td>
<td>Last day of Fall RISD classes.</td>
</tr>
<tr>
<td>Dec. 8 - 12, 2016 Thurs. - Mon.</td>
<td>Reading Period (optional and at the discretion of the instructor.)</td>
</tr>
<tr>
<td>Dec. 12, 2016 Mon.</td>
<td>Classes end for courses not observing the Reading Period. Last day to drop a course (5:00 p.m. deadline) or to request an incomplete from an instructor. Last day for advisors to approve second or third concentrations in ASK for students in their penultimate semester (for most students this is their 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 5:00 p.m. deadline will not be honored. Last day to initiate a Course Performance Report via ASK.</td>
</tr>
<tr>
<td><strong>Winter 2017</strong></td>
<td></td>
</tr>
<tr>
<td>Oct. 5 - Oct. 18, 2016 Wed. - Tue.</td>
<td>Registration for Wintersession courses.</td>
</tr>
<tr>
<td>Oct. 19 - Nov 8, 2016 Fri. - Mon.</td>
<td>Wintersession registration closed for Spring registration (online via Banner for continuing students).</td>
</tr>
<tr>
<td>Nov. 9 - Nov. 22, 2016 Wed. - Tue.</td>
<td>Late registration period for Wintersession courses with late fee.</td>
</tr>
<tr>
<td>December 1, 2016 Thurs.</td>
<td>Wintersession tuition due.</td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
### Winter 2017

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec 22, 2016</td>
<td>Thurs.</td>
</tr>
<tr>
<td>Jan 6, 2017</td>
<td>Fri.</td>
</tr>
<tr>
<td>Jan 16, 2017</td>
<td>Mon.</td>
</tr>
<tr>
<td>Jan 20, 2017</td>
<td>Fri.</td>
</tr>
</tbody>
</table>

### Spring 2017

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 1, 2017</td>
<td>Sun.</td>
</tr>
<tr>
<td>Jan 4, 2017</td>
<td>Wed.</td>
</tr>
<tr>
<td>Jan 11, 2017</td>
<td>Wed.</td>
</tr>
<tr>
<td>Jan 16, 2017</td>
<td>Mon.</td>
</tr>
<tr>
<td>Jan 24, 2017</td>
<td>Tues.</td>
</tr>
<tr>
<td>Jan 25, 2017</td>
<td>Wed.</td>
</tr>
<tr>
<td>Feb 7, 2017</td>
<td>Tues.</td>
</tr>
<tr>
<td>Feb 7, 2017</td>
<td>Tues.</td>
</tr>
<tr>
<td>Feb 16, 2017</td>
<td>Thurs.</td>
</tr>
<tr>
<td>Feb 22, 2017</td>
<td>Wed.</td>
</tr>
<tr>
<td>Feb 23, 2017</td>
<td>Thurs.</td>
</tr>
<tr>
<td>Mar 10, 2017</td>
<td>Fri.</td>
</tr>
</tbody>
</table>

### Important Dates

- **Apr 1, 2017** | Sat. | Deadline for students currently on leave to apply for readmission for Semester I. Date by which sophomores entering their 5th semester must file their concentration declaration forms via ASK to avoid having a No Concentration hold placed against their Banner registration. (5:00 pm deadline).
- **Apr 3, 2017** | Mon. | Classes resume. |
- **Apr 3 - Apr. 14, 2017** | Mon. - Fri. | 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. |
- **Apr 7, 2017** | Fri. | Deadline for submission of proposals for undergraduate group study projects (GISPs) for Semester I. |
- **Apr 13, 2017** | 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). |
- **Apr 18 - 25, 2017** | Tues. - Tues. | Registration for Semester I, 2017-18. (Note: No student will be permitted to register for his or her fifth semester unless an approved declaration of concentration has been filed.) |
- **Apr 25, 2017** | Tues. | End of the pre-registration period. |
- **Apr 28 - May 9, 2017** | Fri. - Tues. | Reading Period (optional and at the discretion of the instructor). |
- **May 1, 2017** | Mon. | Deadline for undergraduates to declare a leave for Semester I. Theses of candidates for Masters and Ph.D. degrees in May due. |
- **May 9, 2017** | 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. Last day to initiate a Course Performance Report via ASK.* 
- **May 10 - 19, 2017** | Wed. - Fri. | Final Examination Period. (No exams on Sunday May 14). |
- **May 17, 2017** | Wed. | Last day of Spring RISD classes. |
- **May 28, 2017** | Sun. | Commencement. |
General Regulations

General academic requirements
Undergraduate degrees:
Information regarding general academic degree requirements are listed under ‘The College’ section of the University Bulletin as well as on the respective websites of the Office of the Registrar (http://www.brown.edu/about/administration/registrar/degree-guidelines-0-college) and the Dean of the College (http://brown.edu/Administration/Dean_of_the_College/degree).

Advanced degrees:
Information regarding Advanced degree requirements for specific academic programs are listed on the Graduate School (http://www.brown.edu/academics/degree-granting) website. Information regarding general and overall guidelines for advanced degrees are also listed on the Office of the Registrar (http://www.brown.edu/about/administration/registrar/degree-guidelines-0-graduate-school) website.

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

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

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

For the full text on the Academic Regulations and Instructions for Registration, see the Registrar’s Office web site at:
http://www.brown.edu/about/administration/registrar/course-enrollment/registration

For a tutorial on registration, see:
https://wiki.brown.edu/confluence/display/CISDOC/Screeencasts

To access the most up-to-date course information including credit bearing summer session offerings (*The course information in the PDF versions of the University Bulletin and Course Announcement Bulletin is current as of February 2016), see:
http://selfservice.brown.edu/menu and select '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/
General Regulations

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 midsemester 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. Either semester may be elected independently without special permission. The final grade submitted at the end of the course covers the work of the entire year and is recorded as the final grade for both semesters. It is normally expected that the second half of a year course will be completed in the second semester of the same academic year in which the first half was taken. If the second half of the year course is not completed at the end of that academic year, the grade for the first semester will become a No Credit. If the student completes the second part of the year course during a later academic year, he or she may need to notify the Registrar's Office, in order to reactivate the first part of the course.

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

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

Grade Requirements for Advanced Degrees: A minimum grade of either Satisfactory or C in a 1000 or 2000 level course carries credit toward all advanced degrees. Individual departments may, subject to the approval of the Graduate Council, set higher grade requirements. Advanced degree candidates may be required to register in courses primarily for undergraduates (numbered 1–999); these courses do not carry advanced degree credit. On occasion, however, and with approval of the student's department and the dean, a student may register for such a course with extra work for advanced degree credit. This course then has the same standing as a 1000-level course and an EX is noted on the transcript. This provision for extra work does not apply to courses of the level of 1–999 taken for graduate credit by students in MD program.

Course Performance Reports: Students, regardless of grade option selected, may request the instructor to complete a Course Performance Report. This request should be by the deadline specified in the Academic Calendar for the semester in which the course is being completed. The instructor may decline to complete such a form if it is believed he or she has inadequate information to do so. Particular consideration should be given to requests from students for whom the course is part of their concentration program or the course is taken on the S/NC basis. Copies of Course Performance Reports will be made available to: (1) the student, (2) the dean's office, and (3) the student's concentration advisor. While part of the official record, Course Performance Reports may be sent out of the University at the student's request along with an official Brown University academic transcript. In such cases, the student must provide copies of such CPRs to be enclosed at the time the transcript is initially requested.

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

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

Examinations

A final, written examination (at the end of each semester) shall be given in each course numbered under 2000 unless the instructor of a particular course decides to use some other mode of final evaluation. If the written examination is not to be used, the mode of final examination which is to be used shall be made known to the students in the course no later than 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 2016-2017 is as follows:

<table>
<thead>
<tr>
<th>Semester</th>
<th>2016-2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>9 am Group</td>
</tr>
<tr>
<td>Dec. 13  T</td>
<td>1</td>
</tr>
<tr>
<td>Dec. 14 W</td>
<td>15</td>
</tr>
<tr>
<td>Dec. 15 Th</td>
<td>12</td>
</tr>
<tr>
<td>Dec. 16 F</td>
<td>6</td>
</tr>
<tr>
<td>Dec. 17 Sat</td>
<td>17</td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
for up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Liberal Learning
The Liberal Learning course list was created to assist students in planning a course of study consistent with the goals of a liberal education. These courses, which are an established part of the Brown curriculum, emphasize synthesis rather than survey and focus on methods, concepts, and values. Reflecting Brown’s conviction that liberal education requires active student involvement, Liberal Learning courses entail extensive student participation through papers, projects, reports, and class discussion.

A complete list of each semester’s LILE courses may be viewed in Courses@Brown by choosing “Liberal Learning” in the Curricular Programs field.

Sophomore Seminars
Sophomore seminars bring together ideas, perspectives, and approaches that are not normally seen side by side in a given course or program. Embracing a range of intellectual perspectives, many of the seminars focus specifically on issues of social justice, identity, and difference. Limited to twenty students each, the seminars help students develop the skills, knowledge, and values they need to progress toward more advanced learning in a discipline or field.

A complete list of each semester’s SOPH seminars may be viewed in Courses@Brown by choosing “Sophomore Seminar” in the Curricular Programs field.

Writing-Designated Courses
Brown students are expected to work on writing in their general studies and in the concentration. Students may begin to fulfill this expectation by taking at least one course that carries the WRIT designation. WRIT courses are offered across the curriculum and help students develop the ability to write well in styles appropriate to different academic disciplines.

A complete list of each semester’s WRIT courses may be viewed in Courses@Brown by choosing “Writing-Designated Courses” in the Curricular Programs field.

Diverse Perspectives in Liberal Learning
Fall 2016
African Studies
AFRI 0090 S01 15787 An Intro to African Studies Francoise N. Hamlin
AFRI 0210 S01 15784 Afro Latin Americans Anani Dzidzienyo
AFRI 0670 S01 16566 Global Black Radicalism Brian W E Meeks
AFRI 0830 S01 16713 How Structural Racism Works Tricia Rose
AFRI 1110 S01 15774 Voices Beneath the Veil Elmo Terry-Morgan
AFRI 1150 S01 15786 Afro-Caribbean Philosophy Paget Henry
AFRI 1210 S01 15785 Afro-Brazilians + Braziln Polity Anani Dzidzienyo

American Studies
AMST 0192B S01 16690 Remixing Racial Codes TBD
AMST 1700D S01 15461 Race and Remembering Monica M. Martinez
AMST 1901D S01 15212 Motherhood in Black and White Beverly Haviland

Anthropology
ANTH 006J S01 16772 You Want to Change the World Daniel Smith
ANTH 1112 S01 16564 Anthropology of Climate Change Dana J. Graef
ANTH 1120 S01 16298 People + Cultures of Americas Kay B. Warren
ANTH 1242 S01 16299 Bioethics and Culture Katherine A. Mason
ANTH 1505 S01 16560 Vertical Civ: SouthAm Arch Parker VanValkenburgh
ANTH 1624 S01 16303 NE Indians,Colonists,Africans Patricia E. Rubertone
ANTH 1648 S01 16305 Ethnography + Social Critique Matthew C. Gutmann

Arabic
ARAB 1100 S01 16568 Modern Arabic Poetry Miled Faiza

Biology
BIOL 0190P S01 14801 Pride/Prej Dev of Sci Theories Stephen L. Helfand

Classics
CLAS 0855 S01 15972 The Bhagavad Gita David Buchta

East Asian Studies
EAST 1012 S01 15371 20th century Japanese Lit Kimiko Yamashita
EAST 1030 S01 16346 Words on Things: Lit/Mat China TBD
EAST 1951A S01 16344 Prose of the World TBD

Economics
ECON 1530 S01 16361 Health, Hunger + the Household Andrew D. Foster

Education
EDUC 1700 S01 16007 Asian Americans in Higher Educ Liza D. Caragia-Lo

English
ENGL 0100V S01 16547 Inventing Asian Am Lit Daniel Kim
ENGL 07100 Q S01 15716 Literature Segregation Rolland D. Murray
ENGL 1710P S01 15746 Lit and Culture of Black Power Rolland D. Murray
ENGL 1900R S01 15750 Aesthetics and Sexuality Jacques Khalip

Environmental Studies
ENVS 0070E S01 16775 What Does It Mean To Be Green? Dana J. Graef

Ethnic Studies
ETHN 0500 S02 16281 Intro to Amercn/Ethnic Studies Elizabeth M. Hoover

Gender and Sexuality Studies
GNSS 1721 S01 16724 Cinema’s Bodies Gertrud M. Koch

German Studies
GRMN 1340R S01 16332 Literature and Multilingualism Zachary Sng

Haitian-Creole
CROL 1804A S01 15205 Framing Haiti: Hist, Cit, Pol Patrick Sylvain

Hispanic Studies
HISP 0730 S01 15302 Early/Contmp Wrtr of Span Amer Felipe I. Martinez-Pinizon

History and Art Architecture
HIAA 0770 S01 15292 Arch Urbanism African Diaspora Itohan I. Osayimwese

History
HIST 0654B S01 15523 AmericanPatriotism Black/White Francoise N. Hamlin
HIST 1553 S01 15133 Empires in America to 1890 Naoko Shibutawa

Judaic Studies
JUDS 0050A S01 14919 Believers, Agnostics, Atheists David C. Jacobson
JUDS 0050M S01 14920 Judaism and Christianity Adam Teller
JUDS 0083 S01 16280 Jews and Money Paul E. Nahme
JUDS 0830 S01 14925 The Bible as Literature David C. Jacobson
JUDS 1614 S01 16390 Heidegger, the Jews, + Crisis Paul E. Nahme
JUDS 1630 S01 14927 The Talmud Michael L. Satlow

Music
MUSC 0021B S01 15629 Reading Jazz Matthew Richards McGarrell
MUSC 0044 S01 16682 East Asian Popular Music John Byrd McDaniel
MUSC 1935 S01 16181 Brazilian Music and Society Christopher Joshua Tucker

Public Health
PHP 1070 S01 16585 Brdc of Disease in Devel Cntry Stephen T. Mcgarvey
PHP 1100 S01 16586 Comparative Health Care Systms Cara J Sammartino
PHP 1680 S01 16590 Disability/Health and Community Sarah E. Skeels

Religious Studies
RELS 0015 S01 16531 Sacred Stories Susan Ashbrook Harvey
RELS 0260 S01 15550 Religion Gone Wild Mark Cladis
RELS 1380A S01 15554 Money, Media, and Religion Daniel Vaca

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Modern Culture and Media  
MCM 0800L S01 25518 Television+Race in America Lynne Joyrich

Political Science  
POLS 0820U S01 24112 Drug War Politics Peter R. Andreas

Public Health  
PHP 0303 S01 25401 Health of Hispaniola Timothy M. Empkie

Sociology  
SOC 0300D S01 24843 Who Am I? Gregory C. Elliott

Liberal Learning  
Fall 2016

African Studies  
AFRI 0090 S01 15787 An Intro to African Studies Francoise N. Hamlin
AFRI 1150 S01 15786 Afro-Caribbean Philosophy Paget Henry

American Studies  
AMST 1700D S01 15461 Race and Remembering Monica M. Martinez

Anthropology  
ANTH 0066J S01 16772 You Want to Change the World Daniel Smith
ANTH 0110 S01 16294 Anth and Global Soc Problems Sarah Besky
ANTH 0500 S01 16295 Anthropological Archaeology Parker Van Valkenburgh
ANTH 1120 S01 16296 People + Cultures of Americas Kay B. Warren
ANTH 1242 S01 16299 Bioethics and Culture Katherine A. Mason
ANTH 1300 S01 16302 Anthropology of Addictions Irene Glasser
ANTH 1505 S01 16560 Vertical Civ: South Am Arch Parker Van Valkenburgh
ANTH 1624 S01 16303 NE Indians, Colonists, Africans Patricia E. Rubertone
ANTH 1720 S01 16304 The Human Skeleton Andrew K. Scherer
ANTH 1848 S01 16305 Ethnography + Social Critique Matthew C. Gutmann

Arabic  
ARAB 1100 S01 16568 Modern Arabic Poetry Miled Faiza

Archaeology and Ancient World  
ARCH 0030 S01 16471 Art in Antiquity: An Intro Felipe A. Rojas Silva

BioMed-Neuroscience  
NEUR 0010 S01 15788 The Brain: Intro to Neuroscient Michael A. Paradiso

Biography  
BIOL 0030 S01 14793 Principles of Nutrition Mary M. Flynn
BIOL 0380 S01 14805 Eco + Evo Infectious Disease Daniel M. Weinreich

Chemistry  
CHEM 0800E S01 16220 Chemistry of Renewable Energy Kathleen M. Hess

Classics  
CLASS 0010 S01 15973 The Greeks Stephen E. Kidd
CLASS 1120E S01 15988 Slavery in the Ancient World John P. Bodel
CLASS 1120G S01 15987 The Idea of Self Joseph Michael Pucci

Cognitive, Linguistic and Psychological Sciences  
CLPS 0030 S01 16494 Intro to Linguistic Theory Pauline I. Jacobson
CLPS 0050L S01 16552 Anthrop. Activity + Animals Ruth Melanie Colwill

Computer Science  
CSCI 0020 S01 16253 The Digital World Donald L. Stanford

Contemplative Studies  
COST 1950 S01 16461 Contemplative Studies Capstone Harold D. Roth

East Asian Studies  
EAST 1012 S01 15371 20th century Japanese Lit Kikuko Yamashita

East 1070 S01 15241 An Intro to Lit of 20thC China Lingzhen Wang

Education  
EDUC 1700 S01 16007 Asian Americans in Higher Educ Liza D. Cariaga-Lo

English  
ENGL 0100P S01 16443 Love Stories James A. Kuzner
ENGL 0100V S01 16547 Inventing Asian Am Lit Daniel Kim
ENGL 1560A S01 15745 Jane Austen and George Eliot Ellen Frances Rooney
ENGL 1761P S01 16740 Yeats, Pound, Eliot Muir Konuk Blasing
ENGL 1900D S01 15749 Literature and Politics William Keach
ENGL 1910E S01 16451 Lyric Language: Renaissance/Mo Stephen Merriam Foley

Environmental Studies  
ENVS 0070C S01 16133 Transcending Transpnt Impacts Kurt Teichert
ENVS 1400 S01 16134 Sustainable Design Kurt Teichert

German Studies  
GRMN 0750F S01 16138 Historical Crime Fiction Thomas W. Knesche

Hispanic Studies  
HISP 0730 S01 15302 Early/Contmp Wrtr of Span Amer Felipe I. Martinez-Pinzon

Judaic Studies  
JUDS 0050A S01 14919 Believers, Agnostics, Atheists David C. Jacobson
JUDS 0050M S01 14920 Judaism and Christianity Adam Teller
JUDS 0683 S01 16280 Jews and Money Paul E. Nahme
JUDS 0830 S01 14925 The Bible as Literature David C. Jacobson
JUDS 1614 S01 16390 Heidegger, the Jews, + Crisis Paul E. Nahme
JUDS 1630 S01 14926 The Talmud Michael L. Satlow

Literary Arts  
LITR 0510C S01 16084 The Pleasures of the Text Carole Maso

Modern Culture and Media  
MCM 0220 S01 15282 Print Cultures Ellen Frances Rooney
MCM 0240 S01 15290 Television Studies Lynne Joyrich
MCM 0750 S01 15319 Art in Digital Culture Elisa Giardina Papa

Music  
MUSC 0018E S01 15629 Reading Jazz Matthew Richards McGarrill
MUSC 0044 S01 16682 East Asian Popular Music John Byrd McDaniel
MUSC 0200 S01 15630 Computers and Music Todd E. Winkler
MUSC 1935 S01 16181 Brazilian Music and Society Christopher Joshua Tucker

Portuguese and Brazilian Studies  
POBS 0910 S01 15938 On the Dawn of Modernity Onesimo T. Almeida

Public Health  
PHP 0320 S01 16583 Introduction to Public Health Abigail D. Harrison
PHP 1070 S01 16585 Bndr of Disease in Devel Cntry Stephen T. McCarvey
PHP 1680 S01 16590 Disability/Health and Community Sarah E. Skees

Religious Studies  
RELS 0015 S01 16531 Sacred Stories Susan Ashbrook Harvey
RELS 0065 S01 15549 On Being Human Thomas A. Lewis
RELS 0260 S01 15550 Religion Gone Wild Mark Cladis
RELS 0830 S01 15551 Kant to Nietzsche Thomas A. Lewis
RELS 1000 S01 15552 Methods in Religious Studies Paul E. Nahme
RELS 1190 S01 15553 Religious Japan Janine T Anderson Sawada
RELS 1380A S01 15554 Money, Media, and Religion Daniel Vaca
RELS 1430 S01 15555 Buddhist Classics Janine T Anderson Sawada

Russian  
RUSS 0320C S01 15617 Demons and Angels Michal Oklot
RUSS 1840 S01 15618 Nabokov Michal Oklot

Sociology  
SOC 1118 S01 16029 Context Research for Innov. Lisa DiCarlo

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Urban Studies
URBN 0210 S01 15262 The City: Intro to Urban Study Dietrich Neumann
URBN 1230 S01 15263 Crime and the City Stefano Bloch
URBN 1870Q S01 15374 Cities Mind: Mod Urb Thought Samuel Zipp

Spring 2017

Africana Studies
AFRI 1360 S01 24642 Knowledge, Texts + Methodology Barrymore A. Bogues

Anthropology
ANTH 0077N S01 25152 The Anthropology of Gender and Matthew C. Gutmann
ANTH 0130 S01 25154 Myths Alive William S. Simmons
ANTH 0300 S01 25162 Culture and Health Katherine A. Mason
ANTH 0680 S01 25163 Anthropology of Food Andrew K. Scherer
ANTH 0800 S01 25164 Intro to Linguistic Anthropo TBD
ANTH 1151 S01 25167 Ethnographies Muslim Mid East Anila Daulatzai
ANTH 1224 S01 25168 Human Trafficking Kay B. Warren
ANTH 1301 S01 25169 Anthropology of Homelessness Irene Glasser
ANTH 1312 S01 25170 Stratified Reproduction Katherine A. Mason
ANTH 1491 S01 25171 1493: Spanish Invasion Parker Van Valkenburgh
ANTH 1620 S01 25172 Global Historical Archaeology Patricia E. Rubertone
ANTH 1621 S01 25173 Material Culture Practicum Patricia E. Rubertone
ANTH 2560 S01 25184 Archaeology of Human Remains Andrew K. Scherer

Applied Mathematics
APMA 1200 S01 25076 Operatns Rsrch-Problistc Models Anastasios Matzavinos

Archaeology and Ancient World
ARCH 0666 S01 25296 Cult Archaeology Laurel D. Bestock

Biology
BIOL 0200 S01 23928 Foundation of Living Systems Kenneth Raymond Miller

Cognitive, Linguisitic and Psychological Sciences
CLPS 0200 S01 25344 Human Cognition Joseph L. Austerweil
CLPS 1170 S01 25351 Theories of Learning Ruth Melanie Colwill

Comparative Literature
COLT 0710C S01 24155 Intro Scandinavian Literature Arnold Louis Weinstein
COLT 0811I S01 24315 Classical Mythology Western Trad Molly Ierulli
COLT 1610T S01 25238 Critical Approaches to China Tamara Chin

Computer Science
CSCI 0931 S01 24568 Middle English Literature Elizabeth Johnson Bryan
CSCI 1800 S01 24569 Spenser and Shakespeare Stephen Merriam Foley
CSCI 1810 S01 24570 Tolkien and the Renaissance James A. Kuzner

Contemplative Studies
COST 0100 S01 25582 Intro to Contemplative Studies TBD

Czech
CZCH 0320A S01 24586 Czech Animation Masako Ueda Fidler

East Asian Studies
EAST 1070 S01 24180 An Intro to Lit of 20thC China TBD
EAST 1950M S01 24817 Critical Approaches to China Lingzhen Wang

Education
EDUC 0610 S01 25040 Brown v. Board of Education TBD
EDUC 1870 S01 25037 Education in East Asia Yoko Yamamoto

English
ENGL 0100G S01 24588 Literature of Identity Jacques Khalip
ENGL 0310A S01 24591 Shakespeare James A. Kuzner
ENGL 1360J S01 24588 Myths Alive William S. Simmons
ENGL 1361F S01 24569 Spenser and Shakespeare Stephen Merriam Foley
ENGL 1361G S01 24570 Tolkien and the Renaissance James A. Kuzner
ENGL 1561W S01 24571 On Being Bored Jacques Khalip
ENGL 1760Q S01 25555 Amer British Poetry Since 1945 Mutlu Konuk Blasing
ENGL 1760I S01 24598 Lit + Terrorist Imaginary Timothy R T Bewes

History of Art and Architecture
HIAA 1550C S01 25373 Dreaming of Food in EM World Evelyn Lincoln

Judaic Studies
JUDS 0060 S01 25047 The Bible and Moral Debate Saul Olyan
JUDS 0061 S01 25447 Foreigner, Refugee, Minority Paul E. Nahme
JUDS 0600 S01 23908 Issues in Israel in Hebrew David C. Jacobson
JUDS 0700 S01 25048 Religion and Nationalism Paul E. Nahme
JUDS 1702 S01 25446 Creating the Global Economy Adam Teller
JUDS 1726 S01 25445 Jewish Humor + Comm Ent Mary Gluck

Modern Culture and Media
MC M 0700 S01 24083 Art in Digital Culture Elisa Giardina Papa
MC M 0800 S01 25518 Television+Race in America Lynne Joyrich
MC M 1505A S01 24390 Television Realities Lynne Joyrich

Music
MUSC 1922 S01 25534 Black Sound Kiri M. Miller

Public Health
PHP 0310 S01 25402 Health Care in US Ira B. Wilson

Religious Studies
RELS 0068 S01 24316 Religion and Torture Stephen S. Bush
RELS 0820 S01 24318 African American Religious Str Andre C. Willis

Russian
RUSS 1967 S01 25003 Russian Postmodernism Michel Oklot

Science and Society
SCSO 1700P S01 25504 Neuroethics Jeffrey S. Poland

Sophomore Seminars

Fall 2016

Africana Studies
AFRI 0670 S01 16566 Global Black Radicalism Brian W E Meeks

Biology
BIOL 0140K S01 14796 Conservation Medicine Katherine F. Smith
BIOL 0940A S01 14814 Viral Epidemics Walter J. Atwood
BIOL 0940B S01 14815 Life in a Shell Donald C. Jackson
BIOL 0940D S01 16470 Rhode Island Flora: Local Plant Timothy J. Whitfield

History
HIST 0654B S01 15523 American History Patricia Ehrenberg

Portuguese and Brazilian Studies
POBS 0915 S01 15939 On cultural & pers. identities Onesimo T. Almeida

Spring 2017

Anthropology
ANTH 0077N S01 25152 The Anthropology of Gender and Matthew C. Gutmann

Biology
BIOL 0140K S01 14796 Conservation Medicine Katherine F. Smith
BIOL 0940A S01 14814 Viral Epidemics Walter J. Atwood
BIOL 0940B S01 14815 Life in a Shell Donald C. Jackson
BIOL 0940D S01 16470 Rhode Island Flora: Local Plant Timothy J. Whitfield

History
HIST 0654B S01 15523 American History Patricia Ehrenberg

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
HIST 0658D S01 25193 Walden + Woodstock Kenneth S. Sacks

Portuguese and Brazilian Studies
POBS 0990 S01 24707 Mapping Cross-Cult. Identities Patricia I. Sobral

Sociology
SOC 1872G S01 25552 First-Generation College Stude Gregory C. Elliott

Writing-Designated Courses

Fall 2016

Africana Studies
AFRI 0090 S01 15787 An Intro to Africana Studies Françoise N. Hamlin
AFRI 1110 S01 15774 Voices Beneath the Veil Elmo Terry-Morgan

American Studies
AMST 0191Y S01 16774 Cradle of Democracy? TBD
AMST 0192B S01 16690 Remaking Racial Codes TBD
AMST 1601 S01 16453 Health/Healing in US History Debbie Weinstein
AMST 1700D S01 15461 Race and Remembering Monica M. Martinez
AMST 1900P S01 15459 Essaying Culture Ralph E. Rodriguez
AMST 1901D S01 15212 Motherhood in Black and White Beverly Haviland
AMST 1905N S01 15599 War + Mind in Modern America Debbie Weinstein

Anthropology
ANTH 1242 S01 16299 Bioethics and Culture Katherine A. Mason
ANTH 1300 S01 16302 Anthropology of Addictions Irene Glasser

Biology
BIOL 0190U S01 14803 Plant Devel, Struct, Function Peter Heywood
BIOL 0400 S01 14806 Biological Design Justine J. Allen
BIOL 0430 S01 14808 Evolution of Plant Diversity Erika J. Edwards
BIOL 0940A S01 14816 Viral Epidemics Walter J. Atwood
BIOL 1300 S01 14951 Biomolecular Interactions Nicolas Lux Fawzi
BIOL 1465 S01 15766 Human Population Genomics Sohini Ramachandran

Business, Entrepreneurship and Organizations
BEO 1930C S01 14830 Plant Devel, Struct, Function Peter Heywood
BEO 1930B S01 14831 BEO Capstone I TBD
BEO 1930A S01 14830 BEO Capstone I TBD

Classics
CLAS 0010 S01 15973 The Greeks Stephen E. Kiiid
CLAS 0860 S01 15986 The World of Byzantium Efstratios Papaioannou
CLAS 0855 S01 15972 The Bhagavad Gita David Butra
CLAS 1120G S01 15987 The Idea of Self Joseph Michael Pucci
CLAS 1310 S01 15976 Roman Hist I/Rise/Fall Imp Repl Lisa M. Mignone

Comparative Literature
COLT 0610E S01 15606 Mexico Crisis/Identy 1519-1968 Stephanie Merrim
COLT 0710N S01 15414 Comp Intro Lit Americas Luz Fernando Valente

Economics
ECON 1400 S01 15591 The Economics of Mass Media Jesse M. Shapiro
ECON 1530 S01 16361 Health, Hunger + the Household Andrew D. Foster

Education
EDUC 0400 S01 15226 Amer College/University-1960’s Luther Spoehr
EDUC 1430 S01 15808 Soc Psych of Race, Class + Gen TED
EDUC 1650 S01 16201 Policy Implementath in Educath Kenneth K. Wong
EDUC 1740 S01 15223 Academic Freedom on Trial Luther Spoehr

Egyptology
EGYT 1410 S01 15803 Ancient Egyptian Literature Leo Deupytt

Engineering
ENGN 1010 S01 14859 Entrepreneurial Process Daniel E. Warshay
ENGN 1010 S02 14860 Entrepreneurial Process Jon E. Cohen
ENGN 1010 S03 14861 Entrepreneurial Process Jason D. Harry
ENGN 1230 S01 14862 Instrumentation Design David A. Barton
ENGN 1520 S01 14866 Cardiovascular Engineering Karen L K Coulombre
ENGN 1931E S01 14877 Writing Science Cornelia Dean

English
ENGL 0100P S01 16443 Love Stories James A. Kuzner
ENGL 0100V S01 16547 Inventing Asian Am Lit Daniel Kim
ENGL 0200P S01 16691 Monsters in America Nicole Aleia Fung
ENGL 0200R S01 16692 Reading With Feeling Zachary Stephen Heine
ENGL 1900D S01 15749 Literature and Politics William Keach

Environmental Studies
ENVS 0070C S01 16133 Transcending Transpnh Impacts Kurt Teichert
ENVS 0110 S01 16132 Humans, Nature and the Environ Dawn King
ENVS 1920 S01 16580 Methods Interdisciplinary Rsch Leah K. Vanwey

French Studies
FREN 0720A S01 15770 De l’amour courtois au desir Virginia A. Krause
FREN 0760A S01 15732 Intro Analyse litteraire Gretchen Schultz
FREN 1000B S01 15708 Litterature et culture Virginia A. Krause
FREN 1110P S01 16772 Le Roman contemporain Thangam Ravindranathan

Geological Sciences
GEOG 0030 S01 16760 Ocean Biogeochemical Cycles Timothy D. Herbert
GEOG 1240 S01 16661 Stratigraphy and Sedimentation James M. Russell

German Studies
GRMN 0500F S01 16137 20th Century German Culture Kristina C. Mendinico
GRMN 0750F S01 16136 Historical Crime Fiction Thomas W. Knesche

Hispanic Studies
HISP 0730 S01 15302 Early/Contmp Wrtr of Span Amer Felipe I. Martinez-Pincon
HISP 0740 S01 15301 Intensive Survey of Spanish Lit TBD
HISP 1700B S01 16325 Rhythm and Silence: A Creative TBD

History of Art and Architecture
HIAA 0062 S01 15299 Age of Rubens and Rembrandt Jeffrey M. Muller
HIAA 0580 S01 15291 World, Image, Power-Irily Evelyn Lincoln
HIAA 0770 S01 15292 Arch Urbanism African Diaspora Thangam I. Osaymwe
HIAA 1090 S01 15328 Writing About the Arts Courtney J. Martin
HIAA 1181 S01 15343 Prefabrication and Architecture Thangam I. Osaymwe

History
HIST 0253 S01 15109 Religion, Politics, Culture Linford D. Fisher
HIST 0537A S01 15117 Popular Culture/Latin America Jennifer L. Lambe
HIST 0550A S01 15108 Object Histories Linford D. Fisher
HIST 0551A S01 16219 Lincoln in History and Culture Michael Vorenberg
HIST 0552B S01 16228 Darwin’s England Joan L. Richards
HIST 0555A S01 15133 Empires in America to 1890 Naoko Shibasawa
HIST 1820G S01 16544 Nature on Display Lukas B. Rieppel
HIST 1825L S01 15126 Roots of Mod Science Joan L. Richards
Assyriology
ASYR 1500 S01 24667 Anct Babylonian Magic + Med Matthew T. Rutz

BioMed-Neuroscience
NEUR 1600 S01 24651 Experimental Neurobiology John J. Stein

Biology
BIOL 0140A S01 23920 Topics in Sci Communicatns Scott J. Turner
BIOL 1800 S01 24543 Animal Locomotion TBD

Business, Entrepreneurship and Organizations
BEO 1940A S01 23879 BEO Capstone II TBD
BEO 1940B S01 23880 BEO Capstone II TBD

Chemistry
CHEM 1450 S01 24238 Advanced Organic Chemistry TBD

Cognitive, Linguistic and Psychological Sciences
CLPS 1193 S01 25352 Laboratory in Genes + Behavior Kevin G. Bath

Computer Science
CSCI 1800 S01 25142 Cybersec and Intl Relations John E. Savage

Conversational Studies
COST 0100 S01 25582 Intro to Conversational Studies TBD

Czech
CZCH 0320A S01 24586 Czech Animation Masako Ueda Fidler

Education
EDUC 0410E S01 25036 Empowering Youth TBD
EDUC 0610 S01 25040 Brown v. Board of Education TBD

Engineering
ENGN 0120A S01 24439 Crssng Consumr Chasm by Design Richard D. Fleeter
ENGN 0120B S01 24440 Crssng Spec Chsm Throug Hgn Dsgn Richard D. Fleeter
ENGL 1010 S02 24456 Entrepreneurial Process Daniel E. Warshay

English
ENG 0100A S01 24591 Shakespeare James A. Kuzner

Environmental Studies
ENVS 1415 S01 25399 Power, Justice, Climate Change J Timmons Roberts

Ethnic Studies
ETHN 0090A S01 24204 The Border/La Frontera Evelyn Hu-Dehart

French Studies
FREN 0210 S01 24579 Revolution and Romanticism Mary Giuc

Gender and Sexuality Studies
GNSS 0090C S01 24661 Reproductive Health Sarah D. Fox
GNSS 0120 S01 25251 Intro Gender/Sexuality Studies Drew Walker

Geological Sciences
GEOL 0240 S01 25576 Earth:Evolution of Habitb Planet Timothy D. Herbert
GEOL 1350 S01 25578 Weather and Climate Amanda Lynch
GEOL 1450 S01 25591 Structural Geology Jan Tullis

German Studies
GRMN 0400 S01 24973 Intermediate German II Jane Sokolosky
GRMN 0400 S02 24974 Intermediate German II Jane Sokolosky
GRMN 0600B S01 24975 Was ist Deutsch? Thomas W. Kniesche

Hispanic Studies
HISP 0760 S01 24109 Transatlantic Crossings TBD

History of Art and Architecture
HIAA 0560 S01 24788 Renaissance Rome Evelyn Lincoln
HIAA 1201 S01 24818 Brushwork: Chinese Painting in Jeffrey Moser
HIAA 1550C S01 25373 Dreaming of Food in EM World Evelyn Lincoln
HIAA 1870B S01 25378 SoCal: Art in Los Angeles Courtney J. Martin

History
HIST 0215 S01 25240 Modern Korea James L. McClain
HIST 0257 S01 24536 Modern American History Howard P. Chudacoff
HIST 0537B S01 24576 Tropical Delights James N. Green
HIST 0577A S01 25590 Chinese Diaspora Evelyn Hu-Dehart
HIST 0654A S01 25202 Welfare States Robert O. Self
HIST 0658D S01 25193 Walden + Woodstock Kenneth S. Sacks
HIST 1030 S01 25233 South African History Nancy J. Jacobs
HIST 1150 S01 25301 Modern Japan Kerry Smith
HIST 1201B S01 25281 Roman History II: The Empire John P. Bodel
HIST 1211 S01 25364 Europe in High Middle Ages Amy G. Remensnyder
HIST 1230A S01 24577 The English Revolution Timothy J G Harris
HIST 1266D S01 24580 British History, 1660-1800 Timothy J G Harris
HIST 1511 S01 24929 Sinners, Saints, and Heretics Linford D. Fisher
HIST 1714 S01 24946 Capitalism, Land and Water Jo Guldi
HIST 1825M S01 25209 Science at the Crossroads Joan L. Richards
HIST 1963Q S01 25210 Sex, Power, and God Amy G. Remensnyder
HIST 1964E S01 24579 The English Revolution Timothy J G Harris
HIST 1967F S01 25376 The Maya in the Modern World Robert Douglas Cope
HIST 1969B S01 25456 Israel-Palestine: Lands/Peoples Omer Bartov
HIST 1970D S01 25267 Problem of Class Early America Seth E. Rockman
HIST 1976R S01 25300 Histories of the Future Kerry Smith
HIST 1992 S01 25500 History Honors Workshop Ethan Pollock
HIST 1994 S01 25502 History Honors Thesis Part II Ethan Pollock

Judaic Studies
JUDS 0060 S01 25047 The Bible and Moral Debate Saul Olyan
JUDS 0061 S01 25447 Foreigner, + Minority Paul E. Nahme
JUDS 0700 S01 25048 Religion and Nationalism Paul E. Nahme
JUDS 1615 S01 23911 The Archaeology of Palestine Katharina M. Gaitor
JUDS 1702 S01 25646 Creating the Global Economy Adam Telier

Literary Arts
LITR 0100A S01 24888 Introduction to Fiction TBD
LITR 0100A S02 24899 Introduction to Fiction TBD
LITR 0100B S01 24896 Introduction to Poetry TBD
LITR 0110A S01 24889 Fiction I TBD
LITR 0110A S02 24890 Fiction I TBD
LITR 0110A S03 24891 Fiction I TBD
LITR 0110B S01 24892 Poetry I TBD
LITR 0110B S02 24893 Poetry I TBD
LITR 0110B S03 24894 Poetry I TBD
LITR 0110D S01 24895 Digital Language Art I TBD
LITR 0210A S01 24878 Fiction Writing II Joanna E. Howard
LITR 0210A S02 24879 Fiction Writing II TBD
LITR 0210B S01 24897 Poetry Writing II TBD
LITR 0210D S01 24900 Digital Language Art II TBD
LITR 0210D S02 24884 Writers on Writing Seminar TBD
LITR 1010A S01 24875 Advanced Fiction Meredith Steinbach
LITR 1010A S02 25532 Advanced Fiction TBD
LITR 1010B S01 24885 Advanced Poetry TBD
LITR 1010G S01 24887 Writing3D John H. Cayley
LITR 1110N S01 24883 Wrkshp Potential Lit Peter Gale Nelson

Modern Culture and Media
MCM 0150 S01 25520 Text/Media/Culture Philip Rosen

Philosophy
PHIL 0010 S01 24246 The Place of Persons David P. Christensen
PHIL 0360 S01 24247 Early Modern Philosophy Justin Broackes

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
PHIL 0400 S01 24253 Marxism Charles Larmore
PHIL 0880 S01 24254 Ethicl Themes Amer Short Story Felicia Nimue Ackerman
PHIL 1250 S01 24257 Aristotle Mary Louise G. Gill
PHIL 1660 S01 24858 Metaphysics Adam R. Pautz
PHIL 1670 S01 24398 Time Nina R. Emery
PHIL 1750 S01 24259 Epistemology David P. Christensen
PHIL 1765 S01 25396 Sense and Reference Richard Heck

**Physics**

PHYS 0560 S01 24689 Experiments in Modern Physics TBD
PHYS 1560 S01 24693 Modern Physics Laboratory TBD
PHYS 1600 S01 24694 Computational Physics TBD

**Political Science**

POLS 0110 S01 24130 Intro to Political Thought Sharon R. Krause
POLS 0820U S01 24112 Drug War Politics Peter R. Andreas
POLS 1820D S01 24122 Civil Liberties:Morality/Poliical Corey L. Brettschneider
POLS 1820J S01 24124 Dynamics of Agenda Building Roger Cobb
POLS 1821G S01 24137 Represnt/Parties/Interest Grps Wendy J. Schiller
POLS 1821T S01 24123 Criminal Justice System Ross E. Chert
POLS 1822A S01 24132 Nuclear Weapons and Internatio Nicholas L. Miller
POLS 1822X S01 24120 Technology + International Pol Jordan N. Branch
POLS 1823V S01 24129 Freedom, Work, Leisure Alexander H. Gourevitch
POLS 1823V S01 24127 Politics of Ethnic Conflict Linda J. Cook
POLS 1823Y S01 24142 Global Governance Nina Tannenwald
POLS 1823Z S01 24133 Gender and Public Policy Susan L. Moffit
POLS 1824C S01 24148 Political Communication Richard A. Arenberg
POLS 1920 S01 24149 Senior Honors Thesis Preparatin TBD

**Portuguese and Brazilian Studies**

POBS 0400 S01 24698 Writing + Speaking Portuguese Naomi Parker
POBS 0620 S01 24702 Map Portugues-Speak Cltr:Portugl Leonor Simas-Almeida
POBS 1080 S01 24710 Brazil: Lang/Theater/Culture Patricia I. Sobral
POBS 1080 S02 24776 Brazil: Lang/Theater/Culture Patricia I. Sobral

**Public Health**

PHP 0030 S01 25401 Health of Hispaniola Timothy M. Empkie

**Public Policy**

PLCY 0100 S01 24037 Introduction to Public Policy Robert B. Hackey

**Religious Studies**

RELS 0068 S01 24316 Religion and Torture Stephen S. Bush
RELS 0820 S01 24318 African American Religious Str Andre C. Willis

**Russian**

RUSS 1300 S01 25017 Russian Lit in Translation II Vladimir Golstein
RUSS 1967 S01 25003 Russian Postmodernism Michel Oklot

**Sociology**

SOC 0300D S01 24843 Who Am I? Gregory C. Elliott
SOC 1870A S01 24870 Investing in Social Change Katherine C. Trimble
SOC 1871D S01 24871 Sociology of Development Jose Itzigsohn
SOC 1871L S01 24872 Migration, Displacement and Em Lisa DiCarlo
SOC 1950 S01 24906 Senior Seminar TBD

**Theatre Arts and Performance Studies**

TAPS 0100 S01 25263 Playwriting I TBD
TAPS 0200 S01 25280 Playwriting II TBD
TAPS 1240 S01 25264 Perform Histriogrph/Theatr Hst VK Preston
TAPS 1250 S01 25265 20th-Cent W Theatre/Performanc Spencer Golub
TAPS 1380 S01 25276 Mise en Scene Spencer Golub
TAPS 1630 S01 25271 Race + Gender in Performance Colleen K. Daniher
TAPS 1650 S01 25251 21st Century American Drama Patricia Ybarra

**University Courses**

UNIV 1520 S01 24712 The Shaping of World Views Onesimo T. Almeida

**Visual Art**

VISA 1800P S01 25000 Art/Work: Professionl Practice Heather Darcy Bhandari

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 AFR0090 S01 15787 TTh 1:00-2:20(10) (F. Hamlin)

AFRI 0210. Afro Latin Americans and Blackness in the Americas.
This course focuses on the position of Blacks in the national histories and societies of Latin America from slavery to the present-day. Emphasis is on a multidisciplinary engagement with issues and the exposure of students to the critical discussion of national images and realities about blackness and Africa-descended institutions and practices. The role of racial issues in national and transnational encounters and the consequences of migration of people and ideas within the hemisphere are explored. DPLL
Fall AFR0210 S01 15784 TTh 2:30-3:50(03) (A. Dzidzienyo)

AFRI 0610. Black Student Protest from Jim Crow to the Present.
This is a history-driven class about black student protest. It puts this history in direct dialogue with other kinds of student protests over the long twentieth century. The point of the class is to ground conversations about contemporary protest culture in a deeper historical context that extends well beyond Brown, that moves into the deep history of higher education and education more generally, and that reveals the intersection of protest with other global, national, and local plotlines. It is, as well, meant to think about how all of these histories have been represented popularly and politically in the very recent past. DPLL FYS
Spr AFR0610 S01 25400 TTh 9:00-10:20(08) (M. Guterf)

AFRI 0670. Global Black Radicalism.
The decade from the mid-Sixties until the mid-Seventies witnessed the rise of Black Radicalism as a global phenomenon. The emergence of Black Power in the US, Brazil and the Caribbean, the consolidation of liberation struggles in Portuguese Africa and the rise of a Black Consciousness trend in Apartheid South Africa all represent key moments. What led young activists to embrace “Black Power?” What led to the emergence of Marxist movements in Portuguese Africa? What events in the Caribbean gave ascendency to radical tendencies? And what forces contributed to the decline of these movements? This course seeks to answer these questions. DPLL SOPH
Fall AFR0670 S01 16566 Th 4:00-6:30(04) (B. Meeks)

AFRI 0760A. Rastafarianism.
This course explores the philosophy, history, politics, and theology of Rastafari, one of the Caribbean’s most influential and misunderstood liberation movements. DPLL
Spr AFR0760A S01 25398 TTh 2:30-3:50(11) (B. Meeks)

AFRI 0830. How Structural Racism Works.
This lecture course is an exploration of structural racism: the normalized and legitimized range of policies, practices, and attitudes that routinely produce cumulative and chronic adverse outcomes for people of color. With a special focus on African-Americans in the post Civil Rights Era, we will explore how structural racism “works” intersectionally and in compounded ways in housing, criminal justice, education, employment, and media. We will also consider cultural, political and social challenges to structural racism as well as the the role and impact of colorblind ideology and behaviorism as dominant countervailing explanations for racial disparities. DPLL
Fall AFR0830 S01 16713 MWF 11:00-11:50(02) (T. Rose)

AFRI 0990. Black Lavender: Black Gay/Lesbian Plays/Dramatic Constructions in the American Theatre
An interdisciplinary approach to the study of plays that address the identities and issues of black gay men and lesbians and offers various perspectives from within and without the black gay and lesbian artistic communities. Focuses on analysis of unpublished titles. Also includes published works by Baraka, Bullins, Corbitt, Gibson, Holmes, West, and Pomo Afro Homos. Some evening screenings of videotapes. Enrollment limited to 40. WRIT DPLL
Spr AFR0990 S01 24634 TTh 10:30-11:50(09) (E. Terry-Morgan)

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. DPLL
Spr AFR1050A S01 24675 Th 4:00-6:30(11) (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). DPLL
Spr AFR1050D S01 24676 Th 4:00-6:30(11) (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 AFR1050E S01 24677 Th 4:00-6:30(11) (E. Terry-Morgan)

Lecture course that examines the extended history of the mass civil rights movement in the U.S. Starting at World War II, we consider the roles of the courts, the federal and state governments, organizations, local communities, individuals and various activist strategies in the ongoing struggle for African American equality, focusing on African American agency, particularly in the South, but also in Boston, Mass. Sources include photographs, documentaries, movies, letters, speeches, autobiographies, and secondary readings. Requirements: Weekly readings, documentary viewings, 4 short papers, 2 exams. DPLL
Spr AFR1090 S01 24641 TTh 1:00-2:20(10) (F. Hamlin)

AFRI 1110. Voices Beneath the Veil.
Thirty plays, written by Afro-American playwrights and presented on the American stage between 1858 and the 1990s, are examined as cultural and historical documents of Afro-American realities. Supplementary readings from the humanities and social sciences provide critical framework for in-class discussions and student papers. Instructor permission required. WRIT DPLL
Fall AFR1110 S01 15774 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 the ongoing struggle for African American equality, focusing on African American agency, particularly in the South, but also in Boston, Mass. Sources include photographs, documentaries, movies, letters, speeches, autobiographies, and secondary readings. Requirements: Weekly readings, documentary viewings, 4 short papers, 2 exams. DPLL
Spr AFR1150 S01 15786 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 AFR1210 S01 15785 W 3:00-5:30(17) (A. Dzidzienyo)

AFRI 1360. Africana Studies: Knowledge, Texts and Methodology.
This course will explore the issues of Africana Studies as a discipline by engaging in a series of critical readings of the central texts, which laid the protocols of the discipline. The course will also raise issues of knowledge production and methodologies. This course is a senior capstone seminar.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
<table>
<thead>
<tr>
<th>Section</th>
<th>Course Title</th>
<th>Instructor</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>S01</td>
<td>AMST 1601. Health and Healing in American History</td>
<td>T. Rose</td>
<td>Fall</td>
</tr>
<tr>
<td>S01</td>
<td>AMST 1600D. Sports in American Society</td>
<td>P. Henry</td>
<td>Fall</td>
</tr>
<tr>
<td>S01</td>
<td>AMST 1250G. Topics in Material Culture Studies: The Arts and Crafts Movement in America 1880-1920</td>
<td>T. Rose</td>
<td>Fall</td>
</tr>
<tr>
<td>S01</td>
<td>AMST 0192B. Remixing Racial Codes: Interraciality in Literature and Film Post-1945</td>
<td>P. Henry</td>
<td>Fall</td>
</tr>
<tr>
<td>S01</td>
<td>AMST 1201Y. Cradle of Democracy?: Race, Childhood, and U.S. National Identity</td>
<td>T. Rose</td>
<td>Fall</td>
</tr>
<tr>
<td>S01</td>
<td>ENGL 1710Q American Literature and the Era of Segregation</td>
<td>B. Bogues</td>
<td>Fall</td>
</tr>
<tr>
<td>S01</td>
<td>ENGL 1710P The Literature and Culture of Black Power Reconsidered</td>
<td>B. Bogues</td>
<td>Fall</td>
</tr>
<tr>
<td>S01</td>
<td>AFRI 2450. Exchange Scholar Program</td>
<td>P. Henry</td>
<td>Fall</td>
</tr>
<tr>
<td>S01</td>
<td>AFRI 2970. Preliminary Examination Preparation</td>
<td>T. Rose</td>
<td>Fall</td>
</tr>
<tr>
<td>S01</td>
<td>AFRI 2980. Graduate Level Independent Reading and Research</td>
<td>T. Rose</td>
<td>Fall</td>
</tr>
<tr>
<td>S01</td>
<td>AFRI 2990. Thesis Preparation</td>
<td>T. Rose</td>
<td>Fall</td>
</tr>
<tr>
<td>S01</td>
<td>AFRI XLIST. Courses of Interest to Concentrators in Africana Studies.</td>
<td>T. Rose</td>
<td>Fall</td>
</tr>
</tbody>
</table>

**Course Descriptions**

Open to all senior Africana Studies concentrators; others by instructor permission only. Enrollment limited to 25. DPLL LILE

AFRI 1970. Independent Reading and Research.


AFRI 2120. Interdisciplinary Methods and Africana Studies.

AFRI 2450. Exchange Scholar Program.

AFRI 2970. Preliminary Examination Preparation.

AFRI 2980. Graduate Level Independent Reading and Research.

AFRI 2990. Thesis Preparation.

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

Spring 2017

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

**American Studies**

**American Studies**

AMST 0191Y. Cradle of Democracy?: Race, Childhood, and U.S. National Identity.

From Elian Gonzalez to Trayvon Martin, children play an important role in political narratives concerning domestic and international affairs. Engaging with a range of texts—including blogs, films, and online exhibits—students will consider how the idea of childhood and the bodies of children have constructed our gendered and racialized sense of self. Such ideas about difference and belonging also emerge through children’s material culture, and so students will create a children’s book and multimedia website as well as visit the Providence Children’s Museum. WRIT

AMST 0192B. Remixing Racial Codes: Interraciality in Literature and Film Post-1945.

Through a reading of select critical theory, literary texts, and films, students will look critically at the ways in which interracial relationships have been prescribed and figured in U.S. culture post-1945. Decentering the dominant narrative of black-white miscegenation, we will give equal attention to the role that Asian bodies play in complicating this binary. We will also investigate the potentiality of texts to challenge social norms or reclaim injurious identities. Authors include Lillian Smith, Jhumpa Lahiri, and Celeste Ng. Films include Guess Who’s Coming to Dinner (1967), Snow Falling on Cedars (1999) and Beyond the Lights (2014). WRIT DPLL

AMST 1250G. Topics in Material Culture Studies: The Arts and Crafts Movement in America 1880-1920.

In the 1880s an international movement to reform the design of buildings and their furnishings took hold in America. Its proponents wanted to improve visual life in America by advocating the pride and honesty of craftsmanship and by embracing the ideal of unity of design--by which means they hoped to change the way Americans lived and worked. This course examines the architecture, furniture, silver, ceramics, and printed works of the Arts & Crafts Movement in America from 1880 -1920. Understanding and interpreting material life is emphasized through local field trips and first-hand experience with the collections of the RISD Museum.

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, America. Society. DPLL

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
Fall AMST1601 S01 16453 MWF 11:00-11:50(02) (D. Weinstein)

AMST 1611M. Trauma and the Shame of the Unspeakable: The Holocaust, American Slavery, and Childhood Sexual Abuse.
The problem of representing traumatic experience has been raised by witnesses and survivors, psychoanalysts, psychologists, sociologists, philosophers, and artists. This course compares three historical situations--The Holocaust, American slavery, and childhood sexual abuse--by reading histories, memoirs, and fictions, and analyzing material cultural artifacts such as memorials. Questions about the relation of individual trauma to collective and cultural trauma will be pursued through readings that will include Freud, Jeffrey Alexander, Judith Herman, Dominique La Capra, Primo Levi, Jill Christman, Harriet Jacobs, Toni Morrison, Gayle Jones and Art Spiegelman.

Spr AMST1611S/S01 25444 MWF 12:00-12:50(05) (B. Haviland)

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 WRIT

Fall AMST1700CS01 15461 W 3:00-5:30(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 juniors and seniors. WRIT

Spr AMST1700I S01 24195 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 AMST1800 S01 24206 F 3:00-5:30(15) (B. Haviland)

AMST 1900N. Ethnicity, Identity and Culture in 20th Century New York City.
Explores the processes by which 20th-century New Yorkers created a self-consciously modern, urban, and ethnic American culture. Focuses on literary and artistic representations of life in 20th-century New York as manifested in works by five ethnic groups of New Yorkers that immigrated or migrated to the city after 1800: Jews, African Americans, Italians, Chinese, and Puerto Picans. Enrollment limited to 20 juniors and seniors.

Fall AMST1900N S01 15522 Th 4:00-6:30(04) (E. Hu-DeHart)

AMST 1900P. Essaying Culture.
This course is interested in the essay as form. As a verb, essay means “to make an often tentative or experimental effort to perform.” We will explore through reading and our own writing the poetic, gnostic, and often desultory moves the essay makes as it seeks to understand its cultural objects. Like the novel, the essay is an omnivorous form. It consists of fragments, poetry, personal reflection, lists, rational argument, and much more as it winds its way to understanding. We will be reading a range of essays, as well as theories of the form.

Fall AMST1900PFS01 15459 TTh 1:00-2:20(10) (R. Rodriguez)

Fall AMST1901E S01 15212 Th 4:00-6:30(04) (B. Haviland)

AMST 1902Z. Radio: From Hams to Podcasts.
This course examines the history of radio broadcasting and asks if a consideration of radio’s historic flexibility can predict the future of this interesting medium. Readings will focus on the exciting new field of radio studies, emphasizing economics, structures, and listeners. Topics include radio’s ability to cross borders, create racial and gender categories, and change programming possibilities. Enrollment limited to 20 juniors and seniors. WRIT

Spr AMST1902Z S01 24403 Arranged (S. Smulyan)

AMST 1904V. Decolonizing Minds: A People’s History of the World.
This seminar will explore the knowledge-production and military-financial infrastructures that maintain empires, as well as the means through which people resist or subvert them. While some attention will be made to the 19th and early 20th century colonial context, the bulk of the course will focus on the Cold War liberal era to the neoliberal regime that continues today. Possible topics include: popular culture and ideology, the Cold War university, area studies, international anti-war networks, transnational labor activism, the anti-colonial radical tradition, and the Arab Spring/Occupy Movements. Weekly readings; evaluation based on participation and analytical essays. Enrollment limited to 20. No overrides will be given before the semester begins.

Spr AMST1904V S01 24401 W 3:00-5:30(14) (N. Shibasawa)

AMST 1905L. Transpacific Popular Culture.
General Tso’s Chicken is as American as apple pie, half the nation’s 8-year olds practice some “ancient” Asian form of mayhem, and K-pop is still big in Mexico City while Spidey is a political superhero in Hong Kong and Bangkok street protesters flash Mockingjay salutes. In this seminar, we will use three spaces of cultural production and consumption, food, performance and street art, to illuminate deep circuits of migration, labor, culture, and popular politics across and around the Pacific. DPLL

Spr AMST1905L S01 24199 M 3:00-5:30(13) (R. Lee)

AMST 1905N. War and the Mind in Modern America.
This course examines how the crucible of war has shaped modern conceptions of human nature. Moving from the Civil War to the present, we will consider questions such as changing theories of combat trauma, evolutionary and social scientific explanations for why people fight wars, and the role of memory in individual and collective understandings of violent conflicts. Students will analyze representations of war in film and literature in addition to reading historical and theoretical texts. WRIT

Fall AMST1905N S01 15599 M 3:00-5:30(15) (D. Weinstein)

This course examines US women’s history from the late 19th century to the present, with a focus on labor broadly defined. It will consider how differences among women (e.g. race, ethnicity, religion, sexuality), as well as their status as women, historically shaped their experiences of work, cultural life, activism, and reproduction. WRIT

Spr AMST1905Q S01 25448 M 3:00-5:30(13) (D. Weinstein)

AMST 1906H. Beauty Pageants in American Society.
Beauty pageants are often ridiculed, and even vilified, in American society. Yet their cultural power—from “There She Is” to Toddlers + Tiaras to pageant waves—is undeniable. What accounts for the enduring power of beauty pageants? This course draws on inter-disciplinary scholarship across the social sciences and humanities to examine how and why pageantry and American femininity have become linked in the public consciousness. By the end of this course you will be able to use beauty pageants as a lens to carefully examine gender, race, age, and appearance, and apply that critical thinking to other pop culture phenomena. WRIT

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
AMST 1906I. Collecting Culture: Indigenous Artifacts in North America and Taiwan.
This course is a comparative examination of ethnoarchaeological collections in Taiwan and North America. What is meant by “culture”, “ethnic identity”, “indigenous”, and “nationality” in today’s museum context in both places? Answers to these questions come into focus through an international comparison. In hands-on and virtual examinations of museum collections, students follow ethnographic artifacts from useful circulation to glass cabinets—and ultimately to tourist shops or galleries. We explore collecting and representation strategies of “ethnic” objects in relation to colonialism, decolonization, ethnic politics, and nationalism. How have indigenous peoples asserted authority in the presentation of their own societies? WRIT DPLL

AMST 170. Independent Reading and Research.
Required of all honors candidates in the senior year. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. S/NC

AMST 2010. Introduction to Interdisciplinary Methods.
Introduction to interdisciplinary studies required of all first-year graduate students in American Studies. Graduate students from other departments may enroll with permission of the instructor.

Fall AMST2010 S01 15457 Arranged
(M. Martinez)

AMST 2020E. Introduction to Interdisciplinary American Studies.
This graduate-level course offers an introduction to the discipline of American Studies through a close reading of four important texts representing different methodologies and theories within the discipline. We will also read a series of seminal articles focused on transnationalism, highlighting the significance of border-crossings to the American experience throughout the semester. The goal of the course is to familiarize students with pedagogical approaches within American Studies, through active seminar discussions, fieldtrips within the community, and work with material and visual media as well as secondary texts.

Fall AMST2020E S01 15460 W 3:00-5:30(17)
(C. Frank)

AMST 2220B. Culture, Politics and the Metropolitan-Built Environment.
This interdisciplinary readings seminar will provide graduate students with an introduction to recent scholarly work on 20th century and contemporary cities and suburbs. Readings will be drawn from cultural, political, social, and intellectual history, American Studies, political science, sociology, and ethnography. They will investigate the interconnections between urban and suburban development and the role of ideology, class, gender, race, and globalization in shaping planning, architecture, culture, policy, politics, and social movements. This class is open to students in American Studies, History, Sociology, Political Science, Anthropology, and other disciplines who find themselves interested in multi-disciplinary approaches to the study of cities and suburbs.

Spr AMST2220B S01 24400 Th 4:00-6:30(17)
(S. Zipp)

AMST 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 a thesis.

Fall AMST2450 S01 14696 Arranged "To Be Arranged"
Spr AMST2450 S01 23797 Arranged "To Be Arranged"

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

Fall AMST2520 S01 15458 Arranged (L. Alvarado)

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

Spr AMST2650 S01 24196 W 3:00-5:30(14)
(S. Lubar)

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

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

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

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

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 14697 Arranged "To Be Arranged"
Spr AMST2990 S01 23797 Arranged "To Be Arranged"

Ethnic Studies

ETHN 0090A. The Border/La Frontera.
We will examine the historical formation, contemporary reality and popular representation of the U.S.-Mexico border from a bilingual (English-Spanish), multicultural (U.S., Mexican, and Latino), and transnational perspective within the framework of globalization. We will explore the construction of border communities, lives and identities on both sides of the international divide, and pay particular attention to the movement of peoples in both directions. We will read materials, watch films, and conduct class discussions in English and Spanish. Comfort and reasonable proficiency in Spanish is required, but native command is not necessary. Enrollment limited to 20 first year students. FYS WRIT

Spr ETHN0090A S01 24204 W 3:00-5:30(14)
(E. Hu-Dehart)

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. DPLL

Fall ETHN0500 S02 16281 MWF 1:00-1:50(06)
(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 Latina/o U.S. experience. We will study how
Latindad is constructed as an identity and how that identity varies across origin, place, and time. Major themes we will explore include the legacies of U.S. colonialism; cultural nationalism, citizenship, immigration and exile; labor and class; race and ethnicity; and gender and sexuality. Fall ETHN0512 S01 15462 Th 4:00-6:30(04) (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 24197 Th 10:30-11:50(09) (R. Rodriguez)

ETHN 1750A. Immigrant Social Movements: Bridging Theory and Practice. What is the impact of legal status on the potential for undocumented individuals’ participation in a social movement? Relatedly, how is the heterogeneity of movement participants represented in campaigns and political protest? In this course we will examine the undocumented immigrant movement in the United States today through readings, films and guest lectures from local immigrant rights activists. As part of the course students will be partnered with local community-based organizations where they will complete a semester-long internship. DPLL Fall ETHN1750A S01 24201 T 4:00-6:30(16) (K. Escudero)

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. Spr ETHN1890M S01 25460 M 3:00-5:30(13) (E. Hoover)

ETHN 1890O. The Latina/o Novel. This course is an advanced seminar in the study of the contemporary Latina/o Novel. Close attention will be paid to the social and historical context of the work with a particular attention to the form and style of the novel. We will read about eight to ten novels over the course of the semester. Rigorous participation is expected in class discussion. The class aims to hone your written and oral communication skills in the analysis of the Latina/o novel. Fall ETHN1890O S01 16052 Th 2:30-3:50(03) (R. Rodriguez)

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. Spr ETHN189OR S01 24205 W 3:00-5:30(14) (L. Alvarado)

ETHN 1890U. Extravagant Texts: Reading the World Through Asian American Literature. In this course we study a body of writings that self-consciously move beyond the topics and genres with which Asian American literature has traditionally been associated—that are, in Maxine Hong’s Kingston’s formulation, “extravagant.” We explore works that adopt a transnational or diasporic perspective and that are written in such genres as magical realism, speculative fiction, graphic novels, and plays. In addition to more conventional concerns like racism or immigration, these works also address such issues as empire, war, mixed-race identity, adoption, and sexuality. Writers we examine include: Theresa Cha, Jessica Hagedorn, David Henry Hwang, Adrian Tomine and Karen Tei Yamashita. DPLL Spring ETHN1890US01 24397 TTh 1:00-2:20(10) (D. Kim)

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 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. FY's DPLL LILE Fall ANTH0066JS01 16772 W 3:00-5:30(17) (D. Smith)

ANTH 0077N. The Anthropology of Gender and Science. This seminar examines topics including genetics, reproduction, and evolution, all through the lens of gender/sex systems. The themes of social justice, identity, and difference are central to the course. We will explore: How epidemiology and gendered social justice are often in conflict in the fight against AIDS in Africa; to learn about difference, anthropomorphism, gender, and primatologists’ comparisons between humans, bonobos, and chimpanzees; efforts to scare men in the United States about “Low Testosterone,” and how they reflect shifting identities as much as reduced hormone levels; and the relationship between gender, Traditional Chinese Medicine, and Western Biomedicine in China. SOPH LILE DPLL Spring ANTH0077NS01 25152 W 3:00-5:30(14) (M. Gutmann)

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 anthropologies’ findings and comportment in other cultures to its conclusions and conduct in our own. No prerequisites. WRIT DPLL LILE Spring ANTH0100 S01 25153 MWF 11:00-11:50(04) (B. Singh)

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 16294 MWF 11:00-11:50(02) (S. Besky)

ANTH 0130. Myths Alive. Myth 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 Spring ANTH0130 S01 25154 TTh 10:30-11:50(09) (W. Simmons)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 25162 MWF 1:00-1:50(06) (K. Mason)

ANTH 0500. Past Forward: Discovering Anthropological Archaeology.
This course offers a broad journey through the human past, from material culture crafted by our evolutionary ancestors to the remnants of the recent historic past. To facilitate this journey, the class explores the methods, concepts, and theories that anthropologists employ in the study of past peoples, places, and things. Case studies stretch across the globe. As a hands-on endeavor, archaeology focuses on tangible evidence. In this course, small-group discussion, laboratory, and field exercises will complement lectures, leading to an understanding of how anthropologists study the past and how that knowledge affects the present. LILE WRIT
Fall ANTH0500 S01 16295 MWF 9:00-9:50(01) (P. Van Valkenburgh)

ANTH 0860. Anthropology of Food.
An exploration of the human experience of food and nutrition from evolutionary, archaeological, and cross-cultural perspectives. The course will review the various approaches employed by anthropologists and archaeologists to understand diet and subsistence in the past and present. Starting with the evolutionary roots of the human diet in Plio-Pleistocene Africa, we will trace patterns of human subsistence to the present, including the social and health implications of the agricultural revolution. We will then explore modern foodways in cross-cultural perspective, focusing on the interplay of ecology, politics, technology, and cultural beliefs. LILE WRIT
Spr ANTH0860 S01 25163 MWF 10:00-10:50(03) (A. Scherer)

ANTH 0880. 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, courthouses, medical settings, and political campaigns. DPLL LILE
Spr ANTH0880 S01 25164 MWF 2:00-2:50(07) ’To Be Arranged’

ANTH 1031. Classic Mayan Civilization.
Examines the history, culture, and society of the Classic Maya, with special emphasis on Preclassic precursors, dynasties, environmental adaptation, imagery, architecture, urban form, and the Maya Collapse. Spr ANTH1031 S01 25165 TTh 10:30-11:50(09) (S. Houston)

ANTH 1112. Anthropology of Climate Change
Contemporary climate change is a profoundly human issue. This course disaggregates “the human” in climate change, employing an anthropological perspective to ask how people experience changing climates in different ways throughout the world. From receding glaciers to rising seas to unpredictable seasons and periods of drought, the ways people understand, respond to, and experience climate change are shaped by diverse cultures and histories. Topics include environmental change, capitalism, energy, climate justice in indigenous communities, green economies, tropical forests, denial and skepticism, and the visibility of climate change. Articles and ethnographies cover the Global North as well as the Global South. DPLL
Fall ANTH1112 S01 16564 Th 4:00-6:30(04) (D. Graef)

ANTH 1120. Peoples and the Cultures of the Americas.
Examines the diverse cultures and history of the Americas - especially Brazil, Peru, Mexico, and the Caribbean. Topics include the organization of labor, cultural and artistic practices, changing conventions of gender and family, international migration, national and local identities, indigenous rights, and protest and rebellion. LILE DPLL
Fall ANTH1120 S01 16298 TTh 9:00-10:20(08) (K. Warren)

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
Spr ANTH1151 S01 25167 TTh 4:00-6:30(16) (A. Daulatzai)

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
Spr ANTH1224 S01 25168 TTh 2:30-3:50(10) (K. Warren)

ANTH 1242. Bioethics and Culture.
This course examines bioethics from an ethnographic point of view. Topics include pregnancy, death, suicide, disability, medical research, organ transplantation, and population control. We will distinguish between the moral experiences of people faced with difficult choices, and the ethical ideals to which they aspire. We will then ask: how can these perspectives be reconciled? When trying to reconcile these perspectives, how can we account for powerful dynamics of race, gender, class, religion, and cultural difference? And finally, how can we develop a code of ethics that takes these issues into account and also is fundamentally connected to everyday life? DPLL LILE WRIT
Fall ANTH1242 S01 16299 TTh 2:30-3:50(03) (K. Mason)

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.
Fall ANTH1251 S01 16300 TTh 1:00-2:20(10) (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 16302 M 3:00-5:30(15) (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 populations, we will uncover the causes, conditions, and responses to homelessness. Each student will spend at least two hours per week in a local homeless-serving agency in order to gain face to face experiences. The field placements will be facilitated by the professor. LILE
Spr ANTH1301 S01 25169 T 4:00-6:30(16) (L. Glasser)

ANTH 1312. Stratified Reproduction: Race, Class and Parenthood. This Engaged Scholar course will examine the social, cultural, and economic dynamics that guide and shape the process of becoming a parent in the context of deepening global and national inequalities. In addition to reading widely in relevant social science literature, students will embed themselves in one of the many local organizations in Providence and the broader New England area that provide services for new mothers and fathers in need. The course is limited to 15 students admitted to the class via an application process. Priority given to seniors, those in the Engaged Scholars Program, and Anthropology concentrators. DPLL LILE Spr ANTH1312 S01 25170 W 3:00-5:30(14) (K. Mason)

ANTH 1491. 1493: The Spanish Invasion and Its Indigenous Responses in the Americas. Drawing on historical sources from the John Carter Brown Library and objects from the Haffenreffer Museum, this course re-examines the history of Ibero-American cultural encounters between 1492 and 1700 AD. Students learn to interpret the different perspectives offered by archaeological and historical evidence to create more nuanced accounts of indigenous social history before and after the Spanish invasion. Topics addressed include cultural (mis)communication, disease and ecological change, roles played by people of African descent, and the legacies of conquest in the present. Special emphasis is placed on the Taino, Mexico, Inka, Maya and Pueblo cultures. DPLL LILE Spr ANTH1491 S01 25171 M 3:00-5:30(13) (P. Van Valkenburgh)

ANTH 1505. Vertical Civilization: South American Archaeology from Monte Verde to the Inkas. This course offers an introduction to the archaeology of indigenous south American Civilizations, from the peopling of the continent around 13,000 years ago, to the Spanish Invasion of the 16th Century C.E. Throughout, we seek to understand the often unique solutions that South America indigenous peoples developed to deal with risk and to make sense of the world around them. Course lectures and discussions focus on recent research and major debates. Weekly sections draw on viewings of artifacts and manuscripts from the Haffenreffer Museum and the John Carter Brown Library. DPLL LILE Fall ANTH1505 S01 16560 MWF 11:00-11:50(02) (P. Van Valkenburgh)

ANTH 1515. Anthropology of Mental Health. Mental illness and wellbeing have been defined and treated in dramatically different ways across cultures and historical periods. In this course we engage with religious and secular healing traditions including biomedicine, and the ways in which these shape the experience and understanding of “madness”, of common mental disorders (such as depression and anxiety), and changing perceptions of the normal and the pathological. Drawing on anthropology, psychiatry, philosophy, literature and cinema, we follow the emergence, translation and critique of diagnostic categories across different parts of the contemporary world. Key authors include Foucault, Deleuze and Guattari, Kleinman, Good, Veena Das, and others. Fall ANTH1515 S01 16296 TTh 10:30-11:50(13) (B. Singh)

ANTH 1620. Global Historical Archaeology. The course examines historical archaeology as a multidisciplinary approach to the study of the historic past. Draws in recent research from different parts of the world, including North America, South Africa, Australia, the Caribbean, and South America, to illustrate historical archaeology’s contributions to interpreting peoples’ everyday lives and the diversity of their experiences in the post-1500 era. LILE Spr ANTH1620 S01 25172 TTh 2:30-3:50(11) (P. Rubertone)

ANTH 1621. Material Culture Practicum. Combines theory with hands-on study of artifacts from historical archaeological contexts in North and Latin America. Students will gain skills and experience in artifact identification, dating, recording, analysis, and interpretation, and will conduct individual or team research projects on material things as products of everyday life and history. Enrollment limited to 15. LILE Spr ANTH1621 S01 25173 W 3:00-5:30(14) (P. Rubertone)

ANTH 1624. Indians, Colonists, and Africans in New England. The course explores the colonial and capitalist transformation of New England’s social and cultural landscapes following European contact. Using archaeology as critical evidence, we will examine claims about conquest, Indian Extinction, and class, gender and race relations by studying the daily lives and interactions of the area’s diverse Native American, African American, and European peoples. DPLL LILE Fall ANTH1624 S01 16303 TTh 10:30-11:50(13) (P. Rubertone)

ANTH 1720. The Human Skeleton. More than simply a tissue within our bodies, the human skeleton is 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 16304 TTh 10:30-11:50(13) (A. Scherer)

ANTH 1848. Ethnography + Social Critique. This class will study classic and contemporary anthropological 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 examine the methods involved in research for the books and articles 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. This class is to study ethnographies more than to make them. That said, assignments will include practicing certain methods that are often employed by ethnographers. Preference given to students who have taken another Anthropology class. DPLL LILE Fall ANTH1848 S01 16305 TTh 2:30-3:50(03) (M. Gutmann)

ANTH 1850. Body Arts: The Human Frame as Cultural Expression. The body is inescapable: humans live with it and through it, sending messages and instating identity. The body remains, and will remain, our principal means of cultural expression. As its guiding proposition, this seminar affirms that body arts have a history and social setting, whether of gesture, clothing, fashion, tattooing, make-up, hair-styles, cranial deformation, jewelry, perfume, dance or other embellishments and subtractions of the human frame. Those arts involve material equipment and a set of theories and dispositions needing close review and appraisal. These come from varied sources, including anthropology, art history, cultural studies, literature history or archaeology. Fall ANTH1850 S01 16306 M 12:30-3:00 (S. Houston)

ANTH 1901. Anthropology in/of the Museum. This course provides an introduction to museums from an anthropological perspective. Topics include politics of representation and the construction of the “Other”; objects, identity, and meaning; collecting and cultural property; and collaboration, community engagement, and indigenous self-representation. Assignments involve work with the Haffenreffer Museum of Anthropology’s exhibitions and collections. The course focuses on museums dedicated to natural and cultural history, but establishes theoretical and practical grounding for thinking about and working in other disciplines and other kinds of display institutions. It is suitable for both undergraduate and graduate students. There are no prerequisites; but familiarity with anthropology is presumed. Fall ANTH1901 S01 16334 T 4:00-6:30(09) ‘To Be Arranged’
Spr ANTH1901 S01 25175 Th 4:00-6:30(17) ‘To Be Arranged’

ANTH 1910D. Faces of Culture. The seminar is designed to allow you as anthropology majors to question to debate and examine some of the assumptions of the discipline, and critically explore the multifaceted uses of the concept. We will contextualize the study of culture with the history of anthropology and across other
Course Descriptions

disciplines in the humanities and the social sciences. Limited to 20.
Prerequisite: ANTH1900
Fall ANTH1910C S01 16308 TTh 1:00-2:20(10) (L. Fruzzetti)

ANTH 1910G. Senior Seminar: Politics and Symbols.
Examination of the key role played by symbols 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 2016 U.S. presidential,
congressional, state, and local political campaigns receive attention.
Students, in part working in groups, will engage in original research
both on the 2016 American elections and a wide variety of historical and
contemporary political developments, from ISIS and the Arab Spring to the
American anti-abortion movement. Prerequisites: two previous courses in
anthropology.
Spr ANTH1910C S01 25176 M 3:00-5:30(13) (D. Kertzer)

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 16309 W 3:00-5:30(17) (L. Fruzzetti)

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

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 16310 M 3:00-5:30(15) (D. Kertzer)

A seminar exploring fundamental theoretical and ethnographic currents in
20th- and 21st-century cultural anthropology.
Spr ANTH2010 S01 25177 Th 4:00-6:30(17) (M. Gutmann)

ANTH 2018. Labor and Social Life.
This is a graduate seminar that will explore anthropologies of labor. The
Fall 2016 focus will be on labor, posthuman and feminist theory, and
critical studies of capitalism.
Fall ANTH2018 S01 16311 Th 4:00-6:30(04) (S. Besky)

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 25178 Arranged 'To Be Arranged'

ANTH 2045. Proposal Writing Workshop for Anthropological Fieldwork.
This course is designed for third-year graduate students in any subfield
of anthropology or closely related fields who are writing grant proposals
for dissertation research. Student grant proposals will be pre-circulated
and worked up. Students will gain familiarity with the format for writing
successful proposals, with the strategies needed to operationalize them,
and with the everyday academic labor of both offering and responding to
substantive feedback.
Fall ANTH2045 S01 16312 W 12:30-3:00 (J. Leinaweaver)

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 workshopping writing.
Fall ANTH2060 S01 16331 Arranged 'To Be Arranged'
Spr ANTH2060 S01 25180 Arranged 'To Be Arranged'

ANTH 2230. Medical Anthropology.
This graduate seminar provides a theoretical, methodological, and
ethnographic foundation in medical anthropology. The focus will be on
sociocultural approaches to the study of the suffering, illness and the
body, though the course will also engage with key issues in biocultural
approaches to understanding disease processes. Topics will include:
social suffering, religion and medicine, local biologies, gender and the
body, biotechnology, bioethics, caregiving and doctoring, and the global
burden of disease.
Fall ANTH2230 S01 16314 Th 9:00-11:30 (K. Mason)

ANTH 2304. Issues in Anthropology and Population.
This seminar is intended for graduate students and postdoctoral fellows
interested in anthropological approaches to population issues and
is normally taken as the second course in a two-course sequence that
begins with ANTH 2300. The overarching theme of the seminar is the
contributions that sociocultural anthropology can make to the
understanding of population processes.
Spr ANTH2304 S01 25181 W 3:00-5:30(14) (D. Smith)

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.
Spr ANTH2310A S01 25182 M 3:00-5:30(13) (K. Warren)

ANTH 2315. Anthropology of State Power and Powerlessness.
How do we conceptualize state power? Is sovereign power primarily
a capacity for force and coercion or a source of welfare and social
cohesion? States the world over often do not manage to provide adequate
welfare or to maintain a monopoly on violence. How then might we
understand state power not only as a capacity but also in its incapacities
and vulnerabilities? We engage these paradoxes of power through classic
texts of anthropology and political theory including Foucault, Deleuze,
Weber, Hobbes, and Rousseau, in tandem with lively ethnographic
analyses of state power in its capacities and incapacities.
Fall ANTH2315 S01 16317 W 3:00-5:30(17) (B. Singh)

ANTH 2320. Ideology of Development.
An examination of different development theories and their relationship
to field application. The analysis of project preparation and implementation
is used to question the goals and objectives of Western and indigenous
notions of progress and change within a social and economic context.
Third World countries are utilized as case studies to address related
issues, such as the meaning of development.
Spr ANTH2320 S01 25183 T 4:00-6:30(16) (L. Fruzzetti)

ANTH 2450. Exchange Scholar Program.
Fall ANTH2450 S01 14698 Arranged 'To Be Arranged'
Spr ANTH2450 S01 23798 Arranged 'To Be Arranged'

ANTH 2500A. Problems in Archaeology: Archaeology of Colonialism.
Explores the theoretical discourses shaping anthropological approaches
and defining archaeological projects on culture contact and colonialism.
Attention will be given to examining colonial encounters between
Europeans and indigenous peoples as ongoing processes rather
than particular historical moments, and to looking at recent efforts at
decolonizing archaeological practice.
Fall ANTH2500A S01 16318 Th 4:00-6:30(04) (P. Rubertone)

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 16319 F 9:00-11:30 (R. Preucel)

ANTH 2560. Lived Bodies, Dead Bodies: The Archaeology of Human
Remains. Bioarchaeology is the study of human remains from archaeological
contexts. We will survey the "state of the art" in bioarchaeology, while

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
exploring its relevance and application to the archaeology of complex societies. We will survey a range of bioarchaeological methods and applications, including paleopathology, stable isotope analysis, population affinity/ancient DNA, perimortem trauma, and body modification. In turn, we will explore how bioarchaeology can be used to approach a wide range of archaeological problems relative to complex societies, including subsistence, economy, migration, urbanism, social inequality, conflict and warfare, and identity. Open to graduate students only. S/NC. LILE
Spr ANTH2560 S01 25184 M 6:00-8:30PM (A. Scherer)

ANTH 2590. Space, Power, and Politics.
This course critically examines the politics of space and landscape from an interdisciplinary perspective. After examining key texts in political philosophy and cultural geography, we examine themes in recent scholarship including the spatial production of sovereignty, capital, and political subjectivity and the evolving role of digital cartography in public culture and politics. Case studies are drawn from archaeology, art history, ethnography, cultural geography, and history.
Spr ANTH2590 S01 25185 W 6:00-8:30PM (P. Van Valkenburgh)

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 semantic 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 25186 T 1:30-3:50 'To Be Arranged'

ANTH 2970. Preliminary Examination Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.
Fall ANTH2970 S01 14699 Arranged 'To Be Arranged'
Spr ANTH2970 S01 23799 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 14700 Arranged 'To Be Arranged'
Spr ANTH2990 S01 23800 Arranged 'To Be Arranged'

ANTH XLIST. Courses of Interest to Students Concentrating in Anthropology.
Fall 2016 The following courses, listed in other departments, may be of interest to students concentrating in Anthropology. Please check the course listings of the sponsoring department for times and locations.
Archaeology and the Ancient World
ARCH 1900 The Archaeology of College Hill
Spring 2017 The following courses, listed in other departments, may be of interest to students concentrating in Anthropology. Please check the course listings of the sponsoring department for times and locations.
Archaeology and the Ancient World
ARCH 2105 Ceramic Analysis for Archaeology
English
ENGL 2901F Around 1948: Interdisciplinary Approaches to Global Transformations

Applied Mathematics
APMA 0100. Elementary Probability for Applications.
This course serves as an introduction to probability and stochastic processes with applications to practical problems. It will cover basic probability and stochastic processes such as basic concepts of probability and conditional probability, simple random walk, Markov chains, continuous distributions. Brownian motion and option pricing. Enrollment limited to 20 first year students. FYS
Fall APMA0100 S01 16352 Th 9:00-10:20(08) 'To Be Arranged'

For student in any discipline that may involve numerical computations. Includes instruction for programming in MATLAB. Applications discussed include solution of linear equations (with vectors and matrices) and nonlinear equations (by bisection, iteration, and Newton's method), interpolation, and curve-fitting, difference equations, iterated maps, numerical differentiation and integration, and differential equations. Prerequisite: MATH 0100 or its equivalent.
Spr APMA0160 S01 25068 MWF 9:00-9:50(02) 'To Be Arranged'

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 difference equations, linear algebra, and numerical methods, to probability and statistics will be introduced in class. Prerequisites: Math 0100 or equivalent.
Fall APMA0200 S01 16231 MWF 10:00-10:50(14) (C. Dafermos)

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.
Fall APMA0330 S01 16252 MWF 12:00-12:50(12) (V. Dobrushkin)
Spr APMA0330 S01 25070 MWF 12:00-12:50(05) (C. Dafermos)

APMA 0340. Methods of Applied Mathematics I, II.
Mathematical techniques involving differential equations used in the analysis of physical, biological and economic phenomena. Emphasis on the use of established methods, rather than rigorous foundations. I: First and second order differential equations. II: Applications of linear algebra to systems of equations; numerical methods; nonlinear problems and stability; introduction to partial differential equations; introduction to statistics. Prerequisite: MATH 0100, 0170, 0180, 0190, 0200, or 0350, or advanced placement.
Fall APMA0340 S01 16232 MWF 12:00-12:50(12) (Y. Guo)
Spr APMA0340 S01 25069 MWF 12:00-12:50(05) (V. Dobrushkin)

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: Six hours of lectures, and two hours of recitation. Prerequisites: MATH 0100, 0170, 0180, 0190, 0200, or 0350, or advanced placement. MATH 0520 (can be taken concurrently).
Fall APMA0350 S01 16233 MWF 9:00-9:50(01) (D. Kaspar)
Spr APMA0350 S01 25071 MWF 10:00-10:50(03) (B. Kunsberg)

APMA 0360. Methods of Applied Mathematics I, II.
Covers the same material as APMA 0340, albeit of greater depth. Intended primarily for students who desire a rigorous development of the mathematical foundations of the methods used, for those students considering one of the applied mathematics concentrations, and for all students in the sciences who will be taking advanced courses in applied mathematics, mathematics, physics, engineering, etc. Three hours lecture and one hour recitation. Prerequisite: MATH 0100, 0170, 0180, 0190, 0200, or 0350, or advanced placement.
Fall APMA0360 S01 16562 MWF 9:00-9:50(01) (Y. Guo)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
APMA 0650. Essential Statistics.
A first course in probability and statistics emphasizing statistical reasoning and basic concepts. Topics include visual and numerical summaries of data, representative and non-representative samples, elementary discrete probability theory, the normal distribution, sampling variability, elementary statistical inference, measures of association. Examples and applications from the popular press and the life, social and physical sciences. No prerequisites.

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

Fall APMA1070 S01 16235 MWF 10:00-10:50(14)  (A. Matzavinos)

APMA 1080. Inference in Genomics and Molecular Biology.
Sequencing of genomes has generated a massive quantity of fundamental biological data. Drawing traditional and Bayesian statistical inferences from these data, including: motif finding; hidden Markov models; other probabilistic models, significances 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, 1655 or MATH 1610 or CSCI 1450; BIOL 0200 recommended, programming skills required.

Spr APMA1080 S01 25074 MWF 1:00-1:50(06)  (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 16236 TTh 10:30-11:50(13)  (C. Lawrence)

APMA 1180. Introduction to Numerical Solution of Differential Equations.
Fundamental numerical techniques for solving ordinary and partial differential equations. Overview of techniques for approximation and integration of functions. Development of multistep and multistage methods, differential equations. Overview of techniques for approximation 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 APMA1180 S01 25075 TTh 10:30-11:50(09)  (J. Guzman)

Basic probabilistic problems and methods in operations research and management science. Methods of problem formulation and solution. Markov chains, birth-death processes, stochastic service and queueing systems, the theory of sequential decisions under uncertainty, dynamic programming. Applications. Prerequisite: APMA 1650, 1655 or MATH 1610, or equivalent. LILE

Spr APMA1200 S01 25076 TTh 9:00-10:20(08)  (A. Matzavinos)

An introduction to the basic mathematical ideas and computational methods of optimizing allocation of effort or resources, with or without constraints. Linear programming, network models, dynamic programming, and integer programming.

Fall APMA1210 S01 16238 MWF 11:00-11:50(02)  (B. Rozovsky)

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 25077 MWF 9:00-9:50(02)  (B. Sandstede)

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. Since 2016 is a presidential election year, examples throughout the course will be drawn from electoral politics. Prerequisite: One year of university-level calculus. At Brown, this corresponds to MATH 0100, 0170, 0180, 0190, 0200, or 0350. A score of 4 or 5 on the AP Calculus BC exam is also sufficient.

Fall APMA1650 S01 16240 MWF 2:00-2:50(07)  (B. Kunsberg)
Spr APMA1650 S01 25078 MWF 11:00-11:50(04)  (A. Matzavinos)

APMA 1655. Statistical Inference II.
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.

Spr APMA1655 S01 16241 TTh 1:00-2:00(10)  (C. Miao)

APMA 1660. Statistical Inference I.
APMA 1660 is designed as a sequel to APMA 1650 to form one of the alternative tracks for an integrated year's course in mathematical statistics. The main topic is linear models in statistics. Specific topics include likelihood-ratio tests, nonparametric tests, introduction to statistical computing, matrix approach to simple-linear and multiple regression, analysis of variance, and design of experiments. Prerequisite: APMA 1650, 1655 or equivalent, basic linear algebra.

Spr APMA1660 S01 25079 TTh 2:30-3:50(11)  (N. Garcia Trillos)

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 16242 MWF 2:00-2:50(07)  (C. Lawrence)

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 16244 MWF 11:00-11:50(02)  (G. Menon)

APMA 1720. Monte Carlo Simulation with Applications to Finance.
The course will cover the basics of Monte Carlo and its applications to financial engineering: generating random variables and simulating stochastic processes; analysis of simulated data; variance reduction techniques; binomial trees and option pricing; Black-Scholes formula; portfolio optimization; interest rate models. The course will use MATLAB as the standard simulation tool. Prerequisites: APMA 1650 or MATH 1610

Fall APMA1720 S01 16245 MWF 1:00-1:50(08)  (N. Garcia Trillos)
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 enrol in 2610; for 1,000-level credit enrol 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 25080 MWF 11:00-11:50(04) (M. Harrison)

APMA 1860. Graphs and Networks.
Selected topics about the mathematics of graphs and networks with an emphasis on random graph models and the dynamics of processes operating on these graphs. Topics may include: empirical properties of biological, social, and technological networks (small-world effects, scale-free properties, transitivity, community structure); mathematical and statistical models of random graphs and their properties (Bernoulli random graphs, preferential attachment models, stochastic block models, phase transitions); dynamical processes on graphs and networks (percolation, cascades, epidemics, queuing, synchronization).
Fall APMA1860 S01 16561 TTh 2:30-3:50(03) (M. Harrison)

APMA 1930P. Mathematics and Climate.
The study of Earth’s climate involves many scientific components; mathematical tools play an important role in relating these through quantitative models, computational experiments and data analysis. The course aims to introduce students in applied mathematics to several of the conceptual models, the underlying physical principles and some of the ways data is analyzed and incorporated. Students will develop individual projects later in the semester. Prerequisites: APMA 0360, or APMA 0340, or written permission; APMA 1650 is recommended.
Fall APMA1930P S01 16292 TTh 9:00-10:20(08) (M. Maxey)

APMA 1930Q. Mathematical Models of Cortical Dynamics.
A Senior Applied Mathematics seminar on brain modeling, emphasizing: stochastic aspects of cortical dynamics; models of spike-time-dependent plasticity; mean-field approaches to the analysis of large networks; the emergence of network motifs and their role in cortical function. Open to Neuroscience and CLPS students with adequate mathematical and computational preparation. Background in neuroscience desirable but not required.
Fall APMA1930Q S01 16355 M 3:00-5:30(15) (L. Bienenstock)

APMA 1930R. Probabilities in Quantum Mechanics.
We will start from scratch. The only prerequisites are some probability and a good facility with mathematics. We will be rigorous, while making a careful accounting of the (surprisingly few) conceptual assumptions that lead inexorably to consequences that are almost impossible to believe. With an eye on some of the most startling and vexing of these, we will construct a minimum mathematical foundation sufficient to explore: the abrupt transition from the weird quantum to the familiar classical world; the uncertainty principles; teleportation; Bell’s theorem and the Einstein-Bohr debates; quantum erasure; the Conway-Kochen “free-will theorem”; and (unbreakable) quantum encryption.
Fall APMA1930R S01 16528 F 3:00-5:30(11) (S. Geman)

APMA 1940V. Topics in Coding Theory.
This class covers two distinct areas: (1) algebraic coding theory; (2) examples of code breaking and design. Part (1) stresses cryptography, data compression, error correction and sphere packings. Part (2) will involve case studies of code breaking and code design in applications. Depending on student interest these may include decoding scripts (Ventris and Linear B), or design problems in synthetic biology (e.g. RNA folding and DNA self-assembly).
Spr APMA1940V S01 25216 MWF 2:00-2:50(07) (G. Menon)

APMA 1940W. Randomized Algorithms for Counting, Integration and Optimization.
We consider the construction and analysis of random methods for approximating sums and integrals, and related questions. Example, consider the problem of counting the number of vectors with integer components that satisfy a collection of linear equality and inequality constraints. Depending on the number of constraints, this could be a problem of counting the number of needles in a haystack, and straightforward enumeration is impossible. There are now a variety of randomized methods that can attack this problem and other problems with similar difficult features. We survey some of the methods and the problems to which they apply.
Spr APMA1940W S01 25368 TTh 1:00-2:20(10) (P. Dupuis)

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

APMA 2110. Real Analysis.
Provides the basis of real analysis which is fundamental to many of the other courses in the program: metric spaces, measure theory, and the theory of integration and differentiation.
Fall APMA2110 S01 16389 TTh 10:30-11:50(13) (P. Dupuis)

APMA 2120. Hilbert Spaces and Their Applications.
A continuation of APMA 2110. Hilbert spaces, Banach spaces, Hilbert spaces, the spectrum of bounded operators on Banach and Hilbert spaces, compact operators, applications to integral and differential equations.
SPr APMA2120 S01 25236 MWF 10:00-10:50(03) (H. Dong)

Fall APMA2190 S01 16247 TTh 2:30-3:50(03) (J. Mallet-Paret)

SPr APMA2200 S01 25081 MWF 1:00-1:50(06) (J. Mallet-Paret)

APMA 2420. Fluid Mechanics II.
Introduction to concepts basic to current fluid mechanics research: hydrodynamic stability, the concept of average fluid mechanics, introduction to turbulence and to multiphase flow, wave motion, and topics in inviscid and compressible flow.
SPr APMA2420 S01 25237 MWF 2:00-2:50(07) (M. Maxey)

APMA 2450. Exchange Scholar Program.
Fall APMA2450 S01 14701 Arranged "To Be Arranged"

Finite difference methods for solving time-dependent initial value problems of partial differential equations. Fundamental concepts of consistency, accuracy, stability and convergence of finite difference methods will be covered. Associated well-posedness theory for linear time-dependent PDEs will also be covered. Some knowledge of computer programming expected.
Fall APMA2550 S01 16248 W 3:00-5:30(17) (J. Guzman)

APMA 2560. Numerical Solution of Partial Differential Equations II.
An introduction to weighted residual methods, specifically spectral, finite element and spectral element methods. Topics include a review of variational calculus, the Rayleigh-Ritz method, approximation properties of spectral end finite element methods, and solution techniques. Homework will include both theoretical and computational problems.
APMA 250A. Computational Fluid Dynamics. The course will focus primarily on finite difference methods for viscous incompressible flows. Other topics will include multiscale methods, e.g. molecular dynamics, dissipative particle dynamics and lattice Boltzmann methods. We will start with the mathematical nature of the Navier-Stokes equations and their simplified models, learn about high-order explicit and implicit methods, time stepping, and fast solvers. We will then cover advection-diffusion equations and various forms of the Navier-Stokes equations in primitive variables and in vorticity/streamfunction formulations. In addition to the homeworks the students are required to develop a Navier-Stokes solver as a final project.

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 neuro-sciences. The course is rigorous, but the emphasis is on applications. 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.

APMA 2630. Theory of Probability. 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.

APMA 2640. Theory of Probability. 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, Browian motion, introduction to stochastic calculus and Ito'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.

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.

APMA 2680. Mathematical Statistics II. The course covers modern nonparametric 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.

APMA 2810Q. Discontinuous Galerkin Methods. In this seminar course we will cover the algorithm formulation, stability analysis and error estimates, and implementation and applications of discontinuous Galerkin finite element methods for solving hyperbolic conservation laws, convection diffusion equations, dispersive wave equations, and other linear and nonlinear partial differential equations. Prerequisite: APMA 2550.

APMA 2811T. Dissipative Particle Dynamics. This seminar course will cover topics on coarse graining of liquids and soft matter using the Dissipative Particle Dynamics (DPD) method. It will cover some basic concepts on Mori-Zwanzig formulation for particle systems and the derivation of DPD from first principles. The seminars will be presented by the instructor and the participants in the course.

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 single neurons and in more complicated networks. We will focus on relevance to modern 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.

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

APMA 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.

Architecture and Ancient World

ARCH 0030. Art in Antiquity: An Introduction. What went into the creation of the Parthenon? Who lived in the Tower of Babel? Why do we still care? This course offers an introduction to the art, architecture, and material culture of the ancient world. Things of beauty and of power will be explored, from Egyptian pyramids and Near Eastern palaces, to the ‘classical’ art of Greece and Rome. LILE

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

Interested students must register for CLAS 0210L.

ARCH 0201L. Who Owns the Classical Past? (CLAS 0210L).
ARCH 0270. Troy Rocks! Archaeology of an Epic.
What do Brad Pitt, Julius Caesar, Dante, Alexander the Great, and countless sports teams have in common? The Trojan War! This course will explore the Trojan War not only through the archaeology, art, and mythology of the Greeks and Romans but also through the popular imaginings of cultures ever since, to figure out what "really" happened when Helen ran off and Achilles got angry and the Greeks came bearing gifts. Enrollment limited to 20 first year students. FYS.
Fall ARCH0270 S01 16474 TTh 9:00-10:20(08) "To Be Arranged"

ARCH 0666. Cult Archaeology: Fantastic Frauds and Meaningful Myths of the Past.
The pyramids and Stonehenge built by aliens? The power of the Mummy's Curse? These myths couldn't be true... or could they? Cult Archaeology examines popular and fantastic interpretations of archaeological remains presented in the press and popular media. This course finds the logical flaws in pseudoscientific explanations and the biases that underlie them. Discover the "truth" about archaeology! LILE
Spring ARCH0666 S01 25296 MWF 1:00-1:50(08) (L. Bestock)

ARCH 0801. Alexander the Great and the Alexander Tradition (CLAS 0810A).
Interested students must register for CLAS 0810A.
Spring ARCH0801 S01 25512 Arranged "To Be Arranged"

ARCH 1715. Building Big! Supersized Architectural and Engineering Structures From Antiquity.
Sometimes size does matter. The need and desire to "build big", to create colossal architectural or sculptural things, was a constant feature of antiquity, from temples to portraits, from tunnels to fortifications. Who and what lay behind this apparent architectural megalomania? What practical challenges to construction had to be overcome? And how have such monuments affected our understanding, both of the ancient world and of modern means of self-representation? Enrollment limited to 50.
Spring ARCH1715 S01 25297 TTh 10:30-11:50(09) (F. Rojas Silva)

ARCH 1772. The Human Skeleton (ANTH 1720).
Interested students must register for ANTH 1720.
Fall ARCH1772 S01 16705 Arranged "To Be Arranged"

ARCH 1900. The Archaeology of College Hill.
A training class in field and laboratory techniques. Topics include the nature of field archaeology, excavation and survey methodologies, archaeological ethics, computer technologies (such as GIS), and site and artifact analysis and conservation. Students will act as practicing archaeologists through the investigation of local historical and archaeological sites in the College Hill area (e.g., the First Baptist Church of America and Brown University's Quiet Green). Prerequisite: A previous course in Archaeology and the Ancient World or Anthropology is required. Restricted to sophomores, juniors, and seniors, except by permission of the instructor. Enrollment limited to 15.
Fall ARCH1900 S01 16473 M 3:00-5:30(15) "To Be Arranged"

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

Honors students in Archaeology and the Ancient World who are completing their theses should enroll in this course in their final semester. The subject of the thesis and program of study will be determined by the needs of the individual student. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Interested students must register for ANTH 2501.
Fall ARCH2006 S01 16706 Arranged "To Be Arranged"

ARCH 2105. Ceramic Analysis for Archaeology.
The analysis and the interpretation of ceramic remains allows archaeologists to accomplish varied ends: establish a time scale, document interconnections between different areas, and suggest what activities were carried out at particular sites. The techniques and theories used to bridge the gap between the recovery of ceramics and their interpretation within anthropological contexts are the focus of this seminar.
Spring ARCH2105 S01 25298 M 3:00-5:30(14) (P. Van Dommelen)

ARCH 2710. The Archaeology of Nubia and Egypt.
Egypt and Nubia share the distinction of ancient civilizations along the Nile river, but Nubia remains much more poorly known than Egypt. This seminar will examine the archaeology of Nubia, including its relationship to Egypt, from the introduction of ceramics and agriculture to the medieval period. This long-term perspective will allow comparative study of issues such as state formation, imperialism and religious change. Enrollment limited to 15 graduate students.
Fall ARCH2710 S01 16476 W 3:00-5:30(17) (L. Bestock)

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

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

ARCH 2982. Individual Reading for Dissertation.
Reading leading to selection of the dissertation subject. Single credit. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

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

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

Biology and Medicine

Biology

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
Fall BIOL0030 S01 14793 MW 8:30-9:50(01) (M. Flynn)

BIOL 0080. Biotechnology Management.
An examination of the pharmaceutical, biotechnology, and medical product industries: what they are, how they function, whence they originate, and various perspectives on why some succeed and others fail. Pathways from lab-bench to marketplace are described as are the pervasive influences of the FDA, patent office, and courts. Extensive reading; emphasis on oral presentation. Primarily intended for students planning a career in biomedical industry. Not for biology concentration credit. Students MUST register for the lecture section and the conference. Enrollment limited to 20.
Spr BIOL0080 S01 23919 T 4:00-6:30(16) (B. Bready)

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 WRIT
Spr BIOL0140A S01 23920 W 5:00-6:30 (S. Turner)

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.
Fall BIO1040C S01 14794 W 1:00-6:00 (J. Stein)

**BIO 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: BIO 0200 or equivalent placement. Enrollment limited to 15 sophomores. Instructor permission required. SOPH
Fall BIO1040K S01 14795 M 1:00-3:30 (K. Smith)

**BIO 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
Fall BIO10150A S01 14796 Arranged (J. Hall)

**BIO 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 phytotherapeutics from plants and plant parts have been increasing at a rapid rate especially by the pharmaceutical industry. Many plants have been selected and collected for their specific secondary compounds and healing powers by ethnobotanists in the field. The final step is the extraction, analyzing and identification of these plant specimens. Enrollment limited to 10 first year students. Instructor permission required. Half-credit course. S/NC. FYS
Spr BIO10150C S01 23921 T 3:00-5:00 (F. Jackson)

**BIO 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 BIO10150D S01 14797 Arranged (B. Zielinski-Habershaw)

**BIO 0170. Biotechnology in Medicine.**
Introduces undergraduates to the main technological advances currently dominating the practice of medicine. Provides an overview of the objectives, techniques, and problems related to the application of biomedical technology to the diagnosis and treatment of disease and the contemporary health care industry. Topics include: pharmaceutical development and formulation; organ replacement by prosthetics and transplantation; medical imaging; tissue engineering, therapeutic cloning, regenerative medicine: stem cells, societal, economic, and ethical issues. This course does carry Biology concentration credit.
Fall BIO10170 S01 14796 MWF 12:00-12:50(12) (B. Zielinski-Habershaw)

**BIO 0180. The Biology of AIDS.**
AIDS represents an example of the vulnerabilities of humans to new infectious agents. We will review some human infectious diseases including small pox yellow fever and influenza, and then explore AIDS/HIV. First characterized in 1981, AIDS became the leading cause of death in U.S. males aged 25-44 within a decade. We will examine what factors make HIV such a potent pathogen. The course is intended for students beginning in biology. Expected: BIO 0200, or equivalent placement. This course does carry Biology concentration credit.
Spr BIO10180 S01 23924 MW 8:30-9:50(02) (P. Shank)

**BIO 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 hands-on approach in lab, observing, identifying and growing these plants. Enrollment limited to 20 first year students. FYS
Fall BIO10190E S01 14800 TTh 1:00-2:20(10) (M. Tatar)

**BIO 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 BIO10190F S01 14800 TTh 1:00-2:20(10) (M. Tatar)

**BIO 0190P. Pride and Prejudice in the Development of Scientific Theories.**
We will examine how the pace and shape of scientific progress is affected by the social/cultural context and the "personality" of the individual. We will look into how the interplay between society and the individual affects how scientific theories arise, are presented, are debated and are accepted. The course will initially focus on Charles Darwin and his theory of Natural Selection using the biography of Adrian Desmond and James Moore, "Darwin: The Life of a Tormented Evolutionist." Enrollment limited to 20 first year students. FYS
Fall BIO10190P S01 14801 TTh 2:30-5:30(03) (S. Helfand)

**BIO 0190R. Phage Hunters, Part I.**
A research-based lab class for freshmen; both semesters are required in the sequence. Students will isolate and characterize a bacteriophage viruses found in the soil. Lab work includes isolation and purification of your own phage, DNA isolation and restriction mapping, and EM characterization of your phage. Several phages will be selected for genome sequencing over winter break, and are annotated in the spring. One hour lecture, discussion, and 3 hours lab per week. Expected: AP Biology or equivalent, and HS chemistry. Instructor permission required. Admittance based on review of applications in the first class. Limited to 20 freshmen. FYS
Fall BIO10190R S01 14802 M 3:00-5:30(15) (Y. Zhou)

**BIO 0190S. Phage Hunters, Part II.**
A research-based laboratory/class for freshmen; both semesters are required. Students will isolate and characterize a bacteriophage viruses found in the soil. Lab work includes isolation and purification of your own phage, DNA isolation and restriction mapping, and EM characterization of your phage. Several phages will be selected for genome sequencing over Winter Recess, and annotated in the spring. One hour of lecture/discussion, and 3 hours lab per week. Expected: AP Biology or equivalent, HS chemistry, and permission of the instructor. Students are expected to take fall and spring courses in the sequence. Enrollment limited to 20 first-year students. Instructor permission. FYS
Spr BIO10190S S01 23925 M 3:00-5:30(13) (S. Taylor)

**BIO 0190U. Plant Development, Structure and Function.**
This course presents an integrated account of development, structure and function in plants, especially seed plants. Enrollment limited to 20 first year students. FYS WRIT

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
BIOL 0200. The Foundation of Living Systems.
A broad overview of biological systems, emphasizing patterns and processes that form the basis of life. Explores essentials of biochemistry, molecular, and cellular biology and their relationship to the larger issues of ecology, evolution, and development. Examines current research trends in biology and their influence on culture. Appropriate for all students interested in biology. Serves as a gateway course to much of the intermediate and advanced curriculum. Placement tests are offered (contact Jody_Hall@brown.edu); AP scores of 4 or 5 are equivalent to BIOL 0200, and place a student out of this course. Students will be assigned to a lab section during the second week of class. LILE
Fall BIOL0190U S01 14803 M 3:00-5:30(15) (P. Heywood)
Fall BIOL0190U S01 14803 W 3:00-5:30(15) (P. Heywood)

BIOL 0210. Diversity of Life.
This course will explore biological diversity – the number of taxa, and the functions, and processes that support life – from the perspectives of ecology and evolutionary biology. It will draw on examples and case studies from the geological record, functional morphology, the evolution of organ systems in vertebrates, genomics, behavior and sexual selection in birds and invertebrates. Overarching themes will emphasize that taxonomic diversity is an emergent property of complex life on Earth, and the importance of diversity of biological functions and processes in generating and maintaining taxonomic diversity. Class Restriction: Freshmen and sophomores; others by instructor permission.
Fall BIOL0210 S01 14804 W 11:00-11:50(02) (J. Kellner)

BIOL 0280. Introductory Biochemistry.
Lectures and recitation sections explore the mechanisms involved in the principles of macromolecular structure and function, the organization and regulation of pathways for intermediary metabolism, and the transfer of information from genes to proteins. It is expected that students have taken CHEM 0350 or are taking it concurrently.
Spr BIOL0280 S01 23934 TTh 1:00-2:20(10) (G. Jogli)

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 23953 M 1:00-5:00 (S. Taylor)
Spr BIOL0285 S02 24941 Th 2:30-6:30 (S. Taylor)

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 geology/biology 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 25369 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 peer-reviewed scientific literature. The discovery of infectious microbes, the role of genetic novelty, population structure and transmission mode, and the influence of clinical therapies and host immune response will be considered. Evaluation will be based on preparation, participation, weekly student presentations, brief weekly written assignments, a midterm and a final. Expected: BIOL 0200 or equivalent. Enrollment limited to 25 first year students and sophomores.
LILE
Fall BIOL0380 S01 14805 MWF 10:00-10:50(14) (D. Weinreich)

Many questions about the workings of living creatures can be answered by joining math, physics, and biology. We will identify basic physical science concepts that help biologists understand the structure and function of animals, plants, and microorganisms, and use these to study how the physical world constrains and facilitates the evolution of the extraordinary design and diversity of organisms. For first and second year students; others by permission. Recommended background: BIOL 0200, or equivalent. Enrollment limited to 40. Instructor permission required.
WRIT
Fall BIOL0400 S01 14806 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 14807 MWF 11:00-11:50(02) (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 23956 TTh 9:00-10:20(08) 'To Be Arranged'

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 14808 TTh 9:00-10:20(08) (E. Edwards)

Will enable students to master fundamental ecological concepts and understand how this knowledge can be used to inform coastal conservation and management. Case studies from New England and elsewhere, field trips to rocky shores, salt marshes and coastal ecosystems enable students to develop scientific skills and experience the challenges of coastal conservation science. The course is aimed at freshmen and sophomores. Expected background: BIOL 0200 or equivalent placement. Enrollment limited to 15 students, and written permission required. Email (Mark_Bertness@brown.edu) to receive course application (due May 1). Admitted students register for the course in September.
Fall BIOL0455 S01 16467 TTh 2:30-3:50(03) (M. Bertness)

BIOL 0460. Insect Biology.
Focuses on characteristics that make insects unique and why more insect species have been described than all other organisms combined; the opportunity to investigate diversity and adaptation; their abundance, small size, and short lifespans; their importance as agents of biocontrol pollination, agricultural pests, and disease vectors. Expected: BIOL 0200 or equivalent. Enrollment limited to 20. Students MUST register for lecture AND lab. Primarily for freshmen and sophomores.
Spr BIOL0460 S01 25061 MW 8:30-9:50(02) (D. Morse)

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 14809 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 14810 MWF 9:00-9:50(01) (D. Rand)

BIOL 0495. Statistical Analysis of Biological Data.
A first course in probability distributions and the use of statistical methods for biological data. Topics covered will include describing data, statistical inference (hypothesis tests and confidence intervals), analyzing associations, and methods for categorical data (contingency tables and odds ratios). Methods will be applied to data drawn from areas of biological inquiry. For statistics or related science credit in Biology programs. Expected background: BIOL 0200 or equivalent, math equivalent to MATH 0100. This course is for related science credit only in Biological Sciences concentration programs. Enrollment limited: 40 undergraduates--20 juniors and 10 sophomores, and 10 for seniors requiring permission of instructor.

Spr BIOL0495 S01 23960 TTh 10:30-11:50(09) (S. Ramachandran)

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

Spr BIOL0500 S01 23962 MW 8:30-9:50(02) (P. Heywood)

BIOL 0510. Introductory Microbiology.
Introduces role of microbes in our understanding of biology at the cellular and molecular level. Focuses on microbial significance for infectious disease, public health, genetics, biotechnology, and biochemical 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.

Spr BIOL0510 S01 23964 MWF 1:00-1:50(06) (R. Bennett)

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

Fall BIOL0530 S01 14811 TTh 2:30-3:50(03) (R. Bungiro)

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

Fall BIOL0800 S01 14812 TTh 10:30-11:50(13) (J. Stein)

Fall BIOL0800 S01 23968 MWF 10:00-10:50(03) (C. Hai)

BIOL 0860. Diet and Chronic Disease.
This course addresses the relationship of food to the development and treatment of chronic diseases. Chronic diseases discussed are obesity, dyslipidemia/heart disease, diabetes mellitus, cancers and osteoporosis. Dietary recommendations for these diseases are critically assessed. Geared toward students interested in nutrition, medicine, and public health. Prerequisites: BIOL 0030 and 0800, plus permission of the instructor. Enrollment limited to 20.

Fall BIOL0860 S01 24547 T 4:00-6:30(16) (M. Flynn)

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

Fall BIOL0940A S01 14814 Th 4:00-6:30(04) (W. Atwood)

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

Fall BIOL0940B S01 14815 T 4:00-6:30(09) (D. Jackson)

BIOL 0940C. Sophomore Seminar: Insect Biology.
Focuses on characteristics that make insects unique and why more insect species have been described than all other organisms combined; the opportunity to investigate diversity and adaptation; their abundance, small size, and short lifespans; their importance as agents of biocultural pollination, agricultural pests, and disease vectors. Expected: BIOL 0200 or equivalent. Enrollment limited to 12 sophomores only. Students MUST register for lecture AND lab. SOPH

Spr BIOL0940C S01 24562 TTh 1:00-3:50 (D. Morse)

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

Fall BIOL0940D S01 16470 F 1:00-5:00 (T. Whitfield)

BIOL 0960. Independent Study in Science Writing.
Incorporates a nontechnical science journalism component into the BioMed curriculum. A series of four to six specific assignments are recommended, based on topics derived from another biology course taken previously by the student, whose instructor has agreed to serve as a BIOL 0960 sponsor. Assignments may include, for example, investigative or analytical reviews, or feature articles on ethical or social impacts of new discoveries. The student and instructor schedule meetings to discuss topics and due dates, review rough drafts, and evaluate completed work. Not for concentration credit in the biological sciences programs. Permission must be obtained from the instructor prior to registering. Section numbers vary by instructor. Half credit.
BIOL 1040. Ultrastructure/Bioimaging.
This course examines microscopy and image analysis in the life sciences. Theoretical and practical aspects of microscopy will be discussed. Students will obtain hands-on experience with electron microscopy, light microscopy, fluorescence microscopy, and confocal microscopy. Students will learn to display images in 3D. Advanced undergraduates. Instructor permission required.
Spr BIOL1040 S01 24902 M 2:00-5:00 (G. Williams)

BIOL 1050. Biology of the Eukaryotic Cell.
Examines organelles and macromolecular complexes of eukaryotic cells with respect to structural and functional roles in major cellular activities. Emphasizes experimental basis for knowledge in modern cell biology using original literature, and discusses validity of current concepts. For advanced undergraduates and beginning graduate students. Complementary to BIOL 1270 and 1540. Prerequisites: BIOL 0280, 0470, 0500, or instructor permission. Graduate students register for BIOL 2050.
Fall BIOL1050 S01 14820 TTh 1:00-2:20(10) (K. Miller)

This course examines contemporary biotechnologies used to combat the predominant, worldwide problems in human health. Global health will be addressed from the scientific and engineering perspectives while integrating public health policy, health systems and economics, medical research ethics, and technology regulation and management. This course is intended for graduate and advanced undergraduate students in biology, engineering, or related fields who have an interest in global health initiatives. Expected background: BIOL 0200 and BIOL 0800, or equivalents. Preference will be granted to graduate students in the Biotechnology and Biomedical Engineering programs. Only for related course credit in Biology, and for theme course credit in Health and Human Biology programs. Enrollment limited to 20. Instructor permission required.
Fall BIOL1070 S01 14822 MTh 4:00-5:20 (J. Schell)

BIOL 1090. Polymer Science for Biomaterials.
Basic principles of polymer science and its application in medicine. Topics include basic polymerization chemistry, kinetics of polymerization and depolymerization with emphasis on bioerodible polymers, characterization of polymers by physical methods, bulk and surface properties, behavior of polymers in solutions, crystallization, gelation, and liquid crystals. Hands-on experience with polymer characterization. Expected: CHEM 0350. Enrollment limited to 25.
Fall BIOL1090 S01 16002 T 1:00-3:30 (E. Mathiowitz)

BIOL 1100. Cell Physiology and Biophysics.
Current topics in cell physiology, with an emphasis on membrane-mediated interactions between cells and their environment. Topics may include: ion channel structure, function and regulation; intracellular regulatory molecules; mechanisms of sensory transduction; membrane receptors and second messenger systems; vesicle secretion; and cytoskeletal regulation of cell function. Lectures, discussion, and student presentations of the current literature. Expected: BIOL 0800 or NEUR 0010. Instructor permission required. Registration overrides will not be given out until after the first one or two classes. Enrollment limited to 30, and admission is based on seniority -- graduate students, seniors, then juniors. (Not for first and second-year undergraduates.)
Spr BIOL1100 S01 23974 M 3:00-5:30(13) (D. Horrigan)

BIOL 1110. Topics in Signal Transduction.
Signal transduction is one of the most rapidly developing fields in biomedical sciences. Defects in signaling pathways can be responsible for diseases such as cancer, diabetes, cardiovascular disorders and psychoses. This course offers students an overview of the molecular pathways that allow cells to receive and process signals from their external environment, with an emphasis on the emerging state-of-the-art techniques used in their study. Expected background: BIOL 0200, 0280, 0470, or 0500. Enrollment limited to 20 juniors and seniors. Instructor permission required.
Fall BIOL1110 S01 14823 W 3:00-5:30(17) (E. Oancea)

BIOL 1120. Biomaterials.
A biomaterial is defined as a material suitable for use in medical implants that come in direct contact with patients' tissues. These include polymers, metals, and ceramics, and materials obtained from biological sources or through recombinant biotechnology. Goal: to provide comprehensive coverage of biomaterial science and technology. Emphasizes the transition from replacement to repair strategies. For advanced undergraduates and graduate students. Prerequisite: BIOL 0800 or instructor permission.
Spr BIOL1120 S01 24812 Th 4:00-6:30(17) (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 BIOL1140 S01 14825 Th 3:00-5:50 (D. Hoffman-Kim)

BIOL 1150. Stem Cell Engineering.
Stem cell engineering focuses on using adult, embryonic, and induced stem cells to repair damaged or diseased tissues. This course will examine the role of stem cells in development, tissue homeostasis, and wound healing, as well as how they are being applied in regenerative medicine. A lecture and discussion format for major topic areas. Students will receive hands-on training in how to isolate, culture, and differentiate adult stem cells in a laboratory setting. Expected: CHEM 0330 and BIOL 0500 or an equivalent course in cell biology or physiology. Cell culture experience highly recommended. Enrollment limited to 20. Instructor permission required.
Spr BIOL1150 S01 23975 Th 3:00-5:20 (E. Darling)

BIOL 1160. Principles of Exercise Physiology.
Application of the basic principles of physiology to the study of the response mechanisms of the human body during exercise. Topics include muscle and neural control, energy metabolism, cardiovascular and respiratory effects, endocrinology, principles of training, and special topics (e.g., diving, high altitude, and microgravity). Student presentations based on scientific articles are included. Expected: BIOL 0800 or written permission of the instructor.
Fall BIOL1160 S01 14826 MWF 1:00-1:50(6) (C. Hagi)

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.
Spr BIOL1190 S01 23977 Th 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 BIOL1200 S01 23978 Th 4:00-6:30(17) "To Be Arranged"

BIOL 1222A. Current Topics in Functional Genomics.
A technological revolution in genomics has exponentially increased our ability to gather biological data. A host of new methods and types of analysis has arisen to accommodate this dramatic shift in data collection. The broad scope of inquiry has ushered in an era of “system-wide” approaches and brute-force strategies where rare signals can be detected and studied. In this seminar we will cover papers that embody this new approach. Students typically have taken an advanced undergraduate-level course in biology.
Fall BIOL1222A S01 16089 Arranged (N. Neretti)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
BIOL 1250. Host-microbiome Interactions in Health and Disease
Will focus on our current understanding of how various microbiomes communicate and interact with the host and the factors that influence these interactions. We will discuss how the new technologies such as metagenomics and metabolomics have enhanced our understanding of host-microbiome interactions in health and disease. Students will have the opportunity to participate in discussions on how to apply recent discoveries to disease processes, health restoration and maintenance. The course will help students develop skills in critical thinking and in reading and evaluating original scientific literature. Expected: students with a background in basic microbiology (BIOL 0530 or its equivalent). 20 enrollment.
Spr BIOL1250 S01 24943 Arranged (S. Vaishnava)

BIOL 1260. Physiological Pharmacology.
Covers the physiology of human disease (e.g., Heart failure and arrhythmia; cancer signaling pathways with a focus on breast cancer; neurological disorders such as schizophrenia and Parkinson's disease) and discusses the pharmacology of the drugs used to treat disease. A group of the most commonly prescribed drugs is discussed in terms of their fundamental modes of action and clinical importance. Expected: BIOL 0800.
Fall BIOL1260 S01 14828 TTh 10:30-11:50(13) (J. Marshall)

BIOL 1270. Advanced Biochemistry.
An advanced course in biochemistry, biochemical methods, and reading of the primary literature, featuring systematic coverage of the biochemistry of the central dogma, including DNA (replication, repair, recombination), RNA (regulation and mechanism of transcription, processing, turnover), and proteins structure, synthesis, modification, degradation, mechanisms of action, function). Expected: BIOL 0280, CHEM 0350, 0360. Graduate students register for BIOL 2270.
Fall BIOL1270 S01 14948 TTh 2:30-3:50(03) (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, or 0470 or 0500.
Fall BIOL1290 S01 14950 MW 3:00-4:20(17) (A. Zhitkovich)

BIOL 1300. Biomolecular Interactions: Health, Disease and Drug Design.
Interactions between the molecules of life-proteins, DNA, RNA, 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.
WRIT Fall BIOL1300 S01 14951 M 3:00-5:30(15) (N. 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 BIOL1310 S01 14852 TTh 9:00-10:20(08) (K. Wharton)

BIOL 1330. Biology of Reproduction
This course is an advanced, seminar-based course. Primary literature is emphasized to complement the format of extensive student seminar presentations. It is 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 0750), and two additional Biology courses above the introductory (BIOL 0200) level. Enrollment limited to 20.
Spr BIOL1330 S01 23797 M 3:00-5:30(13) (G. Wessel)

BIOL 1440. Marine Biology.
An examination of current topics in the ecology of marine organisms and communities. Current literature and ideas are analyzed in a seminar format (5hr/week). A class research project provides hands-on experience with designing and interpreting experimental field work. Prerequisites: BIOL 0410 and 0420. Instructor's permission required.
Spr BIOL1440 S01 24642 Arranged (M. Bertness)

BIOL 1465. Human Population Genomics.
An introduction to human genomics and the evolutionary forces that shape observed genetic variation across humans today. Topics will include the relationship among humans and other primates, human population genetics and genomics, and examples of the concomitant evolution of both cultural traits and domesticated organisms. Assignments include a class presentation and reviewing papers on a selected topic. Expected background: BIOL 0470 or 0480, and BIOL 0495, PHP 2500, or equivalent. Enrollment limited to 25. Instructor permission required. WRIT Fall BIOL1465 S01 15766 TTh 1:00-2:20(10) (S. Ramachandran)

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 14958 TTh 9:00-10:20(08) (D. Sax)

BIOL 1480. Terrestrial Biogeochemistry and the Functioning of Ecosystems.
Three fundamental multidisciplinary questions will be addressed: How do ecosystems work? What limits the growth of life on Earth? How are humans altering the framework in which all life exists? Earth is basically a closed chemical system, and the reactions that sustain life are fueled by sunlight. But added to this chemical process is the tremendous influence of life. Life created an oxygen atmosphere; the evolution of biological nitrogen fixation exponentially increased how many organisms could exist, and the soils that support human food production developed only by biologically-mediated processes. Throughout Earth's 4.5 billion-year history changes in Earth's basic biogeochemical processes have been fairly slow. Under our inattentive stewardship, we have almost instantaneously altered all of the major element cycles. We will focus heavily on what these changes mean for life on Earth. Instructor permission required.
Fall BIOL1480 S01 15660 MWF 10:00-10:50(14) (S. Porder)

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 14960 MW 8:30-9:50(01) (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

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 23987 Tth 2:30-3:50(11)  (E. Larschan)

**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 23990 W 1:00-1:50(08)  (A. Campbell)

**BIOL 1555. Methods in Biomedical Informatics.**
Will provide a methodological survey of approaches used in biomedical informatics. Particular emphasis given to formalisms and algorithms used within the context of both biological and medical research. Students will learn to use those used in biomolecular sequence analysis, electronic health records, clinical decision support, and public health surveillance. Practical programming skills will also be taught within these contexts. The final project of the course is to demonstrate an understanding of biomedical informatics approaches through development of a solution within biomedical research or healthcare context. Prerequisite: introductory statistics course. Enrollment: 20 students. For biological science concentrators, graduate students, others with permission. Spr BIOL1555 S01 24944 W 3:00-5:30(14)  (N. Sarkar)

**BIOL 1560. Virology.**
Emphasizes the understanding of molecular mechanisms of viral pathogenesis. Begins with a general introduction to the field of virology and then focuses on the molecular biology of specific viruses that are associated with human disease. Lectures based on current literature. Prerequisite: BIOL 0280, 0470, or 0530, or instructor permission. Spr BIOL1560 S01 23991 MWF 9:00-9:50(02)  (A. Jamieson)

**BIOL 1600. Development of Vaccines to Infectious Diseases.**
Provides background steps involved in vaccine development, from conceptualization to production to deployment. Considers infectious diseases and associated vaccines in context of community health. Appropriate for students wanting to gain an understanding of vaccine science. Provides a foundation for advanced courses in immunology and infectious disease, biomedical research, or medical/graduate studies. Activities include a weekly section meeting for discussion of relevant primary literature, and a final project of the student's choice in the form of an in-class presentation, a research paper or an approved alternative format. Expected: BIOL 0200 or equivalent placement; BIOL 0530, and at least one additional biology course. Spr BIOL1600 S01 23993 MW 3:00-4:20(14)  (R. Bungiro)

**BIOL 1800. Animal Locomotion.**
How and why do animals run, jump, swim and fly? Physiology, anatomy, ecology, and evolutionary history all influence, and are influenced by, the way animals move around. We will integrate analyses from many levels of biological organization - from molecular motors, through bone-muscle systems, to biogeography - with methods and approaches from mechanics, fluid dynamics, and robotics. Expected: BIOL 0800 and PHYS 0030. Instructor permission required. WRIT Spr BIOL1800 S01 24543 Tth 10:30-11:50(09)  "To Be Arranged"

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

Advanced students have priority. Spr BIOL1820 S01 24927 MW 8:30-9:50(02)  (T. Johnston)

**BIOL 1870. Techniques in Pathobiology.**
A methodology course featuring laboratory and lecture instruction in established and leading-edge technologies. Examples: flow cytometry (multi-parameter analysis, cell sorting, DNA analysis, apoptosis analysis); molecular biology (PCR, in situ hybridization, southern blotting, cytogenetics, gene cloning, bioinformatics); digital imaging (image acquisition, processing and analysis); light microscopy (confocal, immuno-histochemistry); transmission electron microscopy (immuno/lectin/ enzyme cytochemistry); scanning electron microscopy (including x-ray microanalysis). Spr BIOL1870 S01 23995 Tth 1:00-3:50  (C. Jackson)

**BIOL 1880. Comparative Biology of the Vertebrates.**
The biology, structure, and evolutionary history of the vertebrates considered phylogenetically, emphasizing evolution of the major body systems. Stresses an evolutionary approach to the correlation of structure and function with environment and mode of life. Labs include dissection of several different vertebrates and comparative osteological material. Emphasis of course is on critical thinking rather than memorization of material. Recommended: BIOL 0320 or 0800. First-year students must obtain instructor permission to register. Enrollment limited to 32. Students MUST register for the lecture section and the lab. Spr BIOL1880 S01 23996 MWF 11:00-11:50(04)  "To Be Arranged"

**BIOL 1920B. Health Inequality in Historical Perspective.**
Seminar takes a historical perspective to explore causes of health inequality in the US. Draws on studies from the 19th century-present. Examines socio–political and economic context of health/disease, focusing on how race, class, and gender shape the experience of health, disease causality, and public health responses. Includes health consequences of immigration, incarceration, race-based medicine, the Chicago heatwave, and Katrina. BIOL 0200 and work in Africana Studies and/or science-technology courses SUGGESTED. Not for biology concentration credit. Suitable as related science or theme course for HHB. Enrollment restricted to 20, third- AND FOURTH-year students. Spr BIOL1920B S01 24045 Arranged  (L. Braun)

**BIOL 1950. Directed Research/Independent Study.**
Directed research/independent study in biological sciences: basic science, social studies of biomedical science, and clinically-oriented projects, mentored by individual faculty members in the Division of Biology and Medicine. Sites include campus and hospital-based facilities. Projects can serve as the basis for Honors theses, or to fulfill research requirements in a Bio-Med concentration program. Students planning to use 1950/1960 to fulfill a concentration requirement must receive approval from the concentration advisor. No more than two (2) semesters of BIOL 1950/1960 may be used toward a concentration program in the biological sciences. Faculty from outside the Division may supervise projects for bio-med program concentrators, but should do so using their Department's own Independent Study course number.

**BIOL 1960. Directed Research/Independent Study.**
Directed research/independent study in biological sciences: basic science, social studies of biomedical science, and clinically-oriented projects, mentored by individual faculty members in the Division of Biology and Medicine. Sites include campus and hospital-based facilities. Projects can serve as the basis for Honors theses, or to fulfill research requirements in a Bio-Med concentration program. Students planning to use 1950/1960 to fulfill a concentration requirement must receive approval from the concentration advisor. No more than two (2) semesters of BIOL 1950/1960 may be used toward a concentration program in the biological sciences. Faculty from outside the Division may supervise projects for bio-med program concentrators, but should do so using their Department's own Independent Study course number.

**BIOL 1970A. Stem Cell Biology.**
Senior seminar course will provide an interactive forum by which up to twenty seniors (and qualified juniors with permission) will explore the biology of stem cells from their humble beginnings in the embryo to their potential use in regenerative medicine. The potency and regulation of embryonic and adult stem cell populations derived from diverse

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
organisms will be contrasted with laboratory-derived human stem-like cells for biomedical applications. Critical reading of classical and modern literature in the field of stem cell biology will form the basis of student-led presentations, papers and ethical forums. Expected: biochemistry, genetics and/or cell biology. Instructor permission; 20 students.

Fall BIOL1970A S01 16048 M 2:00-4:30 (R. Freeman)

BIOL 210. Quantitative Approaches to Biology.
Graduate level introduction to quantitative and computational methods in modern biology. Topics include Programming, Modeling, Algorithms, Bioinformatics, Applied Statistics, Structural Biology, Molecular Dynamics, Enzyme Kinetics, and Population and Quantitative Human Genetics. Preference is given to graduate students in Molecular Biology, Cell Biology and Biochemistry and Molecular Pharmacology, Physiology, and Biotechnology. Limited to 20 students. Instructor permission required.
Spr BIOL2010 S01 23998 WF 2:00-5:00 (N. Neretti)

This course provides a comprehensive overview of the primary functional roles and steps involved in developing and commercializing a novel technology/scientific breakthrough within the biotechnology industry. This course is particularly suitable for students interested in pursuing a career within a biotechnology company, or for those interested in developing an in-depth knowledge of how the science of biotechnology becomes realized in real-world products. Pre Requisites: Foundations of Living Systems (BIOL0200), Principles of Physiology (BIOL0800), and Principles of Economics (ECON0110) equivalent or instructor’s permission is required.
Fall BIOL2020 S01 16105 Th 4:00-6:30(04) (J. Scott)

BIOL 2030. Foundations for Advanced Study in the Life Sciences.
A double-credit graduate course on multidisciplinary experimental approaches to biological questions. Focusing on primary literature, lectures and discussions cover the mechanisms and regulation of basic cellular processes involving nucleic acids (synthesis, structure, maintenance and transmission) and proteins (synthesis, maturation, function) and their integration into more complex circuits (signaling, organelle biogenesis and inheritance, cell cycle control). Required for PhD students in the MCB Graduate Program; all others must obtain instructor permission. Enrollment is limited to graduate students.
Fall BIOL2030 S01 14962 MTh 9:00-10:20 (A. DeLong)
Fall BIOL2030 S01 14962 F 10:00-11:35 (A. DeLong)

BIOL 2040. Ultrastructure/Bioimaging.
This course examines microscopy and image analysis in the life sciences. Theoretical and practical aspects of microscopy will be discussed. Students will obtain hands-on experience with electron microscopy, light microscopy, fluorescence microscopy, and confocal microscopy. Students will learn to display images in 3D. For graduate students and advanced undergraduates. Instructor permission required.
Spr BIOL2040 S01 24903 M 2:00-5:00 (G. Williams)

BIOL 2050. Biology of the Eukaryotic Cell.
(Undergraduate students should register for BIOL 1050.)
Fall BIOL2050 S01 14821 Th 1:00-2:20(10) (S. Gerbi)

BIOL 2089. The Importance of Intellectual Property in Biotechnology.
This course delves into the various roles of intellectual property in biotechnology. In addition to providing a solid foundation in the fundamentals of intellectual property, the course will use case studies in biotechnology to explore in depth the interplay between specific scientific breakthroughs and intellectual property. An understanding of the science of biotechnology is critical for advanced understanding of the value and possibilities of biotechnology intellectual property.
Fall BIOL2089 S01 15574 F 10:00-12:20 (J. Morgan)

BIOL 2110. Drug and Gene Delivery.
Topics in drug delivery systems including history of the field, advantages of controlled release technology, stabilization and release of proteins, fabrication methods, regulatory considerations, economic aspects, patents and intellectual property rights, and more. Prepares students for research in industry and academia, and offers information for consultants in the field. Expected: BIOL 1090, 1120; CHEM 0350, 0360.
Fall BIOL2110 S01 14964 M 3:00-5:30(15) (E. Mathiowitz)

BIOL 2145. Molecular Targets of Drug Discovery.
This course emphasizes the role of cell physiology in the identification of drug targets and the development of novel drugs. Specific protein drug targets such as G-protein coupled receptors will be examined in detail from identifying a target to development of drugs for that target and the physiological consequences. Prerequisite: BIOL 0800. Enrollment limited to 20. Preference is given to graduate students in Biotechnology and BME, especially Masters students. Graduate students from other programs may enroll if permission of the instructor is granted.
Spr BIOL2145 S01 24000 T 10:00-12:20 (D. Horrigan)

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 14965 F 12:00-3:00 (J. Bender)
Fall BIOL2150 S02 16046 F 12:00-3:00 (K. Mowry)

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 24003 T 1:30-3:20 (J. Schell)

BIOL 2170. Molecular Pharmacology and Physiology.
Fundamental concepts in pharmacology and physiology from the cellular/molecular level to organ systems. Required of first-year graduate students in Molecular Pharmacology and Physiology.
Fall BIOL2170 S01 14969 MWF 10:00-11:30 (D. Horrigan)

BIOL 2180. Experiential Learning Industry, ELI.
Experiential Learning in Industry is restricted to biomedical engineering (BME) Sc.M. and biotechnology (Biotech) Sc.M. students, permission also required. The course is an extended in-depth learning experience in an industry environment related to the discipline of BME and Biotech. Industry environments include; medical device, pharmaceutical or biotechnology and industries that provide BME and Biotech relevant services to the aforementioned companies including patent law, licensing, regulatory and consulting. Students will pursue Experiential Learning in Industry during one summer plus one semester or during two semesters for which they will receive credit towards their degree. This course is restricted to BME and Biotech Masters students only. Students must have successfully completed the first year of the BME Masters Program. Slots are limited so permission is required.
Spr BIOL2180 S01 24004 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 14970 M 12:00-1:30 (D. Horrigan)

BIOL 222B. Current Topics in Functional Genomics.
A technological revolution in genomics has exponentially increased our ability to gather biological data. A host of new methods and types of analysis has arisen to accommodate this dramatic shift in data collection. The broad scope of inquiry has ushered in an era of "system-wide"
approaches and brute-force strategies where rare signals can be detected and studied. In this seminar we will cover papers that embody this new approach. Students typically have taken an advanced undergraduate-level course in biology.

Fall BIOL2222 S01 16090 Arranged (N. Neretti)

**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 14971 T 4:30-7:00 (D. Hoffman-Kim)

**BIOL 2240. Biomedical Engineering and Biotechnology Seminar.**
See Biomedical Engineering and Biotechnology Seminar (BIOL 2230) for course description.

Spr BIOL2240 S01 24005 T 4:30-7:10 (J. Morgan)

**BIOL 2245. Blood Substitutes: Principles and Therapeutics Development.**
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 and Seniors who meet the pre-requisites BIOL 0800 and BIOL 0280 or with instructor's permission.

Fall BIOL2245 S01 14972 MW 10:30-11:50 (H. Kim)
Spr BIOL2245 S01 24005 MW 10:30-11:50 (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 14947 TTh 10:30-11:50(13) (J. Marshall)

**BIOL 2270. Advanced Biochemistry.**
(Undergraduate students should register for BIOL 1270.)

Fall BIOL2270 S01 14949 TTh 2:30-3:50(03) (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 14954 TTh 9:00-10:20(08) (K. Wharton)

**BIOL 2340. Neurogenetics and Disease.**
Genetic mutations provides 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 14973 W 4:00-6:50 (E. Morrow)
Fall BIOL2340 S02 16047 W 4:00-6:50 (R. Reenan)

**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 24006 Arranged (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, biomechanics, coevolution, quantitative genetics, life history strategies, and units of selection. Expected: courses in advanced ecology and genetics.

Fall BIOL2430 S01 14974 W 3:00-5:30(17) (D. Rand)
Fall BIOL2430 S02 15678 Arranged (D. Weinreich)
Spr BIOL2430 S01 24612 Arranged (J. Kellner)

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

Spr BIOL2440 S01 24007 Arranged (D. Rand)

**BIOL 2450. Exchange Scholar Program.**
Fall BIOL2450 S01 14705 Arranged 'To Be Arranged'
Fall BIOL2450 S02 14706 Arranged 'To Be Arranged'

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

Spr BIOL2540 S01 23989 TTh 2:30-3:50(11) (E. Labschan)

**BIOL 2640A. Viral Immunology.**
Viral Immunology is an advanced topics course in Microbiology and Immunology which will be focused on viral immunology. Weekly meetings will cover different issues concerning defense against viral infections and pathology related to viral infection, with focus on viral-host interactions. Topics will be selected to present either important basic concepts in the context of immune responses and/or major challenges in controlling viral infections. Recent advances in understanding virus-host interactions, host responses to viruses, cytokine regulation of immune responses or cytokine-mediated pathology during viral infections will be emphasized.

Spr BIOL2640A S01 24008 W 2:00-5:00 (C. Biron)

**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 14976 Arranged (K. Boekelheide)
Biology of the Brain: An Introduction to Neurosciences.

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 14707 Arranged “To Be Arranged”
Spr BIOL2970 S01 23804 Arranged “To Be Arranged”

BIOL 2980. Graduate Independent Study.

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

BIOL 2985. Graduate Seminar.

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

BIOL 2990. Thesis Preparation.

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

Fall BIOL2990 S01 14708 Arranged “To Be Arranged”
Spr BIOL2990 S01 23805 Arranged “To Be Arranged”

BIOL 2995. Thesis.

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

BIOL XLIST. Courses of Interest to Biology Concentrators.

BioMed-Neuroscience

NEUR 0010. The Brain: An Introduction to Neuroscience.

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

LILEFall NEUR0010 S01 15788 TTh 1:00-2:20(10) (M. Paradiso)


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

Spr NEUR0650 S01 24648 MWF 1:00-1:50(08) (J. Simmons)

NEUR 0680. Introduction to Computational Neuroscience.

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

Spr NEUR0680 S01 24647 TTh 2:30-3:50(11) (L. Bienenstock)

NEUR 1020. Principles of Neurobiology.

A lecture course covering fundamental concepts of cellular and molecular neurobiology. Topics include structure of ion channels, synaptic transmission, synaptic development, molecular mechanisms of synaptic plasticity, learning and memory and neurological diseases. Prerequisite: NEUR 0010. Strongly recommended: BIOL 0200 or equivalent.

Spr NEUR1020 S01 24649 TTh 9:00-10:20(08) (C. Alizemnan)

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 15821 TTh 10:30-11:50(13) (M. Linden)

NEUR 1040. Introduction to Neurogenetics.

Recent advances in molecular biology and molecular genetics have allowed researchers to test specific hypotheses concerning the genetic control of behavior and neurological disease. This course will familiarize you with the relatively new and exciting field of neurogenetics. We will

Cover basic topics, new ideas, and unsolved problems in neurogenetics primarily through the two assigned texts. However, neurogenetics is essentially a “frontier” area in neuroscience, and the best way to approach this topic is by scientific literature, which will be covered in some lectures.

Spr NEUR1040 S01 24650 TTh 10:30-11:50(09) (K. Kaun)

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 15789 Arranged (C. Kaun)

NEUR 1540. Neurobiology of Learning and Memory.

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

Spr NEUR1540 S01 24678 MWF 11:00-11:50(04) (M. Linden)

NEUR 1600. Experimental Neurobiology.

Intensive laboratory experience in neuroscience appropriate for students with basic background in Neurobiology. Learn and employ the classical neurophysiological techniques of extracellular recording and intracellular recording and receptive field mapping using a variety of animal species. Experiments include 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 lecure. Instruction on 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 24651 W 1:00-5:50 (J. Stein)

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 psychotropic drugs and biochemical theories of psychiatric disorders will be examined. Prerequisites: NEUR 0010 and BIOL 0200 or the equivalent.

Fall NEUR1670 S01 16176 TTh 9:00-10:20(08) (R. Patrick)

NEUR 1930H. Neuropsychiatric Disorders: Neural Dynamics + Brain-Computer Interfaces.

This seminar course provides an introduction to neural dynamics in neurological disorders and current therapeutic approaches based on open-/closed-loop Brain-Computer Interfaces (BCIs) and neuromodulation. The lectures and discussion sections will cover: (1) Disorders of consciousness: Primary and secondary generalized epilepsies, seizure prediction/control, coma and anesthesia; Basics of open- and closed-loop neuroregulators; (2) Sensorimotor disorders: Retinal and cochlear neuroprostheses, paralysis and BCIs, Parkinson’s disease and essential tremor, chronic pain; (3) Neuropsychiatric disorders: Major depression, obsessive compulsive disorder (OCD). Computational approaches for tracking ongoing brain states/dynamics in BCIs and closed-loop neuromodulation will be reviewed. Enrollment is capped at 20. Instructor permission required.

Fall NEUR1930H S01 16734 Arranged (W. Truccolo)

NEUR 1930N. Region of Interest: An In-Depth Analysis of One Brain Area.

In-depth exploration of one region of the brain. Topics will include: cell types and properties; synaptic properties; plasticity; connections to other brain areas; sub-divisions within the area; the region’s role in sensation

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
and perception; the region's role in action and behavior; the region's role in learning and memory; and diseases and disorders. Students will gain a deeper understanding of concepts and principles that apply throughout the brain. Students will gain experience with primary literature and learn about techniques for studying the area. Sign-up sheet in Sidney Frank Hall, Room 315 beginning on the first day of registration.

Fall NEUR1930 S01 16742 Arranged (M. Linden)

NEUR 1940B. Neuroethology.

Neuroethology is concerned with the neural systems serving such naturally occurring behaviors as orientation in the environment, finding food, predator detection, social communication, circadian and seasonal rhythms, and locomotion and tracking. This seminar will examine selected examples of the neuroethological approach to analysis of brain function, which 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 NEUR1940ES S01 24652 M 3:00-5:30(13) (J. Simmons)

NEUR 1940I. Neural Correlates of Consciousness.

This course will consider the neuroscience of consciousness from a variety of perspectives, using examples from behavior, neurophysiology, neuroimaging and neurology. The course content will focus on primary literature, using reviews to set the stage for the lectures. Students will lead discussions. 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 NEUR1940I S01 26375 Arranged (J. Sanes)


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

NEUR 2010. Graduate Proseminar in Neuroscience.

A study of selected topics in experimental and theoretical neuroscience. Presented by neuroscience faculty, students, and outside speakers. A required course for all students in the neuroscience graduate program.

Fall NEUR2010 S01 15793 Arranged (D. Sheinberg)


See Graduate Pro-Seminar In Neuroscience (NEUR 2010) for course description.

Spr NEUR2020 S01 24653 Arranged (D. Sheinberg)

NEUR 2030. Advanced Molecular and Cellular Neurobiology I.

Focuses on molecular 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 15791 Arranged (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 patternning of the nervous system, generation of neuronal diversity, axonal guidance, synapse formation, the control of behavior by specific neural circuits and neurodegenerative diseases. Enrollment is limited to graduate students.

Spr NEUR2040 S01 24654 Arranged (G. Barnea)


Focuses on systems approaches to study nervous system function. Lectures and discussions focus on neurophysiology, neuroimaging and lesion analysis in mammals, including humans. 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 15792 Arranged (D. Sheinberg)

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 24655 Arranged "To Be 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 neural spike trains, local field potentials, ECoG/EEG, and MRI. Sign-up sheet in Sidney Frank Hall, Room 315 beginning on the first day of registration. Instructor permission required.

Spr NEUR2110 S01 25511 Arranged (W. Truccolo)

NEUR 2160. Neurochemistry and Behavior.

Examines behavior from a neurochemical perspective via readings and discussions based on original research articles. Intended primarily for graduate students with a strong background in neurochemistry and neuropharmacology and advanced undergraduates with an appropriate background. Offered alternate years. Sign-up sheet in Sidney Frank Hall, Room 315 beginning on the first day of registration.

Spr NEUR2160 S01 25021 Arranged (R. Patrick)

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 14765 Arranged (D. Sheinberg)

Spr NEUR2970 S01 23854 Arranged (D. Sheinberg)

NEUR 2980. Independent Study.

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 14766 Arranged (D. Lipscombe)

Spr NEUR2990 S01 23855 Arranged (D. Lipscombe)

Medical Education

MED 2046. Leadership in Health Care.

This course emphasizes practical application of teamwork and leadership skills across multiple settings. Leadership in Health Care is a master's level course for second year medical students enrolled in the Primary Care-Population Medicine (PC-PM) program. Through interactive classroom sessions, field work in health care advocacy, and a team-based "leadership action project", students will develop foundational leadership skills. The first formal leadership course at Alpert Medical School, Leadership in Health Care will contribute to the PC-PM program's ultimate goal of preparing physician leaders who will improve the quality of health care and wellness of the population.

Fall MED2046 S01 14918 Arranged (P. Geoge)


For students enrolled in the Primary Care-Population Medicine program at Alpert Medical School, this course is structured to allow students to conduct research focused on population health with a mentor at Brown University.

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

PLME 0200, Primetime Bioethics.
Is it ethical to design a perfect baby? Who should get these organs? Is it ever okay to be dishonest with patients for their own good? These questions and more will be tackled in this discussion-based course that uses episodes of popular medical television shows to highlight topics in medical ethics. Students will watch 1-2 episodes of TV shows and read related articles and chapters on biomedical ethics and ethics theory. The goal is to give students the background with which to approach the ethical topics. This course may be most beneficial to students pursuing a career in medicine.

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 who will preferentially enroll PLME students. Prerequisite: PLME competency in Biology, Chemistry (inorganic and organic), Physics, and introductory calculus. Enrollment limited to 40. S/NC.

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

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 14630 TTh 1:00-2:20(10) 'To Be Arranged'

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 development, 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 14631 TTh 1:00-2:20(10) 'To Be Arranged'

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. Students have client-mentors. Students apply analytical frameworks of BEO disciplines to hone writing, presentation, leadership and organizational skills. Application required to match students to projects. Project team meetings required outside scheduled lectures. WRIT

Fall BEO1930C S01 14632 TTh 1:00-2:20(10) 'To Be Arranged'

BEO 1940A. BEO Capstone II: Organizational Studies Track.
Continuation of Semester 1, BEO Capstone I: Organizational Studies Track (BEO 1930A). This course involves the completion of team projects begun in fall semester. WRIT

Spr BEO1940A S01 23879 TTh 1:00-2:20(10) 'To Be Arranged'

BEO 1940B. BEO Capstone II: Entrepreneurship and Technology Management Track.
Continuation of Semester 1, BEO Capstone I: Entrepreneurship and Technology Management Track (BEO 1930B). This course involves the completion of team projects begun in fall semester. Non-BEO concentrators require instructor permission. WRIT

Spr BEO1940B S01 23880 TTh 1:00-2:20(10) 'To Be Arranged'

Chemistry

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

Fall CHEM100 S01 15491 MWF 11:00-12:00(02) 'To Be Arranged'

CHEM 0330. Equilibrium, Rate and Structure.
Explores the electronic structure of atoms and molecules, thermodynamics, solution equilibria, electrochemistry, chemical kinetics, and reaction mechanisms. Course includes lecture and laboratory sections. Laboratory cannot be taken without the lecture. Students who previously passed 330 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.

Fall CHEM330 M01 15142 Arranged 'To Be Arranged'
Fall CHEM330 S01 15104 MWF 10:00-10:50(14) 'To Be Arranged'
Fall CHEM330 S02 15141 TTh 10:30-11:50(13) 'To Be Arranged'
Spr CHEM330 S01 24215 Arranged 'To Be Arranged'
Spr CHEM330 S03 24212 TTh 10:30-11:50(09) 'To Be Arranged'

CHEM 0332. Equilibrium, Rate and Structure - Tutorial.
The CHEM 0332 tutorial program offers students a second opportunity to develop mastery of the chemistry concepts taught in the fall semester. CHEM 0330: Equilibrium, Rate and Structure course. Students not performing at a passing level in the fall CHEM 0330 course may apply to join the tutorial program. Students accepted into the tutorial program begin by reviewing compound and reaction stoichiometry toward the end of the fall semester. Tutorial students enroll in CHEM 0332 during the spring semester to complete their studies of equilibrium, acid-base equilibria, thermodynamics, atomic and molecular structure and kinetics. There are no lectures in CHEM 0332. Students in the CHEM 0332 tutorial program complete weekly reading reflection assignments, online homework, and weekly problem sets during the fall and spring semesters and participate in two mandatory regularly scheduled problem sessions during each week of the spring semester. The tutorial program has three midterms and one comprehensive final exam. The first exam is on the same day as the final exam of CHEM 0330 in the fall semester.

Admission to the CHEM 0332 tutorial program requires an application and an interview with Prof. Russo-Rodriguez no later than November 20th. To qualify for consideration, a student’s performance on Fall CHEM 0330 exams must be below the passing level AND the student must be on track to pass the laboratory. Accepted students receive a grade of incomplete for the Fall CHEM 0330 course. Upon successful completion of the CHEM 0332 tutorial program in the spring semester, the incomplete in Fall CHEM 330 is replaced by the student’s tutorial program grade. Permission by Prof. Russo-Rodriguez and an override by Ms. Sheila Quigley are both required.

Spr CHEM332 S02 24217 Arranged 'To Be Arranged'
Spr CHEM332 S03 24218 Arranged 'To Be Arranged'
Spr CHEM332 S04 24219 Arranged 'To Be Arranged'

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

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

If you previously completed CHEM 0350 laboratory but received a grade of no credit in the course, please register for lab section 11.

CHEM 0350. 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.

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

CHEM 0360. Organic Chemistry.
Examines 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 and a lab.

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 0800E. Exploration of the Chemistry of Renewable Energy.
The various types of renewable energy sources will be explored through classroom discussions, activities, and laboratories. Students will learn about the various types of renewable energy sources and the chemistry associated with each. The course will include short laboratories to illustrate the application of the energy sources. Renewable energy will be discussed in relationship to environmental factors and social impact. Active learning strategies will be used throughout the course. For students of all disciplines who are interested in obtaining an understanding of renewable energy. FYS LILE

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 all explored. Prerequisites: CHEM 0330, MATH 0180 or equivalent, PHYS 0030 and PHYS 0040 or PHYS 0050 and PHYS 0060 or PHYS 0070 and PHYS 0047 or ENGN 0030 and ENGN 0040.

Examines the question: Where does chemical equilibrium come from? Focuses on macroscopic perspectives on chemical systems and the molecular origins of macroscopic behavior along with elements of statistical mechanics, the laws of thermodynamics, and the relationships between the two. Prerequisite: CHEM 1140 or written permission of the instructor.

CHEM 1160. Physical Chemistry Laboratory.
An introduction to modern instrumentation and experimental techniques 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 the central methods of chemistry, namely the ability to design and synthesize compounds with a particular set of properties, to analyze biological problems. Specific topics include molecular recognition of DNA, artificial enzymes, small molecule sensors, and in vivo imaging of proteins, nucleic acids, and cell-surface carbohydrates. Prerequisites: CHEM 0360 and BIOL 0280. If enrollment exceeds the limit, permission to enroll will be allotted in the order: 1) first year graduate students, 2) senior concentrators in Chemistry or Biochemistry 3) junior concentrators 4) other students. Students who have registered or have permission to enroll must attend the first three classes or risk losing their places to someone on the waiting list.

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 0360, A or B performance preferable) plus at least one semester of Biochemistry (BIOL 0280). Enrollment limited to: 25 students, written permission required.

CHEM 1450. Advanced Organic Chemistry.
Lectures cover topics of current interest in organic reaction mechanisms, synthesis, and structure determination. Laboratory emphasizes spectroscopic and separation techniques and modern synthetic methods. Prerequisite: CHEM 0360. Students MUST register for a lecture section, conference and a lab. WRIT

CHEM 1560G. 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

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
CHEM 1600. 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.

CHEM 1700. Nanoscale Materials: Synthesis and Applications. Focuses on synthesis, properties, and applications of nanoscale materials. It begins with the introduction to size-dependent properties and to general characterization methods of nanomaterials. It then outlines the synthesis, surface chemistry and self-assembly of nanomaterials. It further reviews catalytic, optical and magnetic properties of nanomaterials. Finally, the course highlights the applications of nanomaterials in information storage, energy conversion, and biomedicine. Prerequisites: CHEM 0350, PHYS 0030 or 0050, BIOC2820 recommended.

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.

CHEM 2020. Statistical Mechanics. Introduction to modern equilibrium statistical mechanics, including the classical and quantum descriptions of ideal gases, the molecular basis of thermodynamics, the concepts of ensembles and fluctuations, and the implications of quantum mechanical indistinguishability. Applications include chemical and phase equilibria, the transition-state theory of chemical reaction rates, and the theory of liquids.

CHEM 2310. Organometallic Chemistry. This course intends to help students understand structures and reactions of transition metal complexes with common organic ligands: 18-electron rule; the structure and properties of transition metal complexes with carbonyl and other common organic ligands: chemical reactions initiated by metal-organic bonding interactions; and organometallic catalysis. Prerequisites: CHEM 0360, CHEM 0500, CHEM 1060. Fall CHEM2310 S01 15477 TTh 10:30-11:50(13) "To Be Arranged"

CHEM 2320. Solid State Chemistry. This course focuses on descriptive understanding of structures and properties of inorganic materials. It covers symmetry operations in crystals, crystal structure, physical properties of inorganic materials, materials phase diagram and preparation, and solid state electrochemistry for battery, fuel cell and supercapacitor applications. Prerequisites: CHEM 0500 and 1060 or equivalents or written permission. Recommended for seniors and first-year graduate students. Spr CHEM2320 S01 24241 TTh 10:30-11:50(09) "To Be Arranged"

CHEM 2410. Physical Organic Chemistry. Detailed examination of organic reaction mechanisms, reactive intermediates, and the methods employed for their characterization (e.g., kinetics, free energy relationships, isotope effects, molecular orbital theory, spectroscopy, and product distributions). Topics may include concerted, free radical, elimination, and photochemical reactions, and the chemistry of radicals, carbocations, carbanions, and carbenes.
uncontrolled happenings. Authors include Euripides, Thucydides, Plato, Aristotle, Epicurus, Lucretius, Augustine, and Dante.

Fall CLAS0150 S01 15980 MWF 12:00-12:50(12) (M. Gill)

CLAS 0210L. Who Owns the Classical Past?
This course offers a forum for informed discussion of a variety of difficult questions about access to the classical past, and its modern-day ownership and presentation, seen primarily from the perspective of material culture (archaeology, art, museum displays, etc.). Enrollment limited to 20 first year students.

Fall CLAS0210L S01 15975 TTh 10:30-11:50(13) (J. Cherry)

CLAS 0210Y. The Philosophy of Classical Indian Yoga
This course will introduce the history of the ancient Indian texts and ideas that came to provide the philosophical foundations of the classical school of Indian Yoga. We will examine the oldest evidence for yoga in the ancient texts of the Vedas, the Jainas, and the Buddhists. We will watch it take clear shape in the Upanishads and in texts of the Mahabhārata, especially the Bhagavad Gītā. We will conclude the course by reading the classical exposition of Indian Yoga, Patañjali’s Yogasūtras. This course is a philosophy course, not an introduction to the practice of yoga.

Fall CLAS0210Y S01 16571 W 3:00-5:30(17) (J. Fitzgerald)

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, sex, and sexuality.

WRIT Fall CLAS0660 S01 15986 MWF 2:00-2:50(07) (E. Papaioannou)

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 16004 TTh 2:30-3:50(03) (A. Laird)

CLAS 0810A. Alexander the Great and the Alexander Tradition
This course focuses on a single historical figure, Alexander the Great, using him as a point of departure for exploring a wide range of problems and approaches that typify the field of Classical Studies. How knowledge of Alexander has been used and abused provides a fascinating case study in the formation and continuous reinterpretation of the western Classical tradition.

Spr CLAS0810A S01 24793 MWF 11:00-11:50(04) (J. Cherry)

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 Mahābhārata, the Rāmāyana, the Cīḷappadikaram, and others.

DPLL Spr CLAS0820 S01 24790 TTh 10:30-11:50(09) (J. Fitzgerald)

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

WRIT Fall CLAS0855 S01 15972 TTh 9:00-10:20(08) (D. Buchta)

CLAS 0900. Greek Mythology
“What of these things goes now without disaster?”—Aeschylus, Agamemnon

This course is an introduction to Ancient Greek mythological traditions. Topics include: the twelve Olympian gods; ‘culture heroes’ (e.g. Heracles), Homer and the Trojan Cycle of myths; mythical traditions about the families of Oedipus and Agamemnon; etc. We will conclude with an investigation of ancient mythical scholarship and skeptical views of myth in antiquity. Throughout we will be considering myth’s relationship with literature, visual culture, and religion. The class focuses on the ancient material (texts, images, monuments, rituals and traditions, etc.), with some secondary readings in mythological and cultural theory.

Fall CLAS0900 S01 15981 MWF 1:00-1:50(06) (J. Hanink)

CLAS 0990. Concepts of the Self in Classical Indian Literature
Examination of the great Indian epic Mahābhārata and related mythology to introduce the context for the most ancient speculations of the Rgveda and the subtle teacher-student dialogues about the self contained in the Bhagavadgītā and Upanishads. We will also examine the more systematic Indian philosophical texts and note their resonance in ancient and modern European conceptions of self.

Spr CLAS0990 S01 24805 MWF 2:00-2:50(07) (J. Buczak)

CLAS 1120E. Slavery in the Ancient World
Examines the institution of slavery in the ancient world, from Mesopotamia to Africa, and from the Near East to the great slave societies of classical Greece and (especially) imperial Rome; comparison of ancient and modern slave systems; modern views of ancient slavery from Adam Smith to Hume to Marx to M.I. Finley. Readings in English.

LILE Fall CLAS1120E S01 15988 TTh 2:30-3:50(03) (J. Bodel)

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 15987 MWF 2:00-2:50(07) (J. Pucci)

CLAS 1310. Roman History I: The Rise and Fall of an Imperial Republic.
The social and political history of Ancient Rome from its origins to the death of Augustus in 14 CE. Focuses on the social conflicts of the early Republic; the conquest of the Mediterranean and its repercussions; the breakdown of the Republic and the establishment of monarchy. Readings emphasize ancient sources in translation.

WRIT Fall CLAS1310 S01 15976 MWF 11:00-11:50(02) (L. Mignone)

CLAS 1320X. Roman History II: The Empire (HIST 1201B).
Interested students must register for HIST 1201B.
Spr CLAS1320X S01 25608 Arranged “To Be Arranged”

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 premodern 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 24799 TTh 1:00-2:20(10) (E. Papaioannou)

CLAS 1770. Ancient Law, Society and Jurisprudence.
After a brief survey of modern legal systems (USA, common and civil law systems), we return to Athens and Rome. Topics: sources of law, its evolution, (e.g., feudal societies); procedural law (e.g., how to bring cases); legal reasoning; rhetoric; substantive law (e.g., regarding marriage, religion, homicide). Different approaches are used: historical, comparative, anthropological, case-law study.

Spr CLAS1770 S01 24802 TTh 2:30-3:50(11) (A. Scafuro)
CLAS 1990. Conference: Especially for Honors Students. Section numbers vary by instructor. Please check banner for the correct section number and CRN to use when registering for this course.

CLAS 2000. Proseminar in Classics. Introduction to standard research methods and tools in major subdisciplines of classical philology and ancient history. Required of entering graduate students. Survey of various subdisciplines in order to become familiar with field and scholarly principles. Fall CLAS2000 S01 15971 TTh 9:00-10:20(08) 'To Be Arranged'

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 14712 Arranged 'To Be Arranged'

Fall CLAS2970 S01 14712 Arranged 'To Be Arranged'

Fall CLAS2970 S01 14712 Arranged 'To Be Arranged'

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

Fall CLAS2980 S01 14713 Arranged 'To Be Arranged'

Fall CLAS2980 S01 14713 Arranged 'To Be Arranged'

CLAS XLIST. Courses of Interest to Classics Concentrators.

Greek

GREK 0100. Essentials of the Greek Language. A two-semester approach to ancient Greek with special emphasis on developing facility in rapid reading of Greek literature. Selections from Attic Greek authors. No previous knowledge of Greek is required.

Fall GREK0100 S01 15985 MWF 2:00-2:50(07) (S. Kidd)

Fall GREK0100 S01 15985 Th 12:00-12:50(07) (S. Kidd)

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

Spr GREK0110 S01 24787 TTh 12:00-12:50(03) 'To Be Arranged'

Spr GREK0110 S01 24787 MWF 10:00-10:50(03) '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 24803 MWF 2:00-2:50(07) 'To Be Arranged'

Spr GREK0200 S01 24803 Th 12:00-12:50(07) '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 15982 MWF 1:00-1:50(06) 'To Be Arranged'

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 24780 MWF 9:00-9:50(02) 'To Be Arranged'

GREK 1050F. Tragedy of Greeks and Others. The class will be devoted mainly to a close reading of Aeschylus’ play The Persians, attending to it in all its aspects (language, performance, historical context, meter). We will also read in translation select passages from Herodotus, Xenophon, and others bearing on Greek attitudes to Persia. We will examine key critical questions about Greek identity and self-definition in their relation to the East.

Fall GREK1050F S01 16055 TTh 10:30-11:50(13) (K. Haynes)

GREK 1100E. Greek Literature in Italy and by Italians. This course surveys Greek texts written in Italy or by Italians from the classical period into the Renaissance: from Pythagorean writings to Dionysius of Halicarnassus, from Plotinus to Bessarion, and from a series of exotic Sicilian Saints Lives to manuscripts of Greek popular literature. Emphasis will be placed on the post-classical tradition as well as on the transmission and manuscript history of Greek texts and authors in Italian libraries.

Spr GREK1100E S01 24925 TTh 2:30-3:50(11) (E. Papaioannou)

GREK 1100F. Fiction and Truth in Greek Story-telling. A survey of a large number of Greek narrative texts in the post-classical tradition that probed the boundaries between fiction and truth, from historiography to hagiography, and from the ancient novel to Christian apocrypha.

Fall GREK1100F S01 16107 MWF 1:00-1:50(06) (E. Papaioannou)

GREK 1110L. Selections from Greek Authors: Thucydides. No description available.

Spr GREK1110L S01 24814 TTh 10:30-11:50(09) (A. Scafuro)

GREK 1150. Greek Prose Composition. Survey of Greek grammar and an opportunity to reflect on problems of translation. Main goals: to improve the students’ command of prose syntax (both in reading and writing), and to develop a keen sensitivity towards issues of translation. A variety of texts written in Attic prose are read and analyzed in class. Students are expected to write two to three compositions a week in good Attic prose. Advanced knowledge of ancient Greek is a prerequisite for this course.

Spr GREK1150 S01 24794 MWF 1:00-1:50(06) (S. Kidd)

GREK 1810. Early Greek Literature. Surveys early Greek literature. Works studied include the Iliad, Odyssey, the Hesiodic poems, and archaic lyric and elegiac poetry. Emphasis on literary interpretation, the interpretive problems inherent in the study of archaic poetry, and the poetics of oral poetry. Extensive readings in the original.

Fall GREK1810 S01 15968 MWF 9:00-9:50(01) (J. Hanink)

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

GREK 2000A. Aristophanes. No description available.

Spr GREK2000A S01 24813 W 3:00-5:30(14) (S. Kidd)

GREK 2110E. Aeschines and Demosthenes, "Crowning Speeches". Fall GREK2110E S01 16006 W 3:00-5:30(17) (A. Scafuro)

GREK 2150. Plato's Theaetetus. See PHIL 2150 for course description.

Fall GREK2150 S01 15990 T 6:40-9:10PM (M. Gill)

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

Fall GREK2970 S01 14737 Arranged 'To Be Arranged'

Spr GREK2970 S01 23831 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 14738 Arranged 'To Be Arranged'

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
<table>
<thead>
<tr>
<th>Course</th>
<th>Section Number</th>
<th>Instructor</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LATN 0100. Essentials of the Latin Language</td>
<td>Fall LATN0100 S01 15977 Th 12:00-12:50(02)</td>
<td>J. Pucci</td>
<td>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.</td>
</tr>
<tr>
<td>LATN 0110. Introduction to Latin</td>
<td>Fall LATN0110 S01 15977 MWF 11:00-11:50(02)</td>
<td>J. Pucci</td>
<td>Intensive, one-semester introduction to Latin. No previous knowledge of Latin is required.</td>
</tr>
<tr>
<td>LATN 0200. Essentials of the Latin Language</td>
<td>Spr LATN0200 S01 24792 Th 12:00-12:50(04)</td>
<td>'To Be Arranged'</td>
<td>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 prior to taking this two course sequence.</td>
</tr>
<tr>
<td>LATN 0300. Introduction to Latin Literature</td>
<td>Fall LATN0300 S01 15970 MWF 9:00-9:50(01)</td>
<td>'To Be Arranged'</td>
<td>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).</td>
</tr>
<tr>
<td>LATN 0400. Introduction to Latin Literature</td>
<td>Fall LATN0400 S01 24797 MWF 1:00-1:50(06)</td>
<td>'To Be Arranged'</td>
<td>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).</td>
</tr>
<tr>
<td>LATN 1040A. Virgil: Eclogues and Georgics</td>
<td>Fall LATN1040A S01 16001 TTh 1:00-2:20(10)</td>
<td>J. Reed</td>
<td>Virgil, most famous as the poet of the Aeneid, began his career with two smaller masterpieces: a collection of ten bucolic poems (Eclogues) modeled on the idylls of the Hellenistic poet Theocritus, and a didactic work on agriculture in four books, the Georgics, which found its inspiration both in Hellenistic models and in more recent Roman antecedents (including Lucretius' De Rerum Natura) and is viewed by many as the poet's finest achievement. We will read selections from both works, concluding with the epilaxis at the end of Georgics Four, which relates the tragic love story of Orpheus and Eurydice.</td>
</tr>
<tr>
<td>LATN 1060H. Conquest: Caesar and Tacitus</td>
<td>Fall LATN1060H S01 15969 MWF 9:00-9:50(01)</td>
<td>L. Mignone</td>
<td>Caesar's account of the Gallic Wars reconstructs his conquests, defeats, and ultimate victory. We will consider the great general's aims and objectives in launching such a major military campaign and in writing a history of these endeavors. Was he simply seeking greater glory for the Roman people? After the midterm, we will turn our critical attention to the life of another Julius: Cn. Iulius Agricola, the Imperial general largely responsible for Rome's conquest of Britain. In this moral biography of his father-in-law, Tacitus mixes panegyric and invective to reveal the less savory aspects of imperialism: Rome's rapacity, corruption, greed, and despotism.</td>
</tr>
<tr>
<td>LATN 1110F. Fortuneus.</td>
<td>Fall LATN1110F S01 24796 MWF 1:00-1:50(06)</td>
<td>J. Pucci</td>
<td>Wide reading in the occasional poetry of the most prolific writer of the early Middle Ages, attending to diction, meter, imagery, allusion, and paying special attention to the (homo- and hetero-) erotic pieces written to the poet's friends.</td>
</tr>
<tr>
<td>LATN 1110L. Lucretius</td>
<td>Fall LATN1110L S01 15978 MTWTh 12:00-12:50</td>
<td>E. Amanatidou</td>
<td>Lucrétius' De Rerum Natura, a long philosophical poem, is both a major source for Epicurean philosophical thought and an example of the ambitious Latin poetry of the late Roman Republic. We will read extensive selections from the poem in Latin. Our aim will be to make a detailed exploration of these sections through close reading of the Latin text and discussion of linguistic, literary, and cultural problems.</td>
</tr>
</tbody>
</table>
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 24806 MTWTh 12:00-12:50 (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 15983 TTh 1:00-2:20(10) (E. Amanatidou)

MGRK 0400. Intermediate Modern Greek.
A continuation of MGRK 0300. New students may place into it, after special arrangement with the instructor. It aims to enhance language skills within a variety of registers and themes; enable the students to master use and understand effectively essential linguistic structures; examine a variety of expressive forms within an authentic cultural context.
Fall MGRK0400 S01 24783 TTh 9:00-10:20(08) (E. Amanatidou)

MGRK 0500. Advanced Modern Greek.
May be taken by students who have completed the previous sequences or by anyone who places successfully into the course. The course places emphasis on the improvement of writing and oral skills, via presentations, collaborative projects, conversations and assignments based on topics and texts, drawn from a variety of sources and cultural forms of expression.
Fall MGRK0500 S01 15992 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 24807 Arranged (E. Amanatidou)

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

Sanskrit
SANS 0100. Elementary Sanskrit I.
This course introduces Sanskrit to students who have no prior knowledge of any language other than English. Students quickly learn to read the Devanagari script and study the basics of the sound-system of Sanskrit. The course rapidly surveys the basics of Sanskrit grammar while using adaptations of classical Indian myths and stories as reading exercises.
Fall SANS0100 S01 15979 TTh 12:00-12:50(12) (D. Buchta)
Fall SANS0100 S01 15979 MWF 12:00-12:50(12) (D. Buchta)

SANS 0200. Elementary Sanskrit II.
This course continues the survey of grammar and the reading exercises of SANS 100. The second half of this course reads selected passages of the Bhagavad Gītā and the beginning of the classic story of Nala and Damayantī from the Mahābhārata. Prerequisite: SANS 0100.
Spr SANS0200 S01 24809 TTh 12:00-12:50(05) (D. Buchta)
Spr SANS0200 S01 24809 MWF 12:00-12:50(05) (D. Buchta)

SANS 0300. Sanskrit Epic Narrative.
Consolidates and extends the knowledge of Sanskrit grammar introduced in first year Sanskrit; acquaints students first-hand with basic themes of ancient Indian culture, and cultivates the reading and interpretive skills necessary to read epic and closely related Sanskrit narrative with comprehension and increased fluency. Prerequisite: SANS 0200.
Fall SANS0300 S01 15991 Arranged (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 24801 TTh 2:30-3:50(11) (J. Fitzgerald)

SANS 1080. The Critical Episodes of the Mahābhārata.
A guided tour of the structure of the Mahābhārata, "The Great Epic of India," through the reading in Sanskrit of selected critical passages.
Fall SANS1080 S01 15974 MWF 10:00-10:50(14) (J. Fitzgerald)

SANS 1600. Sanskrit Belles Lettres.
Introduction to kāvya (classical Sanskrit belles lettres)—poetry, drama, and prose narrative—through the reading of authors of the Classical Period as well as works on aesthetics and commentaries upon them.
Spr SANS1600 S01 24781 TTh 9:00-10:20(08) (D. Buchta)

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

SANS 2970. Sanskrit Preliminary Exam Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.
Fall SANS2970 S01 14784 Arranged 'To Be Arranged'
Spr SANS2970 S01 23871 Arranged 'To Be Arranged'

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

Cognitive, Linguistic and Psychological Sciences

Cognitive, Linguistic and Psychological Sciences
CLPS 0010. Elementary Psychology: An Introduction to Mind and Behavior.
A survey covering the roles of inherited and environmental determinants of human behavior. Topics include sensation, perception, learning, memory, motivation, emotion, neural processes, language, social development, personality assessment, obedience, interpersonal attraction, and the diagnosis, origins, and treatment of mental illness. Laboratory sections illustrate methodologies used to study these issues. Topic selection varies with instructor.
Spr CLPS0010 S01 25329 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 CLPS0020 S01 16493 MWF 2:00-2:50(07) (D. Sobel)

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 16494 TTh 1:00-2:20(10) (P. Jacobson)

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

Spr CLPS0040 S01 25341 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 16495 MWF 10:00-10:50(14) (J. Anderson)

CLPS 0050J. Psychology of Creativity. This course is a first year seminar intended to introduce students to the lively world of creativity and the science thereof. Classic and contemporary readings will be discussed covering topics ranging from theory and assessment to applications in education, product design, organizational behavior, the arts, and science itself. Students will also be nudge to become more mindful of the role of creativity in their everyday lives. The course will emphasize class discussion and the production of tangible projects. Enrollment limited to 20 first year students. FYS Spr CLPS0050J S01 25342 MWF 9:00-9:50(02) (J. Krueger)

CLPS 0050L. Anthropogenic Activity + Animals. Human activities that affect animals and their habitats are both widespread and increasing with largely negative impacts. In this first year seminar, we will examine the effects of anthropogenic disturbances on animal behavior through reading and discussion of scientific papers and conversations with expert guests. Topics include anthropogenic feeding on wildlife; noise, light and chemical pollution on aquatic and terrestrial species; recreational land and water use; technological modernization along migration routes; deforestation, hunting, and poaching. Students conduct an independent examination of environmental disturbances on a species from their country of origin or one with special personal relevance. Limited to first years. FYS LILE WRIT Fall CLPS0050L S01 16552 TTh 1:00-2:20(10) (R. Colwill)

CLPS 0110. Mechanisms of Animal Behavior. 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 25343 MWF 11:00-11:50(04) (A. Simmons)

CLPS 0120. Introduction to Sleep. Uses sleep as the focal point for discussing 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 16229 M 3:00-5:30(15) (M. Carskadon)

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 25344 TTh 1:00-2:20(10) (J. Austerweil)

CLPS 0220. Making Decisions. Life is full of decisions. Some decisions are made rationally, others could be improved. This course considers the psychology of human decision-making, the analysis of optimal decision-making, and implications for individual action and social policy. Topics include: chance and preference (e.g., how do consumers weigh attributes when making purchases?); the value of information (e.g., when should physicians order expensive diagnostic tests?); risky choice (e.g., is it rational to play the lottery?). Spr CLPS0220 S01 25345 TTh 10:30-11:50(09) (S. Sloman)

CLPS 0400. Brain Damage and the Mind. Brain damage in human subjects can produce dramatic and highly selective impairments in cognitive functioning. This course provides an overview of the major neuropsychological disorders of perception, language, memory, thought, and action. Emphasizes the development of human information processing models for understanding the cognitive deficits observed in brain-damaged patients and the implications of neuropsychological findings for models of normal cognition.

Fall CLPS0400 S01 16496 MWF 11:00-11:50(02) (E. Festa)

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 16497 TTh 9:00-10:20(08) (J. Song)

CLPS 0600. Child Development. Children's behavior and development from infancy through adolescence. Major topics include learning, perception, parent-child attachment, language, intelligence, motivation, emotional development, and peer relations. Major developmental theories, including psychoanalytic, ethological, social learning, and cognitive, are considered as organizers of these phenomena and as a source of testable hypotheses.

Fall CLPS0600 S01 16498 TTh 6:40-8:00(05) (D. Amso)

CLPS 0700. Social Psychology. Examines the theories, findings, and methods of social psychology. Topics include: social cognition (person perception, attitudes), social influence (cultural sources of attitudes, conformity), and social relations (aggression, altruism, prejudice). Students become better informed consumers of empirical research and acquire a new framework for interpreting social behavior. Applications to historic and current events.

Fall CLPS0700 S01 16500 TTh 2:30-3:50(03) (B. Malle)

CLPS 0701. Personality. A survey of the major perspectives (psychoanalytic, behavioral, humanistic, etc.) within theories of personality. Particular emphasis is placed on the integration of research and theory.

Fall CLPS0701 S01 16237 TTh 9:00-10:20(08) (B. Hayden)

CLPS 0710. The Psychology and Philosophy of Happiness. The course explores four fundamental questions about happiness: What is happiness—pleasure, life satisfaction, something else? How is happiness achieved—what are the myths and realities about what conduces to happiness? Can happiness be achieved—are we naturally well suited to be happy? Why pursue happiness—is it sufficient, or even necessary, for a good life? The course examines classic contributions from psychology and philosophy, the two disciplines that have studied happiness most extensively. Team-taught by professors from both philosophy and psychology, it invites students to compare and combine both approaches.

Fall CLPS0710 S01 16677 MWF 1:00-1:50(06) (J. Krueger)

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 16502 TTh 10:30-11:50(13) (K. Speehr)

Spr CLPS0900 S01 25347 MWF 11:00-11:50(04) (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.

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.

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, neuroethology, cognitive science, biology, biological anthropology, and neuroscience, we will identify changes in the nervous system that have occurred over phylogeny and ontogeny to allow the development of complex social behaviors, cognition, language, and consciousness.

CLPS 1170. Theories of Learning.
How do we learn? What do we learn? This advanced course explores theoretical issues and empirical findings about associative learning with a focus on Pavlovian conditioning and instrumental learning processes. Emphasis is on experimental methods and formal theories derived from animal studies but with relevance to clinical psychology, behavioral neuroscience, human cognition, education and computer science. Weekly lectures will be blended with class discussion of primary journal articles. Enrollment limited to 40. LLE.

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 0900). Enrollment limited to 12; not open to first year students.

A laboratory course on the prediction, control, and explanation of the behavior of animals in simple environments. Prerequisite: CLPS 0900 (PSYC/COGS 0900). Fall Spr.

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

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.

Most university students believe they are good learners, and most professors believe they teach well, yet the strategies each group employs are often the ones found to be least effective when examined from a scientific standpoint. This seminar examines what the basic scientific research in human cognition, as well as some well-designed applied studies, tell us about effective teaching and learning inside and outside of the classroom. Emphasis will be on high-school and college learners and teachers, but with some extensions to K-8.

CLPS 1291. Computational Methods for Mind, Brain and Behavior.
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.

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). Fall Spr.

CLPS 1341. Lexical Semantics.
The representation of word meaning and generalizations about the way in which meanings are packaged into words. Topics include: “fuzzy” meanings, natural kind terms, how word meanings are decomposed. Special emphasis on how temporal properties are encoded, on the status of “thematic relations,” and on how the fine-grained structure of word meanings impacts on the syntax. Recommended prerequisite: CLPS 0030 (COGS 0410). Spr.

CLPS 1383D. Topics in Syntax and Semantics: The Syntax, Semantics and Processing of Ellipsis.
Ellipsis is the phenomenon whereby a short expression is understood as a longer paraphrase. An example: “Lindsay can ski that course, but Bode can’t.” The second part is understood as “And Bode can’t ski that course.” How are such cases handled by the grammar (is there “silent linguistic material interpreted by the semantics”)? And how do language users process these? These questions have been debated for decades and because ellipsis constructions interact with many other phenomena, the analysis of this domain is central in grammatical and processing theory. This seminar examines this with respect to several constructions and theories.

CLPS 1390. Linguistic Field Methods.
A lab/practicum course introducing the methodologies needed to collect, manage, and interpret primary data pertaining to the phonetic, phonological, morphosyntactic, semantic, and pragmatic properties of an understudied language. The course takes a hands-on approach, with students working in groups and individually with a native speaker consultant of an unfamiliar language. Students will learn how to test hypotheses about the language as well as construct grammatical descriptions. In addition, the course will cover a variety of practical, technological, interpersonal, cultural, and ethical issues typically encountered in fieldwork. Pre Requisite: CLPS 1310 and one other 1300-level course in CLPS or instructor permission.

How do we make decisions? This course considers the factors and mechanisms involved in motivated decision making, as informed by cognitive, neuroscientific, and computational modeling approaches. Readings will span a range of populations (e.g., healthy adults, adults

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
CLPS 1470. Translational Models of Neuropsychiatric Disorder

This course will be an upper level seminar course focused on reading and understanding the primary literature related to the use of animals to model human neuropsychiatric disorders. Throughout the course we will discuss the appropriateness, use, and limitations of animal models for studying human pathology. We will discuss a range of topics building from basic concepts of evolution, development, and genetics to the practice of using animals to study aging and memory function, affective pathology, and developmental disorders. Prerequisites: CLPS010 or NEUR010; and preferably at least one of the following: CLPS1150, CLPS1480, CLPS0400, CLPS2100, NEUR1740; NEUR1540.

Fall CLPS1470 S01 16773 W 3:00-5:30(17) (K. Bath)

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 will include changes in the neurocognitive systems mediating memory, perception, and attention. The course is primarily intended as an advanced seminar for junior and senior concentrators in Psychology, but is also intended for other students interested in aging and the neuropsychology of cognition. Recommended prerequisites: 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. WRIT

Fall CLPS1480B S01 16509 TTh 10:30-11:50(13) (E. Festa)


This course will train students in the practice and use of functional magnetic resonance imaging (fMRI) as a cognitive neuroscience methodology. Topics covered include fMRI physics, the physiological basis of the BOLD signal, experimental design, data collection, statistical analysis, and inference. A practical component of the course includes the opportunity to collect and analyze fMRI data at the Brown MRF. Prerequisites: CLPS 0040 (COGS 0720), CLPS 0400 (PSYC 0470), or NEUR 0100; and CLPS 0900 (PSYC/COGS 0900), or instructor permission. Enrollment limited to 20.

Spr CLPS1490 S01 25359 TTh 2:30-3:50(11) (D. Badre)

CLPS 1492. Computational Cognitive Neuroscience.

We explore neural network models that bridge the gap between biology and cognition. Begins with basic biological and computational properties of individual neurons and networks of neurons. Examines specialized functions of various brain systems (e.g., parietal cortex, frontal cortex, hippocampus, ganglia) and their involvement in various phenomena, including perception, attention, memory, language and higher-level cognition. Includes a lab component in which students get hands on experience with graphical neural network software, allowing deeper appreciation for how these systems work. Prerequisites: CLPS 0040 or CLPS 0200 or NEUR 0100.

Fall CLPS1492 S01 16510 TTh 1:00-2:20(10) (M. Frank)

CLPS 1495. Affective Neuroscience.

This course will survey key topics and methods in research on the neuroscience of affect and emotion. It is ideally suited for advanced undergraduates or graduate students who have taken an introductory cognitive neuroscience and/or psychology course. This course will use a variety of cross-species behavioral and neuroscientific data to examine the structure of affect/emotion; how affective processes shape cognition and action; how cognition in turn shapes affect; and how affective reactions change within and across individuals. The course will include short lectures, in-class presentations, discussions, and written response papers.

Fall CLPS1495 S01 16737 T 4:00-6:30(09) "To Be Arranged"

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 0100), CLPS 0202 (COGS 0010), CLPS 0500 (COGS/PSYC 0440), or CLPS 0510 (COGS 0110).

Fall CLPS1500 S01 16511 TTh 10:30-11:50(13) (W. Warren)


This course introduces students to the acoustic world, and how it affects our cognition and emotions. We will identify the physical properties of sounds that mediate our psychological responses to auditory objects (environmental sounds, speech, and music). We will explore how we focus our attention on particular sounds in the environment, how sounds affect our emotions, and how our ability to perceive and classify sounds varies over the lifespan. We will learn how to record and interpret natural soundscapes, by developing an acoustic map of campus.

Fall CLPS1510 S01 16513 TTh 2:30-3:50(03) (A. Simmons)

CLPS 1520. Computational Vision.

An introduction to computational models of biological vision summarizing traditional approaches and providing experience with state-of-the-art methods. We will sample topics from low- and mid-level vision including fundamental aspects of image, stereo, motion, surface and color processing to high-level vision including object and action recognition as well as scene understanding. Connections to contemporary research in computer vision and computational neuroscience will be emphasized highlighting how computational models may motivate the development of new hypothesis for the design of experiments in visual perception. Prerequisite: comfort with basic linear algebra and at least one introductory course in Computer Science or programming, or instructor permission.

Fall CLPS1520 S01 16514 TTh 10:30-11:50(13) (T. Serre)

CLPS 1540. Perceiving and Acting in 3D.

How does visual stimulation inform the brain about the three-dimensional structure of the world? What information is important for complex organisms, like humans and other primates, to be able to successfully interact with the surrounding environment? In this course we will examine how different sources of visual information such as stereo, contours, texture gradients, shading, and optic flow contribute to the vivid experience of 3D shape by the human visual system. Moreover, connections will be made to the mechanisms that govern goal directed actions, in order to unveil the commonalities between 3D processing for conscious perception and visuomotor mappings.

Fall CLPS1540 S01 16553 TTh 2:30-3:50(03) (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 locus of attention, the nature of language representation, spatial representation of number, and high-level decision-making. Prerequisite: CLPS 0010, CLPS 0202, or NEUR 0100. Enrollment limited to 40.

Spr CLPS1560 S01 25360 F 3:00-5:30(15) (J. Song)

CLPS 1580C. Visualizing Information.

There has been an explosion of interest in how to present information in a visual way rather than as a bunch of boring numbers. Visualizations can be outstanding at conveying information, but there have also been colossal failures. We will explore the good, the bad, and the ugly and harness knowledge of visual perception to understand why some are more successful than others. Someone interested in how to create effective visual displays (posters, infographics) would benefit from this course.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Some background in visual perception is recommended as a CLPS 0600 or NEUR course about vision or familiarity with graphic design. Fall CLPS1580C S01 16516 TTh 2:30-3:50(03) (L. Welch)

CLPS 1590. Visualizing Vision.
This course provides hands-on experience in studying vision using computer graphics combined with visual psychophysics. Students will gain a better understanding of how images are formed, how one employs properties of image formation in the experimental study of vision, and how the perception of complex images function in biological systems. Labs will rely on matlab and several computer graphics packages (e.g; Lightwave). Enrollment limited to 20. 

Spr CLPS1590 S01 25361 TTh 1:00-2:20(10) (F. Domina)

How do infant and preschoolers learn about the world? We will examine children’s understanding of the physical world, psychological kinds, biological entities, number, objects, and space. Students are expected to read and comment on both empirical and theoretical primary source articles, to participate in weekly discussions, and complete a set of writing assignments. Prerequisites: CLPS 0600 (PSYC0810) or CLPS 0610 (COGS0830)

Spr CLPS1610 S01 25362 M 3:00-5:30(13) (D. Sobel)

CLPS 1650. Child Language Acquisition.
All normally developing children acquire language, yet there is little agreement about how this takes place. This class explores the course of language acquisition from birth to babbling and first words to the use of complex syntax, discussing philosophical, theoretical, and methodological approaches to the problem. Includes practical experience analyzing child language data. Prerequisite: CLPS 0030 (COGS 0410) or CLPS 0800 (COGS 0450), or permission of the instructor.

Spr CLPS1650 S01 25363 TTh 1:00-2:20(10) (J. Morgan)

CLPS 1680A. Topics in Development: Social Learning.
How do we learn from other people? If a child was raised in the absence of any social interaction, what cognitive structures would s/he have? This course will focus on what and how children learn from others, including concepts like language, rituals, religion, biology. Emphasis will also be on “selective trust” - whether we learn from all informants equally or are rational in how we learn from others. Prerequisite: CLPS 0600, 0610, or 0700. Enrollment limited to 20 juniors and seniors.

Spr CLPS1680A S01 25365 TTh 2:30-3:50(11) (D. Sobel)

CLPS 1690. Laboratory in Developmental Psychology.
Conceptual and methodological foundations of research design and analysis in developmental psychology, with particular reference to techniques commonly used in studying cognitive development. We will cover general principles of experimental design, measurement and assessment, and strategies of data analysis. Practical and ethical issues involved in conceiving, designing, executing, interpreting, and presenting research will be considered. Recommended prerequisites: CLPS 0610 (COGS 0630), and CLPS 0900 (COGS/PSYC 0900) or equivalent. Enrollment limited to 15.

Fall CLPS1690 S01 16517 M 5:00-7:30 (D. Amso)

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 25067 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 disruption caused by a range of human-made and natural disasters. It examines personal accounts, pertinent psychological research, theoretical discussions, and the creative works of catastrophe survivors. Enrollment limited to 20.

Spr CLPS1720 S01 25366 TTh 2:30-3:50(11) (J. Wright)

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

Spr CLPS1760 S01 25554 Th 4:00-6:30(17) (O. FeldmanHall)

CLPS 1791. Laboratory in Social Cognition.
Examines principles of experimental design and analysis in the context of classic and contemporary research in social cognition. Students replicate and extend several studies on topics such as person perception, social stereotyping, or judgment and decision making. Students will participate in the design of these studies, gather their own data, analyze them, and report the findings in oral presentations and written reports. Prerequisites: CLPS 0010 (PSYC 0010), CLPS 0700 (PSYC 0210), and CLPS 0900 (PSYC/COGS 0900). Enrollment limited to 24.

Fall CLPS1791 S01 16518 TTh 10:30-11:50(13) (J. Krueger)

CLPS 1800. Language Processing.
Explores the nature of language processing with the goal of understanding how we produce and comprehend language. Topics include speech production and speech perception, lexical processing, and syntactic processing. Experimental investigations are studied in an attempt to understand the processes and mechanisms employed in the everyday use of language. Prerequisite: one of CLPS 0020 (COGS 0010), CLPS 0030 (COGS 0410), or CLPS 0800 (COGS 0450).

Spr CLPS1800 S01 25459 MWF 10:00-10:50(03) (P. Hofmeister)

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

Fall CLPS1900 S01 16521 MWF 2:00-2:50(07) (D. Anderson)

Independent study or directed research in cognitive science. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Instructor permission required.

Required of all ScB concentrators and Honors students in psychology. Instructor permission required. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Introduces students to the CLPS Department and the University; provides a brief history of the disciplines, philosophical foundations, and ethical treatment of human subjects; provides professional training, such as 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 16523 Th 4:00-6:30(04) (S. Sloman)

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

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
CLPS 2002. Core Topics in Cognitive and Psychological Sciences II.
An advanced overview of fundamental issues in philosophy of cognitive science, higher-level cognition (concepts, similarity, reasoning, inference, judgment, and decision-making), higher-level language (syntax, semantics, and pragmatics), cognitive development, and social cognition. Domains will be introduced by classic readings and then followed up discussion on modern and contemporary issues in the seminar portion. All topics will be connected throughout by common themes.

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

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

CLPS 2095. Practicum in Teaching.
Each student will assist a designated faculty member in teaching a course in cognitive science or related discipline. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Instructor permission required.

CLPS 2096. Directed Graduate Research.
No description available. Instructor permission required.

CLPS 2450. Exchange Scholar Program.
Fall CLPS2450 S01 14714 Arranged 'To Be Arranged'

CLPS 2800. Core Topics in Language.
No description available. Open to graduate students only.
Fall CLPS2800 S01 16526 3:00-5:30(11) (J. Morgan)

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 bootstraping, among others. Instructor permission required.
Open to graduate students only.
Fall CLPS2906 S01 16527 TTh 9:00-10:20(08) (W. Heindel)

CLPS 2908. Multivariate Statistical Techniques.
This course covers the basic multivariate techniques currently used in psychology and related sciences: multiple regression, logistic regression, principal components and factor analysis, multivariate analysis of variance, discriminant function analysis, and log-linear analysis. Students will learn these techniques' conceptual foundations, their proper selection for a given data set, and the interpretation of computer output from statistical analysis packages (primarily SPSS). Enrollment limited to 20 graduate students.
Spr CLPS2908 S01 25367 TTh 10:30-11:50(09) (B. Malle)

CLPS 2970. Preliminary Examination Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.
Fall CLPS2970 S01 14715 Arranged 'To Be Arranged'
Spr CLPS2970 S01 23810 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 14716 Arranged 'To Be Arranged'
Spr CLPS2990 S01 23811 Arranged 'To Be Arranged'

Humanities
HMAN 1971L. 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. WRIT
Fall HMAN1971L S01 16735 W 3:00-5:30(17) (N. Berman)

The study of nature has developed together with the representation of flora and fauna in Europe and the Americas. After the encounter, visual thinking remained an integral part of how knowledge was negotiated between different communities on both sides of the Atlantic—as several scientific expeditions involving artists confirm. This course, which includes field trips to museums and collections, examines connections between knowing and making, ranging from the tradition of pre-Columbian writer-painters to contemporary Latin American artist collectives. We will investigate the entangled histories of art and science as seen through the artistic productions inspired by the exuberant American land.
Fall HMAN1972C S01 16540 TTh 2:30-5:30(03) (J. Austerweil)

HMAN 1972D. Art of Criticism (ENGL 1901F).
Interested students must register for ENGL 1901F.
Spr HMAN1972D S01 25604 Arranged 'To Be Arranged'

HMAN 1972E. Designers as Transnational Experts.
Recent global humanitarian design initiatives like Brown and RISD's own "Design for a Better World" have roots in 20th and 19th-century transformations in the scope of design practice and in the global political and economic landscape. It was during this period that architects like Jane Drew and Constantinos Dociadi, funded by institutions like the UN and Ford Foundation, became international consultants moving from place to place through a variety of networks. This shift rescued design by re-establishing its social project. This seminar places such design practices in historical context and follows this shift to the present. Juniors, seniors, graduate students only.
Spr HMAN1972E S01 24873 M 3:00-5:30(13) (I. Montero)

Inspiring science, art, and conservation, traded as resources, kept as hunters or pets, and eaten as meat, birds provide an excellent avenue into animal studies. This course will provide grounding in the emerging field of critical animal studies by surveying how we know and interact with one diverse and charismatic class of animals: the Aves. We will explore birds channeled through literature, visual arts, ornithology, behavioral sciences, musicology, history, ethnography, and the history of science. In addition to reading and discussion, we also will experience the birds around us through a five-part indoor and outdoor "laboratory" dedicated to bird-watching skills.
Fall HMAN1972F S01 16466 F 3:00-5:30(11) (O. Osayimwese)

The title of this course alludes to Friedrich Nietzsche's "eternal return of the same," which he famously called "the highest formula of affirmation," and which later philosophers and thinkers, such as Pierre Klossowski and Martin Heidegger, would repeatedly return to. Yet Nietzsche's discovery is not new, for it inflects, too, the thinking of the professional revolutionary, Louis-Auguste Blanqui, the returns of commodity production in high capitalism, and the poetic figurations of the big city found in nineteenth-century writers such as Charles Baudelaire. In this course, we will examine the problem of returns—temporal, political, economic, and poetic—in modernity.
Fall HMAN1972G S01 16736 W 3:00-5:30(17) (K. Mendicino)

HMAN 1972L. Me, Myself, and I: Exploring Senses of Self from a Multidisciplinary Perspective.
Human beings have long puzzled over how precisely to conceptualize and understand what it is we are. Questions about the nature of the self have informed the speculations of philosophy, the soteriologies of religion, the trajectories of self-cultivation in contemplative traditions, and the therapeutics of psychology. Recently, cognitive science and phenomenology have attempted to correlate abstract concepts about the self with lived experience, emphasizing how various senses of self give rise to our self-concepts. Through this course, students will engage with...
Course Descriptions

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Description</th>
<th>Instructor(s)</th>
<th>Time</th>
<th>Room</th>
<th>Notes</th>
<th>Credits</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMAN 2970V</td>
<td>Aesthetics and Architecture</td>
<td>Is art produced for disinterested contemplation? Then how can architecture, which fundamentally serves one of the most fundamental human interests, that for shelter from an adverse environment, count as art? This question has both motivated philosophical speculation and caused tension in architectural practice for centuries. We will approach it through texts by philosophers such as Kant, Hegel, Schopenhauer, and Wittgenstein; architects such as Vitruvius, Alberti, Loos, Wright, Corbusier, and Venturi; and artists such as Ruskin, Watkins, Vidler, and Leatherbarrow. This course is a seminar requiring oral presentation and a term paper.</td>
<td>M. Ierulli</td>
<td>MWF 9:00-10:20</td>
<td>COLT 0810H</td>
<td>(T. Chin)</td>
<td>3</td>
<td>LECT</td>
</tr>
<tr>
<td>HMAN 2970W</td>
<td>Ethics/Politics</td>
<td>This course examines the intersection of ethics and politics from the perspective of critical theory, comparative political and moral philosophy, and transnational intellectual history of the nineteenth and twentieth-centuries. We will examine antagonisms and hierarchies of ethics and politics, ethics as a political discipline, the tension between politics as an institution and as a way of life or ethos. Authors to include Arnold, Wilde, Nietzsche, Gandhi, Berlin, Arendt, Weil, Foucault, Rawls, Habermas, Shklar, Cavell, Butler.</td>
<td>P. Guyer</td>
<td>W 3:00-5:30</td>
<td>COLT 0710A</td>
<td></td>
<td>3</td>
<td>LECT</td>
</tr>
</tbody>
</table>

Comparative Literature

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Description</th>
<th>Instructor(s)</th>
<th>Time</th>
<th>Room</th>
<th>Notes</th>
<th>Credits</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>COLT 0510K</td>
<td>The 1001 Nights</td>
<td>Explores the origins, performance, reception, adaptation, and translation of the 1001 Nights, one of the most beloved and influential story collections in world literature. We will spend the semester in the company of genies, princes, liars, slaves, mass murderers, orientalists, and Walt Disney, and will consider the Nights in the context of its various literary, artistic, and cinematic afterlives.</td>
<td>J. Lindahl</td>
<td>MWF 1:00-1:50</td>
<td>COLT 0610C</td>
<td></td>
<td>3</td>
<td>LECT</td>
</tr>
<tr>
<td>COLT 0510O</td>
<td>Twentieth-Century Experiments</td>
<td>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.</td>
<td>T. Chin</td>
<td>TTh 2:30-3:50</td>
<td>COLT 0710C</td>
<td></td>
<td>3</td>
<td>LECT</td>
</tr>
<tr>
<td>COLT 0610D</td>
<td>Rites of Passage</td>
<td>Examines a seemingly universal theme—coming of age—by focusing on texts from disparate periods and cultures. Proposes that notions of &quot;growing up&quot; are profoundly inflected by issues of class, gender, and race, and that the literary representation of these matters changes drastically over time. Texts from the Middle Ages to the present; authors drawn from Chrétien de Troyes, Quevedo, Prévost, Balzac, Brontë, Twain, Faulkner, Vesaas, Rhys, Satrapi and Foer. Enrolment limited to 15 first year students.</td>
<td>P. Guerrier</td>
<td>MWF 1:00-1:50</td>
<td>COLT 0710B</td>
<td></td>
<td>3</td>
<td>LECT</td>
</tr>
<tr>
<td>COLT 0610E</td>
<td>Crisis and Identity in Mexico, 1519-1968</td>
<td>Examines four moments of crisis/critical moments for the forging of Mexican identity: the &quot;Conquest&quot; as viewed from both sides, the hegemonic 17th century, the Mexican Revolution, the &quot;Mex-hippies&quot; of the 1960s. We especially explore how key literary, historical, and essayistic writings have dealt with Mexico's past and present, with trauma and transformation. Readings include works by Carlos Fuentes, Sor Juana Inés de la Cruz, Octavio Paz, Juan Rufio, and on the Virgin of Guadalupe. All in English. No prerequisites.</td>
<td>S. Merrim</td>
<td>TTh 2:30-3:50</td>
<td>COLT 0710D</td>
<td></td>
<td>3</td>
<td>LECT</td>
</tr>
<tr>
<td>COLT 0610F</td>
<td>Chinese Empire and Literature</td>
<td>This course explores ancient and modern approaches to empire and imperialism, focusing on China from the Qin (221-206 BCE) establishment of unified empire through the Qing (1644-1911 CE) confrontation with the British and other European empires. Emphasis will be placed on the relation between imperial expansion and literary production, and the role of Chinese and non-Chinese literature in representing China's multilingual and multiethnic past. Texts include China’s most famous work of historical literature, Sima Qian’s Shiji; poems, short stories, tomb sculptures, contemporary film; as well as critical essays on empire, colonization, and cross-cultural heritage.</td>
<td>(E. Muhanna)</td>
<td>TTh 10:30-11:50</td>
<td>COLT 0710E</td>
<td></td>
<td>3</td>
<td>LECT</td>
</tr>
</tbody>
</table>

COLT 0710A. A Comparative Introduction to the Literatures of the Americas.

Considers the common links between the diverse literatures of North and South America, approached in relation to one another rather than to Eurocentric paradigms. Focuses on the treatment of such topics as the representation of the past and the self, the role of memory and the imagination, the nature of literary language, and the questions of alienation, colonialism and post-colonialism, communication versus silence, and fiction versus history in the works of selected writers from North and Latin America, including Garcia-Márquez, Faulkner, Cortázar, Allende,Advertisement, Morrison, Doctorow, Rosa, and Delillo. Enrollment limited to 15 first year students. FYS WRIT

Fall COLT 0710A S01 15414 TTh 2:30-3:50(03) (L. Valente)

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 important women authors: Mariama Bâ (Senegal), Zoe Wicomb (South Africa), Tsitsi 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 COLT 0711E S01 15410 TTh 9:00-10:20(08) (C. Goldblatt)

COLT 0811I. Classical Mythology and the Western Tradition.

Reads classical texts that expound the fundamental mythological stories and elements of the Western tradition, then will read selected texts from the Renaissance through the twentieth century that utilize these myths. Ancient texts covered will include the Epic of Gilgamesh, Homer's Theogony and Works and Days, Ovid's Metamorphoses, and plays by Aeschylus, Sophocles, and Euripides. Later texts will include Shakespeare's Venus and Adonis and Rape of Lucrece, Milton's "Lycidas," and lyric poetry by Keats, Shelley, Browning, Swinburne, Rilke, Auden, and Yeats. This course is suitable for anyone wishing to understand the classical background to Western literature. LILE

Spring COLT 0811I S01 24315 MWF 12:00-12:50(05) (M. Ierulli)

COLT 0812H. Literary Bestsellers of the Islamic World.

Who read what during the golden age of Islamic civilization? What were the page-turners, must-read classics, and viral texts of the Islamic world? In this course, we explore works of poetry, epic, satire, fantasy, and allegory by such figures as Jalaluddin Rumi, Hafez, Nizami, Abu Nuwas, and others.

Fall COLT 0812H S01 15608 MWF 9:00-9:50(01) (E. Muhanna)

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 COLT 1210 S01 15406 MWF 11:00-11:50(02) (M. Redfield)

COLT 1310G. Silk Road Fantasies.

This course introduces students to East-West comparative work. We will explore the history and politics of different methods of literary comparison,
and diverse definitions of East and West. In particular we will ask how assumptions of cultural contact or isolation shape the way we bring together, say, a Chinese and a Greek poem, or interpret a documentary film about modern Indonesia. Themes will include: the “Silk Road,” as a historical framework of cultural exchange across Afro-Eurasia; the “Axial Age” of independent civilizations; Orientalism; Hellenism; Pan-Asianism. The filmmaker of The Act of Killing will visit.

COLT 1410S. Classical Tragedy.
This course will read the great Greek tragedies of Aeschylus, Sophocles, and Euripides, and some Senecan tragedy. We will then read Renaissance and later tragedies that use the classical world as a setting, such as Anthony and Cleopatra, Julius Caesar, and tragedies that rewrite classical themes, including O’Neill’s Mourning Becomes Electra. Fall
Fall COLT1410S S01 15559 MWF 12:00-12:50(12) (M. Ierulli)

COLT 1410Y. Shakespeare and Embodiment (ENGL 1360Z).
Interested students must register for ENGL 1360Z.
Fall COLT1410Y S01 16743 Arranged ‘To Be Arranged’

COLT 1420O. Proust, Joyce and Faulkner.
A reading of three major Modernist authors, with a focus on the following issues: role of the artist, representation of consciousness, weight of the past. Texts include substantial portions of Proust’s Recherche, Joyce’s Portrait and Ulysses, Faulkner’s Sound and the Fury, Light in August and Absalom, Absalom! Prior background in these authors desirable, especially Ulysses. Senior Seminar. Reserved for seniors. Preference given to concentrators in Comparative Literature, English, Literary Arts, Modern Culture and Media, as well as highly qualified seniors in other concentrations. Instructor’s approval required. Enrollment limited to 20. Fall Spr COLT1420O S01 20401 TTh 1:00-2:20(10) (A. Weinstein)

COLT 1430L. Voices of Romanticism.
Readings of lyric poetry in the European Romantic tradition. Focus on problems of lyric subjectivity and representation, and the rhetoric of “voice.” Emphasis on formal features of poetry. The course will be based on close reading and frequent writing assignments. Readings from Wordsworth, Shelley, Keats, Goethe, Novalis, Hugo, Nerval, Lamartine, Baudelaire and others. Knowledge of French or German required, or by permission. Fall
Fall COLT1430L S01 15411 MWF 10:00-10:50(14) (S. Bernstein)

COLT 1440L. Sharing (MCM 1203K).
Interested students must register for MCM 1203K.
Spr COLT1440L S01 25056 Arranged ‘To Be Arranged’

COLT 1610N. 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: garbology (especially hoarding, collecting, and the relation between trash and modern 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. Fall
Fall COLT1610NS S01 16456 M 3:00-5:30(15) (H. Freed-Thall)

COLT 1610S. Theory of the Novel.
The novel has been theorized as the genre of the proper name, of privatized experience, and of capitalist accumulation. Yet many novels orient toward threshold states of perception and experience, toward objects impossible to classify or evaluate, and toward new ways of conceiving of the self and the social. In this class, we will read novels that invite us to contemplate what constitutes personhood and where its limits lie.

Spring COLT1610S S01 24153 TTh 9:00-10:20(08) (H. Freed-Thall)

COLT 1610T. Critical Approaches to China.
This co-taught seminar introduces students to some of the basic interdisciplinary research tools and methodologies for the study of China. Core texts will be drawn from the ancient through contemporary periods, organized around broad themes (e.g., Classics, gender, globalization).

Students from all disciplines are welcome. Some knowledge of modern or classical Chinese desirable. LILE
Spring COLT1610T S01 25238 W 3:00-5:30(14) (T. Chin)

COLT 1710C. Literary Translation.
Exercises and investigations in the history, theory, and practice of literary translation. Prerequisite: at least one foreign-language course in literature at 1000-level (or equivalent).
Fall COLT1710C S01 15560 TTh 9:00-10:20(08) (K. Haynes)

COLT 1710D. Exercise in Literary Translation.
Exercises and investigations in the history, theory, and practice of literary translation. Students pursue individual projects for translation workshops. Common exercises draw on Shakespeare translation, from classic translations in Europe to unique examples like Nyerere’s Swahili Caesar and current projects like Shakespeare in Modern English or The Chinese Shakespeare. Prerequisite: one foreign-language course in literature at 1000-level (or equivalent).
Spr COLT1710D S01 24418 TTh 9:00-10:20(08) (S. Foley)

COLT 1810P. Literature and Medicine.
The purpose of this course is to examine a number of central issues in medicine-disease, pain, trauma, madness, the image of the physician—from the distinct perspectives of the sciences and the arts. Texts will be drawn from authors such as Sophocles, Hawthorne, Gilman, Tolstoy, Kafka, Anderson, O’Neill, Hemingway, Ionesco, Verghese, Barker, Sacks, Foucault, Sontag, Scarry, Gawande and others. Open enrollment course: lecture + section.
Fall COLT1810P S01 15207 TTh 10:30-11:50(13) (A. Weinstein)

COLT 1814K. Fashion + Power.
Clothing is a text to be read in modernity, and artists from Baudelaire to RuPaul mobilize sartorial performativity in powerful ways. Fashion functions, for example, as a semiotic system, a mnemonic device, an erotic signifier, a tool for bourgeois self-fashioning, and an anti-normative force. In this course, students will gain familiarity with key works in the sociology of culture, and a critical vocabulary for discussing literary and cinematic style. Among our concerns: commodity fetishism; the subcultural dynamics of decadence, primitivism, and punk; queer irony and gender performativity; and vernacular aesthetic categories (glamour, coolness, cuteness, etc.).
Spr COLT1814K S01 24154 TTh 10:30-11:50(09) (H. Freed-Thall)

COLT 1814P. Fascinating Fascism.
This seminar examines the enduring First World fascination with fascism and above all with Nazism, not just as a historical political phenomenon, but as a cultural, literary, and cinematic topic, trope and image. The question of the commercial and ideological appeal of Nazi villains, imagery and iconography will be pursued through several contexts: the historical, psychological and ideological appeal of fascism; the trauma of the Shoah; the narrative and ideological imperatives of late-capitalist entertainment systems. Readings will engage a variety of theoretical texts (Freud, Bataille, Adorno, Sontag), films (Riefenstahl, Tarantino), novels (Dick, DeLillo, Littell).
Fall COLT1814P S01 16407 Th 4:00-6:30(04) (M. Redfield)

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 see the registration staff for the correct section number to use when registering for this course.

Special work or preparation of honors theses under the supervision of a member of the staff. Open to honors students and to others. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

COLT 2450. Exchange Scholar Program.
Fall COLT2450 S01 14717 Arranged ‘To Be Arranged’
Spring COLT2450 S01 23812 Arranged ‘To Be Arranged’

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

Brown University 53
COLT 2821M. Orientalism in Theory and Practice.
In this seminar, we will investigate diverse examples from the long history of Europe's relations to others in the East. We will also draw on, and critically examine, influential recent accounts of Orientalism offered by cultural studies and post-colonial theory. Our focus will fall on particular episodes of cultural appropriation and self-definition, chosen not only from literature and the arts but also from the history of religion, philosophy, and academic scholarship.
Spr COLT2821M 202 21452 Th 4:00-5:30(17) (K. Haynes)

COLT 2821O. Culture and Economy.
This seminar examines a range of approaches to the human economy; philosophical and spiritual discourses on poverty, wealth and nonmaterial values; the place of the economy in literary criticism and theory; historical and anthropological narratives of economic development, including recent challenges to Europe-centered histories of capitalism; feminist economics; debates over the definition and translation of the "economic."
Spr COLT2821OS 202 24417 M 3:00-5:30(13) (T. Chin)

COLT 2821P. Walter Benjamin: Literary Criticism.
The seminar will trace the emergence of an idea and a practice of literary criticism in Benjamin's writings from his early essay on Friedrich Hölderlin through his essays on Goethe, Proust, the Baroque Trauerspiel, Kafka and Baudelaire. We will pair selections from the literary works with Benjamin's critical writing on them.
Fall COLT2821P S 202 16359 F 3:00-5:30(11) (K. McLaughlin)

COLT 2830I. Histories of the Early Modern Body.
This seminar considers the production of knowledge about the body in the early modern period. The institution of science and how the emerging "science" of the body was visualized; discourses of the erotic, the scientific and the religious; the body in varied cultural performances including the blason, devotional texts, erotica, drama etc. Texts include theoretical work on gender and sexuality. Open to graduate students only.
Fall COLT2830I S 202 15413 M 3:00-5:30(15) (K. Newman)

COLT 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.

COLT 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 COLT2990 202 14718 Arranged "To Be Arranged"
Spr COLT2990 202 23813 Arranged "To Be Arranged"

Computer Science
CSCI 0020. The Digital World.
Removes the mystery surrounding computers and the ever-growing digital world. Introduces a range of topics and many aspects of multimedia, along with explanations of the underlying digital technology and its relevance to our society. Other topics include artificial intelligence, IT security, ethics and the economics of computing as well as the effects of its pervasiveness in today’s world. Introductory programming and analytic skills are developed through HTML, Photoshop, Excel and Python assignments. CSCI 0020 is a good introduction to a wide range of CS topics that have broad relevance in our society. No prerequisites. LILE Fall CSCI0020 S 202 16253 TTh 9:00-10:20(08) (D. Stanford)

CSCI 0040. Introduction to Scientific Computing and Problem Solving.
CSCI0040 provides an introduction to using computers to solve STEM (Science, Technology, Engineering and Mathematics) data analysis, visualization and simulation problems from engineering, neuroscience, biology, mathematics and finance.
Students will access and analyze a number of "real world" data sets while becoming fluent MATLAB programmers. Other tools utilized may include Excel, Wolframalpha and Python.
By course end, students should be able to use MATLAB to solve a large variety of scientific data analysis, visualization and simulation problems. No prior programming experience is required (MATLAB is easy and fun to use).

CSCI 0080. A First Byte of Computer Science.
Introduces non-CS concentrators to the academic discipline of computer science, its thought processes, and its relevance to other fields and modern life more generally. The target audience is students who are interested in learning more about what computer science is about and the ideas it has to offer tomorrow’s citizens and scholars. Topics include the basics of computation and programming, a taste of theoretical computer science and algorithms, and an introduction to codes and artificial intelligence. Although students will learn to read and understand short programs, the course will not teach or require advanced programming skills. LILE
Spr CSCI0080 S 202 25118 MWF 1:00-1:50(06) (M. Littman)

CSCI 0081. TA Apprenticeship: Full Credit.
Being an undergraduate TA is a learning experience: one not only gets a deeper understanding of the course material, but gains management and social skills that are invaluable for one's future. Students taking this course must first be selected as an undergraduate TA for a Computer Science course, a course the student has taken and done well in. Students will work with the course's instructor on a variety of course-related topics, including preparation of material and development of assignments. Whether CSCI 0081 or its half-credit version (CSCI 0082) is taken is up to the professor of the course being TA'd. Instructor permission required.
Fall CSCI0081 S 202 16273 Arranged (T. Doepner)

CSCI 0082. TA Apprenticeship: Half Credit.
Being an undergraduate TA is a learning experience: one not only gets a deeper understanding of the course material, but gains management and social skills that are invaluable for one's future. Students taking this course must first be selected as an undergraduate TA for a Computer Science course, a course the student has taken and done well in. Students will work with the course's instructor on a variety of course-related topics, including preparation of material and development of assignments. Whether CSCI 0082 or its full-credit version (CSCI 0081) is taken is up to the professor of the course being TA’d. Instructor permission required.
Fall CSCI0082 S 202 16274 Arranged (T. Doepner)

CSCI 0105. Introduction to Object-Oriented Programming and Computer Science.
Emphasizes object-oriented design and programming in Java, an effective modern technique for producing modular, reusable, internet-aware programs. Also introduces interactive computer graphics, user interface design and some fundamental data structures and algorithms.
A sequence of successively more complex graphics programs, including Tetris, and culminating in a significant final project, helps provide a serious introduction to the field intended for both potential concentrators and those who may take only a single course. No prerequisites, no prior knowledge of programming required.
Fall CSCI0105 S 202 16254 TTh 2:30-3:50(03) (A. van Dam)

CSCI 0160. Introduction to Algorithms and Data Structures.
Introduces fundamental techniques for problem solving by computer that are relevant to most areas of computer science, both theoretical and applied. Algorithms and data structures for sorting, searching, graph problems, and geometric problems are covered. Programming assignments conform with the object-oriented methodology introduced in CSCI 0150. Prerequisite: CSCI 0150 or written permission.
Spr CSCI0160 S 202 25119 Th 10:30-11:50(08) "To Be Arranged"

CSCI 0170. Computer Science: An Integrated Introduction.
CSCI0170/0180 is an introductory sequence that helps students begin to develop the skills, knowledge, and confidence to solve computational problems elegantly, correctly, efficiently, and with ease. The sequence is unique in teaching both the functional and imperative programming paradigms—the first through the languages Scheme and ML in CSCI0170; the second through Java in CSCI0180. The sequence requires no previous programming experience. Indeed, few high school students are exposed to functional programming; hence even students with previous programming experience often find this sequence an invaluable part of their education.
Although students are taught to use programming languages as tools, the goal of CSCI0170/0180 is not merely to teach programming, On

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 16255 MWF 10:00-10:50(14) "To Be Arranged"
Fall CSCI0180 S01 21520 MWF 11:00-11:50(04) (P. Klein)

CSCI 0170. Computer Science: An Integrated Introduction.
A continuation of CSCI 0170. Students learn to program in Java while continuing to develop their algorithmic and analytic skills. Emphasis is placed on object-oriented design, imperative programming, and the implementation and use of data structures. Examples are drawn from such areas as databases, strategy games, web programming, graphical user interfaces, route finding, and data compression. Lab work done with the assistance of TAs. Prerequisite: CSCI 0170.

CSCI 0190. Accelerated Introduction to Computer Science.
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 gently 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.

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 algebra, logic, set theory, elements of algebraic structures, graph theory, combinatorics, and probability. No prerequisites.

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.

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.

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.

CSCI 0931. Introduction to Computation for the Humanities and Social Sciences.
Introduces students to the use of computation for solving problems in the social sciences and the humanities. We will investigate a series of real-world problems taken from the news, from books such as Freakonomics, and from current research. Topics covered include data gathering, 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/1qiv9SC_KmB_yeP55SWbdYLicyJx_nCCz27xB3-391U-W4/viewform to be added to the waitlist. You must use your Brown login to access the waitlist; requests to gain access to non-Brown addresses will be ignored.

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.

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.

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.

CSCI 1260. 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.

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.

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.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 16265 TTh 1:00-2:20(10) (J. Huang)

This course covers all aspects of web application development, including the initial concept, user-centric design, development methodologies, front and back end development, databases, security, testing, load testing, accessibility, and deployment. There will be a substantial team project. The course is designed for students with a programming background (equiv CSCI 0320/CSCI 0330) who want to learn how to build web applications, and for students with a background in web design, including HTML and Javascript, who are interested in learning how to extend design techniques to incorporate the technologies needed in modern web applications. Project teams will consist of students with both backgrounds.

Spr CSCI1320 S01 25125 MWF 10:00-10:50(03) (S. Reiss)

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, fault tolerance, 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 25126 TTh 10:30-11:50(09) (T. Doepner)

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 25135 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. Particular topics include: language modeling (as used in e.g., speech recognition, machine translation), machine translation, part-of-speech labeling, syntactic parsing, and pronoun resolution. Mathematical techniques include basic probability, noisy channel models, the EM (Expectation-Maximization) algorithm, hidden Markov models, probabilistic context-free grammars, and the forward-backward algorithm. Not open to first year students.

Spr CSCI1460 S01 25136 MWF 2:00-2:50(07) (E. Charniak)

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 25137 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 16266 MWF 1:00-1:50(06) (P. Valiant)

CSCI 1620 is a half-credit laboratory course intended to be taken concurrently with CSCI 1660 and provides students with a deeper understanding of the material by doing additional assignments, which include extensions of the 1660's assignments. Instructor permission required.

Spr CSCI1620 S01 25141 Arranged (R. Tamassia)

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 25138 MWF 1:00-1:50(08) (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 25139 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 0310 or consent of instructor.

Fall CSCI1680 S01 16267 TTh 10:30-11:50(13) (R. Fonseca)

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 25140 Arranged (T. Doepner)

CSCI 1730. Design and Implementation of Programming Languages.
Explores the principles of modern programming languages by implementation. Examines linguistic features, especially control operators such as 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 16268 MWF 11:00-11:50(02) (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 16269 TTh 1:00-2:20(10) (J. Hryciuk)

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 WRIT

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

<table>
<thead>
<tr>
<th>Code</th>
<th>CRN</th>
<th>Days</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spr CSCI1800 S01</td>
<td>25142</td>
<td>MW</td>
<td>3:00-4:20(14)</td>
<td>(J. Savage)</td>
</tr>
</tbody>
</table>

### CSCI 1820. Algorithmic Foundations of Computational Biology

The course is devoted to computational and statistical methods as well as software tools for DNA, RNA, and protein sequence analysis. The focus is on understanding the algorithmic and mathematical foundations of the methods, the design of associated genomics software tools, as well as on their applications. Topics include: sequence alignment, genome assembly, gene prediction, regulatory genomics, and SNP's variation. The course is open to computer and mathematical sciences students as well as biological and medical students.

**Prerequisites:** CSCI 0160, CSCI 0180, or CSCI 0190. One of CSCI 0330 or CSCI 0320 strongly recommended.

<table>
<thead>
<tr>
<th>Code</th>
<th>CRN</th>
<th>Days</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spr CSCI1820 S01</td>
<td>25144</td>
<td>TTh</td>
<td>2:30-3:50(11)</td>
<td>(S. Istrail)</td>
</tr>
</tbody>
</table>

### CSCI 1950T. Advanced Animation Production

Students will apply knowledge and skills gained in previous animation courses to produce a high quality short animated film as a group. Production will follow the industry standard pipeline that includes modeling, texturing, lighting, animating, rendering, and post production. Interested students will perform preproduction story and concept design prior to beginning of course. Prerequisite: CSCI 1250. Enrollment limited to 15. Instructor permission required.

<table>
<thead>
<tr>
<th>Code</th>
<th>CRN</th>
<th>Days</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall CSCI1950T S01</td>
<td>16262</td>
<td>Arranged</td>
<td>(B. Meier)</td>
<td></td>
</tr>
</tbody>
</table>

### CSCI 1950Y. Logic for Systems

The course will focus on proving properties about systems and programs. We will study the distinction between programs and specifications, and check for whether the former obey the latter. We will work with tools that have extensive automation such as model constructors, model checkers, and proof assistants. Problems and projects will apply to real-world systems. Prerequisite: CSCI 0160, CSCI 0180, or CSCI 0190. Preferred but not required: CSCI 0220 and CSCI 0510, or instructor's permission.

<table>
<thead>
<tr>
<th>Code</th>
<th>CRN</th>
<th>Days</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spr CSCI1950Y S01</td>
<td>25145</td>
<td>MWF</td>
<td>11:00-11:50(04)</td>
<td>(T. Nelson)</td>
</tr>
</tbody>
</table>

### CSCI 1951A. Data Science

Mastering big data requires skills spanning a variety of disciplines: distributed systems over statistics, machine learning, and a deep understanding of a complex ecosystem of tools and platforms. Data Science refers to the intersection of these skills and how to transform data into actionable knowledge. This course provides an overview of techniques and tools involved and how they work together: SQL and NoSQL solutions for massive data management, basic algorithms for data mining and machine learning, information retrieval techniques, and visualization methods.

**Prerequisites:** CSCI 0160, CSCI 0180, or CSCI 0190. One of CSCI 0330 or CSCI 0320 strongly recommended.

<table>
<thead>
<tr>
<th>Code</th>
<th>CRN</th>
<th>Days</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spr CSCI1951A S01</td>
<td>25147</td>
<td>TTh</td>
<td>9:00-10:20(08)</td>
<td>(T. Kraska)</td>
</tr>
</tbody>
</table>

### 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.

<table>
<thead>
<tr>
<th>Code</th>
<th>CRN</th>
<th>Days</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spr CSCI2240 S01</td>
<td>25149</td>
<td>MWF</td>
<td>11:00-11:50(04)</td>
<td>(J. Hughes)</td>
</tr>
</tbody>
</table>

### CSCI 1973. Independent Study: Introduction to Computer Systems

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.

<table>
<thead>
<tr>
<th>Code</th>
<th>CRN</th>
<th>Days</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spr CSCI2270 S01</td>
<td>25148</td>
<td>M</td>
<td>3:00-5:30(13)</td>
<td>(S. Zdonik)</td>
</tr>
</tbody>
</table>

### CSCI 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.

<table>
<thead>
<tr>
<th>Code</th>
<th>CRN</th>
<th>Days</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall CSCI2450 S01</td>
<td>14719</td>
<td>Arranged</td>
<td>'To Be Arranged'</td>
<td></td>
</tr>
<tr>
<td>Fall CSCI2450 S01</td>
<td>23814</td>
<td>Arranged</td>
<td>'To Be Arranged'</td>
<td></td>
</tr>
</tbody>
</table>

### CSCI 2590. Advanced Topics in Cryptography

Seminar-style course on advanced topics in cryptography. Example topics are zero-knowledge proofs, multi-party computation, extractors in cryptography, universal compositability, anonymous credentials and ecash, interplay of cryptography and game theory. May be repeated for credit. Prerequisite: CSCI 1510 or permission of the instructor.

<table>
<thead>
<tr>
<th>Code</th>
<th>CRN</th>
<th>Days</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spr CSCI2590 S01</td>
<td>25150</td>
<td>TTh</td>
<td>10:30-11:30(09)</td>
<td>(A. Lysyanskaya)</td>
</tr>
</tbody>
</table>

### 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.

<table>
<thead>
<tr>
<th>Code</th>
<th>CRN</th>
<th>Days</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall CSCI2890 S01</td>
<td>14719</td>
<td>Arranged</td>
<td>'To Be Arranged'</td>
<td></td>
</tr>
</tbody>
</table>

### CSCI 2950K. Special Topics in Computational Linguistics

Every year will cover a different topic in computational linguistics, from a statistical point of view, including parsing, machine translation, conference summarization, etc. Prerequisites: CSCI 1460 or permission of the instructor.

<table>
<thead>
<tr>
<th>Code</th>
<th>CRN</th>
<th>Days</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall CSCI2950K S01</td>
<td>16270</td>
<td>MWF</td>
<td>2:00-2:50(07)</td>
<td>(E. Charniak)</td>
</tr>
</tbody>
</table>

### 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.

<table>
<thead>
<tr>
<th>Code</th>
<th>CRN</th>
<th>Days</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall CSCI2951E S01</td>
<td>16271</td>
<td>M</td>
<td>3:00-5:30(15)</td>
<td>(R. Tamassia)</td>
</tr>
</tbody>
</table>

### 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.

<table>
<thead>
<tr>
<th>Code</th>
<th>CRN</th>
<th>Days</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spr CSCI2951K S01</td>
<td>25151</td>
<td>TTh</td>
<td>1:00-2:20(10)</td>
<td>(S. Tellex)</td>
</tr>
</tbody>
</table>

### 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 CSL2951N S01 16272 TTh 2:30-3:50(03) (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 14720 Arranged 'To Be Arranged'
Spr CSCI2990 S01 23815 Arranged 'To Be Arranged'

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

Development Studies

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

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

Fall DEVL2990 S01 14721 Arranged 'To Be Arranged'
Spr DEVL2990 S01 23816 Arranged 'To Be Arranged'

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

Early Cultures

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

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 15433 MWF 9:00-9:50(01) 'To Be Arranged'
Fall CHIN0100 S01 15433 TTh 9:00-10:20(01) 'To Be Arranged'
Fall CHIN0100 S02 15434 MWF 10:00-10:50(14) 'To Be Arranged'
Fall CHIN0100 S02 15434 TTh 10:30-11:50(14) 'To Be Arranged'
Fall CHIN0100 S03 15448 MWF 1:00-1:50(06) 'To Be Arranged'
Fall CHIN0100 S03 15448 TTh 1:00-2:20(06) 'To Be Arranged'
Fall CHIN0100 S04 15454 MWF 2:00-2:50(07) 'To Be Arranged'
Fall CHIN0100 S04 15454 TTh 2:30-3:50(07) 'To Be Arranged'

CHIN 0200. Basic Chinese.
A year-long introduction to Standard Chinese (Mandarin). Speaking, reading, writing, and grammar. Five classroom meetings weekly. This is the second half of a year-long course. Students must have taken CHIN 0100 to receive credit for this course. The final grade for this course will become the final grade for CHIN 0100. If CHIN 0100 was taken for credit then this course must be taken for credit; if taken as an audit, this course must also be taken as an audit. Exceptions to this policy must be approved by both the academic department and the Committee on Academic Standing.

Spr CHIN0200 S01 24160 MWF 9:00-9:50(02) 'To Be Arranged'
Spr CHIN0200 S01 24160 TTh 9:00-10:20(02) 'To Be Arranged'
Spr CHIN0200 S02 24161 MWF 10:00-10:50(03) 'To Be Arranged'
Spr CHIN0200 S02 24161 TTh 10:30-11:50(03) 'To Be Arranged'
Spr CHIN0200 S03 24175 MWF 1:00-1:50(06) 'To Be Arranged'
Spr CHIN0200 S03 24175 TTh 1:00-2:20(06) 'To Be Arranged'
Spr CHIN0200 S04 24181 MWF 2:00-2:50(07) 'To Be Arranged'
Spr CHIN0200 S04 24181 TTh 2:30-3:50(07) 'To Be Arranged'

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

Fall CHIN0300 S01 15442 MWF 12:00-12:50(12) 'To Be Arranged'
Fall CHIN0300 S01 15442 TTh 12:00-12:50(12) 'To Be Arranged'
Fall CHIN0300 S02 15449 MWF 1:00-1:50(06) 'To Be Arranged'
Fall CHIN0300 S02 15449 TTh 1:00-2:20(06) 'To Be Arranged'
Fall CHIN0300 S03 15455 MWF 2:00-2:50(07) 'To Be Arranged'
Fall CHIN0300 S03 15455 TTh 2:30-3:50(07) 'To Be Arranged'

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

Spr CHIN0400 S01 24171 MWF 12:00-12:50(05) 'To Be Arranged'
Spr CHIN0400 S01 24171 TTh 12:00-12:50(05) 'To Be Arranged'
Spr CHIN0400 S02 24176 MWF 1:00-1:50(06) 'To Be Arranged'
Spr CHIN0400 S02 24176 TTh 1:00-2:20(06) 'To Be Arranged'
Spr CHIN0400 S03 24182 MWF 2:00-2:50(07) 'To Be Arranged'
Spr CHIN0400 S03 24182 TTh 2:30-3:50(07) 'To Be Arranged'

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

Fall CHIN0500 S01 15420 MWF 9:00-9:50(01) 'To Be Arranged'
Fall CHIN0500 S01 15420 TTh 9:00-10:20(01) 'To Be Arranged'
Fall CHIN0500 S02 15438 TTh 10:30-11:50(02) 'To Be Arranged'
Fall CHIN0500 S02 15438 MWF 11:00-11:50(02) 'To Be Arranged'
Fall CHIN0500 S03 15445 MWF 12:00-12:50(12) 'To Be Arranged'
Fall CHIN0500 S03 15445 TTh 2:30-3:50(12) 'To Be Arranged'

CHIN 0600. Advanced Modern Chinese II.
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 24157 MWF 9:00-9:50(02) 'To Be Arranged'
Spr CHIN0600 S01 24157 TTh 9:00-10:20(02) 'To Be Arranged'
Spr CHIN0600 S02 24165 TTh 10:30-11:50(04) 'To Be Arranged'
Spr CHIN0600 S02 24165 MWF 11:00-11:50(04) 'To Be Arranged'
Spr CHIN0600 S03 24172 MWF 12:00-12:50(05) 'To Be Arranged'
Spr CHIN0600 S03 24172 TTh 2:30-3:50(05) 'To Be Arranged'

CHIN 0700. Advanced Modern Chinese III.
This course is designed to enhance the Chinese proficiency of those who have taken Advanced Modern Chinese I (CHIN 0600) or the equivalent. All four language skills are emphasized through selected authentic materials. At the end of the year, students should be able to express their ideas with sophistication and nuance. Drills on complex sentence patterns will be

For up-to-date course information please visit Courses@Brown.edu (https://cabs.brown.edu).
conducted when necessary. Prerequisite: CHIN 0600 or permission of instructor.

Fall CHIN0700 S01 15435 MWF 10:00-10:50(14) (L. Hu)
Fall CHIN0700 S01 15435 TTh 10:30-11:50(14) (L. Hu)
Fall CHIN0700 S02 15441 MWF 12:00-12:50(12) (L. Hu)
Fall CHIN0700 S02 15441 TTh 12:00-12:50(12) (L. Hu)

CHIN 0800. Advanced Modern Chinese II
See Advanced Modern Chinese II (CHIN 0700) for course description. Prerequisite: CHIN 0700 or permission of instructor.

Spr CHIN0800 S01 24162 MWF 10:00-10:50(03) (L. Hu)
Spr CHIN0800 S02 24162 TTh 10:30-11:50(03) (L. Hu)
Spr CHIN0800 S02 24169 MWF 12:00-12:50(05) (L. Hu)
Spr CHIN0800 S02 24169 TTh 12:00-12:50(05) (L. Hu)

CHIN 0910C. Introduction to Modern Chinese Prose
Students will pursue their ability to appreciate and use various Chinese writing styles by reading and analyzing modern Chinese prose classics. Classes include lecture, discussion and group or individual presentations. By the end of the semester, students will be familiar with the development of modern Chinese prose, understand the language and meaning of each text, be comfortable with different writing styles and techniques, and have a deeper understanding of Chinese thought, society, and culture via the writers and their masterpieces. Conducted in Mandarin Chinese; designed for students with advanced language skills. Prerequisites: CHIN 0800 or the equivalent.

Spr CHIN0910C S01 24191 TTh 2:30-3:50(11) (H. Tseng)

CHIN 0920B. Classical Chinese
This course aims to build on basic knowledge of reading Classical Chinese grammar, syntax, and vocabulary. The class will use modern Chinese (Mandarin) to discuss classical texts. Readings are original works of prose and poetry dating from the 2nd to 12th century CE. Prerequisite: CHIN 0910B. Instructor permission required.

Fall CHIN0920B S02 16045 TTh 1:00-2:20(13) (W. Chen)

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

Fall CHIN0920E S01 16536 TTh 10:30-11:50(13) (L. Hu)

CHIN 1040. Modern Chinese Literature.
Introduces students to the most representative writers in 20th century China. Emphasizes textual and historical analyses. Major issues include Westernization, nationalism, revolution, class, gender, and literary innovations. Designated primarily as a literature course, rather than language class, and conducted entirely in Mandarin Chinese. Prerequisite: CHIN 0800. Instructor permission required.

Fall CHIN1040 S01 15261 TTh 1:00-2:20(10) (L. Wang)

CHIN 1910. Independent Study
Reading materials for research in Chinese. Sections numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Fall CHIN2450 S01 14711 Arranged "To Be Arranged"

East Asian Studies

An introduction to major and minor works of Japanese literature produced during the Japanese Empire as well as in post-WWII Japan. Covered writers include canonical novelists such as Tanizaki Junichiro, Kawabata Yasunari, and Oe Kenzaburo, as well as writers lesser known outside of Japan today, including women, queers, revolutionaries and colonial/resident Koreans. DPLL LILE

Fall EAST1012 S01 15371 TTh 2:30-3:50(03) (K. Yamashita)

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

Fall EAST1030 S01 16346 MWF 1:00-1:50(06) "To Be Arranged"

EAST 1070. China Modern: An Introduction to the Literature of Twentieth-Century China.
A general introduction to modern and contemporary Chinese literature from the May Fourth Movement to contemporary Taiwan and the People's Republic of China. Emphasizes reading of literary works in relation to topics such as cultural tradition, modernity, nationalism, revolution, class, gender, region, cultural commodification, and literary innovations. Readings in English. No previous knowledge of Chinese required. LILE

Fall EAST1070 S01 15241 TTh 2:30-3:50(03) (L. Wang)

EAST 1200. Pop, Political and Patrician: Culture in Japan and the Koreas.
This course introduces students to the modern cultures of Japan and Korea through an examination of events, artifacts, and cultural practices. The over-arching goal of the class is two-fold: to create an alternative narrative to the dominant Orientalized vision of East Asian culture and to deepen our knowledge of the overlapping cultural histories of Japan and Korea. With a broad understanding of culture as a general process of artistic and intellectual development, as a body of material artifacts, and as a social practice of ordinary life, we shall focus our attention on the implications of studying culture in relation to popular media and political activism in particular. Topics covered will include: colonial fiction, the recreation of tradition, art and atrocity, the proletarian arts, postwar children's culture, the globalization of popular music, myth, shojō print culture, and East Asian activism.

Spr EAST1200 S01 24192 TTh 1:00-2:20(10) (S. Perry)

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.

Spr EAST1270 S01 24188 TTh 2:30-3:50(11) (L. Wang)

EAST 1500. Returnees in China's Modernization.
This course examines the impact on contemporary China of returnees, people who have 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 24189 TTh 4:00-6:30(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

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
be to understand the manner by which the written script has become so central to the development of Chinese civilization.

Fall EAST1510 S01 15234 T 4:00-6:30(09) (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 1950M. Critical Approaches to China.
This co-taught seminar introduces students to some of the basic interdisciplinary research tools and methodologies for the study of China. Core texts will be drawn from the ancient through contemporary periods, organized around broad themes (e.g., Classics, gender, globalization). Students from all disciplines are welcome. Some knowledge of modern or classical Chinese desirable. LILE

Spr EAST1950M S01 24817 W 3:00-5:30(14) (L. Wang)

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 (shanshuǐ) and field and garden (tiányuán) poetry of the 6 Dynasties, and the flowering of the shī 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 24186 M 3:00-5:30(13) "To Be Arranged"

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 EAST1950X S01 24190 Th 4:00-6:30(17) (S. Perry)

EAST 1951A. Prose of the World: Understanding Late Imperial China through Fiction and Belles-Lettres.
This course introduces the culture and society of late imperial China through fiction and prose written between 1368 and 1911. The course aims to analyze literary work as the interface of social development and cultural renovation. A chronological exposure to various geographical regions is structured under three conceptual frameworks: cultural belatedness as abundant historical reference; early modernity as commercialization; and pre-modern China encountering the world. The balanced selection of readings in four major literary genres, written by male and female authors, cover topics including: social uprising, the imperial court, civil examination, diplomacy, urban market, travel, religious cult, and courtesan culture. Prerequisites: None. DPLL

Fall EAST1951A S01 16344 W 3:00-5:30(17) "To Be Arranged"

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.

Japanese

JAPN 0100. Basic Japanese.
Introduction to Japanese language. Emphasizes the attainment of good spoken control of Japanese and develops a foundation of literacy. No prerequisites. This is the first half of a year-long course whose first semester grade is normally a temporary one. Neither semester may be elected independently without special written permission. The final grade submitted at the end of the course work in JAPN 0200 covers the entire year and is recorded as the final grade for both semesters. The East Asian Studies department wishes to provide language instruction to all interested students. If you are unable to register for this course due to enrollment limits but are dedicated to learning Japanese, please contact the instructor via email.

Fall JAPN0100 S01 15423 MFV 9:00-9:50(01) (Y. Jackson)
Fall JAPN0100 S01 15423 Th 9:00-10:20(01) (Y. Jackson)
Fall JAPN0100 S02 15436 MFV 10:00-10:50(14) (Y. Jackson)
Fall JAPN0100 S02 15436 Th 10:30-11:50(14) (Y. Jackson)
Fall JAPN0100 S03 15451 MFV 1:00-1:50(06) (Y. Jackson)
Fall JAPN0100 S03 15451 Th 1:00-2:20(06) (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. Prerequisites: 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 15450 MFV 11:00-11:50(02) (K. Yamashita)
Fall JAPN0150 S01 15450 Th 9:00-10:20(02) (K. Yamashita)

JAPN 0200. Basic Japanese.
Introduction to Japanese language. Emphasizes the attainment of good spoken control of Japanese and develops a foundation of literacy. This is the second half of a year-long course. Students must have taken JAPN 0100 to receive credit for this course. The final grade for this course will become the final grade for JAPN 0100. If JAPN 0100 was taken for credit then this course must be taken for credit; if taken as an audit, this course must also be taken as an audit. Exceptions to this policy must be approved by both the academic department and the Committee on Academic Standing. The East Asian Studies department wishes to provide language instruction to all interested students. If you are unable to register for this course due to enrollment limits but are dedicated to learning Japanese, please contact the instructor via email.

Spr JAPN0200 S01 24158 MFV 9:00-9:50(02) (Y. Jackson)
Spr JAPN0200 S02 24158 Th 9:00-10:20(02) (Y. Jackson)
Spr JAPN0200 S02 24163 MFV 10:00-10:50(03) (Y. Jackson)
Spr JAPN0200 S02 24163 Th 10:30-11:50(03) (Y. Jackson)
Spr JAPN0200 S03 24177 MFV 1:00-1:50(06) "To Be Arranged"
Spr JAPN0200 S03 24177 Th 1:00-2:20(06) "To Be Arranged"

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.

Spr JAPN0250 S01 24168 MFV 11:00-11:50(04) (K. Yamashita)
Spr JAPN0250 S01 24168 Th 9:00-10:20(04) (K. Yamashita)

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

Fall JAPN0300 S01 15439 MWF 11:00-11:50(02) (H. Tajima)
Fall JAPN0300 S02 15446 TTh 12:00-12:50(12) (H. Tajima)

See Intermediate Japanese (JAPN 0300) for course description. Prerequisite: JAPN 0300 or equivalent. Enrollment limited to 18.
Spr JAPN0400 S01 24166 TTh 8:00-8:50(02) "To Be Arranged"
Spr JAPN0400 S01 24166 MWF 9:00-9:50(02) "To Be Arranged"
Spr JAPN0400 S02 24173 MWF 12:00-12:50(05) "To Be Arranged"
Spr JAPN0400 S02 24173 TTh 12:00-12:50(05) "To Be Arranged"

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.
Fall JAPN0500 S01 15437 TTh 12:00-12:50(14) "To Be Arranged"
Fall JAPN0500 S01 15437 MWF 10:00-10:50(14) "To Be Arranged"

JAPN 0600. Advanced Japanese I.
See Advanced Japanese I (JAPN 0500) for course description.
Spr JAPN0600 S01 24164 TTh 12:00-12:50(03) "To Be Arranged"
Spr JAPN0600 S01 24164 MWF 10:00-10:50(03) "To Be Arranged"

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.
Fall JAPN0700 S01 15456 MWF 2:00-2:50(07) (H. Tajima)

JAPN 0800. Advanced Japanese II.
See Advanced Japanese II (JAPN 0700) for course description.
Spr JAPN0800 S01 24183 MWF 2:00-2:50(07) (H. Tajima)

JAPN 1010. Readings in Contemporary Japanese Fiction.
Introduces contemporary short stories and novellas by award winning writers published after 2000. Authors include Yoko Ogawa, Natsuo Kirino, Jiro Asada, Bin Konno. We will analyze why the great many readers are drawn into these literary works through socio cultural background of urban communities. Prerequisites: JAPN0700 or instructor permission.
Spr JAPN1010 S01 24248 M 3:00-5:50(15) (K. Yamashita)

Introduces a linguistic analysis of Japanese language to attain an overview of structure and a foundation for understanding how grammar relates to various modes of communication. Topics include discourse analysis, pragmatics, communicative intention, communication strategies, and intercultural communication gaps. Linguistic data is drawn from films and fiction. Prerequisite: basic knowledge of Japanese grammar, vocabulary, and linguistics. Enrollment limited to 20. WRIT.
Fall JAPN1310 S01 15233 M 3:00-5:50(15) (K. Yamashita)

JAPN 1910. Independent Study.
Reading materials for research in Japanese. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Korean
KREA 0100. Korean.
Begin with an introduction to the Korean writing system (Hangul) and focuses on building communicative competence in modern Korean in the four language modalities (listening, speaking, reading, writing). Provides a foundation for later work in spoken and written Korean. Six classroom hours per week. No prerequisite. Enrollment limited to 18. This is the first half of a year-long course whose first semester grade is normally a temporary one. Neither semester may be elected independently without special written permission. The final grade submitted at the end of the course work in KREA 0200 covers the entire year and is recorded as the final grade for both semesters.
Fall KREA0100 S01 15432 MWF 9:00-9:50(01) "To Be Arranged"
Fall KREA0100 S02 15437 TTh 9:00-10:20(01) "To Be Arranged"
Fall KREA0100 S02 15447 MWF 12:00-12:50(12) "To Be Arranged"
Fall KREA0100 S02 15447 TTh 12:00-12:50(12) "To Be Arranged"

KREA 0200. Korean.
Begin with an introduction to the Korean writing system (Hangul) and focuses on building communicative competence in modern Korean in the four language modalities (listening, speaking, reading, writing). Provides a foundation for later work in spoken and written Korean. Six classroom hours per week. 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.
Fall KREA0200 S01 24159 MWF 9:00-9:50(02) "To Be Arranged"
Fall KREA0200 S02 24159 TTh 9:00-10:20(02) "To Be Arranged"
Fall KREA0200 S02 24174 MWF 12:00-12:50(05) "To Be Arranged"
Fall KREA0200 S02 24174 TTh 12:00-12:50(05) "To Be Arranged"

KREA 0300. Intermediate Korean.
An intermediate course in Korean designed to further communicative competence in spoken Korean and to provide additional reading practice in stylistically higher level materials that are progressively integrated into the given dialogues. Discussions on various aspects of Korean culture and society. Four classroom hours per week. Prerequisite: KREA 0200 or instructor permission.
Fall KREA0300 S01 15440 MWF 11:00-11:50(02) "To Be Arranged"
Fall KREA0300 S01 15440 TTh 10:30-11:50(02) "To Be Arranged"

See Intermediate Korean (KREA 0300) for course description. Prerequisite: KREA 0100-0200 or equivalent.
Spr KREA0400 S01 24167 MWF 11:00-11:50(04) "To Be Arranged"
Spr KREA0400 S01 24167 TTh 10:30-11:50(04) "To Be Arranged"

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 15452 MWF 1:00-1:50(06) "To Be Arranged"

KREA 0600. Advanced Korean.
See Advanced Korean (KREA 0500) for course description. Prerequisite: KREA 0500 or equivalent or permission of instructor.
Spr KREA0600 S01 24178 MWF 1:00-1:50(06) "To Be Arranged"

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 Korea, students enhance their speaking competence and cultural understanding. Prerequisites: KREA 0300 and 0400 or permission of instructor. Enrollment limited to: 15.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Section</th>
<th>Type</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spr KREA0920A S01</td>
<td>24193</td>
<td>TTh</td>
<td>1:00-2:20(10)</td>
<td>(H. Wang)</td>
</tr>
</tbody>
</table>

**KREA 0920D. The Korean Vision: A Debate.**
The contemporary Korean society has undergone significant transformation in the past few decades, not only on the personal level, such as changes in personal life style and family structure, but also on the public level, such as economic development and political affairs. Various issues due to these changes have sparked a much heated debate within Korean society. This course will look into some of these major controversial issues with texts and media materials. Through this content-oriented advanced level language course, students will be able to improve their Korean language proficiency, as well as deepen their understanding of Korean culture and society. Prerequisite: KREA 0600. Enrollment limit to 18. Will replace current KREA 0900 course in schedule for Fall 2016.

Fall KREA0920COS1 16575 TTh 1:00-2:20(10) (H. Wang)

### ECON 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.

### Economics

**ECON 0110. Principles of Economics.**
Exhaustive 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 ECON1110 S01 15009 MWF 9:00-9:50(01) (R. Friedberg)
Spr ECON1110 S01 24326 MWF 9:00-9:50(02) (R. Friedberg)

**ECON 0180D. The Power of Data (and its Limits).**
Open any newspaper, any magazine, any academic journal, you'll find claims which rely on data. Government policies, economic data, health recommendations – all of these are based on some underlying data analysis. Data used in this context has enormous power, but it also has limits. Understanding these limits is key to using – but not mis-using – the power of data.

This first-year seminar will focus on understanding where data comes from, what we can learn from it, and what the limitations are. The course will emphasize policy-relevant economic and public health applications.

Fall ECON0180CS01 15595 TTh 2:30-3:20(03) (E. Oster)

**ECON 0510. Development and the International Economy.**
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 24385 MWF 11:00-11:50(04) (L. Putterman)

**ECON 0710. Financial Accounting.**
Basic accounting theory and practice. Accounting procedures for various forms of business organizations.

Fall ECON0710 S01 15038 MWF 6:00-7:20 (R. D’Andrea)
Fall ECON0710 S02 15039 TTh 6:00-7:20 (T. Lonardo)
Spr ECON0710 S01 24347 MWF 6:00-7:30 (R. D’Andrea)
Spr ECON0710 S02 24348 TTh 6:00-7:30 (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 15040 TTh 2:30-3:50(03) (D. Brenner)
Fall ECON1110 S02 15041 MWF 10:00-10:50(14) (L. Barrage)
Fall ECON1110 S03 15042 MWF 2:00-2:50(07) (L. Barrage)
Spr ECON1110 S01 24349 TTh 9:00-10:20(03) (J. Fanning)
Spr ECON1110 S02 24350 MWF 9:00-9:50(02) (P. Dal Bo)
Spr ECON1110 S03 24351 TTh 2:30-3:50(11) (R. Vohra)
Spr ECON1110 S04 25226 MWF 11:00-11:50(04) (D. Brenner)

**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 15043 MWF 10:00-10:50(14) "To Be Arranged"
Spr ECON1130 S01 24368 TTh 1:00-2:20(10) (R. Serrano)

**ECON 1170. Welfare Economics and Social Choice Theory.**
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 coalitional stability properties of markets, as well as other mechanisms to allocate resources. Market failures are discussed, including advanced treatments of externalities, public goods, and asymmetric information. The second part of the course will discuss a number of topics in social choice theory, including different normative criteria of compensation, life and death choices, majority voting, Arrow’s impossibility theorem.

Fall ECON1170 S01 16323 TTh 1:00-2:20(10) (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 15044 MWF 2:00-2:50(07) "To Be Arranged"
Fall ECON1210 S02 15045 MWF 11:00-11:50(02) "To Be Arranged"
Fall ECON1210 S03 15046 TTh 10:30-11:50(13) "To Be Arranged"
Spr ECON1210 S01 24352 MWF 9:00-9:50(02) (S. Michalopoulou)
Spr ECON1210 S02 24353 MWF 10:00-10:50(03) (S. Michalopoulou)
Spr ECON1210 S03 24354 TTh 1:00-2:20(10) "To Be Arranged"

**ECON 1225. Advanced Macroeconomics: Monetary, Fiscal, and Stabilization Policies.**
The course is concerned with macroeconomic policy in the United States, with special focus on the recent economic crisis. The main objective of the course is to introduce students to the type of models and methods used in current research in macroeconomics both in the scholarly literature but also in the practice of central banks and major policy institutions.

Events of the financial crisis and the economic recession of 2007-2009 will serve to illustrate the challenges confronted by macroeconomic analysis.

Prerequisites: ECON 1110 or 1130; and MATH 0090, 0100, 0170, 0180, 0190, 0200, or 0350; or advanced placement. Enrollment limited to 30.

Fall ECON1225 S01 16366 T 4:00-6:30(09) (G. Eggertsson)

**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.

Spr ECON1301 S01 24942 TTh 9:00-10:20(08) (J. Tyler)

**ECON 1310. Labor Economics.**
Labor supply, human capital, income inequality, discrimination, immigration, unemployment. Prerequisite: ECON 1110 or 1130; and APMA 1650 or CSI 1450 or ECON 1620 or 1630. Enrollment limited to 100.

DPL Spr ECON1310 S01 25204 TTh 9:00-10:20(08) (K. Chay)

**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 24382 T 4:00-6:30(16) (A. Aizer)

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 15591 TTh 9:00-10:20(08) (J. Shapiro)

ECON 1410. Urban Economics.
The first part of the course covers the set of conceptual and mathematical models widely used to understand economic activity both between and within cities. The second part of the course examines various urban policy issues including urban transportation, housing, urban poverty, segregation and crime. The course makes extensive use of empirical evidence taken primarily from the United States. Prerequisites: ECON 1110 or 1130; and APMA 1650 or CSCI 1450 or ECON 1620 or 1630. Enrollment limited to 100.
Spr ECON1410 S01 25206 MW 8:30-9:50(02) (M. Turner)

Bargaining theory is emerging as an important area within the general rubric of game theory. Emphasis is on providing a relatively elementary version of the theory in order to make it accessible to a large number of students. Covers introductory concepts in game theory, strategic and axiomatic theories of bargaining and their connections, applications to competitive markets, strikes, etc. Prerequisite: ECON 1110 or 1130. Enrollment limited to 100.
Fall ECON1470 S01 16284 TTh 1:00-2:20(10) (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 25227 TTh 1:00-1:50(06) (D. Brenner)

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 16369 MWF 1:00-1:50(06) "To Be Arranged"

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 25221 TTh 10:30-11:50(09) (A. Sautmann)

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. WRIT DPLL
Fall ECON1530 S01 16361 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 imperfect competition. Strategic trade policy. Trade, labor markets, preferential trade agreements, and the world trading systems. Prerequisite: ECON 1110 or 1130. Enrollment limited to 100.
Fall ECON1540 S01 15597 MWF 1:00-1:50(06) (J. Blaum)

ECON 1550. International Finance.
The balance of payments; identification and measurement of surpluses and deficits; international monetary standards; the role of gold and paper money; government policies; free versus fixed exchange rates; international capital movements; war and inflation; the International Monetary Fund. Prerequisite: ECON 1210. Enrollment limited to 100.
Spr ECON1550 S01 25228 MWF 2:00-2:50(07) "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 25225 TTh 2:30-3:50(11) "To Be Arranged"

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 15047 TTh 10:30-11:50(13) (A. McCloskey)
Spr ECON1620 S01 24355 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 (e.g., health, labor, political economy, urban economics, development, etc) that can be explored in greater detail in more advanced classes. Students will read and discuss papers published in professional journals and perform data analysis as part of the course requirements. Prerequisites: ECON 1110 or 1130; and ECON 1620 or 1630.
Fall ECON1629 S01 15054 MW 3:00-4:20(17) (D. Bjoerkengren)
Spr ECON1629 S01 24362 MW 3:00-4:20(14) (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 advanced placement; and ECON 1110 or 1130; and APMA 1650 or CSCI 1450, MATH 1620, or ECON 1620; or equivalent.
Fall ECON1630 S01 15058 TTh 1:00-2:20(10) (S. Schennach)
Spr ECON1630 S01 24375 MW 3:00-4:20(14) (A. Norets)

ECON 1640. Econometrics II.
Continuation of ECON 1630 with an emphasis on econometric modeling and applications. Includes applied topics from labor, finance, and macroeconomics. Prerequisite: ECON 1630. Enrollment limited to 100.
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.

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, 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.

ECON 1750. Investments II.
Individual securities: forwards, futures, options and basic derivatives, pricing conditions. Financial markets: main empirical features, equity premium and risk-free rate puzzles, consumption based asset pricing models, stock market participation, international diversification, and topics in behavioral finance. Prerequisites: ECON 1110 or 1130; ECON 1620 or 1630 or APMA 1650 or CSCI 1450; ECON 1710. Enrollment limited to 100.

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.

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 1710. Enrollment limited to 30 senior concentrators in Economics, BEO, Applied Math-Economics, Computer Science-Economics, and Math-Economics.

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.

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.

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.

Existence and efficiency of equilibria for a competitive economy; comparative statics; time and uncertainty. Prerequisite: ECON 1110 or 1130. Enrollment limited to 100.

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, or 0350, or advanced placement; and ECON 1620 or 1630 or APMA 1650 or CSCI 1450, or MATH 1610. Enrollment limited to 100.

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

Techniques of mathematical analysis useful in economic theory and econometrics. Linear algebra, constrained maximization, difference and differential equations, calculus of variations.

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.

ECON 2030. Introduction to Econometrics I.
The probabilistic and statistical basis of inference in econometrics. Fall ECON2030 S01 15064 MW 10:30-11:50 (E. Renault)

ECON 2040. Econometric Methods.
Applications of mathematical statistics in economics. The nature of economic observations, cross-section and time series analysis, the analysis of variance and regression analysis, problems of estimation. Spr ECON2040 S01 24371 MW 10:30-11:50 (A. Norets)
ECON 2050. Microeconomics I.
Decision theory: consumer's and producer's theory; general competitive equilibrium and welfare economics; the Arrow-Debreu-McKenzie model; social choice and implementation.
Fall ECON2050 S01 15070 TTh 1:00-2:20(10) (R. Vohra)

ECON 2060. Microeconomics II.
Economics of imperfect information: expected utility, risk and risk aversion, optimization under uncertainty, moral hazard, and self-selection problems. Economics of imperfect competition: monopoly; price discrimination; monopolistic competition; market structure in single shot, repeated and stage games; and vertical differentiation.
Spr ECON2060 S01 24372 MW 1:00-2:20 (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 15071 TTh 10:30-11:50(13) (O. Galor)

ECON 2080. Macroeconomics II.
Money, inflation, economic fluctuations and nominal rigidities, monetary and fiscal policy, investment, unemployment, and search and coordination failure.
Spr ECON2080 S01 24373 TTh 1:00-2:20(10) (G. Eggertsson)

ECON 2180. Game Theory.
Fall ECON2180 S01 16285 TTh 9:00-10:20(08) (J. Fanning)

ECON 2320. Economics of Labor and Population.
This course examines identification issues in empirical microeconomics. Focus on the sensible application of econometric methods to empirical problems in economics and policy research -- particularly labor and population economics. The course examines issues that arise when analyzing non-experimental data and provides a guide for tools that are useful for applied research. The course also emphasizes how a basic understanding of theory and institutions can help inform the analysis. By the end of the course, students should have a firm grasp of the types of research designs and methods that can lead to convincing analysis and be comfortable working with large-scale data sets.
Fall ECON2320 S01 15596 TTh 2:30-3:50(03) (E. Oster)

ECON 2330. Topics in Labor Economics.
The course introduces students to procedures used to extract evidence from data and to perform rigorous causal inference in order to evaluate public policy on issues such as schooling, the return to education and returns on late intervention programs. Econometric methods, such as Instrumental Variable, Matching, Control Functions, Self Selection Models and Discrete Choice as well as Panel Data Methods, are discussed in detail.
Spr ECON2330 S01 25205 TTh 1:00-2:20(10) (K. Chay)

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 25207 TTh 2:30-3:50(11) (M. Turner)

ECON 2450. Exchange Scholar Program.
Fall ECON2450 S01 14722 Arranged "To Be Arranged"
Spr ECON2450 S01 23817 Arranged "To Be Arranged"

ECON 2470. Industrial Organization.
The focus of this course will be on empirical models for understanding the interactions between firms and consumers in imperfectly competitive markets. Lectures and problem sets will teach canonical models and methods; class discussion will focus on applications of these methods, especially applications outside of traditional areas of industrial organization. Students who take this class will be prepared to conduct research in industrial organization or to "export" methods from industrial organization to other areas of applied microeconomics.
Spr ECON2470 S01 24377 TTh 1:00-3:30 (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 15589 TTh 1:00-2:20(10) (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 15583 TTh 10:30-11:50(13) (A. Sautmann)

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 24374 TTh 9:00-10:20(08) (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.
Fall ECON2530 S01 16347 MW 2:30-3:50 (L. Putterman)

ECON 2600. Bayesian and Structural Econometrics.
This course will cover a number of topics in Bayesian econometrics and estimation of structural dynamic discrete choice models. The Bayesian econometrics part of the course will start with introductory textbook material (Geweke, 2005, Contemporary Bayesian Econometrics and Statistics, denoted by G). A list of 11 topics with corresponding readings is given below. Topics 1-5 will be covered. If time permits, a subset of topics 6-11 determined by interests of the course participants will be covered as well. Readings marked with asterisk * are not required.
Fall ECON2600 S01 16376 MW 10:30-11:50 (A. Norets)

ECON 2630. Econometric Theory.
Standard and generalized linear models, simultaneous equations, maximum likelihood, Bayesian inference, panel data, nonlinear models, asymptotic theory, discrete choice, and limited dependent variable models.
Fall ECON2630 S01 16340 TTh 9:00-10:20(08) (S. Schennach)

ECON 2660. Recent Advances in the Generalized Method of Moments.
Method of Moments (GMM) and Empirical Likelihood (EL). Kernel methods for density and regression estimation. Optimal instruments and local EL. Applications to non-linear time series models, Euler equations and asset pricing.
Spr ECON2660 S01 24380 MW 2:30-3:50 (E. Renault)

ECON 2830. Dynamic Optimization and Economic Growth.
The role of human capital, income distribution, population growth, technological progress, and international trade in the determination of differences in growth performance across countries. Inequality and
economic growth. Technological progress and wage inequality. The transition from stagnation to sustained growth. Evolution and growth. Fall ECON2830 S01 16364 F 9:30-12:00 (O. Galar)

ECON 2890A. Topics in Macroeconomics, Development and Trade. This is a graduate class that covers selected topics at the intersection of macroeconomics, economic development and trade, for students in the second year of the PhD and above. The leading theme of the class is the determinants of the observed cross-country differences in income per capita and growth rates, with a focus on the long run. We start by reviewing theories where factor markets function perfectly and only aggregates matter. We then move to non-aggregative theories, placing special emphasis on theories of financial frictions. We spend some time studying the stochastic growth model with partially uninsurable idiosyncratic risk. Fall ECON2890S S01 16362 MW 2:30-3:50 (J. Blau)

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 14723 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 15226 MWF 11:00-11:50(02) (L. Speohr)

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 EDUC0410ES S01 25036 MW 8:30-9:50(02) 'To Be Arranged'

EDUC 0610. Brown v. Board of Education. 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 educational equality. 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 25040 MWF 9:00-9:50(02) 'To Be Arranged'

EDUC 0800. Introduction to Human Development and Education. Introduces the study of human development and education from infancy through young adulthood. Provides a broad overview of scientific understanding of how children develop and how research is generated in the field. Major topics include biological foundations, mind, cognition, language, emotion, social skills, and moral understanding based on developmental theories and empirical research. The educational implications of research on human development are discussed. Fall EDUC0800 S01 15807 MW 3:00-4:20(06) (Y. Yamamoto)

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 professionalization; 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 24049 TTh 10:30-11:50(09) (L. Speohr)

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 15271 M 3:00-5:30(15) (D. 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 25042 TTh 6:40-8:00PM(12) (K. Catone)

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 15277 Th 4:00-6:30(04) (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 16205 TTh 1:00-2:20(10) 'To Be Arranged'

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 15304 TTh 9:00-10:20(08) (R. Kantrowitz)

EDUC 1035. Decolonizing African Education: Student Activism and Social Change, 1960-present. After many African countries gained political independence in the 1960s, students and teachers sought to transform education. Although relatively few people were well-educated, those who were used their influence to demand social change. Reading work by anthropologists, historians, and African students’ own writings, we will examine the elements of the enduring colonial legacy, such as the language of instruction, and how Africans proposed curricular and structural reforms to “decolonize” education.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Open to students enrolled in semesters 3-8 or by permission of the instructor. DPLL
Spr EDUC1035 S01 25043 TTh 2:30-3:50(11) (R. Kantrowitz)

EDUC 1040. Sociology of Education.
The eclecstical 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.
Spr EDUC1040 S01 25453 10:00-10:50(03) 'To Be Arranged'

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 15224 TTh 10:30-11:50(13) (J. Papay)

EDUC 1070A. Student Teaching: English. S/NC.
Fall EDUC1070A S01 15228 Arranged (L. Snyder)
Spr EDUC1070A S01 24058 Arranged (L. Snyder)

EDUC 1070B. Student Teaching: History and Social Studies. S/NC.
Fall EDUC1070B S01 15278 Arranged (M. Gross)
Spr EDUC1070B S01 24069 Arranged (M. Gross)

EDUC 1070C. Student Teaching: Science. S/NC.
Fall EDUC1070C S01 15272 Arranged (D. Bisaccio)
Spr EDUC1070C S01 24065 Arranged (D. Bisaccio)

EDUC 1080A. Analysis of Teaching: English. S/NC.
Fall EDUC1080A S01 15230 W 4:30-7:00 (L. Snyder)
Spr EDUC1080A S01 24059 W 4:30-7:00 (L. Snyder)

EDUC 1080B. Analysis of Teaching: History and Social Studies. S/NC.
Fall EDUC1080B S01 15279 W 4:30-7:00 (M. Gross)
Spr EDUC1080B S01 24070 W 4:30-7:00 (M. Gross)

EDUC 1080C. Analysis of Teaching: Science. S/NC.
Fall EDUC1080C S01 15273 W 4:30-7:00 (D. Bisaccio)
Spr EDUC1080C S01 24066 W 4:30-7:00 (D. Bisaccio)

EDUC 1090. Adolescent Literature.
What are teens and tweens reading? What should they read? Do books that adults view as "trashy" ruin kids' literary sensibilities? Provide access to the wider world of academic discourse? How can reading adolescent literature provide adolescents with a path toward holding a reader identity?
This course will present a general overview of the historical, sociocultural, academic, and political issues that provide context for the use and availability of adolescent literature today. It presents a strong introduction to contemporary texts that interest adolescents inside and outside of the classroom. Particular attention is paid to issues of reading engagement for striving adolescent readers, issues of access to literacy through adolescent literature, ways that adolescent literature can be paired with the classics, and issues of censorship in American public school classrooms and public libraries. Students in this course will walk away with an understanding of the place of adolescent literature in today's debates as well as a background in choosing, reading, and analyzing the literature itself. Written assignments include weekly reading responses, an annotated bibliography, and a short, 3-5 page paper. There is a substantial amount of independent self-selected reading as well as one collaborative group project with a presentation.
Spr EDUC1090 S01 24055 M 3:00-5:30(13) (L. Snyder)

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 24074 M 3:00-5:30(13) (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 24053 TTh 1:00-2:20(10) (M. Kraft)

EDUC 1130. Economics of Education I.
How do we attract good teachers to public schools? What are the economic returns to early-childhood intervention programs? These are just two examples of important education policy questions. This course introduces key concepts of microeconomic theory and uses them to analyze these and other policy questions. Organized around a structured sequence of readings. First year students require instructor permission.
Spr EDUC1130 S01 24918 TTh 9:00-10:20(08) (J. Tyler)

Examines a century of efforts to improve schooling in the U.S., from John Dewey to Theodore Sizer and E.D. Hirsch, from "social efficiency" to charter schools and No Child Left Behind. How have these movements been affected by the historical contexts in which they operated? Have they produced any lasting results? How, if at all, should current reform movements be informed by the experiences of the past? Enrollment limited to 40.
Spr EDUC1200 S01 24048 W 11:00-11:50(04) (L. Spoehr)

EDUC 1270. Adolescent Psychology.
Provides systematic treatment of the psychological, biological, and sociocultural nature of the adolescent. Both an individual and a collective perspective on the nature of the adolescent and adolescence are used to provide an analytical and comprehensive understanding of the complex environment and psyche of the adolescent. Readings include theoretical and empirical papers from such areas as psychology, sociology, anthropology, and education.
Spr EDUC1270 S01 25508 MWF 1:00-1:50(06) 'To Be Arranged'

EDUC 1430. Social Psychology of Race, Class, and Gender.
Focuses on the social construction of race, class, and gender and how this construction influences an individual's perception of self and other individuals. Topics include identity development, achievement, motivation, and sociopolitical development. Enrollment limited to 30. WRIT
Fall EDUC1430 S01 15808 MWF 9:00-9:50(01) 'To Be Arranged'

EDUC 1450. The Psychology of Teaching and Learning.
Seeks both to demystify the process of teaching and to illuminate its complexities. Assists students with such questions as: What shall I teach? How shall I teach it? Will my students respond? What if I have a discipline problem? Focuses on the teaching-learning process and student behavior, as well as research, theory, and illustrations concerned with classroom applications of psychological principles and ideas. Prerequisites: EDUC 0800 or EDUC 1710. Enrollment limited to 50.
Fall EDUC1450 S01 16202 Th 4:00-5:30(04) 'To Be Arranged'

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
EDUC 1630. Strategic Management for School System Excellence. Despite expending significant energy on education reform in this country and globally, most efforts fail to achieve their lofty ambitions, due to their reliance on "silver bullet" strategies and/or poor execution. This course will focus on management approaches to improving school system performance, enabling students to (a) explore key education reform strategies; (b) adopt a senior management mindset throughout weekly discussion of case studies; and (c) broaden their perspective through use of domestic and global school system examples. The course is appropriate for juniors, seniors and graduate students, who bring an interest in education and a commitment to active classroom discussion. Enrollment limited to 24.
Fall EDUC1630 S01 15806 T 4:00-6:30(09) (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 bargain model, the organizational-bureaucratic model, and the "consumer choice" perspective. Enrollment limited to 20. WRIT
Fall EDUC1650 S01 16201 W 3:00-5:30(17) (K. Wong)

EDUC 1700. The Asian American Experience in Higher Education. This course is an interdisciplinary 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 16007 MW 8:30-9:50(01) (L. Cariglia-Lo)

EDUC 1740. Academic Freedom on Trial: A Century of Campus Controversies. Inside and outside the classroom—for professors, students, administrators, and others—academic freedom has been contested by forces external and internal to the university. This course focuses on challenges to and changes in the definition and application of "academic freedom" from the end of the 19th century to the present day, with particular attention to academic freedom during times of crisis, especially wartime, and includes consideration of current issues such as speech codes, corporate and government funding of research, and the place of religion on campus. Enrollment limited to 40. WRIT
Fall EDUC1740 S01 15223 W 2:00-2:50(07) (L. Spoehr)

EDUC 1870. Education and Human Development in East Asia. This course examines education and human development in East Asia, mainly China, Japan, and South Korea, using international and comparative perspectives. We will examine the role of educational systems and key contexts such as family, school, and globalization in the development and educational processes of children and adolescents. We will also explore culturally unique concepts, diversity, and inequality in educational processes across and within these countries. The course draws on a range of contemporary studies from interdisciplinary social science fields, some of them theoretical and many of them empirical (both qualitative and quantitative). DPLL LILE
Spr EDUC1870 S01 25037 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 2070A. Student Teaching: English. S/NC.
Fall EDUC2070A S01 15275 Arranged (L. Snyder)
Spr EDUC2070A S01 24060 Arranged (L. Snyder)

EDUC 2070B. Student Teaching: History and Social Studies. S/NC.
Fall EDUC2070B S01 15280 Arranged (M. Gross)
Spr EDUC2070B S01 24072 Arranged (M. Gross)

EDUC 2070C. Student Teaching: Science. S/NC.
Fall EDUC2070C S01 15274 Arranged (D. Bisaccio)
Spr EDUC2070C S01 24064 Arranged (D. Bisaccio)

EDUC 2080A. Analysis of Teaching: English. No credit course.
Fall EDUC2080A S01 15229 W 4:30-7:00 (L. Snyder)
Spr EDUC2080A S01 24061 W 4:30-7:00 (L. Snyder)

EDUC 2080B. Analysis of Teaching: History and Social Studies. No credit course.
Fall EDUC2080B S01 15281 W 4:30-7:00 (M. Gross)
Spr EDUC2080B S01 24073 W 4:30-7:00 (M. Gross)

EDUC 2080C. Analysis of Teaching: Science. No credit course.
Fall EDUC2080C S01 15283 W 4:30-7:00 (D. Bisaccio)
Spr EDUC2080C S01 24062 W 4:30-7:00 (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 15298 Th 4:00-6:30(04) (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 15276 F 1:30-4:00 (D. Bisaccio)
Spr EDUC2140 S01 24067 F 1:30-4:00 (D. Bisaccio)

EDUC 2150. Language and Literacy in the Elementary School Classroom. An introduction to Comprehensive Literacy instruction 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 16360 M 4:00-6:30 (M. Nosal)
Spr EDUC2150 S01 25222 T 4:00-6:30(16) (M. Nosal)

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 24075 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/NC.
Spr EDUC2280 S01 24076 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 15225 W 4:00-6:30 (M. Rutz)

EDUC 2330. Urban Politics and School Governance. 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.

Spr EDUC2330 S01 24920 W 4:00-6:30 (K. Wong)

EDUC 2350. Economics of Education II. Introduces students to the main economic theories and related applied work that inform education policy analysis. In so doing, the course combines economic theory, econometric studies, and education and institutional literature in an examination of current issues in U.S. education, particularly those issues that are most relevant to urban education. The course begins with examinations of key concepts and theories from microeconomics, labor economics, and public economics that are most relevant for studying questions in education. After laying this theoretical foundation the course then examines how these theories can illuminate and aid policy analysis around key topics in U.S. education. Open to graduate students only.

Fall EDUC2350 S01 16104 M 4:00-6:30 (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 24051 M 4:00-6:30 (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 16372 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 25229 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.


Fall EDUC2990 S01 14724 Arranged 'To Be Arranged'
Spr EDUC2990 S01 23819 Arranged 'To Be Arranged'

EDUC XLIST. Courses of Interest to Concentrators in Education.

Egyptology and Assyriology

ASSY 1400. Introduction to Sumerian. Over five thousand years ago the first cities emerged in southern Iraq, and around that same time writing was invented, most likely to record the language we now call Sumerian. Even after it was no longer spoken, Sumerian became a powerful conduit for the region's cultural heritage, preserving its literature and religious traditions for millennia. In this course students will learn the fundamentals of Sumerian grammar, develop a basic working vocabulary, and explore the cuneiform script through weekly readings in original texts. Selections will come from royal inscriptions, court cases, myths, magical incantations, and even ancient schoolwork. No prerequisites.

Fall ASYR1400 S01 15801 TTh 2:30-3:50(03) (M. Rutz)

ASSY 1500. Ancient Babylonian Magic and Medicine. A survey of ancient magic and medicine focusing on Mesopotamia (present-day Iraq, ca. 2500-300 BCE), with an emphasis on beliefs about the body, health, illness, and the causes of disease, such as witchcraft or angry gods. Topics will include the training of healers, exorcists, and herbalists; concepts of contagion and plague, modalities of treatment, incantations, prayers, and empirical remedies like prescriptions; ancient perceptions of problems like sexual dysfunction, the perils of pregnancy, tooth decay, epilepsy, and mental illness. Readings will be drawn from ancient texts (in translation), archaeology, and parallels with ancient Egypt, Greece, Rome, and the Bible. No prerequisites. Not open to first year students. WRIT

Spr ASYR1500 S01 24667 Arranged (M. Rutz)

ASSY 2410. Akkadian Letters. A survey of Akkadian letters focusing on periods and corpora that are significant for historical research. This course will introduce the essential research tools and methods necessary for the study of Babylonian and Assyrian epistolary texts from various periods and sites. We will read significant and/or representative letters in the cuneiform script (copies, photographs, and, when possible, actual tablets) and work to place the letters in meaningful historical, social, and cultural contexts. Knowledge of Akkadian cuneiform required.

Fall ASYR2410 S01 15216 M 3:00-5:30(15) (M. Rutz)

ASSY 2420. Akkadian Divinatory Texts. This course offers focused study of the most significant Akkadian divinatory texts from the second and first millennia BCE. Readings will come for the major genres of Mesopotamian divination found at sites throughout the ancient Near East. Emphasis will be placed on matters of textual transmission, reconstruction, and interpretation. We will read texts in the cuneiform script (copies, photographs, and, when possible, actual tablets) and work to place the material in meaningful historical, social, and cultural contexts. Knowledge of Akkadian cuneiform required.

Spr ASYR2420 S01 24044 Arranged (M. Rutz)

ASSY 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.

ASSY 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 14704 Arranged 'To Be Arranged'
Spr ASYR2990 S01 23803 Arranged 'To Be Arranged'

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

Egyptology

EGY 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 16336 Arranged "To Be Arranged"

EGYT 1320. Introduction to Classical Hieroglyphic Egyptian Writing and Language (Middle Egyptian II).
Continuation of a two-semester sequence spent learning the signs, vocabulary, and grammar of one of the oldest languages known. By the end of this introductory year, students read authentic texts of biographical, historical, and literary significance. The cornerstone course in the Department of Egyptology—essential for any serious work in this field and particularly recommended for students in archaeology, history, classics, and religious studies. Prerequisite: EGYT 1310.
Spr EGYT1320 S01 24668 Arranged "To Be Arranged"

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 15802 TTh 9:00-10:20(08) (J. Allen)

EGYT 1410. Ancient Egyptian Literature.
A survey of one of the most intriguing aspects of ancient Egyptian culture. Readings (in translation) of many of the most significant literary documents that survive from Egypt. Presentation of a reasonable amount of historical perspective. Class discussions concerning the nature, purpose, quality, and effectiveness of the works read. Two term papers. No prerequisites. Offered in alternate years. WRIT
Fall EGYT1410 S01 15803 MWF 10:00-10:50(14) (L. Depuydt)

EGYT 1910. Senior Seminar.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

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

EGYT 2410. Late Egyptian.
Introduction to the grammar of the third historical phase of ancient Egyptian and readings from its various genres, including literary texts, letters, historical inscriptions, and tomb-robbing papyri. Students will be expected to translate and discuss assigned texts. Prerequisites: EGYT 1310, 1320.
Spr EGYT2410 S01 24670 Arranged (L. Depuydt)

EGYT 2610. Introduction to Demotic.
 Begins with discussions and exercises in the grammar and peculiar script of this late stage of the Egyptian language, followed by readings of actual ancient texts, including The Instructions of Onkhsheshonkh, The Petition of Petiese, and The Story of Setne Khaemwas. Knowledge of Demotic remains essential for a proper understanding of Egypt during the Saite, Persian, Ptolemaic, and Roman periods. Open to undergraduates with consent of instructor. Prerequisites: EGYT 2410 or 2210.
Spr EGYT2610 S01 24671 Arranged (L. Depuydt)

EGYT 2810. Old Egyptian.
Introduction to the grammar of the first historical phase of ancient Egyptian and readings from its two primary genres, the Pyramid Texts and autobiographical inscriptions. Students will be expected to translate and discuss assigned texts. Prerequisites: EG 131, 132 (EGYT 1310, 1320).
Fall EGYT2810 S01 16383 Arranged (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 14725 Arranged "To Be Arranged"
Spr EGYT2970 S01 23820 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 for a thesis.
Fall EGYT2990 S01 14726 Arranged "To Be Arranged"
Spr EGYT2990 S01 23821 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 all educated individuals to understand basic technology and reach an informed opinion on a particular topic of national or international interest. The course will begin with a brief history of technology.
Spr ENGN0020 S01 24428 MWF 11:00-11:50(04) (J. Harry)

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 14843 MWF 1:00-1:50 (C. Briant)
Fall ENGN0030 S01 14842 T 9:00-10:20 (C. Briant)
Fall ENGN0030 S02 14844 T 2:30-3:50 (C. Briant)
Fall ENGN0030 S03 14845 Th 9:00-10:20 (C. Briant)
Fall ENGN0030 S04 14846 Th 2:30-3:50 (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 24433 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 S02 14836 TTh 2:30-3:50(03) (B. Hazeltine)

ENGN 0120A. Crossing the Consumer Chasm by Design.
Technologies have shaped human life since tools were sticks and flints to today's hydrocarbon powered, silicon managed era. Some spread throughout society; bread, cell phones, airlines, but most never do; personal jet packs, Apple Newton, freeze dried ice cream. Space Tourism, the Segway, electric cars: Can we predict which ones will succeed? What makes some technologies take off, while others fade away? What are the factors that make a technology successful or fail? How do we confront the cross-disciplinary barriers to realizing benefits from technology.
Enrollment limited to 18 first year students. Instructor permission required. FYS WRIT
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.

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 with existing essential elements. Successful entrepreneurs and expert practitioners will be introduced who will highlight practical approaches to entrepreneurial success. Enrollment limited to 35. WRIT

ENGN 1100. Transport and Biotransport Processes.
Aim: To develop a fundamental understanding of mass transport in chemical and biological systems. The course includes: mechanism of transport, biochemical interactions and separations; mass transport in reacting systems; absorption; membrane and transvascular transport; electrophoretic separations; pharmacokinetics and drug transport; equilibrium stage processes; distillation and extraction. Other features: design concepts; modern experimental and computing techniques; laboratory exercises.

ENGN 1120. Chemical and Biochemical Reactor Design.
Stoichiometry, thermodynamics, mechanisms, and rate expressions of homogeneous and heterogeneous chemical and biochemical systems. Basic concepts in homogeneous chemical and bioreactor design and ideal reactor models. Chemostats and enzymatic reactors. Optimization. Temperature and energy effects in reactors. Introduction to heterogeneous chemical and bioreactor design. Prerequisite: ENGN 0720 or physical chemistry. Offered in alternate years.

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 1210. Biomechanics.

ENGN 1220. Neuroengineering.
Course Goals: To develop an advanced understanding of how signals are generated and propagated in neurons and neuronal circuits, and how this knowledge can be harnessed to design devices to assist people with neurologic disease or injury. Fundamental topics in neuronal and neural signal generation, recording methods, and stimulation methods. Clinical/Translational topics include multiple clinically available and emerging neurotechnologies. Prerequisites: NEUR 0010 and ENGN 0510; or instructor permission, which may be provided after discussion with course faculty.

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. Emphasis on principles of virtual work and numerical methods of elastic structural analysis by matrix methods. Includes calculation of deflections and reactions in beam structures, beam vibrations, and column buckling.

ENGN 1340. Water Supply and Wastewater Treatment.
The hydrological cycle, surface water hydrology, ground water hydrology. Emphasis on the formulation of mathematical models of various flow problems and their solution by analytical or numerical means. Typical problems: open channel and river flows; flood routing; ground water flow in aquifers and into wells. Topics in wastewater treatment plant design: mixing, residence time, aeration, and, bacteriological and chemical treatment processes. Prerequisite: CHEM 0330 and MATH 0170 or MATH 0190. Not open to first year students. Enrollment limited to 40.

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.

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.
each of these fields are analyzed. Lectures plus laboratories. Prerequisite: ENGN 0410.

Focuses on the science of electronic materials, the materials at the heart of modern microelectronics and optoelectronics. Addresses fundamental issues controlling their properties, processing, and reliability. Topics include band structure of semiconductors, basic device structures (junctions and transistors), sputter deposition, molecular beam epitaxy, chemical vapor deposition, ion implantation, oxidation, and issues affecting reliability. Materials challenges that must be resolved for future generations of electronic devices. Prerequisite: ENGN 0410.

A study of the structure and properties of nonmetallic materials such as glasses, polymers, elastomers, and ceramics. The crystal structure of ceramics and polymers, and the noncrystalline networks and chains of glasses, polymers, and elastomers and the generation of microstructures and macrostructures are considered. The mechanical, chemical, electrical, magnetic, and optical properties and their dependence on structure are developed. Laboratory. Prerequisite: ENGN 0410.

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 ophthalmology.

ENGN 1510. Nanoengineering and Nanomedicine.
Students in this course will develop a fundamental understanding of nanoelectronic phenomena and its applications in medicine. We will discuss nanomaterials synthesis, fabrication, and characterization. Applications of nanoelectronic materials in medicine, including nanotechnology-based drug delivery systems, nano-based imaging and diagnostics, and nanotechnology-based tissue engineering approaches will be explored in depth. Host response to nanomaterials and nanotoxicity will also be discussed. Research methods in nanoelectronics and nanomedicine will be emphasized (i.e., critical analysis of scientific literature, effective oral and written communication). This course is meant for engineering and science graduate students and advanced upper level engineering undergraduates.

ENGN 1520. Cardiovascular Engineering.
In this course, students will learn quantitative physiological function of the heart and vascular system, including cardiac biomechanics and vascular flow dynamics, through lectures and discussion of current scientific literature. A systems approach will integrate molecular biophysics, cell biology, tissue architecture, and organ-level function into a quantitative understanding of health and disease. Discussion topics will include cardiovascular devices, pre-clinical regenerative therapies, stem cell tropism, and ophthalmology.

ENGN 1550. Linear System Analysis.
Analysis of discrete and continuous electrical signals and systems in both time and frequency domains. Modulation, sampling, spectral analysis, analog and digital filtering. Fourier, Laplace and z-transforms, the state-space approach, stability of linear systems. Prerequisite: ENGN 0520.

ENGN 1590. Introduction to Semiconductors and Semiconductor Electronics.
An introduction to the physics of fundamental electronic processes that underlie the operation of semiconductor devices on a microscopic scale. Basic electronic properties of semiconductors and effects at interfaces heterogeneous media, such as pn junctions and hetero-structure barriers and quantum wells. These junctions, barriers and wells are used as building blocks for devices, focusing on bipolar and field-effect transistors. Modern trends in micro- and opto-electronic devices are discussed. A brief fabrication lab will introduce pn junction fabrication technology. Prerequisites: ENGN 0410 and 0510.
semiconductor platform is a central theme in a coordinated lecture and laboratory course. Topics include microcircuit photolithography: layout and design scaling rules for integrated circuits; and techniques in semiconductor and thin film processing as they apply to ULSI circuit manufacturing. Prerequisite: ENGN 1590 or permission. Spr ENGN1680 S01 24471 MWF 9:00-9:50(02) (D. Pacifici)

ENG 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 24472 TTh 2:30-3:50(11) (J. Xu)

ENG 1700. Jet Engines and Aerospace Propulsion. Dynamics and thermodynamics of compressible internal flows with applications to jet engines for both power and propulsion, rocket engines and other propulsion systems. Thermodynamic analyses of engine cycles with and without afterburners. Fluid dynamics of high Mach number systems. Structural and Materials considerations for engine design. Team projects for analysis and design of novel jet engine concepts. Prerequisite: ENGN 0720 and 0810. Fall ENGN1700 S01 15430 MWF 11:00-11:50(02) (J. Liu)


ENG 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 24474 TTh 6:40-8:00PM(12) (B. Burke)


ENG 1760. Design of Space Systems. Working in design projects, students conceive a space mission and design all of the elements necessary for its execution including launch and orbit / trajectory, space and ground systems, including analysis of structure, thermal, radio link, power and mass budgets, attitude control and dynamics. Each group builds a hardware project to demonstrate a core element of their mission design. Prerequisites: Engineering core curriculum or equivalent. Spr ENGN1760 S01 24475 MWF 1:00-1:50(08) (R. Fletther)

ENG 1860. Advanced Fluid Mechanics. Aims to give mechanical engineering students a deeper and more thorough grounding in principles and basic applications. Topics include review of the conservation principles; inviscid flow; viscous flow, including aerodynamics lubrication theory; laminar boundary layers; wave motions and wave drag. Lectures, assignments, computational projects, and laboratory. Prerequisites: ENGN 0720 and 0810. Spr ENGN1860 S01 24476 MWF 11:00-11:50(04) (J. Franck)

ENG 1930B. Photonics and Biophotonics. Biomedical optics is a rapidly growing field with applications in medicine, biology, neuroscience, genetics, and environmental science. The course covers both theoretical background and technical approaches underlying biomedical imaging technologies. The theoretical background focuses on how photons transport in biological tissues, including the radiative transport equation and photon diffusion theory. The course offers not only mathematical fundamentals of the theories but also opportunities of learning the theories through numerical simulations on MATLAB. The technical approaches include those for various imaging technologies ranging from conventional microscopy to optical coherence tomography. Prerequisites: Undergraduate level ENGN 0510 Minimum Grade of S. Spr ENGN1930B S01 24462 MWF 12:00-12:50(05) (J. Lee)

ENG 1930L. Biomedical Engineering Design, Research and Modeling. This course introduces students to design, modeling and analysis of biological systems. The first portion of the course focuses on linear systems. Research projects in design will be analyzed. The course also introduces students to the Matlab programming language, which allows them to implement the design models discussed in class. For seniors only. Fall ENGN1930L S01 14873 MW 8:30-9:50(01) (A. Tripathi)

ENG 1930M. Industrial Design. Brown engineering and RISD industrial design faculty lead product development teams through a design cycle. Engineers explore industrial design, designers gain some insight into engineering, and both groups can apply their skills to challenging problems. Frequent presentations, field trips, critiques, and labs. Preference given to seniors. Prerequisites: completion of engineering core. Enrollment limited to 15 students. Fall ENGN1930M S01 14874 Arranged (C. Bull)

ENG 1930U. Renewable Energy Technologies. Analysis of the thermodynamics, physics, engineering and policy issues associated with renewable and non-renewable energy technologies with applications appropriate to both the developed and the developing world. Specific technologies that will be studied include Fossil fuels, Wind, Solar, Hydro, Biomass and Nuclear. Energy consumption technologies, such as power generation and transportation will also be studied. Some technical background, such as ENGN 0030, 0040 and 0720, is strongly recommended. Spr ENGN1930U S01 24477 TTh 2:30-3:50(11) (K. Breuer)

ENG 1931D. Writing Science. An introduction to the design and development of mechanical assemblies suitable for production over a range of volumes, from prototypes to high volume manufacture. The course is intended to present an overview of basic machine components and manufacturing processes from the perspective of a design engineer in a contemporary industrial setting. The objective of which being to provide students the background necessary to create mechanical assemblies from blank-page concepts through to production ready designs. Coursework will include both theoretical and experimental exercises as well as two group projects working on a mechanical assembly produced via high volume manufacture. Prerequisite: ENGN 0310, 1740. Enrollment limited to 20. Fall ENGN1931D S01 14876 TTh 6:40-8:00PM(05) (B. Burke)

ENG 1931E. Writing Science. This seminar focuses on communicating scientific and technical information to a lay audience in ways that engage and inform. The focus is on writing about new findings, scientific disputes and policy debates, along with producing profiles, feature articles, op-eds and blog posts. Students who complete this seminar will learn how to turn a collection of facts into a story, ways of explaining complex topics in simple terms, and how to differentiate between crucial technical details and clutter. Proficiency in English is assumed. Permission from the instructor is required. Preference will be given to seniors and graduate students. Enrollment limited to 15. WRIT Fall ENGN1931E S01 14877 W 3:00-5:30(17) (C. Dean)

ENG 1931F. Introduction to Power Engineering. An introduction to the generation, distribution and use of electrical energy in three-phase balanced systems. Topics include: properties of magnetic fields and materials; magnetic reluctance circuits; phasors and the

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
ENGN 1931F. Fuels, Energy, Power and the Environment. 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: ENGN 0510 and 0520.

ENGN 1931P. Fuels, Energy, Power and the Environment. 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: ENGN 0510 and 0520.

ENGN 1931Z. Fuels, Energy, Power and the Environment. 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: ENGN 0510 and 0520.
and take part in guest lectures from experts working in other countries. Classroom discussions, student presentations, papers and readings will be used to focus and further understand the globalization dynamic and its relationship to entrepreneurship. Prerequisite: ENGN 2110. Enrollment limited to graduate students in the PRIME program.

ENGN 2210. Continuum Mechanics.


Fall ENGN2210 S01 15534 MWF 12:00-12:50(12) (A. Bower)


Fall ENGN2220 S01 15535 MWF 12:00-12:50(12) (A. Bower)

ENGN 2240. Linear Elasticity.


Fall ENGN2240 S01 15535 MWF 11:00-11:50(02) (H. Gao)

ENGN 2280. Topics in Continuum Mechanics.

Devoted to one or more advanced topics in continuum mechanics not covered in detail by the regular courses. Examples are: nonlinear viscoelastic constitutive equations, strain gradient and micropolar theories of elasticity, coupled mechanical and thermal or electromagnetic phenomena, and continuum thermodynamics.

Spr ENGN2280 S01 24484 MWF 10:00-10:50(03) (D. Henann)

ENGN 2320. Experimental Mechanics.

The design and evaluation of experiments in solid mechanics. Considers methods for experimental stress analysis and for the mechanical testing of materials. Topics covered include photoelasticity, creep and relaxation tests, high-speed testing, stress wave propagation, fatigue, and fracture. Techniques, instrumentation, and recording systems for the static and dynamic measurement of mechanical parameters such as forces, displacements, velocities, accelerations, and strains.

Spr ENGN2320 S01 24485 MWF 09:00-09:50(02) (K. Kim)

ENGN 2380. Fracture Mechanics.


Spr ENGN2380 S01 24494 Th 04:00-04:50(17) (P. Guduru)

ENGN 2410. Thermodynamics of Materials.


Fall ENGN2410 S01 15536 MWF 06:00-06:50(17) (A. Van De Walle)

ENGN 2430. Deformation Behavior of Materials.

Linear elasticity as applied to isotropic and anisotropic materials; yield criteria including Von Mises, Tresca, Mohr-Coulomb, and Hill. Plastic deformation and slip. Dislocation theory. Mechanisms of hardening. Microstructural models of ductile, intergranular, and cleavage fracture. Toughening mechanisms. Creep. Fatigue. Prerequisites: ENGN 0410 and ENGN 1440 or equivalent.

Fall ENGN2430 S01 15537 Th 01:00-01:50(10) (A. Nurmikko)

ENGN 2501. Digital Geometry Processing.

Three-dimensional geometric models are fundamental for applications in computer vision, computer graphics, medical imaging, computer aided design, visualization, multimedia, and many other related fields. This course includes the study of basic data structures and algorithms for representing, creating, manipulating, animating, editing, and analyzing digital geometry models, such as point clouds and polygon meshes, as well as state-of-the-art material from the current scientific literature. This is a project oriented course with several programming assignments and a final project. Students are expected to have successfully completed an introductory computer graphics/vision course or have an equivalent background. Instructor permission required. Open to seniors and graduate students.

Fall ENGN2501 S01 15538 MWF 03:00-03:50(10) (G. Taubin)


This course covers fundamental topics in pattern recognition and machine learning. We will consider applications in computer vision, signal processing, speech recognition and information retrieval. Topics include: decision theory, parametric and non-parametric learning, dimensionality reduction, graphical models, exact and approximate inference, semi-supervised learning, generalization bounds and support vector machines. Prerequisites: basic probability, linear algebra, calculus and some programming experience.

Spr ENGN2520 S01 24487 Th 2:30-3:30(11) (P. Feilenzwalzb)


An introduction to the basics of linear, shift invariant systems and signals. Quantization and sampling issues are introduced. Discrete time and DFT properties, fast DFT algorithms, and spectral analysis are discussed. IIR and FIR digital filter design is a focus; stochastic and deterministic signals are introduced. MATLAB exercises are a significant part of the course.

Fall ENGN2530 S01 15540 MWF 11:00-11:50(02) (H. Silverman)

ENGN 2560. Computer Vision.

An interdisciplinary exploration of the fundamentals of engineering computer vision systems (e.g., medical imaging, satellite photo interpretation, industrial inspection, robotics, etc.). Classical machine vision paradigms in relation to perceptual theories, physiology of the visual context, and mathematical frameworks. Selections from Gestalt psychology, Gibsonian approach primate visual pathways, edge-detection, segmentation, orientation-selectivity, relaxation-labeling, shading, texture, stereo, shape, object-recognition.

Spr ENGN2560 S01 24488 Th 04:00-04:50(17) (P. Guduru)


Current and proposed semiconductor devices: bipolar transistors (silicon and heterojunction); field effect transistors (MOSFETs, heterostructure, and submicron FETs); hot-electron and quantum-effect devices; and photonic devices (LEDs, semiconductor lasers, and photodetectors). Prerequisites: ENGN 1590 or equivalent introductory device course; some quantum mechanics helpful but not required.

Spr ENGN2610 S01 24489 MWF 09:00-09:50(02) (B. Kimia)

ENGN 2620. Solid State Quantum and Optoelectronics.

Incorporates the study of interaction of radiation with matter (emphasizing lasers, nonlinear optics, and semiconductor quantum electronics. Q-switching and mode-locking, electro- and acousto-optic interactions, harmonic generation and parametric processes, self-focusing and phase modulation, stimulated Raman and Brillouin scattering, ultrafast pulse generation, nonlinear processes of conduction electrons in semiconductors, bulk and surface polaritons. Prerequisite: ENGN 2600 or equivalent.

Fall ENGN2620 S01 15541 MWF 01:00-01:50(06) (A. Zaslavsky)

ENGN 2750. Chemical Kinetics and Reactor Engineering.

This course focuses on the fundamentals of chemical kinetics with engineering applications. Topics include: quantum chemistry, statistical thermodynamics, and transition state theory; tight versus loose transition state theories; kinetics of gases, liquids, and surfaces; adsorption, desorption, surface diffusion; enzyme kinetics and biological processes; formation.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
solution, and interpretation of elementary mechanisms; global versus local sensitivity analysis; uncertainty quantification; and the coupling between fluid dynamics and chemical reactions.

Fall ENGN2750 S01 15622 MWF 12:00-12:50(12) (C. Goldsmith)
Spr ENGN2750 S01 24593 MWF 1:00-1:50(06) (C. Goldsmith)

ENGN 2760. Heat and Mass Transfer.

Spr ENGN2760 S01 24491 MWF 10:00-10:50(03) (J. Liu)

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 15613 MWF 2:00-2:50(07) (J. Franck)

ENGN 2820. Fluid Mechanics II.
Introduction to concepts basic to current fluid mechanics research: hydrodynamic stability, the concept of average fluid mechanics, introduction to turbulence and to multiphase flow, wave motion, and topics in inviscid and compressible flow.

Spr ENGN2820 S01 24492 MW 8:30-9:50(02) (M. Maxey)

ENGN 2910G. Topics in Translational Research and Technologies.
To improve human health, engineering and scientific discoveries must be explored in the context of application and translated into human/societal value. Translational research is creating a fundamental change in the way basic science and engineering research has operated for decades, breaking down the literal and figurative walls that separate basic scientists/ engineers and clinical researchers. Such discoveries typically begin at "the bench" with basic research—and in the case of medicine—then progress to the clinical level, or the patient's "bedside." This seminar course will utilize case studies to demonstrate to students how the translational research unfolds. Lectures will be delivered by clinicians, medical researchers, engineers, and entrepreneurs, with case studies focused on topics ranging from value creation, IRB, HIPAA, FDA approval, etc.

Spr ENGN2910G S01 24597 F 3:00-5:30(15) (A. Tripathi)

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 24599 MWF 1:00-1:50(06) (I. Wong)

ENGN 2912B. Scientific Programming in C++.
Introduction to the C++ language with examples from topics in numerical analysis, differential equations and finite elements. As a prerequisite, some programming knowledge, e.g., MATLAB projects. The course will cover the main C++ elements: data types; pointers; references; conditional expressions; streams; templates; Standard Template Library(STL); design and debugging techniques.

Fall ENGN2912B S01 15614 TTh 10:30-11:50(13) "To Be Arranged"

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.

Fall ENGN2912F S01 15615 TTh 9:00-10:20(08) (T. Powers)

ENGN 2912H. Interfacial Phenomena.
This course is an introduction to mechanics of material interfaces. Particular cases considered are liquid surfaces (surface tension, contact line slip, electro-wetting, etc), lipid membranes, and thin elastic plates and shells. The course will cover detailed analyses of statics and dynamics of these interface. Classical and modern research papers related to these topics will form the motivation for the discussion. A unified treatment of these apparently disparate interfaces is presented to conclude the course.

Prerequisites: ENGN 2010, 2020, 2210, or 2810.

Fall ENGN2912H S01 15621 M 3:00-5:30(15) (S. Mandre)

ENGN 2912L. Topics in Bioelectronics.
Seminar course covering subjects related to interactions between electronic and biological systems. Material includes energy harvesting, low-power electronic circuit design, biosensors and signal integrity, neuromorphic hardware, low-power wireless communications, and electrochemical methods. Emphasis on critical reading, technical analysis, presentation, and discussion. Design project.

Fall ENGN2912L S01 16120 MWF 1:00-1:50(06) (J. Rosenstein)

ENGN 2912Z. Application of Machine Learning to Experimental Science.
Course designed to help introduce experimentalists (in engineering and related sciences) to growing array of computational tools for data analysis. Using MatLab and Python, students will learn how to leverage dedicated software for numerical optimization (e.g. CVX and MOSEK) and machine learning (e.g. TensorFlow). Emphasis will be on exposure to different techniques and practical implementation, rather than underlying fundamentals. (Students seeking rigorous foundation in machine learning should see CSCI1420/ENGN2520.) Initial assignments will introduce range of supervised and unsupervised machine learning approaches; final projects will provide students with opportunity to apply these methods to their own research data.

Spr ENGN2912Z S01 24979 MWF 11:00-11:50(04) (R. Zia)

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 physico- 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 24493 TTh 1:00-2:20(10) (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 risk assessment; pollutant dispersion, transport and bioaccumulation; and remediation technologies. Emphasis is placed on different techniques and practical implementation, rather than underlying fundamentals. (Students seeking rigorous foundation in machine learning should see CSCI1420/ENGN2520.) Initial assignments will introduce range of supervised and unsupervised machine learning approaches; final projects will provide students with opportunity to apply these methods to their own research data.

Fall ENGN2920D S01 15623 M 3:00-5:30(15) (R. Hurt)

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 14730 Arranged "To Be Arranged"
Spr ENGN2970 S01 23824 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.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 14731 Arranged "To Be Arranged"
Spr ENGN2990 S01 23825 Arranged "To Be Arranged"

English

ENGL 0100D. Matters of Romance.
Narratives (1100-1500) of men, women, and elves seeking identity on the road, in bed, and at court. Readings (in modern English) include Arthurian romances, Havelock, Iaïs by Marie de France, and Chaucer’s "Wife of Bath’s Tale." Primarily for freshmen and sophomores. Students should register for ENGL 0100D S01 and may be assigned to conference sections by the instructor during the first week of class.
Spr ENGL0100D S01 24643 MWF 10:00-10:50(03) (E. Bryan)

ENGL 0100G. The Literature of Identity.
This course will explore various conceptions of personal identity, with an emphasis on Romanticism. We’ll read Anglo-American philosophical and literary texts (mostly poetry) from the Renaissance through the 19th century, taking some excursions into contemporary theory (queer, feminist, post-structuralist). Writers may include Shakespeare, Montaigne, Locke, Hume, Rousseau, Wordsworth, Keats, Emerson, Browning, and Wilde.
DPLL LILE
Spr ENGL0100G S01 24588 TTh 2:30-3:50(11) (J. Khalip)

ENGL 0100P. Love Stories.
What do we talk about when we talk about love? We will see how writers have addressed this question from Shakespeare’s day to the present. Writers may include Shakespeare, Austen, Eliot, Flaubert, Graham Greene, Martylme Robinson, and/or others. Students should register for ENGL 0100P S01 and may be assigned to conference sections by the instructor during the first week of class. LILE WRIT
Fall ENGL0100P S01 16443 MWF 10:00-10:50(14) (K. Kuzner)

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 ENGL0100S S01 15712 TTh 10:30-11:50(13) (W. Keach)

ENGL 0100U. Serial Fictions.
A study of serial and serialized fictional narratives from the nineteenth century the present-- dime novels, serial genre fictions, literary novels comprised of chapters initially published as short stories, radio and film serials, television programs old (The Naked City, Hawaii-Five O), newer (The Wire, Sex in the City), and new (Americans), podcasts, and video games (Legend of Zelda).
Fall ENGL0100U S01 15714 TTh 9:00-10:20(08) (D. Nabers)

ENGL 0100V. Inventing Asian American Literature.
What insights can literature provide into the complicated workings of race in America? What role can the invention of a literary tradition play in illuminating and rectifying past and present injustices? We explore these questions by examining how the idea of an Asian American literary tradition came into being and by reading influential works that have become part of its canon. Students should register for ENGL 0100V S01 and may be assigned to conference sections by the instructor during the first week of class. DPLL LILE WRIT
Fall ENGL0100V S01 16547 MWF 11:00-11:50(02) (D. Kim)

ENGL 0105D. Shakespeare's Present Tense.
Shakespeare in Love suggests how Shakespeare was clued in to elite and popular cultures. Current adaptations like O and 10 THINGS I HATE ABOUT YOU demonstrate how Shakespeare provides anachronistic clues to issues of the present. This course will trace such clues by examining the cultural origins and ongoing adaptations of Romeo and Juliet, Hamlet, Othello, Twelfth Night, Henry V, and the sonnets. Enrollment limited to 20 first-year students. FYS
Fall ENGL0105D S01 15737 TTh 9:00-10:20(08) (S. Foley)

ENGL 0150U. The Terrible Century.
Although the term "terrorism" was coined in the 18th century, and although its contemporary resonance has reached an unprecedented pitch, the truly terrible century was arguably the 20th. This course introduces 20th century literature in English through a historical and philosophical examination of terror and terrorism. We will focus on several historical contexts, including: British colonialism in Ireland and Africa, South African apartheid, and the post 9/11 world. Readings include Conrad, Bowen, Farrell, Gordimer, Coetzee, Foulds, Walters, Hamid. Enrollment limited to 20 first-year students. FYS
Fall ENGL0150U S01 15738 W 3:00-5:30(17) (T. Bewes)

ENGL 0150W. Literature and the Visual Arts.
How do words and images represent? Are the processes by which literature and the visual arts render the world similar or different? Is reading a novel or a poem more like or unlike viewing a painting, a sculpture, or a film? This seminar will analyze important theoretical statements about these questions as well as selected literary and visual examples.
Fall ENGL0150W S01 15739 F 3:00-5:30(11) (P. Armstrong)

ENGL 0150X. The Claims of Fiction.
This course explores the interplay of tropes of strangeness, contamination, and crisis in a range of novels and shorter fiction, in English or in translation. We will ask why social misfits and outsiders somehow become such fascinating figures in fictional narratives. How do these fictions entice and equip readers to reflect on collective assumptions, values, and practices? Writers will likely include Baldwin, Brontë, Conde, Conrad, Faulkner, Greene, Ishiguro, Lessing, Morrison, Naipaul, Salih. Limited to 20 first-year students. DPLL FYS
Spr ENGL0150X S01 24589 F 3:00-5:30(15) (O. George)

ENGL 0200P. Monsters in America.
Monsters reveal our deepest fears and our greatest insecurities, and every society creates the monsters that it needs. Probing the shifting terrains of sexual, racial, and cultural otherness that monsters represent, this course examines depictions of monstrosity in 19th- and 20th-century American literature and film. Possible authors/films include: Hawthorne, Lovecraft, Stephen Crane, Octavia Butler, Asimov, The Elephant Man, and Alien.
Enrollment limited to 17. WRIT
Fall ENGL0200P S01 16691 MWF 12:00-12:50(12) (N. Fung)

ENGL 0200R. Reading With Feeling.
How do we feel with our bodies? Starting from the Enlightenment and moving to romanticism this course examines various literary and philosophical accounts of sympathy and sentimentality as modes that complicate the self and its relation to society. Authors include: Adam Smith, Goldsmit, Sterne, Austen, Wordsworth, Joanna Baillie, Keats.
Films include Bridge Jones’s Diary and Atonement.
Enrollment limited to 17. WRIT
Fall ENGL0200R S01 16692 MWF 1:00-1:50(06) (Z. Heine)

ENGL 0300F. Beowulf to Apha Behn: The Earliest British Literatures.
Major texts and a few surprises from literatures composed in Old English, Old Irish, Anglo-Norman, Middle English, and Early Modern English. We will read texts in their historical and cultural contexts. Texts include anonymously authored narratives like Beowulf and Sir Gawain and the Green Knight, selected Canterbury Tales by Chaucer, and texts by Sir Thomas Malory, Spenser, Shakespeare, and Apha Behn.
Enrollment limited to 30.
Fall ENGL0300F S01 15741 TTh 10:30-11:50(13) (E. Bryan)

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 fall.
LILE WRIT

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

ENGL 0700P. Reading Practices: An Introduction to Literary Theory.
What is it to read? This course is an introduction to theories of reading that have shaped literary interpretation and definitions of literature from the early twentieth century to the present, with particular attention to the relation between "literary theory" as a discipline and the broader reading practices it engenders and from which it emerges. We will read the New Criticism, structuralism, post-structuralism, and new historicism, critical race theory and feminist critiques, and recent work in aesthetics. Topics include literariness and textuality, the reader and subjectivity, narrative, rhetoric, and the problem of representation, and "new formalism." Enrollment limited to thirty.

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. Enrollment limited to 30.

ENGL 0700R. Modernist Cities.
In the early twentieth century, modernist writers headed for New York, Paris, London and other cities, and based their literary experiments on forms of metropolitan life. We will discuss chance encounters, cosmopolitan and underground nightlife, solitary wandering, and bohemian communities. Writers may include Barnes, Dos Passos, Eliot, Hemingway, Hughes, Larsen, Joyce, McKay, Rhys, Woolf. Enrollment limited to 30.

ENGL 0700S. American Literature and Political Radicalism.
This class examines American literature in relation to key radical social movements in the twentieth century. The interplay between American authors and Socialism, the New Left, and Black Power nationalism will be at the forefront of the course. The class will focus on works by both committed activists and writers less directly involved in these social movements. Authors include John Steinbeck, Richard Wright, E.L. Doctorow, and Huey Newton. Enrollment limited to 30.

ENGL 0700T. American Literature and the Cold War.
A study of American literature in the decades following World War II, with a view toward specifying the role of culture in the United States' ongoing conflict with the Soviet Union from the 1940s through the 1980s. Authors to be considered include Hersey, Ellison, Wright, Morrison, Bellow, O'Connor, Reed, Pynchon, Updike, Roth, and Didion. Enrollment limited to 30.

ENGL 0710Q. American Literature in the Era of Segregation.
This course explores how American literature intersects with the legal, ethical, and racial discourses that defined the system of racial segregation. The class will assess literary works in relation to the discourses employed historically to rationalize segregation. In addition the course will explore the ways that literary style and genre became inseparable from the culture of segregation. Authors include Mark Twain, Nella Larsen, William Faulkner, and Ralph Ellison. DPLL

Spr ENGL0710C S01 15716 MWF 11:00-11:50(02) (R. Murray)

ENGL 0710T. Reading New York.
How have people imagined New York City from the early 20th century to the present? We will discuss immigration, mobility, nightlife and the neighborhood, downtown, underground and gentrified spaces, 9/11. May include work by John Dos Passos, Nella Larsen, E.B. White, Frank O'Hara, Patti Smith, Nan Goldin, Ernesto Quinones, Jonathan Safran Foer.

Spr ENGL0710T S01 25189 MWF 11:00-11:50(04) (T. Katz)

ENGL 0900. Critical Reading and Writing I: The Academic Essay.
An introduction to university-level writing. Students produce and revise multiple drafts of essays, practice essential skills of paragraph organization, and develop techniques of critical analysis and research. Readings from a wide range of texts in literature, the media, and academic disciplines. Assignments move from personal response papers to formal academic essays. Enrollment limited to 17. Banner registrations after classes begin require instructor approval. S/NC.

Fall ENGL0900 S01 15688 MW 8:30-9:50(01) (R. Ward)
Fall ENGL0900 S02 15689 TH 9:00-10:20(08) (K. Schapira)
Fall ENGL0900 S03 15690 MF 9:00-9:50(01) (C. DeBoer-Langworthy)
Fall ENGL0900 S04 15691 TH 10:30-11:50(13) (J. Readey)
Fall ENGL0900 S05 15692 MW 8:30-9:50(01) (A. Golaski)
Fall ENGL0900 S06 15693 Arranged 'To Be Arranged'
Fall ENGL0900 S07 15694 Arranged 'To Be Arranged'
Fall ENGL0900 S08 15695 MW 12:00-12:50(12) 'To Be Arranged'
Fall ENGL0900 S09 15696 MF 12:00-12:50(12) 'To Be Arranged'
Fall ENGL0900 S10 15697 MF 1:00-1:50(06) 'To Be Arranged'
Fall ENGL0900 S11 15698 MW 2:00-2:50(07) 'To Be Arranged'
Fall ENGL0900 S12 15699 MF 11:00-11:50(02) 'To Be Arranged'
Spr ENGL0900 S01 24549 MF 10:00-10:50(03) 'To Be Arranged'
Spr ENGL0900 S02 24550 MF 12:00-12:50(06) 'To Be Arranged'
Spr ENGL0900 S03 24551 MF 9:00-9:50(02) 'To Be Arranged'
Spr ENGL0900 S04 24552 MF 2:00-2:50(07) (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 any 1000-level nonfiction writing course. Writing sample may be required. Enrollment limited. Banner registrations after classes begin require instructor approval. S/NC.

Fall ENGL0930 S01 15701 MWF 9:00-9:50(01) (L. Stanley)
Fall ENGL0930 S02 15702 MWF 12:00-12:50(12) 'To Be Arranged'
Fall ENGL0930 S03 15703 MWF 10:00-10:50(14) (E. Hardy)
Fall ENGL0930 S04 15704 Arranged 'To Be Arranged'
Fall ENGL0930 S05 15705 Arranged 'To Be Arranged'
Spr ENGL0930 S01 24554 MWF 9:00-9:50(02) (K. Schapira)
Spr ENGL0930 S02 24555 TH 9:00-10:20(08) (E. Hardy)
Spr ENGL0930 S03 24556 MWF 10:00-10:50(03) (A. Golaski)
Spr ENGL0930 S04 24557 MWF 9:00-9:50(11) 'To Be Arranged'
Spr ENGL0930 S05 24558 TH 2:30-3:50(11) (M. Stewart)
Spr ENGL0930 S06 24559 TH 2:30-3:50(11) (E. Taylor)

ENGL 1030A. *ONLINE* The Thoughtful Generalist.
This "ONLINE" section of "ENGL1030: Critical Reading and Writing II: Research" will prepare you for academic and real-world discourse. In Canvas, you will discuss essays demonstrating deep research distilled into engaging intellectual journey. You will research and revise four explanatory, analytical, persuasive essays, using varied sources to explore subjects or issues of your choice. Mandatory peer reviews and conferences ONLINE and in person. Enrollment limited to 17. Banner registrations after classes begin require instructor approval. S/NC.

Fall ENGL1030A S01 16896 Arranged (E. Taylor)

ENGL 1030C. Writing Science.
This course explores how science, as an academic way of thinking and a method, affects our critical thinking and expression of culture. Readings examine the various dialects of scientific discourse. Students write three major research essays on self-selected scientific topics, form both within and outside their fields of study. Enrollment limited to 17.
Students read sample texts, view films, and keep an electronic diary. We explore writing's various forms—memoir, diary, essay, graphic novel, and others. Enrollment limited to 17. Writing sample may be required. Banner registrations after classes begin require instructor approval. S/NC.

ENGL 1030F. The Artist in the Archives

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 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 ENGL1050A 16446 MWF 1:00-1:50(06) (C. DeBoer-Langworthy)

ENGL 1050G. 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. Banner registrations after classes begin require instructor approval. S/NC.

Fall ENGL1050C 15755 TTh 10:30-11:50(13) (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. Banner registrations after classes begin require instructor approval. S/NC.

Fall ENGL1050G 15756 TTh 2:30-3:50(03) (T. Breton)

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 24600 TTh 1:00-2:20(10) (L. Stanley)
essays that do intellectual work or academic essays that address public topics), ideally in fluid, “hybrid,” audience-appropriate forms. Areas of investigation will include (but are not limited to) the review essay, the cultural analysis essay, literary documentary, and the extended persuasive/analytic essay. It will include some brief “touchstone” investigations into rhetorical theory, with the aim of helping to broaden our concepts of audience, analyze the constructive and imaginative effects of language, increase the real-world effectiveness of our own language practices, and situate our writing within current political, cultural, aesthetic and intellectual debates. Students must have sophomore standing or higher in order to be admitted to the class. A writing sample will be administered on the first day of class. Prerequisite: ENGL 0930, 1030, or 1050. Class list will be reduced to 12 after writing samples are reviewed during the first week of classes. Preference will be given to English concentrators. Banner registrations after classes begin require instructor approval. S/NC.

ENGL 1160A. Advanced Feature Writing.
For the advanced writer. Nothing provides people with more pleasure than a “good read.” This journalism seminar helps students develop the skills to spin feature stories that newspaper and magazine readers will stay with from beginning to end, both for print and on-line publications. Students will spend substantial time off-campus conducting in-depth interviews and sharpening their investigative reporting skills. The art of narrative storytelling will be emphasized. Prerequisite: ENGL 1050G or 1050H, or published clips submitted before the first week of classes. Class list reduced to 17 after writing samples are reviewed. Banner registrations after classes begin require instructor approval. S/NC.

ENGL 1160J. Advanced Journalistic Nonfiction.
For experienced writers. We will study and emulate the works of journalists who write across genres. We will focus on observational skills, narrative arc, the capturing of critical detail, scene setting, character, anecdote, thematic development, precision with words, and voice. Because all such writing is dependent upon quality reporting, we will explore the relationship between fidelity to fact and creativity. Class list will be reduced to 12 after writing samples are reviewed during first week of classes. Preference will be given to English concentrators. Prerequisites: 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 given to English concentrators. Banner registrations after classes begin require instructor approval. S/NC.

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.

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 classical texts, writing in and out of class, guest lectures, and touring culinary archives. The goal is to polish personal voice in menus, recipes, memoir, history, reportage, and the lyric essay. Prerequisite: ENGL 0930 or any 1000-level nonfiction writing course. Class list will be reduced to 17 after writing samples are reviewed during the first week of classes. Preference will be given to English concentrators. Banner registrations after classes begin require instructor approval. S/NC.

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.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
and what makes them poetic and read theoretical texts to understand narrative function and performance. We will write experimentally to experience how stories are constructed. Pre-requisites: ENGL 0900, 0930, or any 1000-level nonfiction writing course. S/NC.

Spr ENGL190S S01 25567 TTh 9:00-10:20(08) (L. Stanley)

ENGL 1190U. Nature Writing.
This course seeks to develop your skills as a sensitive reader and writer of the natural world. You will build a portfolio of revised work through a process of workshops, tutorials, and conferences, and engage in discussion of a range of written and visual narratives with reference to their personal, political, and ecological contexts. Writing sample required. Prerequisite: ENGL 0930 or any 1000-level nonfiction writing course. Class list will be reduced to 17 after writing samples are reviewed during the first week of classes. Preference will be given to English concentrators. S/NC.

Fall ENGL1190US01 16448 M 3:00-5:30(15) (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 1310A. Firing the Canon: Early Modern Women's Writing.
Rediscovery and reconsideration of works by early modern women have changed the literary canon: these once-neglected works are becoming mainstream, and they are changing the way we read 'traditional' texts. The reading in this course includes poetry, letters, drama, essays, fiction, and life-writing by authors including Lanyer, Wroth, Cavendish, Behn, Manley, Haywood, Scott, and Montagu.

Fall ENGL1310AS01 15720 TTh 9:00-10:20(08) (M. Rabb)

ENGL 1310V. Chaucer: The Canterbury Tales.
Middle English narratives by Geoffrey Chaucer's band of fictional pilgrims, read in their 14th-century historical and literary contexts. Prior knowledge of Middle English not required. Not open to first-year students.

Fall ENGL1310VS01 15743 TTh 2:30-3:50(03) (E. Bryan)

ENGL 1360J. Middle English Literature.
In the age of Chaucer, literature in Middle English ranged from lyrics to romance narratives to mystery plays and medieval genres like dream visions and debate poems. This course will introduce students to reading texts like Sir Gawain and the Green Knight and The Owl and the Nightingale in their original Middle English. No prerequisites. Not open to first-year students. Enrollment limited to 20. LILE

Spr ENGL1360JS01 24568 MWF 1:00-1:50(06) (E. Bryan)

ENGL 1360Z. Shakespeare and Embodiment.
Consideration of a number of Shakespearean texts including the erotic narrative poem "Venus and Adonis," the early revenge drama Titus Andronicus, the history Henry IV, pt. 1, the tragedy of Othello, among others, and their various representations of the body: as subject to violence, gender and desire, sovereignty and history. Attention to Shakespeare's rewriting of Ovid, novelle, and chronicle history. Enrollment limited to 20. Not open to first-year students.

Fall ENGL1360ZS01 16449 T 1:00-3:30 (K. Newman)

ENGL 1361F. Spenser and Shakespeare.
A comparative study of theme, form, and genre based upon pairings of major works: Shakespeare's Sonnets/Amorini; Faerie Queene I/king Lear; Faerie Queene III/Twelfth Night and Winter's Tale; Shepherdes Calendar/As You Like It. Weekly short interpretative exercises; final essay—3000 words. Enrollment limited to 20. LILE

Spr ENGL1361FS01 24569 W 3:00-5:30(14) (S. Foley)

ENGL 1361G. Tolkien and the Renaissance.
This course explores the work of J.R.R. Tolkien alongside Renaissance forebears such as Shakespeare, Spenser, Milton and others. Topics to include love and friendship, good and evil, violence and nonviolence, and how literature offers distinctive forms of life. Enrollment limited to 20. LILE

Spr ENGL1361GS01 24570 Th 4:00-6:30(17) (J. Kuzner)

ENGL 1380. Undergraduate Independent Study in Medieval and Early Modern Literatures.
Tutorial instruction oriented toward a literary research topic. Section numbers vary by instructor. Instructor permission required.

ENGL 150A. Jane Austen and George Eliot.
A survey of the major novels of Austen and Eliot. Readings will also include contemporary reviews and responses, letters, and Eliot's critical prose, as well as literary theory and criticism addressing questions such as novelistic form, realism and narrativity, the problem of the subject, the politics of aesthetics, and the changing status of the woman writer in the 19th century. Enrollment limited to 20 seniors and juniors. Instructor permission required. LILE

Fall ENGL150AS01 15745 M 3:00-5:30(15) (E. Rooney)

ENGL 151V. Literature of the American Renaissance.
A study of American literature in the decades surrounding the Civil War, with a view toward registering the ways in which formal literary innovations interacted with a climate of political upheaval and Constitutional crisis. Authors to be considered include: Douglass, Wilson, Lincoln, Emerson, Thoreau, Whitman, Crafts, Melville, Poe, Hawthorne, Alcott, Twain, Stowe, Delaney, and Dickinson. Enrollment limited to 20. LILE

Fall ENGL151VS01 15721 TTh 2:30-3:50(03) (D. Nabers)

ENGL 151W. On Being Bored.
This course will explore how and why certain texts and films represent states of non-productivity or non-desire. Beginning with writings from the Enlightenment and Romantic periods, we will move into contemporary theoretical and aesthetic reflections on the links between art and worklessness: narratives with neither progress nor plot, characters that resist characterization, as well as poems and films that resist emotive assertion and revelation. Enrollment limited to 20. DPLL LILE

Spr ENGL151WS01 24571 TTh 10:30-11:50(09) (J. Khalip)

ENGL 151X. Dickens.
Charles Dickens is one of the greatest novelists of the nineteenth century and his writings provide a rich resource for understanding both Victorian society and the history of the novel. Novels to be read include Oliver Twist, Little Dorrit, Great Expectations, and Our Mutual Friend. Topics to be explored include comedy, narrative, sexuality and gender roles, capitalism and modernity. Enrollment limited to 20.

Spr ENGL151XS01 24573 F 3:00-5:30(15) (M. Redfield)

Tutorial instruction oriented toward a literary research topic. Section numbers vary by instructor. Instructor's permission required.

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 through trade, immigration, and digital technology. Authors include Achebe, Cole, Dangarembga, Farah, Gordimer, Ngugi, Sahl, Soyinka, Wicomb. Films by Blomkamp, Loreau, Sembène. DPLL

Spr ENGL1710JS01 24596 TTh 10:30-11:50(09) (O. George)

ENGL 1710P. The Literature and Culture of Black Power Reconsidered.
This course reexamines the Black Power movement as a signal development in American literature and culture. We will read classics from the period with a view toward reassessing the nuances and complexities of their form and politics. At the same time, we will recover less familiar texts that complicate conventional understandings of what defines this movement. Authors include Malcolm X, Huey P. Newton, Angela Davis, Eldridge Cleaver, John Edgar Wideman, Ernest Gaines, and Amiri Baraka. DPLL

Fall ENGL1710PS01 15746 MWF 2:00-2:50(07) (R. Murray)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Instructor(s)</th>
<th>Section</th>
<th>Meeting Time</th>
<th>Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1710Q</td>
<td>Bloomsbury and Modernism</td>
<td>(female gross-out); Far From Heaven; Magic Mike; The D-Train; Boyhood; American Sniper.</td>
<td>Fall</td>
<td>10:00-10:50(14)</td>
<td>Spr</td>
</tr>
<tr>
<td></td>
<td>The contribution of the avant-garde &quot;Bloomsbury Group&quot; to the development of literary modernism. The focus will be on the central literary figures (Virginia Woolf, E. M. Forster, and T. S. Eliot), but attention will also be paid to the visual arts (Roger Fry, Vanessa Bell, and Post-Impressionism) and to social criticism (Lytton Strachey, Leonard Woolf, and John Maynard Keynes).</td>
<td>(P. Armstrong)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENGL 1710R</td>
<td>Recent Experiments in American Fiction.</td>
<td></td>
<td>Fall</td>
<td>10:00-11:50(04)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The premise of this course is that 21st-century American literature is undergoing a renaissance, the unifying quality of which is its exploration of a conceptual space located &quot;on the very edge of fiction,&quot; as one writer puts it. We will discuss how and why the ideological threads that once served to connect the practice of literature to the world seem to be fracturing. Writers discussed include Ball, Cole, Kushner, Lerner, Lin, Nelson, and Robinson. Not open to first-year students.</td>
<td>(T. Bewes)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENGL 1711C</td>
<td>Modernist Henry James.</td>
<td></td>
<td>Spr</td>
<td>11:00-11:50(04)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>How consciousness knew the world was a topic of endless fascination to Henry James. By dramatizing the workings of consciousness, James transformed the novel and led the way to modernism. In addition to the aesthetic significance of his experiments with point of view, the course will also analyze the ethical consequences of his insistence on life's ambiguities.</td>
<td>(T. Bewes)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENGL 1711E</td>
<td>African American Literature After 1975.</td>
<td></td>
<td>Fall</td>
<td>10:30-11:50(09)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course examines major authors and currents in African American literary writing from 1975 to the present. The class positions these works in relation to historical developments such as the rise of black nationalism, the evolution of a distinctive black feminist tradition, and the growing social divisions within the African American community. Authors include Toni Morrison, James H. Cone, Colson Whitehead, and John Wideman. DPLL</td>
<td>(P. Armstrong)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENGL 1711G</td>
<td>Refiguring Expression: The Feeling of Voice in Modern and Contemporary Poetry.</td>
<td></td>
<td>Spr</td>
<td>10:30-11:50(10)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course will examine how various traditions within modern and contemporary poetry have figured the relationship between poetic voice, affect, and expression and how these considerations of subjectivity have been inflected by procedural or conceptual constraints. Readings will include Dickinson, Stein, Olson, Zukofsky, Niedecker, Hejinian, Carson, Howe, Mayer, Cage, Bressenbruge, Lin, Rankine, Molen, Dworkin, Acconci, Sedgwick, Ngai, and Deleuze. Not open to first-year or sophomore students.</td>
<td>(R. Murray)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENGL 1760G</td>
<td>American and British Poetry Since 1945.</td>
<td></td>
<td>Fall</td>
<td>9:00-9:50(02)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Study of poetry after 1945. Readings include Bishop, Plath, Ashbery, Merrill, O'Hara, Heaney, Larkin, Walcott, Rich, Dove. Enrollment limited to 20. LILE</td>
<td>(A. Smailbegovic)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENGL 1760I</td>
<td>&quot;Terrible Beauty&quot;: Literature and the Terrorist Imaginary.</td>
<td></td>
<td>Spr</td>
<td>3:00-5:30(14)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Why does terrorism fascinate literary writers in the modern period? Is terrorism the figure of something that is unrepresentable in fiction, or is it a type of direct political action that fiction writers aspire to? Can literature's humanistic role of allaying terror survive an age of spectacular politics? How susceptible is terrorism to &quot;aestheticization&quot;? Texts will include works by Conrad, Flannery O'Connor, Naipaul, Dennis Cooper, Frantz Fanon, and Ngugiwa Thiong'o. Enrollment limited to 20 seniors, juniors, and sophomores. Banner registrations after classes begin require instructor approval. LILE</td>
<td>(M. Blasing)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENGL 1760X</td>
<td>The Men's Film, c. 2011.</td>
<td></td>
<td>Fall</td>
<td>10:30-11:50(13)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>It's been said that there's no such thing as &quot;the men's film;&quot; only cinema and the subgenre of &quot;the women's film&quot; (or &quot;weepy&quot;). This seminar reopens that question by focusing on genres (gross-out, bromance, coming of age, war) addressed to male audiences and concerned with men in unusual, even extreme circumstances. Films: The Hangover (1-2); Bridesmaids (female gross-out); Far From Heaven; Magic Mike; The D-Train; Boyhood; American Sniper. Enrollment limited to 20 juniors and seniors. Instructor permission required.</td>
<td>(T. Bewes)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 15751 Th 4:00-6:30(04) (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 15753 Arranged (T. Katz)
Spr ENGL1992 S02 24616 Arranged (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 Nonfiction Program in Nonfiction Writing. Instructor permission required.
Fall ENGL1993 S01 15764 M 3:00-5:30(15) (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 15765 Arranged (C. Imbriglio)
Spr ENGL1994 S01 24614 Arranged (C. Imbriglio)

ENGL 2360S. Alternative Miltons.
This seminar undertakes a close reading of Milton's monumentally significant epic "Paradise Lost." We will also consider the current state of Milton criticism. What's new in Milton criticism? What approaches have been holding fort? Has Milton criticism been slower to take to critical and theoretical innovation than Shakespeare criticism? If so, why, and what might we do about it? On that account, the seminar will engage a range of newer approaches—disability studies, queer theory, trauma theory, eco-criticism, animal studies, technoculture studies, and popular culture studies—to consider what they have to offer by way of new perspectives on Milton. Enrollment limited to 15 graduate students.
Spr ENGL2360S S01 24207 W 3:00-5:30(14) (R. Rambuss)

ENGL 2360Z. Shakespeare: a Politics of Love.
This seminar will explore certain of Shakespeare’s plays—mainstays such as Romeo and Juliet and Othello but also more marginal texts, such as All’s Well and As You Like It—in order to discern a politics of love. Enrollment limited to 15.
Fall ENGL2360Z S01 15463 W 3:00-5:30(17) (J. Kuzner)

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 14727 Arranged To Be Arranged

ENGL 2561N. Studying American Literature in a Digital Age.
How might scholars navigate the digital technologies increasingly used by humanists to access, archive, and study literary (and related) material in the information age? We’ll consider how our understanding of literature and literary study changes—if it does—in light of the digital turn and investigate how literary studies might be reconceived in light of the digital revolution. Enrollment limited to 15.
Fall ENGL2561N S01 15464 M 3:00-5:30(15) (J. Egan)

ENGL 2561O. The Romantic Detail.
This course reads texts from the Romantic archive that provide a staging ground for the ethics, aesthetics, and politics of the detail. We will explore how a detail can move from part to whole, incommensurability to consequence, revelation and reticence, as well as become a sign of gender difference, sexual dissidence, and racial ambiguity. Enrollment limited to 15.
Fall ENGL2561C S01 15465 F 3:00-5:30(11) (J. Kalhip)

ENGL 2561P. Secret History.
During the rise of print culture, an extraordinary number of texts presented themselves as secret histories. These texts, which promise disclosure and truth along with scandal and partisanship, establish a new relationship between literature, politics, and the knowing subject. They contribute significantly to the development of new kinds of writing, such as the novel. Recent scholarship (Aravamudan, Ballaster, McKeon, Bullard, Bowers) will accompany the study of representative texts including works by Behn, Manley, Defoe, Haywood, Steele, and Swift. Enrollment limited to 15.
Spr ENGL2561P S01 24208 Th 4:00-6:30(17) (M. Rabb)

Section numbers vary by instructor. May be repeated for credit. Instructor’s permission required.

ENGL 2761B. Temporalities.
Centered on modernism and the early 20th century, this course will investigate the varied models of time pulsing through literary and theoretical texts, and consider a range of issues, including memory and forgetting, historical progress and decay, utopian futurity, and queer temporalities. Readings include work by Freud, Bergson, Nietzsche, Benjamin, Joyce, Woolf, Barnes, Stein, Faulkner. Enrollment limited to 15.
Spr ENGL2761B S01 24826 F 3:00-5:30(15) (T. Katz)

ENGL 2761K. Poetics of Liveliness: Materiality and Change in Modern and Contemporary Poetry.
This seminar will draw on emerging conversations in “new materialisms,” animal studies, queer theory and environmental literature to consider the problem of describing the varied rhythms of change occurring within material worlds. Placing emphasis on how poetic texts stage a set of lively entanglements between materiality and temporality we will consider writing by Stein, Olson, Smithson, Hejinian, Robertson, Grosz, Barad. Enrollment limited to 15.
Fall ENGL2761K S01 15466 Th 4:00-6:30(04) (A. Smalcibegovic)

ENGL 2761L. The Post-Slavery Imagination.
This course excavates nineteenth-century literary and political discourses for their positive accounts of a post-slavery US, and it examines how the category of “post-slavery” shaped postwar efforts to articulate the grounds of racial equality in the US. Authors to be considered Brown, Wilson, Emerson, Stowe, Thoreau, Melville, Whitman, Twain, James, Wright, Hurston, Ellison, Baldwin, Williams. Enrollment limited to 15.
Spr ENGL2761L S01 24209 M 3:00-5:30(13) (D. Naber)

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 2901D. War and the Politics of Cultural Memory.
Examines British, European, and American cultural texts and sites that engage in the work of remembering in relation to four conflicts: the Second World War, the Korean War, Vietnam, and the so-called War on Terror. Works by Woolf, Georges Perec, Chang-rae Lee, Phil Klay, and Mohamedou Ould Slah; Agamben, Arendt, Hirsch, Lacoue-Labarthe and Nancy; films by Lanzmann and Coppolla. Enrollment limited to 15.
Fall ENGL2901D S01 15467 W 3:00-5:30(17) (R. Reichman)
ENGL 2901E. Literary Phenomenology.
An exploration of phenomenology’s theories of consciousness, the body, language, and time and their implications for aesthetics, hermeneutics, and the theory of literature. In addition to major figures in the phenomenological tradition (Husserl, Heidegger, Merleau-Ponty, Gadamer, Ricoeur, Iser), the course will explore such recent developments as embodied cognition, affect theory, kinesthetics, and the new materialism. Enrollment limited to 15.
Spr ENGL2901ES01 24210 Th 4:00-6:30(17) (P. Armstrong)

ENGL 2901F. Around 1946: Interdisciplinary Approaches to Global Transformations.
This seminar will look at the year 1948 across international locations and from an interdisciplinary perspective. An array of new nations states, institutions, political and cultural formations and styles emerged at this moment, with the movements of decolonization, the spread of global socialism, and aftermath of the Second World War. We will analyze these events through documents, images, philosophical texts, archives, literary texts from the era.
Spr ENGL2901FS01 24211 W 3:00-5:30(14) (L. Gandhi)

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. Prior to enrollment, graduate students must submit a syllabus design. Only with permission of instructor.
Fall ENGL2950 S01 15469 T 4:00-6:30(09) (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 ENGL2970 S01 14728 Arranged "To Be Arranged"
Spr ENGL2970 S01 23822 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 ENGL2990 S01 14729 Arranged "To Be Arranged"
Spr ENGL2990 S01 23823 Arranged "To Be Arranged"

ENGL XLIST. Courses of Interest to Students Concentrating in English.
Fall 2016
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 28301 Histories of the Early Modern Body
Cogut Center for Humanities
HMAN 2970W Ethics/Politics
Judaic Studies
JUDS 0830 The Bible as Literature
Spring 2017
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 14200 Proust, Joyce and Faulkner
Modern Culture and Media
MCM 2100Q Lacan vs. Foucault
MCM 2110Q Reading Remains

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 16133 TTh 1:00-2:20(10) (K. Teichert)

ENVS 0070E. 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’ll 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 ENVS0070E S01 16775 M 3:00-5:30(15) (D. Graef)

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 then 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 16132 MWF 10:00-10:50(14) (D. King)

Interested students must register for RELS 0260.
Fall ENVS0260 S01 16382 Arranged "To Be Arranged"

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 can not be easily or inexpensively replicated. Special emphasis will be placed on climate, food and water supply, population growth, and energy.
Fall ENVS0490 S01 16577 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.
Spr ENVS0495 S01 25015 TTh 9:00-10:20(08) (S. Frickel)

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 16134 W 3:00-5:30(17) (K. Teichert)

ENVS 1415. Power, Justice, and Climate Change.
Climate change creates injustices in who caused the problem, who is suffering worst and first, and who is taking action. Power differences between nations and social groups drives unequal disaster risks and "compounded vulnerabilities" for poor peoples and nations, and has led to gridlock in United Nations negotiations. The course reviews social and political dimensions of climate change, including local and national adaptation and mitigation efforts, media dynamics, collective and individual denial, negotiations, and the rise of climate social movements. Enrollment limited to 40. WRIT

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 11071 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 11072 Arranged "To Be Arranged"

ENVS 1492. SES-Aquatic Ecosystem Analysis.
Team-taught course examining the structure of freshwater, estuarine and marine ecosystems; impacts of environmental change on the landscape at local regional and global scales; the application of basic principles of ecosystem ecology to investigating contemporary environmental problems such as coastal eutrophication, fisheries exploitation. Part of the Semester in Environmental Science at the Marine Biological Laboratory; enrollment is limited to students in this program. Instructor permission required.
Fall ENVS1492 S01 11073 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 11074 Arranged "To Be Arranged"

ENVS 1555. Urban Agriculture: The Importance of Localized Food Systems.
Urban agriculture and community gardens have a critical function in a small but increasing movement toward more localized and sustainable food economies. This class will explore research and readings from multiple disciplines on the role of urban agriculture in world development and sustainability practices. Further, we will explore current U.S. farm policy, labor practices, and institutions impacting agricultural systems. More importantly, students will learn organic practices and be involved in planning and developing local urban agriculture projects. Enrollment limited to 40. Instructor permission required. E-mail Prof. King to request override (Dawn_King@brown.edu).
Spr ENVS1555 S01 24965 TTh 1:00-2:20(10) (D. King)

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 system analyses.
Spr ENVS1580 S01 25014 TTh 10:30-11:50(09) (K. Teichert)

Interested students must register for HMAN 1972F.
Fall ENVS1872 S01 16786 Arranged "To Be Arranged"

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 how 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. WRIT
Fall ENVS1920 S01 16580 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 24866 M 3:00-5:30(13) (D. King)

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.
Spr ENVS1970 S01 15707 TTh 10:30-11:50(13) (A. Wiart)

ENVS 2110B. Radical American Romanticism:Democratic, Environmental, + Religious Traditions in America(RELS 2110B).
Interested students must register for RELS 2110B.
Spr ENVS2110B S01 25057 Arranged "To Be Arranged"

ENVS 2450. Exchange Scholar Program.

ENVS 2980. Reading and Research.
First semester of thesis research during which a thesis proposal is prepared. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Instructor override required prior to registration.
Fall ENVS2980 S01 15707 MF 9:00-9:50(13) (A. Wiart)

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.
Fall ENVS2981 S01 15708 MF 10:00-10:50(13) (A. Wiart)

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.
Fall FREN0100 S01 15707 MF 9:00-9:50(13) (A. Wiart)
Fall FREN0100 S02 15708 MF 10:00-10:50(13) (A. Wiart)
Fall FREN0100 S02 15708 TTh 10:30-11:50(13) (A. Wiart)
Fall FREN0100 S03 15709 TTh 9:00-10:20(08) (A. Wiart)
Fall FREN0100 S03 15709 MF 11:00-11:50(08) (A. Wiart)
Fall FREN0100 S04 15710 TTh 9:00-10:20(08) (A. Wiart)
Fall FREN0100 S04 15710 MF 12:00-12:50(08) (A. Wiart)
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.

Spr FREN0200 S01 24615 M 9:00-9:50(09) (A. Wiart)
Spr FREN0200 S01 24615 TTh 10:30-11:50(09) (A. Wiart)
Spr FREN0200 S02 24617 TTh 10:30-11:50(09) (A. Wiart)
Spr FREN0200 S02 24617 MF 12:00-12:50(09) (A. Wiart)
Spr FREN0200 S03 24618 TTh 9:00-10:20(08) (A. Wiart)
Spr FREN0200 S03 24618 MF 1:00-1:50(08) (A. Wiart)
Spr FREN0200 S04 24619 MF 9:00-9:50(10) (A. Wiart)
Spr FREN0200 S04 24619 TTh 1:00-2:20(10) (A. Wiart)

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.

Fall FREN0300 S01 15713 M 9:00-9:50(13) (A. Wiart)
Fall FREN0300 S01 15713 TTh 10:30-11:50(13) (A. Wiart)
Fall FREN0300 S02 15715 TTh 9:00-10:20(08) (A. Wiart)
Fall FREN0300 S02 15715 MF 11:00-12:50(08) (A. Wiart)
Fall FREN0300 S03 15717 MF 12:00-12:50(10) (A. Wiart)
Fall FREN0300 S03 15717 TTh 1:00-2:20(10) (A. Wiart)

FREN 0400. Intermediate French II.
Continuation of FREN 0300 but may be taken separately. A four-skill language course that stresses oral interaction in class (three meetings per week plus one 50-minute conversation section). Materials include audio activities, film, and a novel. Short compositions with systematic grammar practice. Prerequisite: FREN 0300, FREN 0200 with permission, or placement.

Fall FREN0400 S01 15722 MWF 10:00-10:50(14) (Y. Kervennic)
Fall FREN0400 S02 15724 MWF 12:00-12:50(12) (Y. Kervennic)
Spr FREN0400 S01 24620 MWF 9:00-9:50(02) (Y. Kervennic)
Spr FREN0400 S02 24621 MWF 10:00-10:50(03) (Y. Kervennic)
Spr FREN0400 S03 24622 MWF 12:00-12:50(05) (Y. Kervennic)

FREN 0500. Writing and Speaking French I.
A four-skill language course that stresses oral interaction in class. Thematic units will focus on songs, poems, a short novel, a graphic novel, films and a longer novel. Activities include a creative project using Comic Life, and a systematic grammar review. Prerequisite: FREN 0400, FREN 0200 with written permission, or placement.

Fall FREN0500 S01 15725 MWF 9:00-9:50(01) (J. Izzo)
Fall FREN0500 S02 15726 MWF 10:00-10:50(14) (J. Izzo)
Fall FREN0500 S03 15727 MWF 11:00-11:50(02) (J. Izzo)
Fall FREN0500 S04 15728 MWF 12:00-12:50(12) (J. Izzo)
Spr FREN0500 S01 24623 MWF 10:00-10:50(03) (J. Izzo)
Spr FREN0500 S02 24624 MWF 11:00-11:50(04) (J. Izzo)
Spr FREN0500 S03 24625 MWF 12:00-12:50(05) (J. Izzo)

FREN 0600. Writing and Speaking French II.
Prerequisite for study in French-speaking countries. Class time is devoted mainly to conversation and discussion practice. Writing instruction and assignments focus on essays, commentaries, and to a lesser degree, on dialogues. Prerequisite: FREN 0500 or placement. Enrollment limited to 18.

Fall FREN0600 S01 15729 MWF 9:00-9:50(01) (S. Ravillon)
Fall FREN0600 S02 15730 MWF 11:00-11:50(02) (S. Ravillon)
Fall FREN0600 S03 15731 MWF 1:00-1:50(06) (S. Ravillon)
Spr FREN0600 S01 24626 MWF 10:00-10:50(03) (S. Ravillon)
Spr FREN0600 S02 24627 MWF 11:00-11:50(04) (S. Ravillon)
Spr FREN0600 S03 24628 MWF 1:00-1:50(06) (S. Ravillon)

FREN 0610. Writing and Speaking French II: International Relations.
Prerequisite for study in French-speaking countries. Continuation of FREN 500. Class time is devoted mainly to conversation and discussion practice. Same level as FREN0600. This course is designed for students who are interested in international relations. Discussions and writing assignments are related to global politics from French and Francophone perspectives and introduce students to the discourse of international relations in France. Prerequisite: FREN 0500. Enrollment limited to 18.

Spr FREN0610 S01 24629 MWF 11:00-11:50(04) (S. Ravillon)

FREN 0720A. De l’Amour courtois au désir postmoderne.
From twelfth-century courtly literature to contemporary film, this course explores the enduring romance between French culture and Eros. The ambiguities of desire are brought to the fore across changing religious and social contexts. Readings include Duras, Flaubert, Freud, and Baudrillard. Open to students who receive a 5 (AP test), 700 and above (SAT II) or with instructor’s permission. First Year Seminar, open to first year students only. Please email Virginia_Krause@brown.edu if you have questions.

Taught in French. FYS WRIT
Fall FREN0720A S01 15770 Th 4:00-4:50(04) (V. Krause)

What does today’s French novel look like? Reading ten prominent short novels (in English translation) from the last 20 years, students will be acquainted with the novelistic landscape of contemporary France, while also learning to approach through analysis and narrative theory the novel as genre. We will consider what kinds of questions these novels pose and how - be it regarding conditions specific to our time (human/inhuman, identity, technology, the globalized world, the everyday, dystopia...) - or those unceasing questions of life, time, love, predicament, that every novel must ask, even while sometimes seeming not to. Taught in English. FYS WRIT
Spr FREN0720B S01 25330 MWF 2:00-2:50(07) ‘To Be Arranged’

FREN 0750G. L’animal dans la culture contemporaine.
From reports of animals stranded in conflict zones and natural calamities, to cute or clever animals cast in advertisements and popular media, from the rat of Ratatouille to the caged orangutan of Nénette, the new interest for oral practice plus one conversation hour. One hour of work outside of class.

Fall FREN0750G S01 24546 Th 2:30-3:50(11) (T. Ravindranathan)

FREN 0760A. Introduction à l'analyse littéraire.
On what terms and with what tools can we "read" a literary text? This class aims to provide the historical context, vocabulary, and tools for textual analysis by comparing traditional and innovative examples of the major genres (short story, novel, poetry, theater) and by introducing students to a range of analytical approaches to literary texts, including narrative theory, poetics, socicriticism, and gender studies. Authors studied include Baudelaire, Apollinaire, Racine, Genet, Maupassant, Duras. WRIT
Fall FREN0760A S01 15732 Th 2:30-3:50(03) (G. Schultz)

FREN 1000B. Littérature et culture: Chevaliers, sorcières, philosophes, et poètes.
From the Middle Ages to the Age of Versailles, this course examines 6 foundational moments in French civilization: the Crusades, courtly love, humanism, the witch hunts, Cartesian reason, and the emergence of the autonomous self. Close scrutiny of literary texts and films will provide a window onto French civilization before the Revolution. Readings include medieval epic, Montaigne, and Descartes. In French. WRIT
Fall FREN1000B S01 15788 Th 1:00-2:20(10) (V. Krause)

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 Prévoit, Marivaux, Balzac, Baudelaire, Maupassant, Duras, Camara Laye and Rachid O. Taught in French.

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

Brown University
For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Stengers, Desprez, Westphal), we will consider what insights they offer for thinking human life ecologically, even as we face the verdicts of destroyed environments, climate change, and species’ vanishing.

**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.

**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

**GNSS 1500. The Art of Being Cared For - Gender, Race, and The Politics of Humanitarianism.**
This course will explore the nature and language of humanitarianism and its political and ethical effects. We will interrogate humanitarianism as a set of practices that emerge from specific contexts and historical circumstances, rather than as a normative set of laws and rules. We will explore humanitarianism not as a triumphal project that transcends violence but as a mediated space that demands reckoning with the violence, uncertainties, and possibilities inherent in contemporary humanitarianism. We will examine cases throughout the world where humanitarianism simultaneously functions as a remedy for absent justice, a rationale for intervention, and an ally for state-sponsored violence. DPLL

**GNSS 1711. Speech and Silence, Trust and Fear: A Feminist Philosophical Inquiry into Sex Equality.**
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.

**GNSS 1721. Cinema's Bodies.**
The course explores the cinematic construction of bodies – female, male, animal, and other. Cinematic bodies do not stand alone as they are framed, cut, exposed, veiled, enlarged, distorted, and gendered. The body is screened and composed into an image of beauty, of death, of sex, of work. Cinematic devices like the close-up, camera angle, light are transform bodies into the body of the film and its specific style. This leads to the question of the spectator’s body as a screen for the filmic body and to theoretical explorations of the embodied visions cinema entails and stimulates. DPLL

**GNSS 1810. Independent Study and Research.**
Independent reading and research for upper-level students under the direction of a faculty member. Please check Banner for the correct section number and CRN to use when registering for this course.

**GNSS 1820. Independent Study and Research.**
Independent reading and research for upper-level students under the direction of a faculty member. Please check Banner for the correct section number and CRN to use when registering for this course.

**GNSS 1970. Directed Research and Thesis.**
Independent research under the direction of a faculty member, leading to a thesis. Required of honors candidates. Open to seniors only. Instructor permission required.

**GNSS 1980. Directed Research and Thesis.**
Independent research under the direction of a faculty member, leading to a thesis. Required of honors candidates. Open to seniors only. Instructor permission required.

**GNSS 1990. Senior Seminar.**
A research seminar focusing on the research and writing of the participants. Required of senior concentrators; open to other advanced students by permission. WRIT

**GNSS 2000. Method, Evidence, Critique: Gender and Sexuality Studies across the Disciplines.**
Gender and Sexuality Studies is by its very nature transdisciplinary. Can we speak of a single methodology that ties GNSS together? How might scholars work on gender and/or sexuality while respecting disciplinary boundaries and training? We will start with the premise that studies in gender and sexuality are tied together by critique that questions foundational assumptions and takes account of its own position within a given field of knowledge. By studying canonical theoretical texts alongside disciplinary studies characterized by a feminist and/or queer focus, we will investigate how critique operates and how standards of evidence are marshaled in particular disciplines.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Fall GNSS2010J S01 16753 W 10:00-12:30 (B. Honig)

An advanced research seminar in feminist theory and gender studies. The seminar's focus for 2016–17 is "Anti-War! Theaters of War/Politics of Refusal." Presentations made by Brown faculty, Pembroke Center fellows, visiting scholars, and students. Offered in conjunction with the Pembroke Seminar. Enrollment limited to 8.

Spr GNSS2020S S01 25563 W 10:00-12:30 (B. Honig)

GNSS XLIST. Courses of Interest to Concentrators in Gender and Sexuality Studies.

Geological Sciences

GEOL 0010. Face of the Earth.
Study of Earth's surface (e.g., mountains, rivers, shorelines) and processes which have created and modify it (e.g., glaciation, floods, volcanism, plate tectonics, earthquakes). The goals are to increase appreciation and enjoyment of our natural surroundings and provide a better understanding of environmental problems, natural land use, and geologic hazards. Four labs, plus a field trip. For nonscience concentrators (science concentrators should take GEOL 0220). Students MUST register for both components of this course (the lecture and one of the labs) during the SAME registration session. Enrollment limited to 100.

Fall GEOL0030 S01 16702 TTh 1:00-2:20(10) (S. Veland)

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. WRIT

Fall GEOL0030 S01 16702 TTh 1:00-2:20(10) (S. Veland)

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 16754 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 25575 MWF 2:00-2:50(07) (S. Clemens)

GEOL 0160I. Diamonds.
Examines both the science and human history of diamonds, and shows how they have interacted over the years. Investigates how and where diamonds are formed in nature and what they tell us about the Earth. At the same time, explores the role diamonds have played in our history and culture. CAP course. Enrollment limited to 12 first year students. FY'S WRIT

Fall GEOL0160 S01 16662 TTh 2:30-3:50(03) (S. Parman)

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. CAP course. Enrollment limited to 100. After pre-registration, instructor permission is required to register or get on wait-list. Please see or email instructor (Jan.Tullis@brown.edu).

Fall GEOLO220 S01 16653 MWF 11:00-11:50(02) (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 GEOLO230 S01 25583 TTh 1:00-2:20(10) (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. WRIT

Spr GEOLO240 S01 25576 MWF 11:00-11:50(04) (T. Herbert)

GEOL 0250. Computational Approaches to Modelling and Quantitative Analysis in Natural Sciences: An Introduction.
Application of numerical analysis to mathematical modelling in the natural sciences including topics such as ground water and glacier flow, earthquakes, climate models, phase equilibrium, and population dynamics. Numerical methods will include the solution of linear algebraic systems of equations, numerical integration, solution of differential equations, time series analysis, statistical data analysis tools. Development of computer programming skills in the Matlab programming environment. Suggested prerequisites: MATH 0090, 0100; PHYS 0030, 0040, or 0050, 0060.

Fall GEOLO250 S01 16701 MWF 10:00-10:50(14) (E. Parmentier)

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 GEOLO350 S01 16659 MWF 11:00-11:50(02) (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 GEOLO810 S01 25564 MWF 10:00-10:50(03) (R. Milliken)

GEOL 1130. Ocean Biogeochemical Cycles.
A quantitative treatment of the cycling of biologically important elements in the world ocean. Special attention paid to the carbon system in the ocean and the role that organisms, in conjunction with ocean circulation, play in regulating the carbon dioxide content of the atmosphere through exchange with the surface ocean. For science concentrators. Offered alternate
GEOL 1130. Global Water Cycle. The goal of this class is to understand the physical principles and processes of the global water cycle. Topics include the climatic importance of water, circulation of atmospheric water vapor, formation of rain and snow, availability of soil water, plant-water relations, mass balance of glaciers, and ongoing and expected changes in the water cycle. Additional goals: become familiar with the current research literature, practice clear and concise science writing, and to use simple programming in Python to plot and analyze actual data sets.

Students are expected to have taken at least one geology-related course. Programming experience recommended, but not necessary.

Fall GEOL1130 S01 16660 MWF 2:00-2:50(07) (T. Herbert)

GEOL 1240. Stratigraphy and Sedimentation. Introduction to depositional environments and processes responsible for formation of sedimentary rocks. Major sedimentary environments in the Recent are discussed, general models are proposed, and stratigraphic sequences in older sediments are examined in the light of these models. The 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 16661 MWF 10:30-11:50(13) (J. Russell)

GEOL 1310. Global Water Cycle. The goal of this class is to understand the physical principles and processes of the global water cycle. Topics include the climatic importance of water, circulation of atmospheric water vapor, formation of rain and snow, availability of soil water, plant-water relations, mass balance of glaciers, and ongoing and expected changes in the water cycle. Additional goals: become familiar with the current research literature, practice clear and concise science writing, and to use simple programming in Python to plot and analyze actual data sets.

Students are expected to have taken at least one geology-related course. Programming experience recommended, but not necessary.

Spr GEOL1310 S01 25577 TTh 10:30-11:50(09) (J. Lee)

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 an application provided by the instructor (to be requested through email). S/N/C.

Fall GEOL1320 S01 16711 TTh 10:30-11:50(13) (L. Carlson)
Fall GEOL1320 S02 16712 TTh 1:00-2:20(10) (L. Carlson)

GEOL 1350. Weather and Climate. Weather phenomena occur on short time scales, and form the basis for understanding climate, the study of changes over longer time scales. This course aims to provide an understanding of the processes that drive weather patterns, the general circulation of the atmosphere, and climate on Earth. Topics include: structure and composition of the atmosphere; sources of energy driving atmospheric processes; weather forecasting; the hydrological cycle; the forces that create severe weather; the influence of humans on the atmosphere; and factors that influence climate, climate variability and climate change. MATH 0090, 0100; PHYS 0050, or equivalent recommended. Enrollment limited to 30. WRIT

Spr GEOL1350 S01 25578 TTh 2:30-3:50(11) (A. Lynch)

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 16663 MWF 10:00-10:50(14) (Y. Liang)

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 25591 TTh 10:30-11:50(09) (J. Tullis)

GEOL 1560. Earthquake Seismology. Topics include: location of earthquakes in space and time; measures of size and intensity of shaking; body waves, surface waves, and free oscillations; structure of the interior of the Earth from wave propagation; earthquake faulting and relationship to tectonic processes. Recommended course: GEOL 0161. Offered in alternate years.

Spr GEOL1560 S01 25593 TTh 10:30-11:50(09) (K. Fischer)

GEOL 1790. Individual Study of Geologic Problems. One semester is required for seniors in Sc.B. and honors program. Course work includes preparation of a thesis. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Enrollment is restricted to undergraduates only.

Spr GEOL1790 S01 23830 GEOL 1790 "To Be Arranged"

GEOL 2460. Phase Equilibria. Principles of thermodynamics and phase equilibria in unary, binary, ternary, and multicomponent systems using analytical and graphical methods. Other topics include: solution theory, equations of state, and thermodynamics of surfaces.

Fall GEOL2460 S01 16672 MWF 9:00-9:50(01) (R. Cooper)

GEOL 2630. Interpretation Theory in Geophysics. Use basic statistical theory and its matrix algebra representation and modern approaches for the optimum design of experiments, constructing model solutions to measurements, and describing nonuniqueness in models, with particular emphasis on generalized linear-inverse techniques. Introduction to stochastic processes and prediction. Recommended courses: GEOL 1610; MATH 0290, 0520, or APMA 0330, 0340, and computer programming skills. Offered alternate years.

Spr GEOL2630 S01 25595 MWF 2:00-2:50(07) (D. Forsyth)

GEOL 2840. Asteroids and Meteorites. Compositional and petrographic characteristics of meteorites are examined along with the physical and compositional diversity of asteroids and other small bodies of the solar system. Possible links between specific types of asteroids and meteorite groups will be evaluated in the context of early solar system evolution. Data from spacecraft encounters with asteroids will be critically reviewed.

Spr GEOL2840 S01 25585 TTh 1:00-2:20(10) (R. Milliken)

GEOL 2920U. Climate Variations. This course will examine the geologic record of lake basins on decadal to million-year time-scales. Students will gain hands-on experience with techniques in paleolimnology including sediment core acquisition, sediment description, petrography, sedimentology and environmental analysis, geochemistry, basic core scanning, and age determination, modeling, and time series analysis. The biotic content and interpretation of fossils will be stressed. The course will also cover theoretical aspects of paleolimnology and more specialized techniques according to student interests through student-led discussions and a course project on regional lake sediments. Graduate students only; enrollment limited to 20.

Spr GEOL2920US01 25580 Arranged (J. Russell)

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 14735 Arranged "To Be Arranged"

Spr GEOL2970 S01 23829 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 14736 Arranged "To Be Arranged"

Spr GEOL2990 S01 23830 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<br>GRMN0100 S01 16327 MWF 9:00-9:50 (01) (J. Sokolosky)<br>GRMN0100 S01 16327 T 12:00-12:50 (01) (J. Sokolosky)<br>GRMN0100 S02 16328 MWF 11:00-11:50 (02) (J. Sokolosky)<br>GRMN0100 S02 16328 T 12:00-12:50 (02) (J. Sokolosky)<br>GRMN0100 S03 16329 MWF 12:00-12:50 (12) (J. Sokolosky)<br>GRMN0100 S03 16329 T 12:00-12:50 (12) (J. Sokolosky)<br>GRMN0100 S04 16330 T 12:00-12:50 (06) (J. Sokolosky)<br>GRMN0100 S04 16330 MWF 1:00-1:50 (06) (J. Sokolosky)<br>

**GRMN 0110. 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<br>GRMN0110 S01 24967 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<br>GRMN0200 S01 24970 MWF 9:00-9:50 (02) (J. Sokolosky)<br>GRMN0200 S01 24970 T 12:00-12:50 (02) (J. Sokolosky)<br>GRMN0200 S02 24971 MWF 11:00-11:50 (04) (J. Sokolosky)<br>GRMN0200 S02 24971 T 12:00-12:50 (04) (J. Sokolosky)<br>GRMN0200 S03 24972 MWF 12:00-12:50 (05) (J. Sokolosky)<br>GRMN0200 S03 24972 T 12:00-12:50 (05) (J. Sokolosky)<br>

**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<br>GRMN0300 S01 16135 MWF 10:00-10:50 (14) (J. Sokolosky)<br>GRMN0300 S01 16135 T 12:00-12:50 (14) (J. Sokolosky)<br>GRMN0300 S02 16136 Th 12:00-12:50 (06) (J. Sokolosky)<br>GRMN0300 S02 16136 MWF 1:00-1:50 (06) (J. Sokolosky)<br>

**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<br>GRMN0400 S01 24973 MWF 10:00-10:50 (03) (J. Sokolosky)<br>GRMN0400 S01 24973 Th 12:00-12:50 (03) (J. Sokolosky)<br>GRMN0400 S02 24974 MWF 12:00-12:50 (06) (J. Sokolosky)<br>GRMN0400 S02 24974 Th 12:00-12:50 (06) (J. Sokolosky)<br>GRMN0400 S02 24974 MWF 1:00-1:50 (06) (J. Sokolosky)<br>

**GRMN 0500F. Twentieth-Century German Culture.**
A broad exploration of twentieth-century German culture using many kinds of written and visual texts (e.g. literature, journalism, film, art). While continuing to work on all four language skills (speaking, listening, reading, writing) students will gain more intensive knowledge about German culture, society, and history. In German. Recommended prerequisite: GRMN 0400. WRIT

Fall<br>GRMN0500F S01 16137 MWF 11:00-11:50 (02) (K. Mendicino)<br>

**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<br>GRMN0600B S01 24975 MWF 10:00-10:50 (03) (T. Kneschke)

**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 Temple, Lindsey Davis, Alan Gordon, Robert van Gulik, Laura Rowland, among others. LILE FYS WRIT

Fall<br>GRMN0750F S01 16138 TTh 9:00-10:20 (08) (T. Kneschke)

**GRMN 0900C. Introduction to German Literature.**
This survey course will give a historical overview of the main periods and genres of literature in German from the eighteenth to the early twentieth century. We will also consider how literature relates and contributes to the cultural, intellectual, and political history of Germany. In English. WRIT

Spr<br>GRMN0900C S01 24976 TTh 10:30-11:50 (09) (Z. Sng)

**GRMN 1200F. Waiting.**
What are we doing when waiting? Is waiting a deed or activity at all? Is to wait the same as to await? And what does it mean to wait (or not to wait) for answers to such questions? This seminar will approach (in order to unfold) the question of Waiting in religious texts (waiting for God or the messiah in the psalmist, the gospels, and letters of Paul); in Samuel Beckett’s Waiting for Godot; in Siegfried Kracauer’s Die Wartenden; in literary texts by Hebel, Kafka and Musil; in philosophical essays and aphorisms by Nietzsche, Heidegger and Blanchot. In English.

Fall<br>GRMN1200F S01 16168 Th 10:30-11:50 (13) (T. Schestag)

**GRMN 1320M. Die Literatur der deutschen Romantik.**
German literature “around 1800” offers complex and fascinating reading experiences. The texts are haunted by Doppelgänger, ghostly appearances, dark secrets, and other forms of the uncanny but also present images of breathtaking beauty and stories of love and insanity. We will study these texts in the context of the beginnings of modernity, with all the uncertainties and upheavals these historical changes brought with them. Readings by Novalis, Tieck, Eichendorff, Hoffmann, Brentano, Chamisso, Fouqué, and others. In German.

Fall<br>GRMN1320M S01 16169 TTh 1:00-2:20 (10) (T. Kneschke)

**GRMN 1320N. Children and Childhood in Literature, Philosophy, and Psychoanalysis.**
Children are question marks. They are around, but embody everything that is not yet: no language, no manners, no education. They are both a promise and a threat. This seminar follows their traces in Lesebuch für Kinder by Karl Philipp Moritz; in Jean Paul’s treatise on education, Levana; in letters between Hamann and Kant about the possibility of a Kinderphysik; in psychoanalytic essays (by Freud, Ferenczi, and Melanie Klein); in literary texts by Adalbert Stifter and Franz Kafka; in Clara and William Stern’s Die Kindersprache; as well as in Walter Benjamin’s Berliner Kindheit um 1900 and Proletarisches Kindertheater. In German.

Fall<br>GRMN1320N S01 16171 TTh 2:30-3:50 (03) (T. Schestag)

**GRMN 1340R. Literature and Multilingualism.**
Has literature ever really been monolingual? Has it not spoken, from the outset, with a split tongue? We will examine a range of authors from the twentieth century in this seminar for whom speaking is always speaking otherwise: speaking about the other, speaking as other, something other than merely speaking. Literary examples might include Franz Kafka, Samuel Beckett, Paul Celan, W. G. Sebald, Yoko Tawada. We will also
look at a selection of theoretical writings from Derrida, Deleuze and Guattari, Freud, Benjamin, and others. In English. Reading knowledge of German helpful but not required. DPLL

Fall GRMN1340 S01 16332 MWF 1:00-1:50(06) (Z. Sng)

GRMN 1440T. Ding-Gedichte/Thing-Poems.

Thing-poems do not only describe (animated or inanimate) things. They undo the strict separation between (designating) words and (designated) things. The seminar will pursue several aspects and implications of this undoing, for the state of language as well as for the state of things, with poems by Bartholinh Herrn Brockes, Eduard Mörike, Conrad Ferdinand Meyer, Rainer Maria Rilke, Stefan George, Paul Celan, Unica Zürn, and Michael Donhauser. In German.

Spr GRMN1440 S01 25029 TTh 1:00-2:20(10) (T. Schestag)

GRMN 1661B. Music in German Letters.

In this course we will study figures and thematizations of music in German fiction, poetry and philosophy from the 18th to 20th centuries. We will also consider the convergence of music and poetry in the German Lied. Readings from Goethe, Hoffmann, Moerike, Heine, Nietzsche, Wagner, Adorno and Mann. In English; no prerequisites.

Fall GRMN1661 S01 16198 W 3:00-5:30(17) (S. Bernstein)

GRMN 1900J. Senior Seminar: Deutsche Gegenwartsliteratur.

Contemporary German seminar is concerned with Germany after reunification, but also with other contemporary issues such as multiculturalism, mass migration, and globalization. In this class, we will discuss texts by younger authors and recent works by established writers. We will read essayistic, poetical, theatrical, and narrative texts, and we will assess what contemporary literature in German has to say about Germany, Europe, and the world of the 21st century. Readings by Durs Grünbein, Maxim Biller, Herta Müller, Juli Zeh, F. C. Delius, and others. In German. Pre-req: a 1000-level course.

Spr GRMN1900 S01 25033 MWF 2:00-2:50(07) (T. Kniesche)


Independent study on a particular topic related to German culture. In German or English. At the discretion of the instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

GRMN 1990. Senior Conference.

Special work or preparation of an honors thesis under the direction of a faculty member. Please check Banner for the correct section number and CRN to use when registering for this course.

GRMN 2450. Exchange Scholar Program.

Fall GRMN2450 S01 14739 Arranged "To Be Arranged"
Spr GRMN2450 S01 23833 Arranged "To Be Arranged"

GRMN 2661G. Frankfurt School Critical Theory.

Careful readings of key texts by members of the Frankfurt School, including Theodor W. Adorno, Walter Benjamin, Max Horkheimer, Siegfried Kracauer, and others. Examination of the ways in which these writers transformed their conceptual roots (provided by such thinkers as Kant, Hegel, Marx, Nietzsche, and Freud) into a new set of concepts, premises, and strategies that came to be known as “Critical Theory” (a term invented by Horkheimer in 1937). Taught in English; students from a variety of disciplines welcome. (Seminar takes place also in conjunction with an international conference on the Frankfurt School at Brown during Fall 2016.)

Fall GRMN2661 S01 16200 M 3:00-5:30(15) (G. Richter)

GRMN 2661H. Lenz-Legenden/Lenz-Legends.

Jakob Michael Reinhold Lenz is a forgotten writer, yet a most influential and haunting presence throughout the centuries (since he was found dead, at age 41, in a Moscow street, in 1792). We will re-read Lenz’ pieces for theater (Der Hofmeister, Die Soldaten) as well as on theater (Anmerkungen über’s Theater), including translations of, and writings on, Shakespeare. Readings will also include political and philosophical essays, linguistic and etymological studies from his Moscow years, and letters. The seminar’s second half includes remnants of encounters with Lenz in Goethe’s writings, Büchner’s novella Lenz, Celan’s Der Meridian and Oswald Egger’s Euer Lenz.

Spr GRMN2661 S01 25034 T 4:00-6:30(16) (T. Schestag)

GRMN 2661I. German Romanticism.

An introduction to the key texts of German romanticism, alongside a selection of secondary commentaries. We will focus on the importance of the period for 20th-century developments in literary theory and criticism. Primary readings will include texts by Kleist, Novalis, Schlegel, Tieck, and Hoffmann, and secondary readings will be drawn from authors such as de Man, Jacobs, Hamacher, and Lacoue-Labarthe/Nancy. Reading knowledge of German recommended but not required.

Spr GRMN2661 S01 25035 Th 4:00-6:30(17) (Z. Sng)

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 14740 Arranged "To Be Arranged"
Spr GRMN2970 S01 23834 Arranged "To Be Arranged"

GRMN 2980. Reading and Research.

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

GRMN 2990. Thesis Preparation.

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

Fall GRMN2990 S01 14741 Arranged "To Be Arranged"
Spr GRMN2990 S01 23835 Arranged "To Be Arranged"

GRMN XLIST. Courses of Interest to Students Concentrating in German Studies.

Hispanic Studies

HISP 0100. Basic Spanish.

This fast-paced beginning course provides a solid foundation in the development of communicative skills in Spanish (speaking, listening comprehension, reading and writing) as well as some insight on the cultures of the Spanish-speaking world. Individual work outside of class prepares students for in-class activities focused on authentic communication. Placement: students who have never taken Spanish before, or have scored below 390 in SAT II, or below 240 in the Brown Placement Exam. Students who have taken Spanish before and those with an AP score of 3 or below must take the Brown Placement Exam. Students should check Placement and Course Description in the Undergraduate Program section of the Hispanic Studies Website. Enrollment limited to 15; 15 spaces are available for students during pre-registration. 3 spaces will be available at the start of the semester for incoming or re-admitted students who should attend the first class. Pre-enrolled students must attend the first four days of class to maintain their pre-registered status and notify the instructor in advance if they must miss any day before the 4th class when the composition of the course section is finalized.

Fall HISP0100 S01 15236 MW 9:00-9:50(08) (S. Sobral)
Fall HISP0100 S01 15236 TTh 9:00-10:20(08) (S. Sobral)
Fall HISP0100 S02 15242 TTh 10:30-11:50(13) (S. Sobral)
Fall HISP0100 S03 15243 MW 1:00-1:50(10) (S. Sobral)
Fall HISP0100 S03 15243 TTh 1:00-2:20(10) (S. Sobral)
Fall HISP0100 S04 15244 TTh 1:00-2:20(10) (S. Sobral)
Fall HISP0100 S04 15244 MW 2:00-5:00(10) (S. Sobral)

HISP 0110. Intensive Basic Spanish.

A highly-intensive, two-semester sequence in one semester that carries 10 contact hours per week. Primarily for students with knowledge of Spanish, who have scored below 450 in SAT II or below 340 in Brown Placement Exam. Students with little or no preparation in Spanish should consult the Course Supervisor. Focused on acquisition of communicative (speaking, listening comprehension, reading and writing) as well as some insight on the cultures of the Spanish-speaking world. Development of cultural awareness. With successful completion of the course students will be able to understand simple texts, carry on short spontaneous conversations involving everyday topics (such as modern daily life, health, art and culture, nature and the environment, and relationships) and write simple texts with good command of grammar and sentence structure. Ideal for students interested in fast-tracking their language learning to meet study abroad requirements. Double credit.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 HISP0110 S01 15245 MWThF 9:00-10:50 (N. Schuhmacher)
Fall HISP0300 S01 15246 MW 9:00-9:50 (V. Smith)
Fall HISP0300 S02 15247 MW 10:00-10:50 (V. Smith)
Fall HISP0300 S03 15248 MW 12:00-12:50 (V. Smith)
Fall HISP0300 S04 15249 MW 1:00-1:50 (V. Smith)
Fall HISP0300 S05 15250 MW 2:00-2:50 (V. Smith)

**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 520 and 550 or 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.

Spr HISP0200 S01 24088 MW 9:00-9:50 (S. Sobral)
Spr HISP0200 S02 24089 MW 10:00-10:50 (S. Sobral)
Spr HISP0200 S03 24090 MW 1:00-1:50 (S. Sobral)
Spr HISP0200 S04 24091 MW 2:00-2:50 (S. Sobral)
Spr HISP0200 S05 24092 MW 3:00-3:50 (S. Sobral)

**HISP 0300. Intermediate Spanish I.**

This course continues to develop and strengthen students’ proficiency in the Spanish language, as well as to help them increase their cultural understanding. It seeks to develop both fluency and accuracy and to teach students to express, interpret, and negotiate meaning in context. Through the exploration of themes such as the individual and the community, health issues, traveling, multiculturalism and human rights, students focus on communication and learn to appreciate cultural differences. Prerequisite: either HISP 0200, HISP 0110, or placement: SAT II scores between 460 and 510, or Brown Placement Exam scores between 341 and 410. Students with an AP score of 3 or below must take the Brown Placement Exam. Students should check Placement and Course Description in the Undergraduate Program section of the Hispanic Studies Website. Enrollment limited to 18; 15 spaces are available for students during pre-registration. 3 spaces will be available at the start of the semester for incoming or re-admitted students who should attend the first class. Pre-enrolled students must attend the first four days of class to maintain their pre-registered status and notify the instructor in advance if they must miss any day before the 4th class when the composition of the course section is finalized.

Fall HISP0300 S01 15246 MW 9:00-9:50 (V. Smith)
Fall HISP0300 S02 15247 MW 10:00-10:50 (V. Smith)
Fall HISP0300 S03 15248 MW 12:00-12:50 (V. Smith)
Fall HISP0300 S04 15249 MW 1:00-1:50 (V. Smith)
Fall HISP0300 S05 15250 MW 2:00-2:50 (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 550 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 15250 MW 2:00-2:50 (V. Smith)
Fall HISP0400 S02 15251 MW 10:00-10:50 (V. Smith)
Fall HISP0400 S03 24093 MW 9:00-9:50 (S. Sobral)
Fall HISP0400 S04 24094 MW 10:00-10:50 (S. Sobral)
Fall HISP0400 S05 24095 MW 12:00-12:50 (V. Smith)
Spr HISP0400 S01 24093 TTh 9:00-10:20 (V. Smith)
Spr HISP0400 S02 24094 TTh 10:30-11:50 (V. Smith)
Spr HISP0400 S03 24095 TTh 11:00-12:20 (V. Smith)
Spr HISP0400 S04 24096 MW 1:00-1:50 (V. Smith)
Spr HISP0400 S05 24097 TTh 1:00-2:20 (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 professions, assessment, and vocabulary useful for establishing patient rapport. Students will practice communicating in common medical situations, conducting patient interviews, and increase their understanding of possible responses from patients. We will broaden knowledge of different cultures, explore health care systems/ professions in a variety of settings, and have pertinent speakers invited to class. Please note this course does not qualify as a pre-requisite for study abroad or for HISP 0600. Students who complete 0490A successfully can continue in our program with HISP 0500 as the next level.

Fall HISP0490A S01 16541 TTh 9:00-10:20 (J. Kuhnheim)

**HISP 0500. Advanced Spanish I.**

Offers comprehensive work in listening, speaking, reading, and writing, with targeted grammar review. Students work with a variety of readings (literature, newspaper articles, etc.) and with art forms such as music and film, in order to develop oral and written expression and to explore issues relevant to the Hispanic world. Students explore topics of their own interest through student-led activities and presentations. Prerequisite: HISP0400 or placement: SAT II scores between 570 and 600, or Brown Placement Exam scores between 411 and 490, 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 20; 18 spaces are available for students during pre-registration. 2 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 HISP0500 S01 15252 MW 9:00-10:20 (N. Schuhmacher)
Fall HISP0500 S02 15253 MW 10:30-11:50 (N. Schuhmacher)
Fall HISP0500 S03 24098 MW 1:00-2:20 (N. Schuhmacher)
Fall HISP0500 S04 24099 MW 2:00-3:30 (N. Schuhmacher)
HISP 0500. Advanced Spanish II.
Offers continued, advanced-level work in speaking, listening, reading, and writing skills, with focused review of challenging aspects of Spanish grammar. Course materials include films, music, art works, and a variety of written texts (articles, stories, plays, a novella, etc.) chosen to promote class discussion and in-depth written analysis. There will be individual and group activities, including in-class presentations and creative writing projects. Prerequisite: HISP 0500 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 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 HISP 0730-0740-0750 range.

HISP 0600. Advanced Spanish II.
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. Pre-requisite: HISP 0500, or AP score =5, or SAT II (Literature) score of 750 or above, or Brown placement score of 651 or above. WRIT

HISP 0740. Intensive Survey of Spanish Literature.
This course explores cultural production in and about Madrid during key moments of the city's history from its establishment as the capital of Spain in the 16th century through its reinvention as a major international tourist destination in the late 20th. Multimedia in orientation, the course draws on representations of the Spanish capital in literature, painting, photography, maps, music, and film. Topics include: self-invention in the court city, modernization and its discontents, Madrid and Spanish, and the development of the language beyond the Iberian Peninsula (in the Sephardic diaspora and in the Americas). Includes the historical and cultural events that deeply influenced the shaping of Castilian language. We will examine the most relevant contributions as well as other languages (Arabic in particular) in shaping the Spanish language. Taught in Spanish.

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 551 and over in the Brown Placement Exam. Instructor permission required.

HISP 0750C. Love and War in Medieval and Contemporary Spanish Fiction.
Examines presentations of Medieval Iberian culture in literature and film. This subject interrogates the persistent popularity of medieval themes and stories in contemporary film and fiction. It will consider some medieval narratives, such as *El Cid*, medieval chronicles and ballads, and *La Celestina*, which inspire a tradition of revisionist re-writing, as well as modern "inventions" of the medieval in a range of cultural forms. Prerequisite: HISP 0600 or placement: SAT II scores of over 750, 5 in AP Literature or 551 and over in the Brown Placement Exam. Instructor permission required.

HISP 0760. Transatlantic Crossings: Readings in Hispanic Literatures.
This course provides students a comprehensive introduction to literature and culture of the Spanish-speaking world, through exploration of a wide range of genres (short story, poetry, theater, novel, and film) and periods of production. The course not only gives students a contextualized historical panorama of literature in Spanish, it also equips them with strategies for reading, thinking, and writing about texts and films in Spanish, preparing them for more advanced literature and culture courses in Hispanic Studies. The course is conducted entirely in Spanish. WRIT

HISP 1250A. Madrid: History, Literature, and Culture.
This course explores cultural production in and about Madrid during key moments of the city's history from its establishment as the capital of Spain in the 16th century through its reinvention as a major international tourist destination in the late 20th. Multimedia in orientation, the course draws on representations of the Spanish capital in literature, painting, photography, maps, music, and film. Topics include: self-invention in the court city, modernization and its discontents, Madrid and Spanish, and the development of the language beyond the Iberian Peninsula (in the Sephardic diaspora and in the Americas). Includes the historical and cultural events that deeply influenced the shaping of Castilian language. We will examine the most relevant contributions as well as other languages (Arabic in particular) in shaping the Spanish language. Taught in Spanish.

HISP 1250B. Hispanic Culture Through Film.
This course examines major trends of Hispanic cinema through a representative selection of culturally diverse films from Spain, Latin America and the USA. Among the course objectives are: to learn about Hispanic history and culture through film, to understand cinema's strengths and limitations for representing culture and history, to gain an understanding of Hispanic cinema in a broader context of globalization, and to learn to write film analyses in Spanish.

HISP 1330W. War, Revolution and Literature in Modern Latin American Literature.
This course will tackle the literary underpinnings of war and revolution in order to scrutinize its powers. The discourse on war does not originate ex nihilo but recycles and appropriates narratives of the nation, the State or a given region depending on the specificities of each given war. Starting with Bolívar's "Decreto de Guerra a Muerte", passing through literary renditions of civil wars, continuing with guerrilla warfare texts, all the way...
to narratives on the War on Drugs, this course will question the ways in which war and revolution are made through language and staged in literature. Taught in Spanish.

Fall  HISP1330W S01  15388  MWF  1:00-1:50(06)  (F. Martinez-Pinzon)

**HISP 1330X. The Nature of Conquest: Scientific Literatures of the Americas.**
Throughout history, conquest and colonization have implied different kinds of appropriations: control over new lands, new bodies, new languages. With the appropriation of new languages came the confrontation between different ways of organizing the world and, in particular, alternative ways of understanding humankind's relationship to nature. This course explores the scientific literatures that emerged in the wake of Spanish conquest and colonization of the Americas (1500-1800). These hybrid scientific literatures, written in Spanish but also in Nahua, Maya, Quechua and graphic forms, illustrate the lasting cross-pollination between Old and New World notions about American nature.

Fall  HISP1330X S01  25449  MWF  12:00-12:50(05)  (I. Montero)

**HISP 1370B. Gaborium: Memory, Fiction, and Reading in Gabriel García Márquez.**
Departing from some formats of writing and reading (myth, history, legend, journalism, memoirs) in García Márquez writings, we plan to study the representation (magical, carnivalesque, political) unfolding in his novels, stories, and essays. From this processing of information and exchange, our course will analyze the cultural history of abundance, scarcity, and Utopia in Latin America. Prerequisite: HISP 0730 or 0740. Enrollment limited to 40.

Fall  HISP1370B S01  15312  Th  4:00-5:30(04)  (J. Ortega)

**HISP 1370T. Transatlantic Literature of the XXI Century.**
This course will explore new trends and authors from the Hispanic-phoncic world: Spanish, Latin American and Latino narratives of migration, bilingualism, globalization and innovative forms and techniques.

Spr  HISP1370T S01  24663  TTh  9:00-10:20(08)  (J. Ortega)

**HISP 1370V. Mujeres Malas.**
This seminar will analyze the notion of "bad women" in Pre-modern and Latin American Literature and visual texts. Perception, representation, and stereotyping of these women, both historical and fictional, as Mad, Witch, Female fatal, Hysteric, and Crazy, will allow us to follow the ideological narrative that produced these characters. Some of them are based on medical, primitive, political, and even psychoanalytic conceptions. We will discuss the primitive Castilian epic cycle, Celestina, Carmen, the novel and the opera; Malinche, Cortez’ translator in the conquest of Mexico; and novels and short stories from contemporary authors as well as Luis Burjuel’ films. Prerequisite: HISP 0730 or 0740.

Spr  HISP1370V S01  24110  MWF  11:00-11:50(04)  (M. Vaquero)

**HISP 1370Z. Puerto Rico: Literatura y Cultura Política.**
This course argues for the inclusion of modern and current Puerto Rican literature into the more visible contemporary Latin American writings. We plan to cover some of the issues that have been central to Puerto Rican authors during the XX and XXI centuries: the movement from the island to the U.S., from traditional to modern, colonial and independentista discourses, as well as intersections between popular culture, race, gender, and migration. Some of the authors are Julia de Burgos, Luis Palés Matos, Luis Rafael Sánchez, Rosario Ferré, Edgardo Rodriguez Juliá, Angela María Dávila, Mayra Santos Febres. In Spanish.

Spr  HISP1370Z S01  24139  W  3:00-5:30(14)  (J. Ortega)

**HISP 1700B. Rhythm and Silence: A Creative Writing Workshop.**
The course focuses on learning the craft of creative writing in Spanish across genres. We will study underlying principles of writing through lectures, readings, discussions, and exercises. As we reflect upon the creative process, we will examine the relationship between author and text and explore narrative techniques used to construct complex characters, dialogue, and imagery. The object will be to expand our creative writing skills and discuss the works of influential contemporary Latin American authors such as Jorge-Luis Borges, Alejo Carpentier, Angelina Muñiz-Huberman, Elena Poniatowska, Ernesto Sabato, Juan Rufio, and Cesar Vallejo. WRIT

Fall  HISP1700B S01  16325  M  3:00-5:30(15)  "To Be Arranged"
HISP 2970. Preliminary Examination Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.
Fall HISPC2970 S01 14748 Arranged "To Be Arranged"
Spr HISPC2970 S01 23839 Arranged "To Be Arranged"

HISP 2980. Research in Spanish and Latin American Literature.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

HISP 2990. Thesis Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.
Fall HISPC2990 S01 14747 Arranged "To Be Arranged"
Spr HISPC2990 S01 23840 Arranged "To Be Arranged"

HISP 2991. Thesis Preparation.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

HISP XLIST. Courses of Interest to Concentrators in Hispanic Studies.

History
A long history lies behind the millions of men and women locked up today as prisoners, captives and hostages. Beginning in antiquity and ending in the present, this course draws on materials from a variety of cultures across the world to explore incarceration's centuries-old past. In examining the experience and meaning of imprisonment, whether as judicial punishment, political repression, or the fallout of war, the class will ask fundamental questions about liberty as well. History 150 courses introduce students to methods of historical analysis, interpretation and argumentation. This course presumes no previous history courses.
Fall HIST0150C S01 15125 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 HIST0150D S01 24026 MWF 1:00-1:50(06) (V. Zamindar)

HIST 0150F. Pirates.
As long as ships have sailed, pirates have preyed upon them. This course examines piracy from ancient times to present, from the Mediterranean Sea to the Indian Ocean and the Caribbean. We will explore questions: How did piracy evolve over time? Where, why, and how did people become pirates, and what (if anything) made them different from other seafarers? How is piracy related to other historical processes, notably imperialism and nation-building? What explains the resurgence of piracy in the twenty-first century? Why have pirates become the stuff of legend, and how accurately are they portrayed in books and films?
Spr HIST0150F S01 24680 MWF 11:00-11:50(04) (R. Cope)

HIST 0203. Modern Africa: From Empire to Nation-State.
This course examines the major historical developments in Africa from 1945 to the present and pays special attention to the diversity of experiences within the vast continent. The first part focuses on Africans' varied responses to the waning European imperial project and explores different ways in which African nationalist leaders and everyday people challenged colonial administrations to ultimately achieve their independence. The second part of the course investigates the consequences and opportunities of decolonization, including questions of political legitimacy, state-building, structural adjustment programs and international aid, human rights, and civil conflicts.
Spr HIST0203 S01 24865 TTh 1:00-2:20(10) (J. Johnson)

HIST 0215. Modern Korea: Contending with Modernity.
This course examines the extraordinarily rapid revolution of Korea from isolated, agrarian society into a culturally modern, industrialized, and democratic nation that is an important actor on the world stage. It also will investigate how a non-Western society generates its own inspiration for human relations, social structure, political and cultural values. Includes coverage of North Korea.
Spr HIST0215 S01 25240 MWF 8:00-8:50(01) (J. McClain)

HIST 0232. Clash of Empires in Latin America.
Examines Latin America as the scene of international rivalry from the 16th to the 19th century. Topics include comparative colonialization, the transatlantic slave trade, privateering and piracy in the Caribbean, and the creation of an "Atlantic world."
P Fall HIST0232 S01 15156 MWF 11:00-11:50(02) (R. Cope)

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 racial politics of state-formation; the fraught history of U.S.-Latin American relations; the cultural politics of nationalism; how modernity was defined in relation to gender and sexuality; and the emergence of authoritarian regimes and revolutionary mobilizations, and the role of religion in shaping these processes.
Spr HIST0234 S01 25161 MWF 10:00-10:50(03) (D. Rodriguez)

HIST 0244. Understanding the Middle East: 1800s to the Present.
This course is an introduction to the history of the modern Middle East from the mid-19th C to the present. Readings and topics are structured chronologically, and emphasize the key events and turning points in the political and economic history of the region. The goal of the course is to understand how the Middle East, as it is today, has been shaped by the events of the past.
Fall HIST0244 S01 16288 TTh 2:30-3:50(03) "To Be Arranged"

HIST 0247. Civilization, Empire, Nation: Competing Histories of the Middle East.
The "Middle East" is a recent invention. 100 years ago, virtually none of the states currently populating the region's map existed. This course considers how historians (and others) have used the concepts of civilization, empire, and nation to construct competing narratives about this pivotal region's past from the rise of Islam to the present. Since facts acquire meanings through interpretative frameworks, we ask: What is privileged and what is hidden in these narratives? And what would the history of this region look like if we could see it through the eyes of the peoples who have long lived there?
Spr HIST0247 S01 24921 MWF 9:00-9:50(02) (F. Ahmed)

HIST 0253. Religion, Politics, and Culture in America, 1865 - Present.
Religion has played an undeniable role in the contemporary American cultural landscape. This course lends some perspective on the present by investigating the various and, at times, surprising role religion has played in history in the shaping of American culture from 1865 to the present.
WRIT Fall HIST0253 S01 15109 MWF 12:00-12:50(12) (L. Fisher)

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

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
HIST 0510A. Shanghai in Myth and History.
Like the greatest of world cities, Shanghai has been the object of fascination, repulsion, admiration, and misunderstanding since its rise to prominence in the 19th century. Often, serving as a symbol for colonialists, adventurers, revolutionaries, and entrepreneurs, obscuring the lives of the refugees, shopkeepers and factory workers who made the city hum. Yet the existence of the mythic city alongside other Shanghais makes this place -- with its polyglot, colonial, local, and transnational histories -- a researcher’s dream. This course will demonstrate how to investigate and analyze dream and image alongside the more concrete aspects of the material city. FYS
Fall HIST0510A S01 16287 W 3:00-5:30(17) (R. Nedostup)

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 two dramatic moments in 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. FYS P
Spr HIST0521A S01 24537 F 3:00-5:30(15) (J. Conant)

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, we will 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 on the relationship between state and society in Latin America and beyond. WRIT FYS
Fall HIST0537A S01 15117 Th 4:00-6:30(04) (J. Lambe)

HIST 0537B. Tropical Delights: Imagining Brazil in History and Culture.
Examines the many ways that Brazilians and foreigners have understood this vast continent-size country, ranging from early European explorers' anxieties about Cannibalism to modern images of the Amazonian rainforest, Rio De Janeiro's freewheeling Carnival celebrations, and the array of social movements mobilizing for social justice. Through an examination of historical sources, literature, movies, and popular culture, this seminar will consider how multiple images and projections of Brazil have shaped national and international notions about the country. Reserved for First Year students. Enrollment limited to 20. FYS P
Spr HIST0537B S01 24576 M 3:00-5:30(13) (J. Green)

HIST 0550A. Object Histories: The Material Culture of Early America.
Object History is not just about objects; it is also about things! Come explore the world of early America through the lens of a broad array of objects—boats, dresses, chokers, houses, wagons, wagons, silver cups, wigs, blankets, land, gardens, hammer, desks--and the cultures that produced and consumed them. As a first year seminar, this course is designed to engagingly introduce students to the basic concepts of historical study. We will take several field trips to local historical sites, both on and off campus. Our primary focus will be specific objects and their contexts and histories. Enrollment limited to 20 first year students. FYS WRIT P
Fall HIST0550A S01 15108 Th 4:00-6:30(04) (L. Fisher)

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 FYS
Fall HIST0551A S01 16219 W 3:00-5:30(17) (M. Vorenbarg)

HIST 0555B. Robber Barons.
Today, the United States looks a lot like it did at the turn of the 20th century. Much like it is now, America’s economy at that time saw tremendous growth interrupted by periodic financial crises. Moreover, both are periods of immense inequality. Whereas we have the one percent, the late 19th century witnessed a small group of capitalists amass unprecedented fortunes, which provided immense political power. In this class, we will explore what the lives of these “robber barons” can tell us about the role of economic privilege in shaping America’s social, cultural, and political history. FYS WRIT
Fall HIST0555B S01 16357 Th 4:00-6:30(04) (L. Riepplen)

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. FYS WRIT
Fall HIST0556A S01 15103 TTh 9:00-10:20(08) (H. Chudacoff)

HIST 0559B. Asian American and Third World Solidarity.
As historian Vijay Prashad puts it, “The Third World was not a place. It was a project.” During the 20th century struggles against colonialism, the peoples of Africa, Asia, and Latin America believed that another world was possible. Here, too, in the United States, minorities and their allies dreamed of dignity, democracy, and justice. Looking through the experiences of Asian Americans, this course examines the domestic freedom movements in the context of global decolonization. Topics include: campus activism, immigration, capitalist labor regimes, neocolonialism, cultural hegemony, and Afro-Asian connections. FYS
Fall HIST0559B S01 16679 F 3:00-5:30(11) (N. Shibasawa)

Why are there Chinese in the US, Canada, Mexico, Cuba, Peru? Singapore, Indonesia, Thailand, Vietnam, the Philippines? Australia, New Zealand? Fiji, Guam, Samoa? Mozambique, Zimbabwe, Cape Verde, Ghana? Spain, Germany, France, Russia, Czech Republic? Mauritius? Madagascar? India, Sri Lanka, Myanmar? Hong Kong, Macau, Taiwan? How and when did 50 million Chinese find their way around the world during the past 500 years, from the Ming Dynasty to the present moment? We will explore worldwide distribution of ethnic Chinese through Time (historical), Space (culture), and the so-called "Chinese diaspora," and examine questions of migration, identity, belonging, politics and conflict. FYS WRIT
Spr HIST0577A S01 25590 W 3:00-5:30(14) (E. Hu-Dehart)
HIST 0580M. The Age of Revolutions, 1760-1824.
In the middle of the eighteenth century, the Americas belonged to a handful of European monarchies; within a few decades, most of the Americas was composed of independent republics, some of the European monarchs were either deposed or quaking on their thrones. Usually considered separately, revolutions in British North America, France, Saint-Domingue (Haiti) and Spanish America had diverse local circumstances yet composed a single cycle of intellectual ferment, imperial reform, accelerating violence and, forging of new political communities. We will examine revolutions that helped create the world we live in. Enrollment limited to 20 first year students. FYS WRIT
Fall HIST0580M S01 15121 M 3:00-5:30(15) (J. Mumford)

HIST 0582B. Science and Society in Darwin's England.
This course is a first year seminar designed to introduce students to the study of history. It will be divided into two very different parts. The first part will be organized as a traditional history seminar in which we explore together the world in which Darwin developed his theory of the Origin of Species. The second part will be a historical re-enactment of an 1863 discussion in Britain’s Royal Society about whether to award Darwin their highest honor, the Copley Medal. Enrollment limited to 20 first year students. FYS WRIT
Fall HIST0582B S01 16289 TTh 2:30-3:50(03) (J. Richards)

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 WRIT
Spr HIST0654A S01 25202 Th 4:00-6:30(17) (R. Self)

HIST 0654B. American Patriotism in Black and White.
This course explores the different and sometimes conflicting definitions and meanings of patriotism and citizenship through the lens of African American history and military participation, using primary and secondary sources from the colonial period to the present, including political and legal documents, letters to editors, literary pieces, plays, speeches, and petitions. What are the many definitions of freedom and patriotism, and how have black people understood their realities as they chose to serve militarily? This social and political (not military) history focuses on the political implications of African Americans’ military service for/to the nation over three centuries. DPLL SOPH
Fall HIST0654B S01 15523 M 3:00-5:30(15) (F. Hamlin)

HIST 0658D. Walden + Woodstock: The American Lives of Ralph Waldo Emerson and Bob Dylan.
Emerson and Dylan are cultural icons of 19th and 120th 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 support 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 WRIT
Spr HIST0658D S01 25193 W 3:00-5:30(14) (K. Sacks)

HIST 1030. South African History.
This course examines major themes of history of southern Africa from the earliest times until 1994, with heavy emphasis on historiographical debates. Our discussions of the South African past will always be informed by a consideration of the approach of the scholars who have interpreted and presented it as history. Our major discussions concern the origin of historical change and the creation of racial groups. We will probe the significance of race in South African history but also the limitations of its explanatory power. Course will meet twice a week for lecture and discussion groups will meet once a week. WRIT
Spr HIST1030 S01 25233 MWF 1:00-1:50(06) (N. Jacobs)

This course considers major actors and developments in Africa from the mid-nineteenth through the mid-twentieth centuries. With a critical awareness of the ways that Africa's past has been narrated, it balances coverage of the state and economy with attention to daily life, families, and popular culture. The majority of the reading assignments are drawn from contemporary documents, commentaries, interviews, and memoirs. Works produced by historians supplement these. Students will analyze change, question perspectives, and imagine life during the age of European imperialism. Written assignments include a book review, two examinations, and identifying and editing a primary source text. WRIT
Fall HIST1060 S01 15116 MWF 1:00-1:50(06) (N. Jacobs)

HIST 1101. Chinese Political Thought.
Xi Jinping, President of the People’s Republic of China, cites the ancient political thinker Han Feizi (280-233 BCE) as an important influence on his approach to governance. He has also embraced (as have several leaders before him) some of the political and social ideals of Confucianism—ideals first stated in the sixth century BCE. This lecture-and-discussion course traces the history of Chinese political thinking from the first Chinese state to the present, emphasizing first, those ideas that continue to shape Chinese notions of governance, and second, comparisons between these and American political ideals. P
Spr HIST1101 S01 25049 TTh 9:00-10:20(08) (C. Brokaw)

HIST 1110. Imperial China/China: Culture and Legacy.
As the current revival of Confucianism in the People’s Republic of China demonstrates, the past is still very much alive in China today. This lecture-and-discussion course surveys the history of China from the origins of the first state through the twilight of the imperial period in the nineteenth century. Lectures are designed and the reading assignments chosen to emphasize in particular those ideas and beliefs, institutions and government structures, and literary and artistic developments that have shaped (and continue to shape) China today. “Imperial China” provides the knowledge necessary for informed study of modern China.
Fall HIST1110 S01 16558 MWF 10:00-10:50(14) (C. Brokaw)

HIST 1121. The Modern Chinese Nation: An Idea and Its Limits.
How did the Chinese empire become a nation-state? This question drives a survey of the history of China, Taiwan, Hong Kong and Chinese societies overseas from 1895 to the present. We will explore a variety of Conceptions of the Chinese nation and the rise of new state formations, investigating the extent to which they shaped the way people experienced everyday life. We will also pay attention to those who have been excluded by or unwillingly drafted into these processes, or who live outside them altogether, looking at other ways society has been organized and culture defined.
Fall HIST1121 S01 16557 MWF 11:00-11:50(02) (R. Nedostup)

An exploration of how the artifacts of visual, material, aural and ritual culture illuminate the practices and beliefs of people at various levels of Chinese society from the late imperial period to the present. Topics include arrangements of space and time, popular entertainment, religion and performance, the growth of mass media, and the relationship of cultural forms to politics, protest and global forces. In addition to lectures, discussions and papers, students will have the opportunity to create research presentations using multiple media formats.
Spr HIST1122 S01 25594 TTh 10:30-11:50(09) (R. Nedostup)

Examines the cultural traditions of the urban samurai, the wealthy merchant, and the plebian artisan that emerged in the great metropolises of Edo, Osaka, and Kyoto during the early modern period. Focuses on the efforts of the government to mold certain kinds of cultural development for its own purposes and the efforts of various social groups to redirect those efforts to suit their desires and self-interest. WRIT P
Fall HIST1140 S01 15120 TTh 9:00-10:20(08) (J. McClain)

HIST 1150. Modern Japan.
Japan is a rich site for an exploration of many of the key processes and concepts that have shaped, and continue to transform, the modern world.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
These include the creation of the nation as the fundamental structure for social and political organization, a development that came late to Japan and had profound effects on its relationships with its neighbors, the crafting of its own histories, and with the emergence of debates about what it meant to be “Japanese.” The course also explores how ideas about gender, race, and tradition have been understood and made use of in modern Japan. WRIT

HIST 1201B. Roman History II: The Empire.
The social and political history of the Roman Empire (14-565 CE). Focuses on expansion, administration, and Romanization of the empire; crisis of the 3rd century; militarization of society and monarchy; the struggle between paganism and Christianity; the end of the Empire in the West. Special attention given to the role of women, slaves, law, and historiography. Ancient sources in translation. WRIT

Focuses on the ancient Greeks, Romans, and Jews, from 300 B.C.E. to 400 C.E. Covers primarily social, philosophical, and religious areas of contention and accommodation, ending with the late Antiquite, Christianity, and rabbinic Judaism. P

HIST 1210A. The Viking Age.
For two centuries, Viking marauders struck terror into hearts of European Christians. Feared as raiders, Norsemen were also traders and explorers who maintained a network of connections stretching from North America to Baghdad and who developed a complex civilization that was deeply concerned with power and its abuses, the role of law in society, and the corrosive power of violence. This class examines the tensions and transformations within Norse society between AD 750 and 1100 and how people living in the Viking world sought to devise solutions to the challenges that confronted them as their world expanded and changed. P

HIST 1211. Crusaders and Cathedrals, Deviants andDominance: Europe in the High Middle Ages.
Popes named Joan, Gothic cathedrals, and crusaders—all these were produced by rich world of the western European Middle Ages. The cultural, religious, and social history of this period are explored with special attention to the social construction of power, gender roles, and relations between Christians and non-Christians. WRIT P

The age of Charlemagne sits at the nexus of antiquity and middle ages. For two hundred years the Carolingians - family of Charlemagne - welded together fragments of the splintered Roman imperial tradition and elements from the Germanic world to forge a new civilization that was to define Western Europe for centuries. This class examines that process by exploring themes as the Carolingian's rise to power; their interactions with the Islamic and Byzantine worlds; the early medieval Church; Charlemagne's imperial coronation; peasant and aristocratic life; the economy; the collapse of the Carolingian Empire; the early development of Charlemagne's legend. P

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

HIST 1230C. The Search for Renewal in 20th century Europe.
The overarching theme of the course is the relationship between modernity and the primitive as manifested in major cultural, aesthetic and political movements in the 20th century. Films are an integral part of the course. WRIT

HIST 1266C. English History, 1529-1660.
Examines politics, religion, and society from the Protestant Reformation to the Puritan Revolution—a period of rapid and dramatic change when the world, for most English people, was turned upside down. Considers the experiences and concerns of ordinary men and women, as well as the elite. Takes in Scotland, Ireland, and the great migration to New England. P WRIT

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 WRIT

HIST 1272D. The French Revolution.
This course aims to provide a basic factual knowledge of the French Revolution, an understanding of the major historiographic debates about the revolution period, and a sense of the worldwide impact of events occurring in late-eighteenth century France. A strong historiographic focus will direct our attention to the gendered nature of the revolutionary project; the tension between liberty and equality that runs throughout French history; the intersection of race and citizenship in the Revolution; and the plausibility of competing social, political, and cultural interpretations of the Revolution.

HIST 1312. Brazil: From Abolition to Emerging Global Power.
How did Brazil transform itself from a slave society in 1888 to rising international economic and political force? This course will examine the history of Brazil from the end of slavery to the present. We will analyze the reasons for the fall of the Empire and the establishment of a Republic, the transformations that took place as immigrants arrived from Europe, Japan, and the Middle East in the early twentieth century, and the search for new forms of national identity. We will study the rise of authoritarian regimes and the search for democratic governance in more recent years.

HIST 1313. Brazilian Biographies.
How do the famous Brazilian singers Carmen Miranda and Caetano Veloso fit into any comprehensive understanding of Brazilian history? Do the life stories of the eighteenth-century freed slave Xica da Silva or the twelfth-century favela dweller and best-selling author Carolina Maria de Jesus represent unique characters or larger social phenomena of different times and places? How have Brazilian and foreign authors written the history of Brazil through portraits of individuals. This course will examine life stories of Brazilians of all races and social classes through texts, documents, and films to see what these biographical portrayals reveal about Brazilian history/culture.

HIST 1320. Rebel Island: Cuba, 1492-Present.
Cuba, once the jewel in the Spanish imperial crown, has been home to some of the world's most radical revolutions and violent repressions. In the last 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 discontents—in addition to the historical processes that have forged one of the world's most vibrant socio-cultural traditions.

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.
**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 16546 TTh 1:00-2:20(10) (D. Rodriguez)**

**HIST 1440. The Ottomans: Faith, Law, Empire.**

This course explores the rise and fall of the longest-lived Muslim dynasty in history, the Ottoman Empire (1299-1923). From Turkish nomads in Asia Minor to multiethnic empire spanning three continents, the Ottoman sultans were the premier power of southeast Europe, northern Africa, and the eastern Mediterranean in the early-modern world. From medieval "Turko-Persia" to the catastrophes of World War I, we shall engage difficult historical questions surrounding religion and empire, Islam and secularism, nationalism and state-building, and the legacy of Ottoman rule in and outside today's Turkey—from Baghdad to Sarajevo, Beirut to Mecca, and "where East meets West": Constantinople/Istanbul.

**Fall HIST1440 S01 16545 MWF 1:00-1:50(06) (F. Ahmed)**

**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. We will conclude with a study of the American Civil War.

**Fall HIST1503 S01 15127 MWF 9:00-9:50(01) (S. Rockman)**

**HIST 1507. American Politics and Culture Since 1945.**

History of the United States between the end of World War II and the present. Major themes and topics include race and civil rights, women's history and feminism, the Cold War, Vietnam, and U.S. foreign policy, suburbanization and the urban crisis, the rise and fall of the welfare state, and a history of consumption and popular culture.

**Fall HIST1507 S01 15131 TTh 9:00-10:20(08) (R. Self)**

**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

**Spr HIST1511 S01 24929 MWF 12:00-12:50(05) (L. Fisher)**

**HIST 1514. Capitalism, Slavery and the Economy of Early America.**

The simultaneous expansion of capitalism and slavery witnessed intense struggle over the boundaries of the market, self-interest, and economic justice. This course traces those arguments from Colonialization through Reconstruction and asks how common people navigate the shifting terrain of economic life. The approach is one of cultural and social history, rather than the application of economic models to the past.

**Spr HIST1514 S01 25268 MWF 9:00-9:50(02) (S. Rockman)**

**HIST 1550. American Urban History, 1600-1870.**

Both a survey covering urbanization in America from colonial times to the present, and a specialized focus exploring American history from an urban frame of reference. Examines the premodern, "walking" city from 1600-1870. Includes such topics as cities in the Revolution and Civil War, the development of urban services, westward expansion, and social structure. P

**Fall HIST1550 S01 15179 MW 8:30-9:50(01) (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 Euro-American 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 15133 MWF 2:00-2:50(07) (N. Shibasawa)**

**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 25203 MWF 2:00-2:50(07) (N. Shibasawa)**

**HIST 1741. Capitalism, Land and Water: A World History: 1848 to the present.**

The choice of how we allocate land and water shapes famine, drought, war, homelessness and poverty. Over the centuries, utopians and empires have looked to very different systems of allocation, from village communalism to plantation systems to state provision of infrastructure to free-market systems. While an economist or political scientist might study these regimes through abstraction, the historian dives into the social context of different systems, reading government documents, social protests, as well as architecture, maps, and the landscape itself, as an archive that testifies as to the nature of consent, participation, and resistance in a political system. WRIT

**Spr HIST1741 S01 24946 TTh 10:30-11:50(09) (J. Guldi)**

**HIST 1820G. Nature on Display.**

This course will explore the different ways in which people have represented the natural world in a variety of context and time periods from the 16th to the 21st century. We will look at the depiction of nature in museums, gardens, documentary films, and municipal parks, as well as the science of biology and ecology. As we do so, we will explore our changing attitudes towards nature and the place that we occupy in it, thinking through the complex and philosophically fraught question of what nature is, and what, if anything, distinguishes it from the rest of our world. WRIT

**Fall HIST1820G S01 16544 TTh 1:00-2:20(10) (L. Rieppl)**

**HIST 1825F. Nature, Knowledge, Power in Renaissance Europe.**

This course connects natural knowledge to larger developments in Renaissance Europe such as noble court culture, artistic innovation, commercial exchange, exploration and colonization. Topics include: alchemy, early museums, the visual culture of science, and the impact of New World nature on Old World knowledge systems. P

**Fall HIST1825F S01 15405 MWF 8:00-8:50(16) (T. Nummedal)**

**HIST 1825H. Science, Medicine and Technology in the 17th Century.**

This course examines the development of science and related fields in the period sometimes called ‘the scientific revolution’. It will both introduce the student to what happened, and ask some questions about causes and effects. The new science is often associated with figures like Harvey, Galileo, Descartes, Boyle, Leeuwenhoek, and Newton. But it is also associated with new ways of assessing nature that are mingled with commerce. The question of the relationship between developments in Europe and elsewhere is therefore also explored. P

**Fall HIST1825H S01 16543 MWF 9:00-9:50(01) (H. Cook)**

**HIST 1825L. The Roots of Modern Science.**

This course explores the ways theories of physics, chemistry, biology and mathematics grew in relation to the natural, cultural and social worlds of the 18th and 19th centuries. There are no formal pre-requisites for the course, which is designed to be equally open and accessible to science and humanities students. WRIT

**Fall HIST1825L S01 15126 MWF 2:00-2:50(07) (J. Richards)**

**HIST 1825M. Science at the Crossroads.**

This course will look closely at the dramatic developments that fundamentally challenged Western Science between 1859 and the advent of the Second World War in the 1930s. Its primary focus will be on a variety of texts written in an effort to understand and interpret the meanings of fundamentally new ideas including from the biological side—evolutionary theory, genetic theory, and eugenics; from the physical side—fundamentally challenged Western Science between 1859 and the advent of the Second World War in the 1930s. Its primary focus will be on a variety of texts written in an effort to understand and interpret the meanings of fundamentally new ideas including from the biological side—evolutionary theory, genetic theory, and eugenics; from the physical side—
relativity theory, and quantum mechanics. The class should be equally accessible to students whose primary interests lie in the sciences and those who are working in the humanities. WRIT

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 24954 MWF 11:00-11:50(04) (J. Lambe)

HIST 1960Q. Medicine and Public Health in Africa. This course explores the major debates in the history of medicine in Africa during the nineteenth and twentieth centuries and highlights the existence of a variety of healing traditions and medical understandings across the continent. It will focus on the following question: What are some of the ways Africans practice and understand medicine? How have these practices interacted with other medical systems? What impact did colonialism have on the production of medical knowledge? How were practices and treatments evaluated and deemed effective? By whom and on what grounds? And how have independent African states addressed these critical issues?

Fall HIST1960Q S01 15222 Th 4:00-5:30(04) (J. Johnson)

HIST 1961C. Knowledge and Power: China’s Examination Hell. For centuries a rigorous series of examinations requiring deep knowledge of the Confucian Classics was the primary tool for the selection of government officials in imperial China. This system has been variously celebrated as a tool of meritocracy and excoriated as the intellectual “straightjacket” that impeded China’s entry into the modern world. This seminar examines the system and the profound impact it had, for better or worse, on Chinese society and government in the early modern period, and the role that its successor “examination hell”—the gaokao or university entrance examination—plays in society today.

Fall HIST1961C S01 16044 M 3:00-5:30(15) (C. Brokaw)

HIST 1961L. North Korea: Past, Present, Future. 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. WRIT

Fall HIST1961L S01 16542 W 3:00-5:30(17) (J. McClain)

HIST 1963Q. Crisis and Social Justice at the End of Antiquity. How did people living in the late Roman Empire manage the humanitarian crises that confronted their society? Drawing on the evidence of letters, laws, and other written sources, as well as of archaeological excavation, this seminar will explore how people both experienced and responded to the catastrophes that were a part of everyday life in the Mediterranean world in late antiquity (ca. 200-600). Topics include the horrors of war, the displacement of asylum-seekers and refugees, the enslavement of captive, acute poverty, food-shortage and famine, disease, natural disaster, religious controversies and violence, and the breakdown of structures of social dependence. P

Fall HIST1963Q S01 15167 F 3:00-5:30(11) (J. Conant)

HIST 1963Q. Sex, Power, and God: A Medieval Perspective. Cross-dressing knights, virgin saints, hospitallers, 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

Spr HIST1963Q S01 25210 M 3:00-5:30(13) (A. Remensnyder)

HIST 1964A. Politics and Culture Under The Brazilian Military Dictatorship, 1964-1985. This course will focus on the political, social, economic, and cultural changes that took place in Brazil during the military dictatorship that
ruled the country from 1964-85. We will examine why the generals took power, the role of the U.S. government in backing the new regime, cultural transformations during this period, and the process that led to re-democratization.

Fall HIST1967L S01 15112 T 5:30-8:00PM (J. Green)

HIST 1967. History of the Andes from the Incas to Evo Morales.
Before the Spanish invaded in the 1530s, western South America was the scene of the largest state the New World had ever known, Tawantinsuyu, the Inca empire. During almost 300 years of colonial rule, the Andean provinces were shared by the "Republic of Spaniards" and the "Republic of Indians" - two separate societies, one dominating and exploiting the other. Today the region remains in many ways colonial, as Quechua- and Aymara-speaking villagers face a Spanish-speaking state, as well as an ever-more-integrated world market, the pressures of neoliberal reform from international banks, and the melting of the Andean glaciers. WRIT
Fall HIST1967T S01 15655 TTh 10:30-11:50(13) (J. Mumford)

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 arena of study? What are the approaches and sources 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 15107 M 3:00-5:30(15) (B. Doumani)

HIST 1968V. America and the Middle East: Social and Cultural Histories in Tandem.
This seminar explores the evolving relations between the diverse states and peoples of the Middle East and North America through the lenses of social and cultural historians. While our course proceeds chronologically tracing primarily US foreign relations with the "Mideast", we will not stop there. Rather, we'll read closely for underlying socioeconomic and cultural processes—including trade patterns, migrant networks, and evolving conceptions of race, religion, and citizenship—themes often ignored by conventional histories that dwell on watershed events, personalities, and conflict. Our goal: to recognize how US-Mideast relations are far more complex, rich, and deep-rooted than is generally assumed.
Spr HIST1968V S01 24534 F 3:00-5:30(15) (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, geologists, geographers, sociologists, scholars of religion and the arts, politics and media. At the very heart of the seminar is the question: What makes for the bond between groups and place - real or imagined, tangible or ephemeral. No prerequisites required. WRIT
Fall HIST1969A S01 16535 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, geologists, geographers, sociologists, scholars of religion and the arts, politics and media. At the very heart of the seminar is the question: What makes for the bond between groups and place - real or imagined, tangible or ephemeral. No prerequisites required. WRIT
Spr HIST1969B S01 25466 W 3:00-5:30(14) (O. Bartov)

HIST 1969C. Debates in Middle Eastern History.
This seminar investigates the historical bases of some of the major debates which continue to dominate contemporary discussions on the Middle East. These include debates on colonialism and its legacies; problems associated with the post-colonial Middle Eastern state (the "democracy deficit": human rights; oil; political Islam); and arguments about the causes and consequences of some of the major events in Middle Eastern history (the Israeli-Palestinian conflict; the Iranian revolution; the Lebanese civil war; 9/11 and the Iraq invasion; and the Arab Spring).
Spr HIST1969C S01 24934 Th 4:00-6:30(17) 'To Be Arranged'

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 material structures of economic inequality and the shifting arguments that legitimated or challenged that inequality. Readings will explore how historians have approached the subject of inequality using on class as a mode of analysis. Students will write extended papers that place primary research in conversation with relevant historiography. Enrollment limited to: 20. Written permission required. WRIT
Spr HIST1970D S01 25267 F 3:00-5:30(15) (S. Rockman)

HIST 1972E. Theory and Practice of Local History.
Examines the theory and practice of local history, evaluating examples from a variety of genres ranging through micro history to folk music, from genealogy to journalism. Work with primary documents, evidence from the built environment and visits to local historic sites and archives will enable students to evaluate sources and develop their own ideas about writing history and presenting it to a public audience. Enrollment limited to 20. Instructor permission required.
Spr HIST1972E S01 25457 Arranged (S. Lubar)

A seminar examining how the categories of "war" and "peace" have emerged over time and place. How does a society decide that a war exists or has ended, or that there is peace, or that peace has been violated? How has the practice of war and the practice of peace changed over the course of history? We approach these questions by looking at a series of case studies, from Greek-Persian relations of the fifth century BCE to the Mongol imperial system of the thirteen century to the twentieth-century World Wars and recent efforts (successful and failed) at global governance.
Spr HIST1974B S01 25587 M 3:00-5:30(13) (M. Vorenberg)

This seminar is an experiment in thinking a global history of the making of the modern world. We read texts that track the movement of ideas, peoples and goods, the formation of political and economic inequalities and the continuous struggles of ordinary people against them. From empires to nation-states, from anti-imperialist nationalist struggles to transnational radical movements, this seminar grapples with the politics of knowledge for drawing out "fugitive" lineages of the past that we need to shape our collective future. No overrides will be given before the semester begins. Interested students should attend first class meeting.
Spr HIST1974J S01 24924 W 3:00-5:30(14) (V. Zamindar)

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 25300 Th 4:00-6:30(17) (K. Smith)

HIST 1978D. Palestine versus the Palestinians.
Who are the Palestinians? How and when did they become a "people"? What are the historical forces that led to the creation of Palestine, then its transformation into Israel? Underlying these questions is a tremendous tension between the historical evolution of Palestine and the Palestinians, as if one could exist only at the expense of the other. To explore this tension between identity and territory, students are introduced to recent scholarship that unsettles nationalist narratives and suggests alternative narratives. Enrollment limited to 20. Not open to first year students.
Spr HIST1978D S01 25458 M 3:00-5:30(13) (B. Doumani)
HIST 1979L. Urban History of Latin America.
Latin America is the world’s most urbanized region. 80 percent of Latin Americans live in cities, and iconic cities such as São Paulo and Mexico City are among the world’s largest conurbations. The city has long played a key role in the region’s history, serving as nodes of imperial power, as religious centers, and as markets from pre-Columbian to colonial times. The 20th century witnessed both the achievement and failure of modernization, as cities industrialized rapidly but grew haphazardly, struggling with poverty and pollution. Today, Latin American cities are multifaceted spaces where both real advancement and daunting problems coexist.
Fall HIST1979L S01 16771 W 3:00-5:30(17) (G. Vergara)

HIST 1990. Undergraduate Reading Courses.
Guided reading on selected topics. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Prospective honors students are encouraged to enroll in HIST 1992 during semesters 5 or 6. HIST 1992 offers a consideration of historical methodology and techniques of writing and research with the goal of preparing to write a senior thesis in history. The course helps students refine research skills, define a project, and prepare a thesis prospectus, which is required for admission to honors. Students who complete honors may count HIST 1992 as a concentration requirement. Limited to juniors who qualify for the honors program. WRIT
Fall HIST1992 S01 15123 M 3:00-5:30(15) (E. Pollock)
Spr HIST1992 S01 25500 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 16313 Arranged (E. Pollock)
Spr HIST1993 S01 25501 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 16316 Arranged (E. Pollock)
Spr HIST1994 S01 25502 Arranged (E. Pollock)

HIST 2450. Exchange Scholar Program.
Fall HIST2450 S01 14748 Arranged "To Be Arranged"
Fall HIST2450 S02 14749 Arranged "To Be Arranged"
Spr HIST2450 S01 23841 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 14750 Arranged "To Be Arranged"
Spr HIST2890 S01 23842 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 15129 Th 4:00-6:30(04) (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 15105 M 12:30-3:00 (H. Cook)

HIST 2940. Writing Workshop.
Required of all 3rd semester Ph.D. students.
Fall HIST2940 S01 15134 Arranged (K. Smith)

HIST 2950. Professionalization Seminar.
Required of all second year Ph.D. students; includes participation in Thursday Lecture Series. E
Spr HIST2950 S01 25230 Arranged (J. Johnson)

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
Spr HIST2960 S01 25059 M 9:00-11:30 (M. Vorenberg)

HIST 2970C. Rethinking the Civil Rights Movement.
This graduate course encourages a rethinking of the complex components, arguments and activities that have characterized what we have come to know as the Civil Rights Movement, concentrating primarily on African American agency, actions and politics, through careful reading of recent scholarship in the field. While knowledge of U.S. history is preferred, this course asks larger thematic questions about protest movements (the role of the state, relationships with and between oppressed groups and organizations, and periodization), that will interest non-Americanists also. Some of the topics covered include: gender, organizing and strategies, the local, global ramifications and interactions, organizational structures and politics, and the recent concept of the Long Civil Rights Movement. M
Spr HIST2970C S01 24945 Arranged (F. Hamlin)

HIST 2970Q. Core Readings in 20th Century United States History.
Major topics and themes in 20th-century U.S. history. M
Fall HIST2970Q S01 15130 Arranged (R. Self)

HIST 2971I. New Perspectives on Medieval History.
No description available.
Fall HIST2971 S01 15124 Arranged (A. Remensnyder)

HIST 2971S. Citizens and Subjects in the Modern Middle East: Ottoman Constitutionalism to Iranian Revolution.
In this graduate seminar we explore historical debates over rupture and continuity in the modern Middle East through the question of citizenship. From the Ottoman Tanzimat reforms to the Iranian Revolution, and French Algeria to Baathist Syria, our primary goal is to trace how scholars of the region have approached various long nineteenth-century revolutions from imperial subjects to national citizens, including questions of pluralism, participatory politics, and majority-minority relations. Second, we ask how legacies of Ottoman, colonial, and nationalist rule have shaped notions and experiences of state and society, religion and secularism, coexistence and conflict over the twentieth-century Middle East.
Fall HIST2971S S01 15158 Arranged (F. Ahmed)

HIST 2971T. Colonial Latin America.
This seminar focuses on the historiography of colonial Latin America since the 1960s. We will examine how this historiography has been influenced by broader trends in the discipline, such as the "cultural turn," and by internal developments, notably the increasing emphasis on native-language sources. We will pay particular attention to more recent interpretations of both traditional subjects (conquest, evangelization, the frontier) and emerging approaches (environmental history, ethno genesis). Requirements include short essays and a literature review.
Fall HIST2971T S01 16339 W 3:00-5:30(17) (R. Cope)

HIST 2981F. The Politics of Knowledge.
The seminar offers an introduction to fundamental theoretical texts and exemplary works in the interdisciplinary field of Science and Technology.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Studies. Readings will be drawn from a range of time periods and geographical areas, and students will be asked to deploy the theoretical insights of our readings in working with sources in their own fields for a final research paper. Topics include: the gendered dimensions of knowledge, the moral economy of science, claims to expertise, and the stakes of "objectivity."

**HIST 2981M. Digital History.**

In the last decade, millions of books and newspapers from our collective past have been digitized. New tools like topic modeling or digital maps have appeared to cut through information overload. In policy and the media, we argue about long-term data about the climate, prosperity, and inequality. What can the skills of the historian offer for making sense of long-term change? Advanced historical coursework OR knowledge of code is required.

Spr HIST2981F S01  25208  Arranged (L. Rieppel)
Spr HIST2981F S02  25217  Arranged (L. Rieppel)

**HIST 2981N. Moral Panic and the Politics of Fear.**

What are the political uses and content of fear? This course traces the politics of panic as a window onto state, stigma, and society by pairing foundational readings in culture studies with historical monographs grounded in case studies. Over the course of the semester, we will consider such themes as: the mobilization of fear as a strategy of governance; sexuality, sickness, and disgust; the political logic of backlash; racial terror and colonialism; paranoia and conspiracy theories; popular culture and elite repression and appropriation; and the supernatural infection of fear politics.

Spr HIST2981N S01  24959  Arranged (J. Guidi)

**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  14751  Arranged "To Be Arranged"
Spr HIST2990 S01  23843  Arranged "To Be Arranged"

**History of Art and Architecture**

**HIAA 0010. A Global History of Art and Architecture.**

Introduction to the global history of art, architecture and material culture from cave paintings to installation art. The course is both an historical survey as well as an analysis of case study examples. In addition to examining visual strategies of representation, the course explores the varied ways in which art shapes and reflects cultural, social, religious, and political concerns. Weekly one-hour conference required. Limited to 225. A fall HIAA0010 S01  15289  MWF  11:00-11:50(02) (S. Bonde)

**HIAA 0042. Islamic Art and Architecture.**

The formation of an Islamic artistic expression in art and architecture and the regional manifestations of that art from central Asia and the Middle East to Sicily and Spain. Weekly one-hour conference required. A Spr HIAA0042 S01  24785  MWF  11:00-11:50(04) (S. Bonde)

**HIAA 0062. The Age of Rubens and Rembrandt: Visual Culture of the Netherlands in the Seventeenth Century.**

Surveyes the amazing art in Holland and Flanders that revolutionized all media. We will see how paintings, sculpture, and architecture formed the historical environment of life in the 17th-century Netherlands. The work of such artists as Rubens, Rembrandt, Van Dyck, and Vermeer is presented as part of this history of art in a "golden age. " Weekly one-hour conference required. WRIT Fall HIAA0062 S01  15299  Th  1:00-2:20(10) (J. Muller)

**HIAA 0070. Introduction to American Art: The 19th Century.**

This undergraduate seminar traces the rise of American painting in the period from the Revolution to the dawn of modernism in the 20th century. Major figures, such as Thomas Cole, Frederick Church, Winslow Homer and Albert Pinkham Ryder, will be examined, as will significant movements, such as the Hudson River School and Tonalism. Discussion will help place American art within the context of history, the invention of national identity, and parallel developments in popular visual culture. Enrollment limited to 100.

Fall HIAA0070 S01  15297  MWF  12:00-12:50(12) (D. Nickel)

**HIAA 0560. Constructing the Eternal City: Popes and Pilgrims in Renaissance Rome.**

Examines Renaissance Roman painting, sculpture, and architecture in the context of the unique urban character of the city: site of antique myth, religious pilgrimage, and a cosmopolitan court. Beginning with Filarete and Fra Angelico, we move through the Renaissance (Michelangelo and Raphael), looking at the formation of artists' workshops and academies, ending with the urbanization programs of Sixtus V. WRIT A Spr HIAA0560 S01  24788  Th  10:30-11:50(09) (E. Lincoln)

**HIAA 0580. Word, Image and Power in Renaissance Italy.**

This class is designed to introduce cultural and historical perspectives on Italy from Siena in the Middle Ages to Venice in the High Renaissance. Taught by professors of Italian Literature, Art History and History, we will move across Italy and the centuries focusing on monuments of literature, art, architecture, and history through different disciplinary lenses. WRIT Fall HIAA0580 S01  15291  MWF  10:00-10:50(14) (E. Lincoln)

**HIAA 0770. Architecture and Urbanism of the African Diaspora.**

This lecture course introduces the built environments in and of "Africa," from the earliest known examples to the contemporary moment. Through a consideration of texts and images, we will interrogate "Africa" as both a construct and geographical entity characterized by diverse cultures, contexts, and histories. In addition to exploring the content of various architectural and urban traditions, we will approach our topic from the point of view of the theoretical paradigms that have governed the historiographical interpretation of particular periods, regions, and cultures. Readings will be arranged thematically and according to chronology and geography. Weekly one-hour section required. A DPLL WRIT Fall HIAA0770 S01  15292  Th  10:30-11:50(13) (I. Osayimwe)

**HIAA 0861. City and Cinema.**

An examination of the mutual influence between two of the major art forms of the 20th century: film and architecture. Concentrates on European and American film sets throughout the 20th century and explores their formal and iconographical sources in contemporary architectural discourse. Presentation and examination of sketches, paintings, still photographs, and film clips as well as writings by directors, set designers, critics, and architects (Eisenstein, Reimann, Kracauer, Bunuel and many others). A Spr HIAA0861 S01  24778  Th  1:00-2:20(10) (D. Neumann)

**HIAA 1090. Writing About the Arts.**

Writing is a critical skill for those who engage in the practice of art history, art criticism, and art theory. This writing-intensive workshop/seminar will offer students the opportunity to encounter various kinds of art in various real-world situations, then write about them. Different genres of art writing will be explored (reviews, museum wall texts, scholarly analyses, etc.) and, through frequent short assignments, participants will be learn to write with greater clarity, precision, and organization. Readings will explore the problems entailed in art historical description and what happens when visual ideas become texts. WRIT Fall HIAA1090 S01  15328  W  3:00-5:30(15) (C. Martin)

**HIAA 1181. Prefabrication and Architecture.**

Architects have been captivated prefabrication since the Industrial Revolution revealed the benefits of mechanized human labor. This undergraduate seminar will examine the provenance and relevance of prefabrication. We will consider the prefabricated traditions of Africa and Asia as the foundation for the discipline of “vernacular architecture”; and conceptualize prefab as a technology of colonial expansion, solution to the postwar housing crisis, expression of 1960s counterculture, and response to climate change. Case studies will be drawn from Africa, Australia, Asia, Europe, and North America. A WRIT Fall HIAA1181 S01  15343  F  3:00-5:30(11) (I. Osayimwe)

**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
Spr HIAA1201 S01 24818 F 3:00-5:30(15) (J. Moser)

HIAA 1550C. Dreaming of Food in the Early Modern World.
Floods, wars, trade, climate change, class distinctions, carnivals and public feasts kept food at the forefront of the early modern imagination. Focusing on Italy, but including its global connections, we will look at the cultures of food as the material of art and literature in markets, vineyards, courts, recipe books, medicine, kitchens, and the dreams of the hungry. Investigating the cultivation, presentation and consumption of food through related arts and the evolution of manners allows us to consider the design of tableware, food sculpture, and tapestries alongside more canonical arts. Some previous art history required, languages helpful. Upperclass seminar. LILE WRIT
Spr HIAA1550C S01 25373 M 3:00-5:30(13) (E. Lincoln)

HIAA 1600J. Rembrandt.
This seminar will concentrate on art of Rembrandt. We will study his technique, development, and varied subject matter in all media from drawings to etchings and paintings. Rembrandt’s work will be related to the historical contexts in which it was created and displayed. Prerequisite: previous courses in History of Art and Architecture. Enrollment limited to 20.
Fall HIAA1600J S01 15686 Th 4:00-6:30(04) (J. Muller)

HIAA 1870B. SoCal: Art in Los Angeles, 1945 to the Present.
Recent exhibitions, scholarship and media have turned to Los Angeles as a site of exploration of both American art and the larger frameworks of the Americas and international contemporary art. The character of media is directly connected to the circumstances of Los Angeles as a creative community built around an industry of visuality (film). This undergraduate seminar will examine postwar architecture, exhibitions, installation, land art, painting, performance, photography, public art and sculpture in Los Angeles and its impact on art history. This course may be open to a limited number of graduate students. WRIT
Spr HIAA1870B S01 25376 W 3:00-5:30(14) (C. Martin)

HIAA 1910A. Providence Architecture.
Seminar examining selected aspects of the architecture of downtown Providence from the late 19th century to the present. Projects require research at local archives, libraries, and architectural drawings collections. Instructor permission required. A
Spr HIAA1910A S01 25514 M 3:00-5:30(13) (D. Neumann)

HIAA 1910F. City Senses: Urbanism Beyond Visual Spectacle.
Architecture and urbanism provide synesthetic experiences of space that don’t necessarily privilege visual perception. This project seminar explores alternative approaches to design and an understanding of the city through explorations of all the senses. We will examine case studies of cities through the sounds of church bells, traffic, and water fountains; the smells of foods, plants, and sewers; or even the feelings of light and shade. Students are encouraged to work on projects that map the city through unconventional sensory markers, record sounds, distill scents, or film different corporeal means of navigating the urban environment.
Spr HIAA1910F S01 24782 Th 4:00-6:00(17) (D. Neumann)

HIAA 2212. The Pictured Text.
Writing makes language visible, and thus concerns images. Language also delimits the legibility of imagery. Turning words into images and images into words occurs at great speed around us. This course explores the relation of text and image across world traditions—Chinese, Mayan, Egyptian, Islamic, Greco-Roman, and others, extending up to the present. Topics include: calligraphy, context, scribal practice, the form and shape of writing, including typography, hidden or pseudo-writing, graffiti, and contemporary art.
Fall HIAA2212 S01 16321 W 3:00-5:30(17) (J. Moser)

HIAA 2450. Exchange Scholar Program.
Fall HIAA2450 S01 14742 Arranged "To Be Arranged"

HIAA 2920. Methods of Research and Art Historical Interpretation.
Required of first-year and second year history of art and architecture A.M./Ph.D. students. Enrollment limited to 20. Instructor permission required.
Spr HIAA2920 S01 24784 W 3:00-5:30(14) (D. Nickel)

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 examinations.
Fall HIAA2970 S01 14743 Arranged "To Be Arranged"
Spr HIAA2970 S01 23836 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 2989. 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 HIAA2989 S01 14744 Arranged "To Be Arranged"
Spr HIAA2989 S01 23837 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 14745 Arranged "To Be Arranged"
Spr HIAA2991 S01 23838 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 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.

Classics
CLAS 0660 The World of Byzantium
Urban Studies
URBN 0210 The City: An Introduction to Urban Studies

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

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.

ITAL 0110. Intensive Elementary Italian.
Covers the same material presented in Italian 100-200. One semester equivalent to the standard two-semester sequence. Daily meetings plus audio and video assignments.

ITAL 0200. Elementary Italian.
See Elementary Italian (ITAL 0100) for course description.

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.

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.

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.

ITAL 0600. Advanced Italian II.
A sixth semester course with intensive practice in speaking and writing. Short stories, poems, music, and movies will be used to discuss Italian Society from the Second World War through the present. We will explore some important themes—family, religion, gender, and politics. Class discussion, compositions, oral presentations, and a final paper. Prerequisite: ITAL 0500, placement by examination.

ITAL 0950. Introduction to Italian Cinema: Italian Film and History.
How do we visualize the past? How has cinema influenced our understanding of contemporary history? The course will focus on how key moments of 20th-century History (Fascism, WWII, the Mafia and Terrorism) have been described or fictionalized by major Italian filmmakers (including Benigni, Bertolucci, Caverni, Fellini and Pasolini). Subtitled films, readings and discussion groups. Enrolled for First Year students. Enrollment limited to: 20. FYWR

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

ITAL 1580. Word, Image and Power in Renaissance Italy.
This class is designed to introduce cultural and historical perspectives on Italy from Siena in the Middle Ages to Venice in the High Renaissance. Taught by professors of Italian Literature, Art History and History, we will move across Italy and the centuries focusing on monuments of literature, art, architecture, and history through different disciplinary lenses. WRIT

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.

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.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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.
please contact the professor and a wait list will be created. This is the first half of a year-long course whose first semester grade is normally a temporary one. Neither semester may be elected independently without special permission. Enrollment limited to 20.

Fall JUDS0100 S01 14921 TTh 1:00-2:20(06) (R. Adler Ben Yehuda)

Fall JUDS0100 S01 14921 MWF 1:00-1:50(06) (R. Adler Ben Yehuda)

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.

Spr JUDS0200 S01 23906 TTh 1:00-2:20(06) (R. Adler Ben Yehuda)

Spr JUDS0200 S01 23906 MWF 1:00-1:50(06) (R. Adler Ben Yehuda)

Develops the skills of reading, writing, and conversing in contemporary Israeli Hebrew at the intermediate level and of reading Hebrew texts of the biblical, rabbinic, and modern periods (biblical stories, rabbinic legends, modern Hebrew poems, stories, essays, newspaper articles). Discussions and compositions focus on the psychological, cultural, political, and social issues reflected in the Hebrew sources that we study. Prerequisite: JUDS 0200 or equivalent. Enrollment limited to 20. If unable to enroll because of closed registration, please contact the professor and a wait list will be created.

Fall JUDS0300 S01 14922 TTh 12:00-12:50(12) (R. Adler Ben Yehuda)

Fall JUDS0300 S01 14922 MWF 12:00-12:50(12) (R. Adler Ben Yehuda)

Develops the skills of reading, writing, and conversing in contemporary Israeli Hebrew at the intermediate level and of reading Hebrew texts of the biblical, rabbinic, and modern periods (biblical stories, rabbinic legends, modern Hebrew poems, stories, essays, newspaper articles). Discussions and compositions focus on the psychological, cultural, political, and social issues reflected in the Hebrew sources that we study. Prerequisite: JUDS 0300 or equivalent. Enrollment limited to 20. If unable to enroll because of closed registration please contact the professor and a wait list will be created.

Spr JUDS0400 S01 23907 TTh 12:00-12:50(05) (R. Adler Ben Yehuda)

Spr JUDS0400 S01 23907 MWF 12:00-12:50(05) (R. Adler Ben Yehuda)

JUDS 0500. Writing and Speaking Hebrew.
Enables students to improve their skills in speaking and writing Hebrew on a variety of topics. Features advanced work on language structure and active language practice in the classroom. Class discussions of Israeli current events draw on Israeli stories, poems, television programs, and films and on the Israeli press. Students also compose essays and stories in Hebrew. Prerequisite: JUDS 0400 or equivalent. Enrollment limited to 20.

Fall JUDS0500 S01 14923 TTh 2:30-3:50(03) (R. Adler Ben Yehuda)

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 JUDS0500 should see instructor for permission to enroll. DPLL LILE WRIT

Spr JUDS0600 S01 23908 MWF 10:00-10:50(03) (D. Jacobson)

This course will investigate both Jewish religious texts concerning money, economy, wealth, and poverty and the historical conditions that led to perversions of stereotypes of Jews. Moving chronologically from antiquity to the present, we will examine questions such as: What is the Bible’s ideal economy? Are the poor closer to God? Are there better or worse ways to make a living? What responsibilities, if any, do the rich have to the poor? Where did Shylock come from? Goals of the course include providing new ways to think about issues of economy and money and improving one’s writing. DPLL LILE WRIT

Fall JUDS0683 S01 16280 TTh 2:30-3:50(03) (P. Nahme)

JUDS 0700. A Game of Thrones: Religion and Nationalism, 1789-1933.
While contemporary liberal democracy takes a neutral stance toward different religions, it was modern European conflict over religion that gave rise to this political theory. Supposed “friends” such as 19th-century German Protestants and Catholics fought bitterly about whose version of Christianity should be the basis of the modern state. “Enemies” such as the Jews were thought to be incapable of civic participation in the liberal state and undeserving of equal rights. This course will examine, both philosophically and historically, the tensions between religion and politics in modernity that led to the emergence of the theory of state neutrality. DPLL LILE WRIT

Spr JUDS0700 S01 25048 MW 8:30-9:50(02) (P. Nahme)

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.

Spr JUDS0820 S01 25107 MWF 11:00-11:50(04) (D. Jacobson)

JUDS 0830. The Bible as Literature.
Explores how methods of literary analysis can be applied to the reading of narratives of the Old Testament/Hebrew Bible (in English translation). Also compares the ways that modern writers have transformed biblical stories into new interpretive literary works. For students interested in an introduction to the Bible, as well as students with a knowledge of the Bible who want to deepen their understanding of biblical narratives and investigate the influence of the Bible on modern literature. All readings in English. DPLL LILE WRIT

Fall JUDS0830 S01 14925 MWF 11:00-11:50(02) (D. Jacobson)

JUDS 1614. Heidegger, the Jews, and the Crisis of Liberalism.
This class explores the enduring legacy of Heidegger’s critique of Western philosophy in political, theological, and social thought. Focusing primarily upon Heidegger’s reception in 20th-century Jewish philosophy, we will explore the allure of Heideggerian thought and its implications in both left and right political critiques of liberalism. Topics include onto-theology, phenomenology, and radical historicism; science, hermeneutics, and methodology in the humanities; liberalism and the secular; ethics, politics, action; de-structuration and deconstruction; time and the Other. Authors include Adorno, Arendt, Butler, Derrida, Levinas, Löwith, Marcuse, Rosenzweig, Schmitt, Strauss. DPLL LILE WRIT

Fall JUDS1614 S01 16390 Th 4:00-5:30(04) (P. Nahme)

JUDS 1615. The Archaeology of Palestine.
Palestine constitutes one of the most important archaeological regions connected to the origins of Judaism, Christianity and Islam. In this class
we will examine the material remains of the region beginning in pre-historic times until the end of the Ottoman period in 1917. Literary sources as well as the more recent scholarly debates and discoveries help us understand the material remains of the relevant periods. WRIT

**JUDS 1625. Problems in Israelite Religion and Ancient Judaism.** A series of topics in Israelite religion and ancient Judaism which are of current scholarly interest are explored in a seminar setting. Students are encouraged to read widely and pursue individual research interests. The course assumes a basic knowledge of biblical literature and scholarly criticism. Enrollment limited to 20.

Fall JUDS1625 S01 14927 M 3:00-5:30(15) (S. Olyan)

**JUDS 1630. The Talmud.**
Written from the first - seventh centuries CE, the Talmud (which runs to 20 volumes) contains law, lore, theological speculation, and complex argumentation. We will read a selection in depth and examine both traditional and modern critical (e.g. historical and literary) approaches to this fundamental text. No prerequisites; all texts in English translation. Enrollment limited to 20. DPLL LILE WRIT

Fall JUDS1630 S01 14926 W 3:00-5:30(17) (M. Satlow)

**JUDS 1670. Ancient Synagogues, Churches, and Mosques in Palestine.**
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

Fall JUDS1670 S01 14928 T 4:00-6:30(09) (K. Galor)

**JUDS 1702. Creating the Global Economy: Entrepreneurial Jews, 1690-2010.**
What can the experience of the Jews teach us about the growth of the modern economy in the era of globalization? What were the economic, political, and cultural conditions that allowed Jewish bankers to create the economic networks that helped underpin the modern world? We will answer these questions by examining the careers and interactions of the major Jewish bankers and banking dynasties such as the Rothschilds, Jacob Schiff, and Gerson Bleicherod. We will see how these Jewish economic networks helped create - and were exploited by – the modern European economic systems of Europe, the United States and Israel. DPLL LILE WRIT

Spr JUDS1702 S01 25446 TTh 10:30-11:50(09) (A. Teller)

**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 23912 TTh 1:00-2:20(10) (R. Rojanski)

**JUDS 1726. Jewish Humor and Commercial Entertainment in Early 20th-Century Europe and America.**
The seminar explores the relationship between humor, popular culture and Jewish ethnic identity in early 20th-century Europe and America. It argues that self-deprecating humor and satiric performance of Jewish stereotypes were not expressions of self-hatred, but complex cultural gestures that led to integration within mainstream society. Topics to be considered are: the joke as a social gesture; the Jewish music hall as an urban institution; the politics of blackface in American Vaudeville; the East-European Jews in Hollywood. DPLL LILE

Spr JUDS1726 S01 25445 W 3:00-5:30(14) (M. Gluck)

**JUDS 17970. Individual Study Projects.**
Section numbers vary by instructor. Please see Banner for the correct course reference number (CRN) to use when registering for this course.

**JUDS 17975. 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 17976. 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 14892 MWF 10:00-10:50(14) (T. Riker)
Fall SIGN0100 S01 14892 TTh 10:00-10:50(14) (T. Riker)
Fall SIGN0100 S02 14895 MWF 12:00-12:50(12) (T. Riker)
Fall SIGN0100 S02 14895 TTh 12:00-12:50(12) (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 24286 MWF 10:00-10:50 (T. Riker)
Spr SIGN0200 S02 24289 MWF 12:00-12:50 (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 14893 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 24287 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 14894 TTh 2:30-3:50(03) (T. Riker)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
SIGN 1910. Independent Study in Sign Language/Deaf Studies. 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 may 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 14904 MW 9:00-9:50(08) (M. Christoff)
Fall ARAB0100 S01 14904 TTh 9:00-10:20(08) (M. Christoff)
Fall ARAB0100 S03 14908 TTh 10:30-11:50(02) (A. Hassan)
Fall ARAB0100 S03 14908 MW 11:00-12:20(02) (A. Hassan)
Fall ARAB0100 S04 14807 MW 12:00-1:00(03) (A. Hassan)
Fall ARAB0100 S04 14807 TTh 2:30-3:50(03) (A. Hassan)
Fall ARAB0100 S05 14908 MW 1:00-2:00(10) (A. Hassan)
Fall ARAB0100 S05 14908 TTh 1:00-2:20(10) (A. Hassan)

ARAB 0200. First-Year Arabic. 
Builds listening, speaking, reading, and writing skills, at the low intermediate level of Arabic proficiency. Six contact hours per week, with an emphasis on grammar and communication, plus written, audio, and video assignments outside of class. This is the second half of a year-long course. Students must have taken ARAB 0100 to receive credit for this course. If ARAB 0100 was taken for credit then this course must be taken for credit, if taken as an audit, this course must also be taken as an audit. Exceptions to this policy must be approved by both the academic department and the Committee on Academic Standing. Enrollment limited to 18.

Spr ARAB0200 S01 24028 MW 9:00-9:50(08) (M. Christoff)
Spr ARAB0200 S01 24028 TTh 9:00-10:20(08) (M. Christoff)
Spr ARAB0200 S02 24029 TTh 10:30-11:50(09) (A. Hassan)
Spr ARAB0200 S02 24029 MW 11:00-12:20(09) (A. Hassan)
Spr ARAB0200 S03 24030 MW 12:00-1:00(11) (A. Hassan)
Spr ARAB0200 S03 24030 TTh 2:30-3:50(11) (A. Hassan)
Spr ARAB0200 S04 24031 MW 1:00-2:00(10) (A. Hassan)
Spr ARAB0200 S04 24031 TTh 1:00-2:20(10) (A. Hassan)

ARAB 0300. Second-Year Arabic. 
Develops listening, speaking, reading and writing skills at the intermediate level of language proficiency through extensive use of various texts and multimedia. Promotes a better understanding of the Arabic cultural traditions. Six contact hours weekly, plus written, audio, and video assignments outside of class. Prerequisite: ARAB 0300. This is the second half of a year-long course. Students must have taken ARAB 0300 to receive credit for this course. If ARAB 0300 was taken for credit, then this course must be taken for credit; if taken as an audit, this course must also be taken as an audit. Exceptions to this policy must be approved by both the academic department and the Committee on Academic Standing. Enrollment limited to 18.

Spr ARAB0300 S01 24290 MW 10:00-10:50(09) (M. Christoff)
Spr ARAB0300 S01 24290 TTh 10:30-11:50(09) (M. Christoff)
Spr ARAB0300 S02 24291 MW 1:00-1:50(10) (M. Faiza)
Spr ARAB0300 S02 24291 TTh 1:00-2:20(10) (M. Faiza)

ARAB 0500. Third-Year Arabic. 
Offers comprehensive training in listening, speaking, reading, and writing, with grammar review as needed. Broadens students' perspective of Arabic culture using selections from the classical and modern traditions of Arabic writing and various art forms. Five contact hours weekly. Prerequisite: ARAB 0400.

Fall ARAB0500 S01 14911 MTWTh 12:00-12:50 (M. Faiza)

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 using selections from the classical and modern traditions of Arabic writing and various art forms. Five contact hours weekly. Prerequisite: ARAB 0500.

Spr ARAB0600 S01 24292 MTWTh 12:00-12:50 (M. Faiza)

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-skills language and culture course. Images of cities, as multifaceted as the people who inhabit them, animate cinema screens and daily news reports, inspire masters of writing, artists, and musicians, arouse political activism. By engaging the complex representation of the urban theme in contemporary discursive and art forms, this course will enhance students' understanding of the dynamics of urban politics and culture in the Middle East, while building a content-specific lexicon and advanced communicative ability. Prerequisite: ARAB 0600, or an equivalent. Enrollment limited to 12.

Fall ARAB0700 S01 14913 MW 12:00-1:30 (M. Christoff)

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 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

Spr ARAB0800 S01 24293 MW 12:00-1:30 (M. Christoff)

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.

Conducted in Modern Standard Arabic; designed for students with advanced language skills. Prerequisite: Four years of Arabic, or by instructor permission. DPLL LILE

Fall ARAB1100 S01 16568 TTh 2:30-3:50(03) (M. Faiza)

ARAB 1990. Special Topics in Arabic Language, Literature, and Culture. 
Advanced level integrated skill course focusing on specific reading and writing topics derived from the traditions and arts of the Arabic language. Course prerequisites include advanced capacity in Arabic grammar and reading comprehension. Enrollment limited to 10.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 2100. Academic Discourse for Internationals.
This course develops the English skills of first-year international graduate students who are preparing to be teaching assistants. Students improve their understanding of English grammar. They develop skills in critical writing, and learn to research, organize, and structure. Instructor permission required.
Fall EINT2100 S01 14896 MTWTh 11:00-11:50 (B. Gourlay)
Spr EINT2100 S01 24299 MTWTh 11:00-11:50 (B. Gourlay)

EINT 2200. Academic Interactions.
This course develops the English language skills of first-year international graduate students who are preparing to be teaching assistants. Students improve their fluency and expression of complex ideas in a variety of linguistic situations typical of classroom interactions. Students also increase their control of vocabulary, pronunciation and listening comprehension when communicating with American undergraduates. Instructor permission required.
Fall EINT2200 S01 14897 MTWTh 12:00-12:50 (B. Gourlay)
Spr EINT2200 S01 24299 MTWTh 12:00-12:50 (B. Gourlay)

EINT 2300. Negotiating an American Classroom.
In this course, international graduate students increase their abilities to communicate accurately and fluently in English with American undergraduates. International students develop their ability to interact, in culturally appropriate ways, in a variety of teaching situations common to an institution of higher education, where they are responsible for expressing and explaining complex information and ideas in English. Instructor permission required.
Fall EINT2300 S01 14898 MTWTh 9:00-9:50 (B. Gourlay)
Spr EINT2300 S01 24300 MTWTh 9:00-9:50 (B. Gourlay)

EINT 2400. Speaking Professionally for Internationals.
This course develops the English communication skills of international graduate students with an emphasis on intelligibility of speech and clarity of expression in a variety of teaching and professional situations (e.g., presenting material, responding to questions, directing discussions). Students develop increased facility of English in extended discourse when they are the authority in a teaching or other professional context. Instructor permission required.
Fall EINT2400 S01 14899 MW 9:00-9:50 (B. Gourlay)
Fall EINT2400 S02 14900 TTh 9:00-9:50 (B. Gourlay)
Spr EINT2400 S01 24301 TTh 9:00-9:50 (B. Gourlay)
Spr EINT2400 S02 24302 MW 9:00-9:50 (B. Gourlay)

EINT 2500. Advanced Articulation Tutorial.
This course is an advanced pronunciation tutorial for international graduate students who have achieved a near-native speaker level of fluency in English, but who require greater precision of English articulations, pronunciation, fluency and/or expression. Instructor permission required.
Fall EINT2500 S01 14901 MTWTh 11:00-11:50 (B. Gourlay)
Spr EINT2500 S01 24303 MTWTh 11:00-11:50 (B. Gourlay)

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 15202 MW 3:00-5:30(17) (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.

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 15204 M 6:30-8:50PM(15) (P. Sylvain)
Spr CROL0300 S01 24298 W 6:30-8:50PM (P. Sylvain)

Hindi-Urdu

HNDI 0100. Beginning Hindi or Urdu.
Introduces conversation, reading, and writing of modern standard Hindi and the Devanagari script. Those who already know Devanagari but have rusty conversation skills may join the class second semester; obtain instructor’s permission during the first semester. Those who prefer to learn Urdu and the Persian script should contact the instructor.
Fall HNDI0100 S01 14888 TTh 12:00-12:50(12) (A. Koul)
Fall HNDI0100 S01 14888 MWF 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 24304 MTWTh 12:00-12:50 (A. Koul)

HNDI 0300. Intermediate Hindi-Urdu.
A continuation of HNDI 0100-0200, which is a prerequisite. Introduces the variation of the Arabic script used for Urdu. Preparers students to communicate in written and spoken language. Activities are conducted in Hindi/Urdu. Meets four hours weekly.
Fall HNDI0300 S01 14889 MWF 1:00-1:50(06) (A. Koul)

HNDI 0400. Intermediate Hindi-Urdu.
A continuation of HNDI 0100-0200. Introduces the variation of the Persian script used for Urdu. Prepares students to communicate in written and spoken language. Activities are conducted in Hindi/Urdu. Meets four hours weekly. Prerequisite: HNDI 0300.
Spr HNDI0400 S01 24308 Th 4:00-4:50(06) (A. Koul)
Spr HNDI0400 S01 24308 MWF 1:00-1:50(06) (A. Koul)

HNDI 1080. Advanced Hindi-Urdu.
Each student follows an independent reading list determined in consultation with the instructor. The readings may include folk tales, journalistic prose, 20th-century literature, classical Urdu poetry of the 17th to 19th centuries, or subjects in nonfiction. The class meets together three hours weekly for discussion. Each student also spends one hour weekly with the instructor. Prerequisite: HNDI 0400.
Fall HNDI1080 S01 14890 Arranged (A. Koul)
Spr HNDI1080 S01 24307 Arranged (A. Koul)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 24027 T 9:00-11:30 (E. Balci)

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 15190 TTh 1:00-2:20(10) (I. Anvar)
Fall PRSN0100 S01 15190 MW 1:00-1:50(10) (I. Anvar)

PRSN 0200. Basic Persian.
Fast-paced course for beginners. Course stresses acquisition of Persian alphabet and basic grammatical patterns, beginning levels of speaking, listening, reading, and writing. Strong emphasis on the links between language and culture.
This is the second half of a year-long course. Students must have taken PRSN 0100 to receive credit for this course. If PRSN 0100 was taken for credit then this course must be taken for credit. If taken as an audit, this course must also be taken as an audit. Exceptions to this policy must be approved by both the academic department and the Committee on Academic Standing.
Spr PRSN0200 S01 24309 TTh 1:00-2:20(10) (I. Anvar)
Spr PRSN0200 S01 24309 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 15192 TTh 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 24311 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 15193 TTh 2:30-3:50(03) (I. Anvar)

PRSN 0600. Advanced Persian Language and Culture II.
Designed for students who have completed PRSN 0500 or have acquired language skills above the advanced level through other means. The main goal of the course is to improve speaking, listening, reading and writing skills and promote exposure to the language and culture through in depth study of samples of Persian literature, history, journals, newspapers, radio and TV material to advance toward mastery of contemporary literature. Students will be motivated to communicate both in written and spoken Persian by utilizing adequate grammatical order and vocabulary. Activities will include poetry reading, informal gatherings and translation from and into Persian. Prerequisite: PRSN 0500.
Spr PRSN0600 S01 24312 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 14891 TTh 2:00-2:50(07) (E. Balci)
Fall TKSH0100 S01 14891 MW 2:00-2:50(07) (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 class after consultation with the instructor or a placement exam. The course combines an emphasis on the development of communicative competences with an understanding of language structures and grammar as well as insights into Modern Turkish society and culture.
Spr TKSH0200 S01 24313 MTWTh 2:00-2:50 (E. Balci)

Latin American and Caribbean Studies

For Latin American + Caribbean Studies concentrators writing senior projects or honors theses.
For Latin American + Caribbean Studies concentrators writing senior projects or honors theses.
For 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 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
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Department</th>
<th>Title</th>
<th>Description</th>
<th>Instructor</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>LITR 0100A</td>
<td>Literature</td>
<td>Introduction to Fiction</td>
<td>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</td>
<td>(C. Maso)</td>
<td>3:00-5:30(17)</td>
<td>Spr 24875</td>
</tr>
<tr>
<td>LITR 0100B</td>
<td>Literature</td>
<td>Introduction to Poetry</td>
<td>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</td>
<td></td>
<td>6:30-9:00 PM</td>
<td>Spr 24899</td>
</tr>
<tr>
<td>LITR 0110A</td>
<td>Literature</td>
<td>Fiction I</td>
<td>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</td>
<td></td>
<td>6:00-8:30 PM</td>
<td>Fall 24891</td>
</tr>
<tr>
<td>LITR 0110B</td>
<td>Literature</td>
<td>Poetry I</td>
<td>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</td>
<td></td>
<td>6:00-8:30 PM</td>
<td>Fall 24891</td>
</tr>
<tr>
<td>LITR 0110D</td>
<td>Literature</td>
<td>Digital Language Art I</td>
<td>Project-oriented workshop for writers, visual/ sound artists, filmmakers and programmers who wish to explore digital media techniques. 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</td>
<td></td>
<td>6:00-8:30 PM</td>
<td>Spr 24891</td>
</tr>
<tr>
<td>LITR 0210A</td>
<td>Literature</td>
<td>Fiction Writing II</td>
<td>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</td>
<td></td>
<td>3:00-5:30 PM</td>
<td>Fall 24897</td>
</tr>
<tr>
<td>LITR 0210B</td>
<td>Literature</td>
<td>Poetry Writing II</td>
<td>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</td>
<td>(A. Colarusso)</td>
<td>4:00-6:30 PM</td>
<td>Fall 24897</td>
</tr>
<tr>
<td>LITR 0210D</td>
<td>Literature</td>
<td>Digital Language Art II</td>
<td>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</td>
<td></td>
<td>4:00-6:30 PM</td>
<td>Spr 24897</td>
</tr>
<tr>
<td>LITR 0510C</td>
<td>Literature</td>
<td>The Pleasures of the Text</td>
<td>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 LILE WRIT</td>
<td></td>
<td>3:00-5:30 PM</td>
<td>Fall 24891</td>
</tr>
<tr>
<td>LITR 0710</td>
<td>Literature</td>
<td>Writers on Writing Seminar</td>
<td>Offers students an introduction to the study of literature (including works from more than one genre) with special attention given to a writer’s way of reading. This course will include visits to the course by contemporary writers who will read to the class and talk about their work. Enrollment limited to 20 first-year students. FYS WRIT</td>
<td>(J. Cayley)</td>
<td>4:00-6:30 PM</td>
<td>Fall 24891</td>
</tr>
<tr>
<td>LITR 1010A</td>
<td>Literature</td>
<td>Advanced Fiction</td>
<td>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</td>
<td></td>
<td>10:30-1:00 PM</td>
<td>Fall 24891</td>
</tr>
<tr>
<td>LITR 1010B</td>
<td>Literature</td>
<td>Advanced Poetry</td>
<td>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</td>
<td>(P. Nelson)</td>
<td>3:00-5:30 PM</td>
<td>Fall 24891</td>
</tr>
<tr>
<td>LITR 1010D</td>
<td>Literature</td>
<td>Advanced Digital Language Arts</td>
<td>An advanced workshop for which participants produce, individually or in collaborative arrangements, a significant work of language-driven, digitally-mediated art in networked and programmable media. This workshop will be given historical and critical context, as participants become more aware of what it is they are doing when they use digital systems to write, or when they create instruments for and of writing. Throughout the course — and especially before final projects become the focus — there will be seminar-style reading and discussion: readings from other works of digital language art and from selected critical writing in the field. WRIT</td>
<td></td>
<td>3:00-5:30 PM</td>
<td>Fall 24891</td>
</tr>
<tr>
<td>LITR 1010G</td>
<td>Literature</td>
<td>Writing3D</td>
<td>An advanced experimental workshop for writing in immersive 3D, introducing text, sound, spatial poetics, and narrative movement into</td>
<td>(J. Cayley)</td>
<td>3:00-5:30 PM</td>
<td>Fall 24891</td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Brown’s Legacy Cave (now house in the Granoff Center for the Creative Arts) with links to the YURT (Yurt Ultimate Reality Theater in the Center for Computation and Visualization). An easy-to-learn and easy-to-use application allows non-programmers to create projects on laptops and then to run them in immersive 3D audiovisuality without the necessity for specialist support. Broadly 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. WRIT

LITR 1101N. Workshop for Potential Literature. A novel without the letter "E", 100,000-billion sonnets by permutation and texts that take the shape of a Mobius-Strip – all this time and more, as workshop participants try their hands in writing in response to problems created by and inspired by a group of writers engaged in strange constraints and procedures. Instructor permission required. S/NC. WRIT Spr LITR1101N S01 24887 M 3:00-5:30(13) (J. Cayley)

LITR 1110N. 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 Austen, Bierce, Carter, Cowley, Doyle, Faulkner, Forster, Fowles, Kesy, Joyce, McCullers, Morrison, Nabokov, O’Connor, Thompson, Walker, Spielberg, Woolf, Yamamoto as directed by Burton, Forman, Fellini, Gilliam, Huston, Jordan, Kurasawa, Lee, Potter, and others. Class and weekly screenings. Enrollment limited to 12. S/NC. WRIT Fall LITR1110N S01 16065 T 10:30-1:00 (M. Steinbach)

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 16064 Th 4:00-6:30(04) (F. Gander)
Spr LITR1200 S01 24881 Th 4:00-6:30(17) 'To Be Arranged'

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 tranlingual 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 24886 W 3:00-5:30(14) (J. Cayley)

LITR 1300. Independent Study in Reading, Research, and Writing About Literature. Provides advanced students with an opportunity to pursue tutorial instruction oriented toward a literary research topic.

LITR 1310. Independent Study in Creative Writing. Offers tutorial instruction oriented toward some significant work in progress by the student. Typically taken by honors or capstone candidates in the antepenultimate or penultimate semester. See instructor to seek permission during the semester before undertaking the course of study. One advanced-level workshop is prerequisite. S/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 24876 Th 10:30-1:00 "To Be Arranged"

LITR 1510. Honors Independent Study in Creative Writing. Provides tutorial instruction for students completing their theses or capstone projects. Typically taken by honors or capstone candidates in their final semester. See instructor to seek permission during the semester before undertaking the course of study. S/NC.

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 15809 TTh 9:00-10:20(08) (A. Landman)
Spr MATH0050 S01 24718 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: MATH 0050 or written permission. S/NC only.

MATH 0070. Calculus with Applications to Social Science. A one-semester survey of calculus for students who wish to learn the basics of calculus for application to social sciences or for cultural appreciation as part of a broader education. Topics include functions, equations, graphs, exponentials and logarithms, and differentiation and integration; applications such as marginal analysis, growth and decay, optimization, and elementary differential equations. May not be taken for credit in addition to MATH 0090. S/NC only.

Fall MATH0070 S01 15815 TTh 10:30-11:50(13) (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 0080 and 0100 or the equivalent are recommended for all students intending to concentrate in the sciences or mathematics. S/NC only.

Fall MATH0090 S01 15831 MWF 9:00-9:50(01) 'To Be Arranged'
Spr MATH0090 S02 15832 MWF 10:00-10:50(14) (D. Katz)
Fall MATH0090 S03 15833 MWF 12:00-12:50(12) 'To Be Arranged'
Fall MATH0090 S04 15834 TTh 9:00-10:20(08) 'To Be Arranged'
Fall MATH0090 S05 15835 TTh 10:30-11:50(13) 'To Be Arranged'

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
MATH 1100. Ordinary Differential Equations.

Ordinary differential equations, including existence and uniqueness theorems and the theory of linear systems. Topics may also include stability theory, the study of singularities, and boundary value problems.

Fall MATH1110 S01 15945 MWF 1:00-1:50(06) (Y. Wu)

MATH 1120. Partial Differential Equations.

The wave equation, the heat equation, Laplace’s equation, and other classical equations of mathematical physics and their generalizations. Solutions in series of eigenfunctions, maximum principles, the method of characteristics, Green’s functions, and discussion of well-posedness. Prerequisites: MATH 0520 or MATH 0540, or instructor permission.

Spr MATH1120 S01 24762 MWF 2:00-2:50(07) (Y. Wu)

MATH 1130. Functions of Several Variables.

A course on calculus on manifolds. Included are differential forms, integration, and Stokes’ formula on manifolds, with applications to geometrical and physical problems, the topology of Euclidean spaces, compactness, connectivity, convexity, differentiability, and Lebesgue integration. It is recommended that a student take a 1000-level course in analysis (MATH 1010 or MATH 1260) before attempting MATH 1130.

Fall MATH1130 S01 15946 MWF 10:00-10:50(14) (S. Treil)

MATH 1140. Functions Of Several Variables.

See Functions Of Several Variables (MATH 1130) for course description. Prerequisite: MATH 1130 or instructor permission.

Spr MATH1140 S01 24763 TTh 2:30-3:50(11) (N. Kapouleas)

MATH 1230. Graph Theory.

This course covers important material about graph theory, such as spanning trees, network flow problems, matching problems, coloring problems, planarity, Cayley graphs, spectral theory on graphs, and Ramsey Theory. The emphasis will be on a combination of theory and algorithms. Depending on the instructor, connections to such fields as combinatorics, geometry, or computer science might be emphasized. Prerequisite: MATH 0180, 0200 or 0350 and MATH 0520 or 0540 are recommended. Enrollment limited to 40.

Spr MATH1230 S01 24764 TTh 1:00-2:20(10) (R. Kenyon)

MATH 1260. Complex Analysis.

Examines one of the cornerstones of mathematics. Complex differentiability, Cauchy-Riemann differential equations, contour integration, residue calculus, harmonic functions, geometric properties of complex mappings. Prerequisite: MATH 0180, 0200, or 0350. This course does not require MATH 0520 or 0540.

Fall MATH1260 S01 15947 TTh 9:00-10:20(08) (R. Kenyon)

MATH 1270. Topics in Functional Analysis.

Infinite-dimensional vector spaces with applications to some or all of the following topics: Fourier series and integrals, distributions, differential equations, integral equations, calculus of variations. Prerequisite: At least one 1000-level course in Mathematics or Applied Mathematics, or permission of the instructor.

Fall MATH1270 S01 15948 MWF 2:00-2:50(07) (Y. Wu)

MATH 1410. Combinatorial Topology.

Topology of Euclidean spaces, winding number and applications, knot theory, fundamental group and covering spaces. Euler characteristic, simplicial complexes, classification of two-dimensional manifolds, vector fields, the Poincaré-Hopf theorem, and introduction to three-dimensional topology. Prerequisites: MATH 0520 or MATH 0540, or instructor permission.

Fall MATH1410 S01 15950 TTh 10:30-11:50(13) (G. Daskalopoulos)

MATH 1530. Abstract Algebra.

An introduction to the principles and concepts of modern abstract algebra. Topics include groups, rings, and fields; applications to number theory, the theory of equations, and geometry. MATH 1530 is required of all students concentrating in mathematics.

Fall MATH1530 S01 15951 TTh 2:30-3:50(03) (T. Goodwillie)

Spr MATH1530 S01 24765 TTh 2:30-3:50(11) (M. Chan)

MATH 1540. Topics in Abstract Algebra.

Galois theory together with selected topics in algebra. Examples of subjects which have been presented in the past include algebraic curves, group representations, and the advanced theory of equations. Prerequisite: MATH 1530.

Spr MATH1540 S01 24766 TTh 10:30-11:50(09) (R. Kenyon)

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 24767 TTh 1:00-2:20(10) (M. Rosen)

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 15952 MWF 10:00-10:50(14) (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 15953 MWF 11:00-11:50(02) (J. Holmer)

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 24768 TTh 10:30-11:50(04) 'To Be Arranged'

MATH 1810A. Special Topics in Mathematics.

Fall MATH1810A S01 15955 TTh 2:30-3:50(03) 'To Be Arranged'

MATH 1970. Honors Conference.

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


Introduction to differential geometry (differentiable manifolds, differential forms, tensor fields, homogeneous spaces, fiber bundles, connections, and Riemannian geometry), followed by selected topics in the field.

Fall MATH2010 S01 15956 Arranged (N. Kapouleas)

MATH 2050. Algebraic Geometry.

Complex manifolds and algebraic varieties, sheaves and cohomology, vector bundles, Hodge theory, Kahler manifolds, vanishing theorems, the Kodaira embedding theorem, the Riemann-Roch theorem, and introduction to deformation theory.

Fall MATH2050 S01 15957 Arranged (N. Pflueger)

MATH 2060. Algebraic Geometry.

See Algebraic Geometry (MATH 2050) for course description.

Spr MATH2060 S01 24769 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 24770 Arranged (N. Kapouleas)

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 15958 Arranged 'To Be Arranged'

MATH 2260. Complex Function Theory.

See Complex Function Theory (MATH 2250) for course description.

Spr MATH2260 S01 24771 Arranged 'To Be Arranged'

MATH 2370. Partial Differential Equations.

The theory of the classical partial differential equations; the method of characteristics and general first order theory. 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.

Semester II concentrates on special topics chosen by the instructor.

Fall MATH2370 S01 15959 Arranged (W. Strauss)

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 15960 Arranged (T. Goodwillie)

MATH 2420. Topology.
See Topology (MATH 2410) for course description.

Spr MATH2420 S01 24772 Arranged (T. Goodwillie)

MATH 2450. Exchange Scholar Program.
Fall MATH2450 S01 14757 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 15961 Arranged (S. Lichtenbaum)

MATH 2520. Algebra.
See Algebra (MATH 2510) for course description.

Spr MATH2520 S01 24773 Arranged (D. Abramovich)

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 15962 Arranged (J. Silverman)

MATH 2540. Number Theory.
See Number Theory (MATH 2530) for course description.

Spr MATH2540 S01 24774 Arranged (J. Silverman)

MATH 2710E. Arithmetic Groups.
Fall MATH2710ES01 15964 Arranged (J. Silverman)

MATH 2720F. Topics in Geometric Analysis.
No description available.

Spr MATH2720FS01 24775 Arranged (G. Daskalopoulos)

MATH 2970. Preliminary Exam Preparation.
No description available.

Fall MATH2970 S01 14758 Arranged 'To Be Arranged'

Spr MATH2970 S01 23849 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 14759 Arranged 'To Be Arranged'

Spr MATH2990 S01 23850 Arranged 'To Be Arranged'

MATH XLIST. Courses of Interest to Graduate Students重大ing in Mathematics.

Fall 2016

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 2110 Real Analysis
APMA 2630 Probability

Spring 2017

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 2120 Hilbert Spaces and Their Applications
APMA 2640 Theory of Probability

Medieval Studies

MDVL 0360. Cities: Medieval Perspectives.
What was a medieval city? Medieval imaginations were inspired by great cities like Cairo, Cordoba, Damascus, Jerusalem, Mecca, Paris, Rome, Samarra, and Toledo. New cities like Bruges arose out of commerce, learning, arts, and migrations. Some medieval societies built around city states, whereas others eschewed the urban for alternate social formations. In this course, faculty will focus on medieval cities from diverse disciplinary perspectives.

Spr MDVL0360 S01 24056 TTh 2:30-3:50(11) (M. Vaquero)

MDVL 0660. The World of Byzantium (CLAS 0660).
Interested students must register for CLAS 0660.

Fall MDVL0660 S01 16192 Arranged 'To Be Arranged'

MDVL 1100E. Greek Literature in Italy and by Italians (GREK 1100E).
Interested students must register for GREK 1100E.

Spr MDVL1000ES01 25191 Arranged 'To Be Arranged'

MDVL 1110F. Fortunatus (LATN 1110F).
Interested students must register for LATN 1110F.

Spr MDVL1110FS01 25024 Arranged 'To Be Arranged'

MDVL 1111F. Fiction and Truth in Greek Story-telling (GREK 1100F).
Interested students must register for GREK 1100F.

Fall MDVL1111FS01 16333 Arranged 'To Be Arranged'

MDVL 1120G. The Idea of Self (CLAS 1120G).
Interested students must register for CLAS 1120G.

Fall MDVL1120G/C01 16191 Arranged 'To Be Arranged'

MDVL 1750L. Erotic Desire in the Premodern Mediterranean (CLAS 1750L).
Interested students must register for CLAS 1750L.

Spr MDVL1750LS01 25025 Arranged 'To Be Arranged'

Tutorial instruction on an approved topic in Late Antique and/or Medieval cultures, supervised by a member of staff. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. May be repeated once for credit.

Independent research and writing on a topic of special interest to the student, under the direction of a faculty member. Required of candidates for honors. Permission should be obtained from the Director of the Program in Medieval Studies.

MDVL 2080H. Seminar: The Sixth Century (LATN 2080H).
Interested students must register for LATN 2080H.

Spr MDVL2080HS01 26235 Arranged 'To Be Arranged'

Middle East Studies

Limited to juniors and seniors. Section numbers vary by instructor. Please check Banner for the correct section and CRN to use when registering for this course. Required: all proposals for independent study must be approved by the faculty sponsor and the MES program director. Students should not register for any section of MES 1970 without this approval.

This study grapples with conceptions of freedom and humanity emergent in Black and Indigenous women’s practices under empire. Colonialism is prefixed on construction of an “other.” Aimé Césaire refers to this as “thingification,” whereby colonial subjects are dehumanized and the colonizer “decivilized”. 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.

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.

Modern Culture and Media

MCM 0150. Text/Media/Culture: Theories of Modern Culture and Media.
An introduction to the theoretical foundations of contemporary cultural criticism. We will study theories of representation, signification and culture; image and narrative; ideology and discursive power; and modernity and postmodernity. Such theories are crucial to understanding modern culture and media (including literary, photographic, film, television, and digital media texts). Readings from theorists such as Saussure, Benjamin, Levi-Strauss, Derrida, Barthes, Marx, Freud, Fanon, Arendt, Foucault, Irigaray, Appadurai, and Butler. Students must register for both the lecture and one screening; a signup sheet will be available for discussion sections after the first class meeting. Open to undergraduates only. LILE WRIT

Fall MCM0220 S01 15282 MW 11:00-11:50 (E. Rooney)

MCM 0240. Television Studies.
Introduces students to the rigorous study of television, concentrating on televisional 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

Fall MCM0240 S01 15290 Th 1:00-1:50 (L. Joyrich)

MCM 0260. Cinematic Coding and Narrativity.
Introduces students to rigorous study of the structural and ideological attributes of cinema, concentrating on the dominant narrative model developed in the American studio system and alternatives to that model. Attention to film theory in relation to questions of representation, culture, and society. Students become conversant with specific elements and operations of the cinematic apparatus (e.g. camerawork, editing, sound/image relations) and how they produce discursive meanings. Students MUST register for the lecture, section and one screening. A signup sheet will be available for conferences after the first class meeting. Open to undergraduates only.

Fall MCM0260 S01 15303 MW 1:00-1:50 (J. Copjec)

MCM 0710. Introduction to Filmic Practice: Time and Form.
A studio-style course on working with time based media, focused specifically on the technology of 16mm film production. With its focus on photographic and montage processes, as well as lighting and sound, the principles established in this course provide a solid foundation for all subsequent work in media, whether cinematic, video or new media, and it is strongly advised as a foundation level, skills oriented media course. Students produce a series of short, non-sync films. No previous experience required. Screenings, demonstrations and studio work.

Fall MCM0710 S01 15317 Th 1:50-2:50 (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 15313 Th 4:00-6:50 (A. Cokes)

MCM 0750. Art in Digital Culture.
How do we produce, disseminate, and exchange images in a global networked society? How do digital technologies challenge conventions about art making, authorship, and audience? This production course introduces students to the practice, and critical inquiry into art in digital 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 Groys. Enrollment limited to 40.

Fall MCM0750 S01 15319 M 3:00-6:50 (E. Giardina Papa)

MCM 0800L. "I Don't Even Know Why They Call It Color TV": Television and Race in America.
Our era has been called both "post-televisional" and "post-racial," yet images that define and are defined by (mis)understandings of race fill our screens (whether on TV sets or other means for disseminating TV). Formations of television and race not only remain pressing concerns but are intertwined, mutually constructing one another. This course thus explores how notions of race have been mediated and how media have figured race. Topics include: stereotype analysis; race in television history; scandal and crisis; intersections of gender and sexuality; consumerism and commodification; racial representation across TV genres (comedy, drama, sports, reality TV), and new media possibilities. DPLL LILE FYS

Spring MCM0800L S01 25518 W 3:00-5:30(14) (L. Joyrich)

MCM 0800M. The Terrible Century (ENGL 0150U).
Interested students must register for ENGL 0150U.

Fall MCM0800M S01 16762 Arranged "To Be Arranged"

MCM 0901T. Shakespeare: The Screenplays (ENGL 0310E).
Interested students must register for ENGL 0310E.

Fall MCM0901T S01 16763 Arranged "To Be Arranged"

MCM 0901W. The Space Within: Contemporary Borderland Moving Image Practice.
This course will examine post-NAFTA moving images that take as their subject the culture and politics of the Mexico-US Borderlands. We will tackle problems such as globalization, neoliberalism, the drug war, securitization, migration, biopolitics, and femicide. To make our claims we will place importance on film form as we unpack how the films figure and/ or represent the bodies and spaces of the Borderlands. More, we will think seriously about how the concepts we adopt—including that of “border” itself—function as epistemological tools. This will be a course for those invested in Borderland issues and political moving image practice.

Fall MCM0901W S01 16725 T 4:00-6:30(09) (F. Monar)

MCM 0901X. Digital Cinema and the Inhuman.
From the incursions of biopolitics to the specter of ecological collapse, the problem of how life is organized, sustained, and functionalized strikes at the heart of contemporary society. And yet to whom or what "life" belongs remains an open and evolving question. This course examines contemporary digital cinema as a textual, technological, and political site
to rethink the concept of “the human.” Drawing on theoretical traditions that investigate the nature of vitality, automation, and the distinction between human and nonhuman, we will study how bodies, identities, and categories of thought are troubled and transformed by moving images.

**MCM 0901Y. Puzzle Films.** This course explores a group of diverse and increasingly popular films termed “puzzle” or “mind game” films. The first unit of the course focuses on a sample of the debates surrounding post-classical cinema and its stylistic and institutional features. We will then explore these films against the background of the economic and political shift to Post-Fordism and Neoliberalism. Since many of these films explicitly with philosophical issues, we will also examine these. The topics will include skepticism and its relation to a changing and expanding media environment, and the importance of speculation in neoliberal economics and culture.

**MCM 0901Z. Reading Practices: An Introduction to Literary Theory (ENGL 0700P).** Interested students must register for ENGL 0700P.

**MCM 1201K. Queer Relations: Aesthetics and Sexuality (ENGL 1900R).** Interested students must register for ENGL 1900R.

**MCM 1201Z. On Being Bored (ENGL 1561W).** Interested students must register for ENGL 1561W.

**MCM 1202B. Literature and Politics (ENGL 1900D).** Interested students must register for ENGL 1900D.

**MCM 1202D. China Through the Lens: History, Cinema, and Critical Discourse (EAST 1270).** Interested students must register for EAST 1270.

**MCM 1203J. Anime Studies.** The scholarly study of anime has rapidly matured over the past few years, and now represents a key site for debates over the social status of drawn characters, the role of animation within larger media ecologies, and the transnational reach of Japanese popular culture. Through close engagement with the central books in anime studies and the major works of anime history, this course examines how anime has forced the rethinking of gender, sexuality, labor, intellectual property, narrative form, and the convergence of on and off-screen space.

**MCM 1203K. Sharing.** What is sharing? What exactly is shared? Do we “own” what we share or is sharing in conflict with ownership? When something is shared, does it become a “common” or being revealed as such? Is it divided into small “units of ownership,” i.e., “shares”? What authorizes our ownership, and what can be shared? Which rights are presupposed or invoked in the act of sharing? And who are ‘we’ who share? We shall examine practices of “sharing” from the constitution of archives to the web and look at how different practices and technologies imply distinct concepts of sharing.

**MCM 1203L. Media and Everyday Life in Japan.** This course examines how media use intersects with the aesthetics of everyday life in modern Japan. We will examine the role of mediation through Japan’s tumultuous modern history, from the early 20th century to the early 21st, drawing on accounts from a range of creative works and critical studies. In the process, we will map out shifts in the circulation of emotion, the border between private and public, the deployment of routine and habit, and the objective design of the ordinary.

**MCM 1203M. Recent Experiments in American Fiction (ENGL 1710R).** Interested students must register for ENGL 1710R.

**MCM 1503B. Jane Austen and George Eliot (ENGL 1560A).** Interested students must register for ENGL 1560A.

**MCM 1503C. “Terrible Beauty”: Literature and the Terrorist Imaginary (ENGL 1760I).** Interested students must register for ENGL 1760I.

**MCM 1503X. The Ekphrastic Mode in Contemporary Literature (ENGL 1762B).** Interested students must register for ENGL 1762B.

**MCM 1504Z. Civil Disobedience — The Politics of Conscience.** From the Ancient Greeks’ Antigone and Lysistrata to Thoreau, Douglass, W.E.B DuBois, and Snowden, we look at individual and collective practices of objection to state violence, reading some of the great texts of civil disobedience and noting their traffic in religious, political, and ethical reasoning. We also study films, including the Antigone and Lysistrata, Citizen Four, Holding Their Ground, and Spike Lee’s Chi-Raq, a remake of the Lysistrata. We explore the genres — tragedy, satire, memoir, documentary — in which conscience is appealed to as an individual or collective politics. One culture lab meeting with the Haffenreffer Museum.

**MCM 1505A. Television Realities.** This course investigates the construction of reality on U.S. television, considering not only specific reality genres (news and opinion programming, crisis and catastrophe coverage, surveillance and confessional video, documentary and docudrama, talk and game shows, reality series and “docu-soaps”) but the discursive and representational modes that define the reality of commercial television as a whole. Issues include: media “liveness” and simulation, representation and “relevancy,” therapeutic and neo-liberal discourses, naturalisms and supernaturalisms, independent video and alternative TV, new technologies and materialities.

**MCM 1505B. Hitchcock: The Theory.** The films of Hitchcock bind together compelling narratives and meta-cinematic reflections by means of a single, distinctive shape or form. This method of construction has piqued the attention not only of cinema theorists, who look to Hitchcock to tell us about the nature of cinema and spectatorship, but also philosophers, who look to him to tell us about the nature of thinking, promising, doubting, and obsession. Examining the films themselves, alongside the philosophical speculations they have inspired, we will try to define the complex pleasure — cinematic and cerebral — they elicit.

**MCM 1505C. Cinema’s Bodies (GNSS 1721).** Interested students must register for GNSS 1721.

**MCM 1505D. The Men’s Film, c. 2011 (ENGL 1760X).** Interested students must register for ENGL 1760X.

**MCM 1700D. Reframing Documentary Production: Concepts and Questions.** An advanced seminar for students of video and/or film production. Focuses on the critical discussion and production of documentary media. A major project (10-20 minutes), three shorter works, and in-class presentations of work-in-progress required. Readings on the theory and practice of the form and weekly screenings augment the presentation of student work. Class members should have completed at least one time-based media class. Students are expected to be competent technically. Application required. Application is available in the MCM office. Students must bring a completed application to the first class to be considered for admission.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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/NC.
Spr MCM1700F S01 24084 W 10:00-12:50 (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 15229 T 3:00-6:50 (E. Giardina Papa)

MCM 1701A. Art/Gender/Technology.
This production course explores and actively engages digital media and art practices that investigate questions of technology, gender, sexuality, and the body. Key topics include: cyberfeminism, gaming and virtual worlds, the social and the deep web, health apps and the datafication of the body, gendered social media bots, and affective digital labor. Technical workshops (on video/editing/coding/live-video-performance), guest speakers, and in-depth analysis of relevant case studies will provide students with the necessary skills and theoretical understanding to develop their own artworks during the course. This class is a Distributed Open Collaborative Course networked with FemTechNet. DPLL
Spr MCM1701A S01 24086 W 3:00-6:50 (E. Giardina Papa)

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

MCM 1990. Honors Thesis/Project in Modern Culture and Media.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Eighth semester students only.

MCM 2100B. Culture and Criticism in Marxist Theory.
Major texts and arguments in 20th and 21st century theories, with emphasis on the Western Marxist Western Marxist thought, from Lukács through the present. Focus on problems in the conception and reading of culture and cultural texts, with some emphasis on cinema and other media where possible. Where appropriate, consideration of interaction with other major theoretical frameworks (e.g., aesthetics, phenomenology, semiotics, psychoanalysis, feminism, postcolonial criticism, globalization theory, etc.) Readings from theorists such as Lukács, Benjamin, Eisenstein, Bakhtin, Adorno, Sartre, S. Hall, Mouffe, Vrmo, Spivak, Lazarato, Jameson, Zizek, etc. Some screenings. Enrollment limited to 12 graduate students. Underclass undergraduates require instructor permission.
Spr MCM2100B S01 24820 F 2:00-4:30 (P. Rosen)

MCM 2100O. Queer Theories.
This course will engage with possibilities and problems of queer theorizing, from the emergence of queer theory, through its (precocious) institutionalization, to its multiplied interventions. Rather than understanding queer theory as a unified approach, we will consider a range of queer theoretical work as well as challenges within queer analysis itself. Issues to be explored include formations of gender and sexuality, race and nation, epistemology and ethics, politics and communities, subjectivities and socialities, identifications and disidentifications, bodies and pleasures, publics and privates, and the temporalities and locations of our world. This course is for Graduates only. Upperclass undergraduates require instructor’s permission.
Fall MCM2100O S01 16751 W 3:00-5:30(17) (L. Joyrich)

MCM 2100P. Around 1948: Interdisciplinary Approaches to Global Transformation (ENGL 2901F).
Interested students must register for ENGL 2901F. 
Spr MCM2100P S01 25602 Arranged "To Be Arranged"

MCM 2100Q. Lacan vs. Foucault.
On a number of issues, Lacan and Foucault seem to be aligned. How, then, to account for The History of Sexuality in which Foucault negatively engages not psychoanalysis per se, but psychoanalytic doxa instead? Why this oblique attack? This seminar will compare Foucault’s account of psychoanalysis with the actual arguments of Freud and Lacan. It will also compare the responses of Foucault and Lacan to the events of May ’68; examine their opposed readings of Las Meninas; and consider their different relations to and theories of neo-liberalism. This course is for Graduates only. Upperclass undergraduates require instructor’s permission.
Spr MCM2100Q S01 24395 T 1:20-3:50 (J. Copjec)

MCM 2110O. Reading Remains.
The question “What is it to read?” animates a wide range of critical discourses, cutting across disciplines and media forms. This course interrogates the tenacity of the question of reading, from the invention of the “New Criticism” in the twentieth century to contemporary polemics for the critique of critique.” We will examine concepts of “close” and “distant” reading, hermeneutics of suspicion, and the “symptomatic” reader; examine potentially cognate terms for the “reader”; “spectator,” “user,” “gamer,” and consider the ways in which literary models shape subsequent accounts of interpretation and “new” media impact our understanding of what it means to read.
Spr MCM2110O S01 24396 M 3:00-5:30(13) (E. Rooney)

MCM 2310L. Romantic Detail (ENGL 2561O).
Interested students must register for ENGL 2561O.
Fall MCM2310L S01 16787 Arranged "To Be Arranged"

MCM 2380. Independent Reading and Research in Modern Culture and Media.
Individual reading and research for doctoral candidates. Not open to undergraduates. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

MCM 2390. Thesis Preparation.
No description available.
Fall MCM2390 S01 14760 Arranged "To Be Arranged"
Spr MCM2390 S01 23851 Arranged "To Be Arranged"

Music
MUSC 0021B. Reading Jazz.
This course will explore the musical aesthetics of jazz in texts about its world. Students will listen to music and read poetry, fiction, autobiography and criticism to investigate techniques (including improvisation, rhythm, timbre and articulation), which authors such as Langston Hughes, Ralph Ellison, Charles Mingus, Stanley Crouch and Jack Kerouac employed to describe and support a creative community. Enrollment limited to 20 first year students. FYS DPLL LILE
Fall MUSC0021B S01 15629 Th 4:00-6:30(04) (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. 
Spr MUSC0033 S01 25533 Th 1:00-2:20(10) (E. Nathan)

This course provides a critical overview of the production, reception, and circulation of East Asian popular music. The course applies broad themes —nationalism, race, gender, diaspora, technology, and globalization—to specific case studies in Japan, North and South Korea, Mainland China,
Taiwan, and areas outside of this region where the music circulates. Rather than approaching “East Asian popular music” as a distinctive category of music from a particular region, we will consider how such designations rely on certain ideas of origin, authenticity, and identity. Course materials include academic scholarship, music, music videos, documentaries, reviews, and journalistic accounts. No prerequisites. DPLL LILE

Fall MUSC0044 S01 16682 MWF 11:00-11:50(02) (J. McDaniel)

MUSC 0064. Honky Tonk Heroes.
This course explores country music from its origins to the present day. We will trace its development through the careers of foundational artists like the Carter Family, Hank Williams, Loretta Lynn, and Willie Nelson, and evaluate the way that their legacy is reflected in the work of contemporary artists like Corb Lund, Hayes Carll, and Neko Case. Beyond the individual creativity of these figures, we will consider the way that country music has been shaped by the recording industry, the relation it has to race, gender, and political identities, and the international spread of the American country sound.

Spr MUSC0064 S01 24505 MWF 10:00-10:50(03) (C. Tucker)

MUSC 0075. Jazz: Race, Power and History. 
Explores jazz in relation to American history, discussing how economics, war conditions, regional differences and race relations shaped the music as its public reception. With readings from A. Baraka, L. Levine, R. Ellison, L. Erenberg, E. Lott, G. Early, S. DeVeaux and others, we address how jazz embodies social and political values or expresses national character. Open to non-musicians. Music proficiency preferred but not required. Enrollment limited to 60.

Spr MUSC0075 S01 24529 TTh 2:30-3:50(11) (D. Gooley)

An introduction to the field of computer music, focusing on the use of electronics and computers in music and performance. Investigates basic acoustics, perception of sound, the history of music technology, and musical applications. Extensive listening assignments illustrate the impact of technology on popular and experimental genres. No prerequisites, though some experience with computers and some knowledge of music is very helpful. Significant hands-on experience with computer music systems. Enrollment limited to 80 students. Permission will be granted based on a questionnaire given in the first class, with preference given to lower-level students. LILE

Fall MUSC0200 S01 15630 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 16182 W 7:00-9:50PM 'To Be Arranged'

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 25536 W 7:00-9:50PM 'To Be Arranged'

MUSC 0400. Introduction to Music Theory.
An introduction to musical terms, elements, and techniques, including notation, intervals, scales and modes, triads and seventh chords, modulation, melody writing and harmonization, analysis, and composition. Ear-training and sight-singing are included. For students with some musical training. Enrollment limited to 40.

Fall MUSC0400 S01 15631 MWF 11:00-11:50(02) 'To Be Arranged'
Spr MUSC0400 S01 24506 MWF 11:00-11:50(04) 'To Be Arranged'

MUSC 0550. Theory of Tonal Music.
Prerequisite to music concentration. For students with knowledge of rudiments of music, including scales, intervals, key signatures, rhythm, and meter. Knowledge of keyboard strongly recommended. Intensive study of voice leading and tonal harmony; analysis, ear training, sight singing, keyboard exercises. An entrance exam will be administered in

Onwix 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 15651 TTh 1:00-2:20(10) (M. Steinbach)
Fall MUSC0550 S02 15652 TTh 10:30-11:50(13) (L. Wang)

See Theory Of Tonal Music (MUSC 0550) for course description. Prerequisite: MUSC 0550 or permission of the instructor.

Spr MUSC0560 S01 24507 TTh 10:30-11:50(09) (M. Steinbach)
Spr MUSC0560 S02 24508 TTh 1:00-2:20(10) (L. Wang)

MUSC 0600. Chorus.
Half credit each semester. A practical study of choral literature, techniques, and performance practice from Gregorian chant to the present, offered through rehearsals, sectionals, and performance. Enrollment is by audition, based on voice quality, experience, and music-reading ability. Instructor permission required.

Fall MUSC0600 S01 16183 MW 6:30-8:20PM (L. Jodry)

MUSC 0601. Chorus.
See Chorus (MUSC 0600) for course description.

Spr MUSC0601 S01 25537 MW 6:30-8:20PM (L. Jodry)

MUSC 0610. Orchestra.
Half credit each semester. A practical study of the orchestra repertory from Bach to the present, offered through coaching, rehearsals, and performances. Enrollment is by audition. Students will be notified of audition results within the first seven days of the semester. Restricted to skilled instrumentalists. May be repeated for credit.

Fall MUSC0610 S01 16184 TTh 7:15-9:45PM (P. Phillips)

MUSC 0611. Orchestra.
See Orchestra (MUSC 0610) for course description.

Spr MUSC0611 S01 25538 TTh 7:15-9:45PM (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 16185 W 6:00-8:20PM (M. McGarrell)
Fall MUSC0620 S01 16185 M 6:00-7:20 (M. McGarrell)

MUSC 0621. Wind Symphony.
See Wind Symphony (MUSC 0620) for course description.

Spr MUSC0621 S01 25539 M 6:00-7:20 (M. McGarrell)

MUSC 0630. Jazz Band.
Half credit each semester. A practical study of jazz from the 1920s to the present through coaching, rehearsals, and performance. Seminars on arranging, ear training, and improvisation are conducted for interested students but the focus is on performance. Enrollment is by audition. Restricted to skilled instrumentalists and vocalists. Instructor permission required.

Fall MUSC0630 S01 16186 Th 6:10-7:20 (M. McGarrell)
Fall MUSC0630 S01 16186 M 7:30-8:50PM (M. McGarrell)
Fall MUSC0630 S02 16187 T 8:00PM-9:20PM (M. McGarrell)
Fall MUSC0630 S03 16188 W 2:00-3:20 (M. McGarrell)
Fall MUSC0630 S04 16189 W 4:00-5:20 (M. McGarrell)
Fall MUSC0630 S05 16190 F 4:00-5:20 (M. McGarrell)

MUSC 0631. Jazz Band.
See Jazz Band (MUSC 0630) for course description.

Spr MUSC0631 S01 25540 M 7:30-8:50PM (M. McGarrell)
Spr MUSC0631 S02 25541 T 8:00PM-9:20PM (M. McGarrell)
Spr MUSC0631 S03 25542 W 2:00-3:20 (M. McGarrell)
Spr MUSC0631 S04 25543 W 4:00-5:20 (M. McGarrell)
Spr MUSC0631 S05 25544 F 4:00-5:20 (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

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 16694 W 5:00-7:20 (M. Obeng)

MUSC 0641. Ghanaian Drumming and Dancing Ensemble.
A dynamic introductory course on drumming, dancing, and singing of Ghana and the diaspora. Students learn to perform diverse types of African music, including Ewe, Akan, Ga, and Dagomba pieces on drums, bells, and shakers. No prerequisites. May be repeated for credit. Enrollment limited to 15. Instructor permission required.

Fall MUSC0641 S01 25545 W 5:00-7:20 (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 limit 20. Fall MUSC0645 S01 16695 M 5:30-7:00 (C. Tucker)

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 limit 20. Spr MUSC0646 S01 25546 M 5:30-7:00 (C. Tucker)

MUSC 0650. Javanese Gamelan.
Half credit each semester. Instruction, rehearsals, and performances in the gamelan music of Java, on instruments owned by the department. No prerequisites. Enrollment limited to 18 students.

Fall MUSC0650 S01 16697 T 6:00-8:50PM (M. Perlman)

MUSC 0651. Javanese Gamelan.
See Javanese Gamelan, MUSC0650, for course description. Enrollment limited to 18 students.

Spr MUSC0651 S01 25547 T 6:00-8:50PM (M. Perlman)

MUSC 0670. Old-Time String Band.
Half course each semester. Instruction and ensemble playing. Music taught by ear. American (southern Appalachian Mountain) traditional music on violin (fiddle), S-string banjo, mandolin, and guitar. Enrollment limited to 20 students.

Fall MUSC0670 S01 16698 T 7:00-8:50PM (S. Astrausky)

MUSC 0671. Old-Time String Band.
See Old-Time String Band (MUSC 0670) for course description. Enrollment limited to 20 students.

Spr MUSC0671 S01 25548 T 7:00-8:50PM (S. Astrausky)

MUSC 0680. Chamber Music Performance.
Half credit each semester. The practical study of the literature of chamber music through participation in a small ensemble. Regular rehearsals, coaching by department staff, and performances are required. Enrollment is by audition. Students will be notified of audition results within the first ten days of the semester. Restricted to skilled instrumentalists. May be repeated for credit.

Fall MUSC0680 S01 16699 Arranged (P. Phillips)

MUSC 0681. Chamber Music Performance.
See Chamber Music Performance (MUSC 0680) for course description.

Spr MUSC0681 S01 25549 Arranged (P. Phillips)

Half credit each semester. Restricted to skilled musicians. Openings are limited. Enrollment and re-enrollment is by audition and jury. Lessons are given by consultants to the Applied Music Program. A fee is charged for enrollment. Copies of the Applied Music Program Guidelines giving detailed information are available online at www.brown.edu/music. May be repeated up to four times for credit.

A history of western European music to Monteverdi's Orfeo (1607), with emphasis on the analysis of individual works supported by reading and listening. Among the major composers studied are Byrd, Dufay, Josquin, Machaut, and Palestrina. Strongly recommended for freshmen and sophomores considering a concentration in music. Limited to students who can read music. Prerequisite: MUSC 0550 or permission of instructor.

Fall MUSC0910 S01 15637 TTh 9:00-10:20(08) (L. Jody)

A history of music in European society from Monteverdi's opera Orfeo to Beethoven's Ninth, studied through texts, scores, CD's, DVDs, and YouTube. We'll spend two-thirds of our time on five composers: Bach, Handel, Haydn, Mozart, and Beethoven. Prerequisite: MUSC0550 or equivalent.

Spr MUSC0920 S01 25535 TTh 9:00-10:20(08) (D. Gooley)

MUSC 1010. Advanced Musicianship I.
Training in advanced musicianship skills relevant to Western art music from the sixteenth Century to the present, including sight singing, ear training, score reading, keyboard harmony, improvisation, and musical transcription. Prerequisite: MUSC 0560 with a grade of B, or permission of the instructor.

Fall MUSC1010 S01 16538 MW 2:00-5:00(07) (A. Cole)

MUSC 1011. Advanced Musicianship II.
Continuation of MUSC 1010. Prerequisite: MUSC 1010 or permission of the instructor.

Spr MUSC1011 S01 24511 MW 2:00-5:00(07) (A. Cole)

Study of the implications of musical analysis for performance. Students prepare solo or chamber works for performance in a formal concert presented at the end of the course. Focuses on problems of interpretation and their resolution through analysis of musical structure. Short analytical assignments and an extended analytical project required. Prerequisite: MUSC 0560 or permission of the instructor and proficiency on a musical instrument.

Spr MUSC1060 S01 24512 TTh 2:30-3:50(11) (M. Steinbach)

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 16541 TTh 2:30-3:50(03) (E. Nathan)

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 24513 W 3:00-5:30(14) (L. Wang)

MUSC 1130. Jazz Composition and Arranging.
A review of jazz theory topics, including rhythmic structures, scales and modes, harmonic progressions and substitutions, improvisation techniques, forms and development. Weekly writing assignments for two to five parts with rhythm section accompaniment. Students compose and orchestrate three works for small and large jazz ensembles. Guest for up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
composers review students' compositions and various Brown jazz bands rehearse and record them. Prerequisites: MUSC 0550.
Spr MUSC1130 S01 24514 Th 4:00-6:30(17)  (M. McGarrell)

MUSC 1140. Classical Improvisation.
A historical and practical study of improvisation in western classical traditions from the middle ages to the 19th century, with emphasis on the common practice period 1700-1850. Students will apply theoretical knowledge in harmony and counterpoint to in-class improvisations, learning such skills as melodic ornamentation, chaconne-bass elaborations, variations, preluding, and free improvisation starting with simple exercises and gradually elaborating more complex pieces. These practices will be studied in relation to their historical contexts and shifting aesthetic purposes. Historical topics include cadenzas, harmonic experimentation, the relationship between oral and written transmission, and the social contexts of performance. MUSC0560 and consultation with instructor recommended. Prerequisite: MUSC 0550. Enrollment limited to 15.
Fall MUSC1140 S01 15642 M 3:00-5:30(15)  (D. Gooley)

A study of advanced studio techniques taught in parallel with topics in psychoacoustics. Students will create original studio work while developing listening and technical skills for audio production. Technical topics include recording, signal processing and mixing software, microphone technique, and live sound engineering. Class size is limited. Preference will be given to students who have completed MUSC 0200. Students will be evaluated for potential future work in the MEME program (Multimedia and Electronic Music Experiments) and past participation in MEME. Admission is determined by an entrance questionnaire completed at the first class meeting. Prerequisite: MUSC 0200
Spr MUSC1200 S01 24515 TTh 10:30-11:50(09)  (J. Moses)

Seminar in Electronic Music is a study of music employing electronic media, including real-time digital signal processing, multimedia, and live performance. Technical aspects of the course focus on programming using Max/MSP to create interactive projects and algorithmic compositions. Permission of instructor required. Interested students must come to the first class. Preference will be given to students who have completed MUSC 0200.
Fall MUSC1210 S01 15643 TTh 1:00-2:20(10)  'To Be Arranged'

MUSC 1240B. Narrative and Immersion.
A production course examining the potentials for engagement in new media, drawing on narrative techniques to establish engagement in immersive works. Students will be introduced to cinematic concepts, interactive technologies, multi-channel video and surround sound environments. Classes will consist of viewing and analysis of exemplary work, discussion of readings, critiques of student projects, and technical workshops on Max/Jitter. Class members should have completed advanced work in film/video, digital sound, and/or creative writing. Open to upper-level undergraduate and graduate students. The class list will be determined after the first class, by permission of instructor. SNC
Spr MUSC1240B S01 24516 W 1:00-4:30  (T. Winkler)

This course will focus on developing and reinforcing technical skills, musical concepts, and critical listening abilities associated with the practice of composition in an electronic music studio. These studies will be tied to a broad range of aesthetic approaches and discussions of sound synthesis and processing, spatialization, and recording techniques. Through a series of projects and focused study, students will expand their knowledge and craft, and will provide each other with a forum for exploring their creative studio work. MUSC 1260 is a prerequisite, and preference will be given to students who have also taken MUSC 1210, and/or 1250.
Fall MUSC1260 S01 15646 MWF 10:00-10:50(14)  (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 15647 T 4:00-6:30(09)  'To Be Arranged'

The course will explore questions of an artist's role in the world, and will include an inquiry into a set of ideas in philosophy of aesthetics; an inquiry into activism and developing social practice as artists; discussion on philosophy of education as it relates to the question of positive social change; and an exploration of musical and artistic initiatives that have been particularly focused on a positive social impact.
Fall MUSC1400 S01 16686 M 3:00-5:30(15)  'To Be Arranged'

MUSC 1500C. Major Masters of Music: Igor Stravinsky.
An examination of the works of Igor Stravinsky within the context of 20th-century music history. Works from throughout his career will be studied, including Firebird, Petrushka, Rite of Spring, L'Histoire du Soldat, Les Noces, Symphony of Psalms, The Rake's Progress, Agon, Don Quixote, Shostakovich's Noces, The Rake's Progress, Agon, and Variations: Aldous Huxley in memoriam. Readings by Stravinsky, Craft, Walsh, Taruskin, and others. Prerequisite: MUSC 0550 or instructor's permission.
The ability to read music is required.
Spr MUSC1500C S01 24656 MWF 10:00-10:50(03)  (P. Phillips)

This course examines the evolving use of musical borrowing over the past century through a series of in-depth case studies of composers, performing and recording artists across concert, electronic, jazz and popular music. How have artists used preexisting material to give meaning to music, engage with social, cultural and political issues, or form their own artistic identity? What is the line between homage and theft, borrowing and appropriation? We investigate a wide range of artists from John Adams to Jay-Z, Duke Ellington to Igor Stravinsky, John Cage to Public Enemy. Prerequisite: MUSC0550 or permission of instructor. Enrollment limit 12.
Fall MUSC1676 S01 15657 W 3:00-5:30(17)  (E. Nathan)

MUSC 1710. Choral Conducting.
An introduction to the art of conducting, with emphasis on choral training. A study of the relationship of gesture to sound will be combined with a survey of the choral repertoire, beginning with Gregorian Chant and covering renaissance motets, masses and madrigals, Baroque works with instruments, excerpts from Mozart's vespers, 19th-century Romantic part-songs, and selected 20th-century. Issues of basic vocal production, warm-ups, rehearsal planning, editing, programming and concert production will also be included. Prerequisite: MUSC 0400 or 0550. Written permission required. May be repeated for credit.
Spr MUSC1710 S01 24519 M 3:00-5:30(13)  (L. Jody)

Half credit each semester. Restricted to skilled musicians. Restricted to skilled musicians demonstrating mastery of an advanced repertory in their fields. Openings are limited. Enrollment and re-enrollment is by audition and jury. Lessons are given by consultants to the Applied Music Program. MUSC 0830, 0840 is prerequisite to this course. A fee is charged for enrollment. Copies of the Applied Music Program Guidelines giving detailed information are available online at www.brown.edu/ music. Prerequisite: MUSC 0400, or MUSC 0550, MUSC 0560. Written permission required. May be repeated up to four times for credit.

MUSC 1900. Introduction to Ethnomusicology.
The study of people making music. Ethnographic research and writing on musical practices; history of ethnomusicology; musical case studies from around the world highlighting such issues as authenticity, tradition, commercialism, amateurism, postcolonial politics, and the ethics of fieldwork.
Fall MUSC1900 S01 15648 TTh 10:30-11:50(13)  (K. Miller)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Explores music perception in terms of auditory and cognitive processes such as auditory perception, memory, and learning. Lectures, discussions, and demonstrations review and analyze a body of scientific research on the psychology of music. Problem sets and a collaborative laboratory project. Prerequisites: PY 1 (PSYC0010) and MU 1 (MUSC 0010) or permission of the instructor.

Explores how music mediates human relations to the natural world. Via case studies drawn from Western and non-Western societies, we will examine how theorists use sound to think through the difference between humans and non-humans; how composers and soundscape artists like Grieg, Ives, Westerkamp, and John Luther Adams shape listeners' perceptions of natural worlds and ecological systems; how people in Papua New Guinea, Mongolia, and the Bolivian Andes use sound to coordinate ecological awareness; how instruments are implicated in human relationships with the environment; and the ways that sound art helps to challenge longstanding distinctions between nature and its others. Fall MUSC1921 S01 15658 W 3:00-5:30(17) (C. Tucker)

MUSC 1922. Black Sound.
How might sound studies resonate queerly when heard through racialized ears? In this seminar we will intervene in the developing interdisciplinary field of sound studies by bringing the analytic framework of blackness to bear on its core topics, including voice, audio technologies, soundscapes, listening practices, and sound’s relationship with modernity. We will explore ideas about black sound (and black ideas about sound) through listenings and readings from popular music studies, ethnomusicology, media studies, performance studies, and critical race theory, foregrounding the intersection of race with gender and sexuality throughout. Enrollment limited to 15. Prerequisite: junior standing or instructor permission. DPLL LILE Spr MUSC1922 S01 25534 TTh 1:00-2:20(10) (K. Miller)

With a musical culture that ranges from roots samba to favela funk, and from the music of indigenous Amazonian peoples to the neo-African sounds of candomblé ritual, Brazil’s soundscape rivals its social and geographic diversity. This course provides an introduction to the “erudite,” traditional, and mass-popular sounds of Brazil, emphasizing their role in creating and contesting visions of nationhood and Brazilian society over the twentieth century. There are no prerequisites, but a background in either music or Latin American studies will greatly aid students’ progress in the course. Open to sophomores, juniors, and seniors. DPLL LILE Fall MUSC1935 S01 16181 TTh 9:00-10:20(08) (C. Tucker)

MUSC 1950. Transcription and Analysis of Jazz.
Transcriptions from major jazz recordings are made by the students. The personal styles of the musicians are defined through analysis in the context of the various trends in jazz history. The transcriptions are analyzed within the parameters of rhythmic and harmonic structures, tone quality, motivic design, and idiomatic performance. Singing, ear-training, and dictation are used to develop transcription skills. Instructor permission required.
Spr MUSC1950 S01 24521 W 12:00-2:20 (E. Tomassi)

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 16700 W 7:30-9:50PM (M. Obeng)

Students with experience in African and related musical traditions perform drumming, dancing, and singing of Ghana and the diaspora. Focus on a more challenging repertoire with emphasis on multi-part, lead, and improvisational playing. Prerequisite: audition. May be repeatable for credit. Instructor permission required. Enrollment limited to 15 students.
Spr MUSC1961 S01 25550 W 7:30-10:00PM (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.

This core seminar offers a graduate-level survey of the discipline of ethnomusicology and its history, building on previous coursework in ethnomusicographic methods and the history of anthropological theory. Students will complete independent research projects as well as shorter assignments geared to professional development (e.g., exam field proposal, scholarly book review, historical investigation of the Society for Ethnomusicology). Prerequisites: MUSC 1900 and ANTH 2000 or instructor permission.
Spr MUSC2000 S01 24522 M 3:00-5:30(13) (C. Tucker)

MUSC 2080A. Seminar in Ethnomusicology: Music and Technoculture.
This seminar investigates ethnomusical approaches to technologically-mediated musical practices. Case studies will focus on recording studios, electronic dance music, broadcast media, digital gameplay, virtual-reality spaces, multimedia installations, and popular music reception. Theoretical readings will be drawn from anthropology of the media, reception studies, and media design/production texts. Students will conduct ethnographic projects. Prerequisite: graduate standing or written permission.
Spr MUSC2080S S01 24523 W 3:00-5:30(14) (K. Miller)

MUSC 2085. Ethnomusicology Workshop.
This workshop-style seminar focuses on professional writing genres in ethnomusicology (e.g., conference papers, grant proposals, human-subject research protocols, syllabus development, dissertation-craft, preparing job application materials, navigating the scholarly peer-review process). Students at all stages of the Ph.D. program will present work in progress and offer collegial feedback. Mandatory S/NC, half-credit per semester, repeatable for credit. Prerequisite: Graduate standing in Music or instructor permission.
Fall MUSC2085 S01 16054 F 3:00-5:30(11) (K. Miller)

MUSC 2110. Seminar in Advanced Orchestration and Analysis.
This seminar investigates music for chamber ensemble to large instrumental ensembles (with and without electronics), provide hands-on engagement with concepts explored through the analysis of model compositions. Prerequisite: MUSC0560, MUSC1120 or permission of the instructor. Not open to first year undergraduate students. Enrollment limited to 8 students.
Spr MUSC2110 S01 24532 M 3:00-5:30(13) (E. Nathan)

MUSC 2210. Digital Performance.
A production seminar examining the artistic impact and creative potential of digital media in the context of live performance. Readings and analysis of work examine innovations in performance practice from dance, theatre, performance art and music. Collaborative assignments investigate video projection, sound design and interactive sensor technology, culminating in a final large-scale performance. Permission will be granted based upon a questionnaire given in the first class.
Fall MUSC2210 S01 15650 W 1:00-4:50 (T. Winkler)

This seminar will explore the science and aesthetics of designing alternate controllers for musical performance. Topics will include basic electronics and hardware prototyping, instrument construction, theories of gesture, human-computer interface issues, and the challenges of mapping sensor data to meaningful musical parameters. Previous experience with MaxMSP or other real-time programming required. Permission of instructor required.
PHIL 0350. 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 PHIL0540 S01 15500 MWF 10:00-10:50(14) (R. Heck)  
Spring PHIL0540 S02 10942 MWF 10:00-10:50(13) (P. Kotsarian)  

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. Students should register for both a section and a conference. WRIT  
Spring PHIL0360 S01 24247 MWF 11:00-11:50(04) (J. Broackes)  

PHIL 0400. Marxism.  
In the first part of the course, we will examine Marx’s economic, political, and philosophical writings, focusing on his analysis of capitalism, his critique of liberal democracy, and his theory of history. Then in the second part, we will look at some recent attempts to renew and extend the Marxist tradition. WRIT  
Spring PHIL0400 S01 24253 MWF 10:00-10:50(03) (C. Lammers)  

PHIL 0500. Psychology and Philosophy of Happiness.  
The course explores four fundamental questions about happiness: What is happiness—pleasure, life satisfaction, something else? How is happiness achieved—what are the myths and realities about what conduces to happiness? Can happiness be achieved—are we naturally well suited to be happy? Why pursue happiness—is it sufficient, or even necessary, for a good life? The course examines classic contributions from philosophy and psychology, the two disciplines that have studied happiness most extensively. Team-taught by professors from both philosophy and psychology, it invites students to compare and combine both approaches. WRIT  
Fall PHIL0650 S01 16535 MWF 1:00-1:50(06) (B. Regnier)  

PHIL 0650. Philosophy of Language.  
Discussion of the nature of linguistic meaning and other topics, such as vagueness; metaphor; and language, thought, and culture. Fall PHIL0850 S02 15507 TTh 10:30-11:50(12) (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  
Spring PHIL0880 S01 24254 MWF 2:00-2:50(07) (F. Ackerman)
PHIL 0990L. Moral Psychology. We all have notions of good, bad and ordinary people, but reality defies our concepts. Many otherwise "nice"people voted for Hitler. People with stupid views about morality are sometimes better "in practice" than their smart counterparts. The same person may be honest with her husband but dishonest with the IRS, brave in battle but scared of public speaking. This class will explore this complexity, touching upon topics like free will and rationality, through the work of contemporary philosophers.

PHIL 0990V. Current Questions About Rational Belief. We'll study some "hot topics" in epistemology. Some possible questions: (1) What's the relationship between rational belief and logic? (2) Is belief best thought as all-or-nothing, as coming in gradations, or both? (3) Can the same evidence support divergent belief-states? (4) Is rational belief completely determined by evidence, or also by values or practical interests? (5) Are graded beliefs best seen as coming in precise degrees, or as more "spread-out"? (6) Can I have rational beliefs I know are denied by others just as intelligent, unbiased, well-informed, etc., as I am? Enrollment limited to 20 juniors and seniors.

PHIL 0991C. Reasons and Ought. Contemporary philosophical problems of the fundamental deontic concepts. Topics will include: ought implies can, "buckpassing" accounts of value, narrow and wide scope requirements, subjective and objective reasons (and ought). Enrollment limited to 20.

PHIL 0991E. Identity and Authenticity. Identity and authenticity are typically thought to be closely allied in that being oneself (authentically) presupposes and depends on a conception of what one is (identity). However, close scrutiny of the ideal of authenticity and of the nature and development of identity exposes significant tensions between the two concepts. Drawing on sources from philosophy, psychoanalytic psychiatry, and sociology, the course will examine these concepts and the tensions that arise between them.

PHIL 1250. Aristotle. A close study of Aristotle's major works: his metaphysics, philosophy of nature, philosophy of mind, and ethics. Readings from original sources (in translation) and contemporary secondary material. (Students wishing to read the texts in the original Greek should make arrangements with the instructor.) WRIT

PHIL 1300. Philosophy of Mathematics. This course provides an introduction to the philosophy of mathematics. We will discuss the nature of mathematical objects: Are they mental constructs, do they inhabit some Platonic realm, or are there no mathematical objects at all? We will also discuss the status of our knowledge of mathematics: How is that we are justifying in reasoning as we do in mathematics? The first part of the course will be devoted to discussing the history of the philosophy of mathematics. The second part of the course will focus on contemporary debates in the philosophy of mathematics.

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

PHIL 1550. Decision Theory: Foundations and Applications. Decision theory is a formal apparatus for analyzing preferences and choices. Students learn the formal theory and then examine its foundations and philosophical implications. Specific topics: the role of causation in decision problems, the status of the axioms of the theory, problems of infinite utility, rudimentary game theory, social choice functions, utilitarianism as a theorem.

PHIL 1590. Philosophy of Science. Some very general, basic questions concerning science. Can evidence justify belief in theories which go beyond the evidence? What is the nature of good scientific reasoning? Is there a single scientific method? What is a scientific explanation? Does science reveal truths about unobservable reality, or merely tell us about parts of the world we can measure directly? WRIT

PHIL 1630. Mathematical Logic. This course provides a rigorous introduction to the metatheory of classical first-order predicate logic. Topics covered include the syntax, formal semantics, and proof theory of first-order logic, leading up to the completeness theorem and its consequences (the compactness and Lowenheim-Skolem theorems). There will be some discussion of philosophical issues, but the focus of the course will be on the technical material. This course provides a more rigorous and mathematical treatment of material covered in PHIL 0540. No previous familiarity with logic is required, but it may be taken after 0540.

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

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.

PHIL 1660. Metaphysics. A survey of some major topics in metaphysics, with a particular focus on radical metaphysical arguments — arguments that call into question our most basic beliefs about the world. Topics covered may include: are there ordinary objects? What is personal identity? Does personal identity matter? Does consciousness matter? Is there right and wrong and objective value? Is there free will? Do the laws of nature genuinely govern the evolution of the universe, or should we rather think of laws of nature as just summaries of what in fact has happened? Is there an explanation for the laws of nature themselves? WRIT

PHIL 1670. Time. This course will survey the major topics in the philosophy of time from Augustine’s Confessions and the Leibniz-Clarke correspondence to contemporary philosophical work on the possibility of time travel. Although the main focus will be on philosophical theories of time, and students will be learning to read, think, and write like philosophers, we will also consider the portrayal of time in various works of fiction, and the role of time in various scientific theories. WRIT

PHIL 1710. 17th Century Continental Rationalism. The course will focus on the principle of sufficient reason and involve a close reading of Spinoza’s Ethics, along with other texts from Leibniz, Schopenhauer, Heidegger, and some contemporary writers.

PHIL 1720. Kant: The Critique of Pure Reason. We will cover the main topics of Kant’s masterpiece, including his third work between rationalism and idealism, his foundational approach to science and everyday experience, and his limitation of knowledge to leave room for practical faith. Prerequisites: PHIL 0360, 1700, 1710 or instructor permission.
PHIL 1750. Epistemology.
We’ll concentrate on several issues involving knowledge and rational belief: What is knowledge, and how does it relate to rational or justified belief? Does a person’s knowing something depend on non-evidential factors such as the practical importance of the person’s being correct? Does the justification of a person’s belief depend just on facts internal to the person—or might it depend on her environment? And what can we learn from thinking about the skeptical position which claims that we’re not justified in believing even the most ordinary things about the world around us? WRIT
Spr PHIL1750 S01 24259 TTh 2:30-3:50(11) (D. Christensen)

PHIL 1765. Sense and Reference.
Introduction to issues in philosophy of language and mind relating to sense and reference, including: definite descriptions, proper names, rigid designation and the description theory of names, the internalism–externalism debate, demonstratives ("this", "that"), and indexicals ("I", "here"). At least two prior courses in philosophy strongly recommended. WRIT
Spr PHIL1765 S01 25396 MWF 1:00-1:50(06) (R. Heck)

PHIL 1770. Philosophy of Mind.
Questions concerning the nature of mentality and its relation to the body. Selections from the following topics: mind and behavior, mind as the brain, mind as a computing machine, thought and language, action and mental causation, intentionality and consciousness. Prerequisite: at least one course in philosophy (2 or more preferred).
Fall PHIL1770 S01 15579 MWF 11:00-11:50(02) (A. Paetz)

PHIL 1840. Twentieth-Century Continental Philosophy.
The course will focus on the main figures of the German tradition--Husserl, Heidigger, Cassirer, Gadamer, Adorno, Habermas, and Tugendhat, with emphasis on their efforts to rethink such key concepts as consciousness, history, reason, and the self. Some attention will be paid to points of intersection with German-language philosophers standardly considered "non-Continental"--Frege, Wittgenstein, and the Vienna Circle.
Fall PHIL1840 S01 15514 TTh 10:30-11:50(13) (C. Larmore)

PHIL 1885. Incompleteness.
Gödel's two incompleteness theorems are among the most important results in the history of logic. We will study these results, and explore related topics, by working through some of the classic papers on the subject. Authors to be read include Gödel, Tarski, Feferman, and Visser. Prerequisites: PHIL 0540 or PHIL 1630, or special permission from instructor.
Spr PHIL1885 S01 25397 MWF 10:00-10:50(03) (R. Heck)

PHIL 1890F. Eye and World: Color and the Theory of Perception.
The cognitive science and philosophy of color perception, both in the history and the present day. Some classics of the science, including Maxwell, Helmholtz, and David Katz. Recent work in evolution and genetics of color vision, color constancy, color blindness, unique hues, and other topics; and current philosophical debate on these and other questions.
Fall PHIL1890F S01 15580 TTh 2:30-3:50(03) (J. Broackers)

PHIL 1900. Independent Studies.
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.

G. A. Cohen, who died in 2009, produced one of the most important bodies of work in political philosophy in recent decades. In this graduate seminar, we will study writings spanning the whole of Cohen’s career, from his early work in “analytical Marxism” (which he partly invented), through his influential critique of libertarianism (left and right) and of the idea of self-ownership, to finally his criticisms of Rawls’ theory of justice and his last, seminal work, Rescuing Justice and Equality (2008).
Spr PHIL2000 S01 25131 M 3:00-5:30(13) (C. Larmore)

PHIL 2030A. Moral Psychology.
We all have our notions of good people, bad people, and ordinary people, but reality tends to defy these concepts. Many otherwise “nice”, family loving, church going people voted for Hitler. On the other hand, people with stupid or even evil views about morality sometimes turn out to be a lot better “in practice” than their smart counterparts who know Kant by heart. The same person may be very honest with her husband but very dishonest with the IRS, brave in battle but scared of public speaking. In this class we shall explore this complexity, touching upon topics like rationality, free will, weak will, character, and love. We’ll look at attempts by contemporary philosophers to find some method in the mess. Undergraduates require instructor permission to enroll.
Spr PHIL2030A S01 24269 Th 4:00-6:30(17) (N. Arpaly)

PHIL 2080H. Aesthetics and Architecture.
Is art produced for disinterested contemplation? Then how can architecture, which fundamentally serves one of the most fundamental human interests, that for shelter from an adverse environment, count as art? This question has both motivated philosophical speculation and caused tension in architectural practice for centuries. We will approach it through texts by philosophers such as Kames, Kant, Hegel, Schopenhauer, and Wittgenstein; architects such as Vitruvius, Alberti, Loos, Wright, Corbusier, and Venturi; and critics such as Ruskin, Watkins, Vidler, and Leatherbarrow. This course is a seminar requiring oral presentation and a term paper.
Fall PHIL2080H S01 16009 W 3:00-5:30(17) (P. Guyer)

PHIL 2110K. Early Modern Metaphysics and Philosophy of the Mind: Locke.
Locke’s view of the world can seem quite ordinary: with minds and material things looking not much different from, say, in Bertrand Russell. In fact, after starting with strongly anti-Aristotelian views in his early work, Locke spent the rest of his life moving in something like the opposite direction, reintroducing or rehabilitating notions of substance, essence and spirit, in ways that are often both surprising and illuminating. Central topics in Locke’s Essay, together with some of Leibniz’s criticisms, and present-day philosophical responses and developments.
Fall PHIL2110K S01 16010 Th 4:00-6:30(04) (J. Broackers)

PHIL 2120K. Philosophy of Language: Slurs and Hate Speech.
We will read some of the recent literature on slurs and hate speech, looking for connections between them. Students not graduate students in philosophy must have had a prior course in philosophy of language.
Fall PHIL2120K S01 16681 M 3:00-5:30(15) (R. Heck)

PHIL 2140G. The Epistemology of Logic.
This seminar focuses on the justification of our logical beliefs and of our employment of deductive rules of inference. What explains our justification? How are we justified in endorsing one logic over alternatives? In this seminar, we will read work by Lewis Carroll, Quine, Carnap, Dummett, Putnam, Boghossian, BonJour, Field, Priest, Haack, Rumfitt, among others. No technical background will be presupposed other than a working knowledge of introductory logic.
Spr PHIL2140G S01 24815 W 3:00-6:30(14) (J. Schechter)

PHIL 2150L. Plato’s Theaetetus.
In this seminar, we will discuss Plato’s Theaetetus, his investigation of knowledge, and associated topics, including relativism, perception, true and false judgment, and accounts, with a view to understanding how Plato distinguishes knowledge from true belief. Open to graduate students only; others may enroll with instructor permission.
Fall PHIL2150L S01 15805 Arranged (M. Gall)

PHIL 2160F. Bioethics Through Fiction: Considering Disability, Illness, and Death.
This course uses fiction as a vehicle for philosophical discussions of disability, illness, and death. Topics include the following: What is disability? What is illness? What do healthy people owe sick, disabled, or dying people, and vice versa? Should we fear death? Should we prolong the lives of the terminally ill? Should we support research aimed at greatly extending the human lifespan? How can fiction enrich philosophical discussions of such questions? Readings include novels and short stories as well as writings by philosophers and bioethicists. In order to include students with varied backgrounds, this course is open to all Brown students and has no prerequisites.
Spr PHIL2160F S01 24277 M 3:00-5:30(13) (F. Ackerman)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Instructor</th>
<th>Date/Time</th>
<th>Location</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0030</td>
<td>Basic Physics</td>
<td></td>
<td>FALL PHYS0030 S01 15853 MWF 11:00-11:50(02)</td>
<td>'To Be Arranged'</td>
<td></td>
</tr>
<tr>
<td>PHYS 0040</td>
<td>Basic Physics</td>
<td></td>
<td>FALL PHYS0040 S02 15874 MWF 12:00-12:50(12)</td>
<td>'To Be Arranged'</td>
<td></td>
</tr>
<tr>
<td>PHYS 0050</td>
<td>Foundations of Mechanics</td>
<td></td>
<td>FALL PHYS0050 S01 15876 MW 8:30-9:50(01)</td>
<td>'To Be Arranged'</td>
<td></td>
</tr>
<tr>
<td>PHYS 0060</td>
<td>Foundations of Electromagnetism and Modern Physics</td>
<td></td>
<td>FALL PHYS0060 S01 15878 MWF 8:30-9:50(02)</td>
<td>'To Be Arranged'</td>
<td></td>
</tr>
<tr>
<td>PHYS 0070</td>
<td>Analytical Mechanics</td>
<td></td>
<td>FALL PHYS0070 S01 15883 MWF 8:30-9:50(01)</td>
<td>'To Be Arranged'</td>
<td></td>
</tr>
<tr>
<td>PHYS 0160</td>
<td>Introduction to Relativity and Quantum Physics</td>
<td></td>
<td>FALL PHYS0160 S01 24268 TTh 9:00-10:20(08)</td>
<td>(J. Pautz)</td>
<td></td>
</tr>
<tr>
<td>PHYS 0220</td>
<td>Astronomy</td>
<td></td>
<td>FALL PHYS0220 S01 24268 TTh 9:00-10:20(08)</td>
<td>'To Be Arranged'</td>
<td></td>
</tr>
<tr>
<td>PHYS 0270</td>
<td>Introduction to Astronomy</td>
<td></td>
<td>FALL PHYS0270 S01 15884 MWF 8:30-9:50(02)</td>
<td>'To Be Arranged'</td>
<td></td>
</tr>
<tr>
<td>PHYS 0470</td>
<td>Electricity and Magnetism</td>
<td></td>
<td>FALL PHYS0470 S01 15885 MWF 8:30-9:50(01)</td>
<td>'To Be Arranged'</td>
<td></td>
</tr>
<tr>
<td>PHYS 0500</td>
<td>Advanced Classical Mechanics</td>
<td></td>
<td>FALL PHYS0500 S01 24268 MWF 8:30-9:50(02)</td>
<td>'To Be Arranged'</td>
<td></td>
</tr>
<tr>
<td>PHYS 0560</td>
<td>Experiments in Modern Physics</td>
<td></td>
<td>FALL PHYS0560 S01 24268 MWF 8:30-9:50(02)</td>
<td>'To Be Arranged'</td>
<td></td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 15997 MWF 11:00-11:50(02) 'To Be Arranged'

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 0400, APMA 0340 or equivalents.
Fall PHYS0790 S01 15899 TTh 9:00-10:20(08) 'To Be Arranged'

PHYS 1100. Introduction to General Relativity.
An introduction to Einstein's theory of gravity, including special relativity, spacetime curvature, cosmology and black holes. Prerequisites: PHYS 0500 and MATH 0520 or MATH 0540 or equivalent, or permission of the instructor. Recommended: PHYS 0720. Offered every other year.
Spr PHYS1100 S01 24690 TTh 1:00-2:20(10) 'To Be Arranged'

PHYS 1280. Introduction to Cosmology.
The course presents an introduction to the study of the origin, evolution and contents of the Universe. Topics include the expansion of the Universe, relativistic cosmologies, thermal evolution, primordial nucleosynthesis, structure formation and the Cosmic Microwave Background. Prerequisites: PHYS 0160, MATH 0190, MATH 0200, or MATH 0350, or instructor permission.
Fall PHYS1280 S01 15900 TTh 1:00-2:20(10) 'To Be Arranged'

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 15901 MWF 9:00-9:50(01) 'To Be Arranged'

PHYS 1420. Quantum Mechanics B.
See Quantum Mechanics A, (PHYS 1410) for course description.
Spr PHYS1420 S01 24691 MWF 9:00-9:50(02) 'To Be Arranged'

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 15902 TTh 2:30-3:50(03) 'To Be Arranged'

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 15903 TTh 10:30-11:50(13) 'To Be Arranged'

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 24693 TTh 9:00-10:20(08) 'To Be Arranged'

PHYS 1600. Computational Physics.
This course provides students with an introduction to scientific computation, primarily as applied to physical science problems. It will assume a basic knowledge of programming and will focus on how computational methods can be used to study physical systems complementing experimental and theoretical techniques. Prerequisites: PHYS 0070, 0160 (or 0050, 0060) and 0470 (or ENGN 0510); MATH 0180 or 0200 or 0350; the ability to write a simple computer program in Fortran, Matlab, C or C++; WRIT
Spr PHYS1600 S01 24694 TTh 1:00-2:20(10) 'To Be Arranged'

PHYS 1610. Biological Physics.
Introduction on structures of proteins, nucleotides, and membranes; electrostatics and hydration; chemical equilibrium; binding affinity and kinetics; hydrodynamics and transport; cellular mechanics and motions; biophysical techniques including sedimentation, electrophoresis, microscopy and spectroscopy. Suitable for undergraduate science and engineering majors and graduate students with limited background in life science. Prerequisites: MATH 0180.
Fall PHYS1610 S01 15904 TTh 2:30-3:50(03) 'To Be Arranged'

PHYS 1890. Undergraduate Research in Physics.
Designed for undergraduates to participate, individually or in small groups, in research projects mentored by the physics faculty. Students must have taken one year of college level physics. An average of 8 to 10 hours per week of guided research is required as are weekly meetings with the supervising faculty member. Students should consult with faculty to find a mutually agreeable research project and obtain permission to enroll. Section number varies by instructor (students must register for the appropriate section).

PHYS 1990. Senior Conference Course.
Preparation of thesis project. Required of candidates for the degree of bachelor of science with a concentration in physics. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

PHYS 2010. Techniques in Experimental Physics.
No description available.
Fall PHYS2010 S01 15911 W 3:00-5:30(17) 'To Be Arranged'
Spr PHYS2010 S01 24960 W 3:00-5:30(14) 'To Be Arranged'

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 15912 T 4:00-6:30(09) 'To Be Arranged'

PHYS 2030. Classical Theoretical Physics I.
No description available.
Fall PHYS2030 S01 15913 TTh 9:00-10:20(08) 'To Be Arranged'

PHYS 2040. Classical Theoretical Physics II.
No description available.
Spr PHYS2040 S01 24699 TTh 10:30-11:50(09) 'To Be Arranged'

PHYS 2050. Quantum Mechanics.
No description available.
Fall PHYS2050 S01 15914 MWF 10:00-11:50(14) 'To Be Arranged'

PHYS 2060. Quantum Mechanics.
No description available.
Spr PHYS2060 S01 24700 MWF 10:00-10:50(03) 'To Be Arranged'

PHYS 2070. Advanced Quantum Mechanics.
No description available.
Fall PHYS2070 S01 15922 TTh 1:00-2:20(10) 'To Be Arranged'

PHYS 2140. Statistical Mechanics.
No description available.
Spr PHYS2140 S01 24703 TTh 1:00-2:20(10) 'To Be Arranged'

PHYS 2170. Introduction to Nuclear and High Energy Physics.
No description available.
Spr PHYS2170 S01 24961 MWF 1:00-1:50(06) 'To Be Arranged'

PHYS 2280. Astrophysics and Cosmology.
This course serves as a graduate-level introduction to modern cosmology, including current topics of research on both observational and theoretical fronts. Topics include relativistic cosmology, inflation and the early Universe, observational cosmology, galaxy formation. Prerequisites for undergraduates: PHYS 1280 and PHYS 1530.
Spr PHYS2280 S01 24704 MWF 2:00-2:50(07) 'To Be Arranged'

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
PHYS 2300. Quantum Theory of Fields I.
No description available.  
Spr PHYS2300  S01  24706  TTh  2:30-3:50(11)  'To Be Arranged'

PHYS 2320. Quantum Theory of Fields II.
No description available. Instructor permission required.  
Fall PHYS2320  S01  15923  TTh  10:30-11:50(13)  'To Be Arranged'

PHYS 2340. Group Theory.
Offered every other year.  
Spr PHYS2340  S01  24708  TTh  2:00-2:50(07)  'To Be Arranged'

PHYS 2410. Solid State Physics I.
No description available.  
Fall PHYS2410  S01  15924  MWF  12:00-12:50(12)  'To Be Arranged'

PHYS 2420. Solid State Physics II.
No description available.  
Spr PHYS2420  S01  24709  TTh  10:30-11:50(09)  'To Be Arranged'

PHYS 2450. Exchange Scholar Program.
Fall PHYS2450  S01  14774  Arranged  'To Be Arranged'
Spr PHYS2450  S01  23860  Arranged  'To Be Arranged'

PHYS 2470. Advanced Statistical Mechanics.
No description available.  
Fall PHYS2470  S01  15926  TTh  9:00-10:20(08)  'To Be Arranged'

PHYS 2600. Computational Physics.
This course provides students with an introduction to scientific computation at the graduate level, primarily as applied to physical science problems. It will assume a basic knowledge of programming and will focus on how computational methods can be used to study physical systems complementing experimental and theoretical techniques. Prerequisites: PHYS 2030, 2050, 2140; the ability to write a simple computer program in Fortran, Matlab, C or C++.  
Spr PHYS2600  S01  24695  TTh  1:00-2:20(10)  'To Be Arranged'

PHYS 2630. Biological Physics.
The course is the graduate version of Phys 1610, Biological Physics. The topics to be covered include structure of cells and biological molecules; diffusion, dissipation and random motion; flow and friction in fluids; entropy, temperature and energy; chemical reactions and self-assembly; solution electrostatics; action potential and nerve impulses. The graduate level course has additional pre-requisites of Phys 0470 and 1530, or equivalents. It requires homework assignments at the graduate level. The final grades will be assigned separately from those who take the course as Phys 1610, although the two groups may be taught in the same classroom.  
Fall PHYS2630  S01  16733  TTh  2:30-3:50(03)  'To Be Arranged'

PHYS 2710. Seminar in Research Topics.
Instruction via reading assignments and seminars for graduate students on research projects. Credit may vary. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

PHYS 2711. Seminar in Research Topics.
See Seminar In Research Topics (PHYS 2710) for course description. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

PHYS 2970. Preliminary Examination Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.  
Fall PHYS2970  S01  14773  Arranged  'To Be Arranged'
Spr PHYS2970  S01  23861  Arranged  'To Be Arranged'

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

PHYS 2981. Research in Physics.
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

PHYS 2990. Thesis Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a thesis.  
Fall PHYS2990  S01  14774  Arranged  'To Be Arranged'
Spr PHYS2990  S01  23862  Arranged  'To Be Arranged'

Political Science

POLS 0010. Introduction to the American Political Process.
This course is designed to be an introduction to the American political process, broadly defined. We will cover topics including but not limited to: Constitution, Federalism, Federal Budget, Congress, Presidency, Bureaucracy, Judiciary, Civil Rights, Civil Liberties, Public Opinion, Media, Interest Groups, Political Parties, Campaigns, Elections, and Participation.  
Fall POLS0010  S01  15382  MW  8:30-9:50(02)  (W. Schiller)

POLS 0110. Introduction to Political Thought.
What is justice? What is freedom? What is the basis of political authority? What is the nature of the best regime? Why should we obey the laws? When may we legitimately resist? These and other perennial questions of political life are explored. Readings includes Aristotle, Machiavelli, Hobbes, Locke, Rousseau, Marx, and J.S. Mill.  
Spr POLS0110  S01  24130  MW  8:30-9:50(02)  (S. Krause)

POLS 0400. Introduction to International Politics.
This course provides a basic introduction to the central theoretical perspectives and debates in international relations. The second part of the course applies these models to current problems in international relations, including globalization, state failure, humanitarian intervention, NGOs, terrorist networks, environmental issues, and possible future change in international politics.  
Fall POLS0400  S01  15376  MW  1:00-1:50(06)  (R. McDermott)

POLS 0820B. The Politics of Leadership.
Many people are placed in leadership positions but most never become real leaders. What separates leaders and non-leaders? What are the characteristics of a real leader? The course will focus on American politics and investigate two institutional arenas: the presidency and congress. Several case studies will be investigated where people use different skills to perform leadership roles. Among the factors to be considered are; personal qualities, prior preparation, selection of a challenge and the use of rhetorical skills. Enrollment limited to 20 first year students.  
Fall POLS0820B  S01  15365  F  3:00-5:30(11)  (R. Cobb)

POLS 0820U. Drug War Politics.
This seminar examines the politics, practice, and consequences of government efforts to regulate mind-altering substances since the early 20th century. Although much of the focus is on the contemporary United States and Latin America, the coverage is broadly historical, comparative, and global. The main drugs focused on are cocaine, opium, and cannabis, but will include alcohol, tobacco, and synthetics. The course also evaluates policy alternatives and the obstacles to policy reform. The course draws on readings from fields such as political science, anthropology, criminology, and history. The seminar is reading intensive, and is designed to cultivate critical writing and presentation skills. Enrollment limited to 20 first year students. Instructor permission required. FYS WRIT  
Spr POLS0820U  S01  24112  T  6:30-9:00PM  (P. Andreas)

POLS 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  15993  M  3:00-5:30(15)  (J. Tomasi)

POLS 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 15362 TTh 1:00-2:20(10) (C. Bretschneider) 
POLS 1020. Politics of the Illitical Economy. 
This course is about the "underside" of globalization. It introduces key sectors of the illitical global economy, including the clandestine flow of drugs, arms, people, body parts, arts and antiquities, endangered species, and toxic waste. The course compares these illitical sectors across time and place, and evaluates the practice and politics of state regulatory efforts. Particular attention is given to the role of the U.S. in the illitical global economy. 

Fall POLS1020 S01 15352 MWF 10:00-10:50(14) (P. Andreas) 
POLS 1035. Democracy and Its Nineteenth Century Critics. 
What exactly is democracy, or 'the rule of the people'? Our unreflective support for democracy often blinds us to the fact that historically, democracy has not always been viewed favorably, but rather, with skepticism—particularly as it was rising to the forefront of political life in the United States and Western Europe in the 19th century. This course investigates claims about democracy through historical and philosophical readings. What exactly is democracy? How is it justified (or not)? How is democracy related to representation, gender, and class? We investigate these questions through Burke, Paine, Wolfstonecraft, deTocqueville, Marx, Mill, Taylor, and Nietzsche. 

Spr POLS1035 S01 24128 TTh 2:30-3:50(11) (A. Gourevitch) 
POLS 1090. Polarized Politics. 
Focus will be on growing partisan polarization in American politics. Existence of polarization in institutions like House of Representatives, Senate, the presidency, federal courts, media, and religion will be examined. Emphasis will include the roles of political elites, non-elites, lobbyists, money in politics, red states/blue states, House and Senate rules, particular pressures created by budget, domestic, foreign policy, defense and homeland security issues. Requires extensive reading, detailed paper, take-home final exam and active class participation. Expectation to remain informed about current events as they apply to partisan polarization and to weigh the impacts of polarized politics on a democratic nation. 

Spr POLS1090 S01 24147 TTh 1:00-2:20(10) (R. Arenberg) 
POLS 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. 

Fall POLS1130 S01 15398 MWF 12:00-12:50(12) (R. Arenberg) 
POLS 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 15394 TTh 10:30-11:50(13) (J. Tomasi) 
This course examines governmental powers under the United States Constitution, addressing the powers of Congress, the President, and the courts, as well as the relationship between the national and state governments. The primary reading materials will be leading Supreme Court cases, supplemented by additional reading materials on history and legal theory. The course will consider the role of the courts in enforcing constitutional principles in a democratic system, as well as theories of constitutional interpretation and constitutional change. 

Fall POLS1160 S01 15404 MWF 2:00-2:50(08) (S. Calabresi) 
POLS 1265. Political Institutions of East Asian Democracies. 
Will discuss present-day government and politics of South Korea, Taiwan and the Philippines as well as the decades leading up to democratic transitions in these countries. Will discuss economic miracles in Japan and the four "Asian tigers," and democratization in these high-growing regions. Throughout, reference will be made to similarities and differences – and implications thereof – between the "rules of the game" in these countries and in other new democracies. We will focus on several areas of policy that have been at the center of political science and economics debates concerning policy making in Korea, Taiwan and the Philippines. 

Spr POLS1265 S01 24138 MWF 2:00-2:50(07) (P. Singh) 
POLS 1280. Politics, Economy and Society in India. 
This course will concentrate on three aspects of the "Indian experience": democracy, ethnic and religious diversity, and political economy. With a brief exception, India has continued to be democratic since 1947. No developing country matches India's democratic record. Second, remarkable cultural, ethnic and religious diversity marks India's social landscape, and influences its politics. Third, Indian economy has of late been going through a serious economic transformation, drawing comparisons with China. Is the comparison valid? 

Fall POLS1280 S01 15399 MWF 10:00-11:50(14) (P. Varshney) 
POLS 1290. The Rise of China. 
This course examines the causes and consequences of China's societal transformation and emergence as a global power. Employing perspectives from comparative politics, international relations, and economics, the course explores the connections between China's domestic transformation and its integration with the global system. Lectures and readings cover the historical antecedents of China's rise, the contemporary relationship between state and citizen, the nature of China's global competitiveness, and likely future avenues for socio-political change. 

Spr POLS1290 S01 24141 TTh 10:30-11:50(10) (E. Steinfield) 
POLS 1310. African American Politics. 
Focuses on the contemporary African American politics in various spheres of the American political environment. Examines also how the concept of an African American community has evolved and shifted historically. We will pay particular attention to the growing diversity within the African American community and discuss what these changes mean for black political participation, representation, and organizing. 

Spr POLS1310 S01 24136 MWF 10:00-11:50(10) (E. Steinfield) 
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 15391 TTh 9:00-10:20(08) (K. Tate) 
POLS 1380. Ethnic Politics and Conflict. 
Course focuses on the politics of rising national consciousness and the development of ethnic conflicts. It covers sources of contemporary nationalism; nationalist political mobilization; emergence of conflicts; impact on societies of internal strife and wars; international interventions; explanations for resolution or persistence of conflict; politics of post-conflict states. The course combines analytical texts and case studies. Cases from Eastern and Western Europe, North America, South Asia, and Africa. 

Spr POLS1380 S01 24126 MWF 1:00-1:50(06) (L. Cook) 
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 24131 TTh 6:40-8:00PM(12) (N. Miller) 
POLS 1420. Money and Power in the International Political Economy. 
Examines how the interaction of states and markets create distinct global monetary and political orders. Class analyzes the shift from the classical liberal Gold Standard through the Post-War Bretton Woods arrangements through to the globalization IPE of today. 

Fall POLS1420 S01 15819 TTh 10:30-11:50(13) (M. Blyth)
POLS 1440. Security, Governance and Development in Africa.
Some of the fastest-growing economies in the world now lie in sub-Saharan Africa. Yet Africa is also home to some of the world’s most corrupt and violent states. This course will provide a variety of lenses through which to view these and other paradoxes on the continent, with a focus on security, governance and economic development. Topics will include the long-term consequences of colonialism and the slave trade; the politics of independence; the causes and effects of crime, violence and civil war; democracy and democratization; the promise and pitfalls of foreign aid; and the challenges of building strong, stable states.
Fall POLS1440 S01 15995 MWF 10:00-10:50(14) (R. Blair)

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 15390 MWF 11:00-11:50(02) (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 sophomore, junior, and senior Political Science, International Relations, or Public Policy concentrators.
Fall POLS1600 S01 15379 TTh 2:30-3:50(03) (N. Miller)

POLS 1730. International Political Economy.
Who benefits from international trade, and what are its social and environmental consequences? How can rich nations help poor ones develop, and to what extent should they try? What are the political dimensions of the flow of oil and natural resources? This course is designed to provide students with a broad introduction to the field of international political economy to help address questions like these ones. The course examines the fundamentals of international trade, finance, development, and investment policies. Must have basic understanding of statistics, macroeconomics, and international politics. Pre-req of POLS 0500 or equivalent training in statistics.
Spr POLS1730 S01 24125 TTh 9:00-10:20(08) (J. Colgan)

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 healthfulness of food? This course 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.
Fall POLS1740 S01 15363 TTh 1:00-2:20(10) (R. Chell)

POLS 1760. Infrastructure Policy.
The focus is on transportation infrastructure: roads, bridges, rail, transit and airports. How has our infrastructure developed over the past two centuries? What trends and multitudes have been legion? How does Obama compare with his predecessors? Who are the key actors in congress and bureaucracy that control the distribution of money? What are the key interest groups?
Fall POLS1760 S01 15364 MWF 8:00-8:50(16) (R. Cobb)

POLS 1770. Education, Inequality, and American Democracy.
How are public schools and the educational programs they offer products of political inequality? How might public schools remedy those inequalities or exacerbate them? This course examines the ways in which education contributes to democratic governance; how the development of American public schools builds on and reproduces political, economic and social privilege and inequality; and the promise and limitations of various types of reforms designed to redress inequality, including the Common Core. This course focuses primarily on the United States, but looks to other democracies, including Canada and Mexico, to understand the intersection of education, inequality and democratic governance.
Fall POLS1770 S01 15380 MWF 2:00-2:50(07) (S. Moffitt)

POLS 1820A. American Political Development.
No description available. Enrollment limited to juniors and seniors.
Spr POLS1820A S01 24195 Th 4:00-5:30(17) (J. Morone)

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
Spr POLS1820D S01 24122 M 3:00-5:30(13) (C. Brettschneider)

POLS 1820H. Contraband Capitalism: States and Illegal Global Markets.
This course explores the clandestine side of the global economy (including flows of drugs, people, weapons, and money) and state policing efforts. We will examine the organization of these activities, how they interact with the state and legal economy, their relationship to armed conflicts, and how they shape (and are shaped by) domestic and international politics. Enrollment limited to 20 juniors and seniors concentrating in Development Studies, Political Science, or International Relations. Course is not open to students who have taken POLS 1020. WRIT
Fall POLS1820H S01 15353 M 3:00-5:30(15) (P. Andreas)

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 24124 M 3:00-5:30(13) (R. Cobb)

POLS 1821G. Representation, Parties and Interest Groups.
Examination of the role of political parties and interest groups in translating the will of citizens into policy outcomes. Covers the extent to which voters use party as a guideline, the possibility of a viable third party at the Presidential level, the effect of parties on Presidential/Congressional relations, and the interaction of interest groups and parties in politics. Enrollment limited to 20 juniors and seniors concentrating in Political Science and Public Policy. WRIT
Spr POLS1821G S01 24137 W 3:00-5:30(14) (W. Schiller)

POLS 1821M. War in Film and Literature.
This course introduces students to a study of warfare, and some of the central issues raised in war, through the use of movies and novels. Central themes include civil-military relations, leadership, the role of women in war, managing the homefront as well as issues related to battlefield tactics and strategy. Students will be encouraged to address these topics in applications related to World War I, World War II, and Vietnam in particular. This course will take place in a seminar format which stresses discussion of the relevant materials. Enrollment limited to 20 juniors and seniors concentrating in Political Science. WRIT
Fall POLS1821M S01 15377 W 3:00-5:30(17) (R. McDermott)

POLS 1821T. Criminal Justice System.
An examination of police, criminal courts, and prisons in the contemporary United States. Major topics include police discretion, plea bargaining, and theories of punishment. We will also examine the politics of crime, including federal efforts to influence these traditional state functions. Major assignments are based in the Rhode Island criminal justice system.
Enrollment limited to 20 juniors and seniors concentrating in Political Science or Public Policy. Instructor permission required. WRIT
Spr POLS1821TS01 24123 F 3:00-5:30(15) (R. Chett)

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 will 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 POLS1822AS01 24132 M 3:00-5:30(13) (N. Miller)

POLS 1822B. Foundations of Political Economy.
This course is both historical and theoretical and overlaps with the disciplines of political science, history, economics, and political theory. Based around an in-depth reading of "the classics" of political economy, the course traces the evolution of political economy through a consideration of some of its major contributions from the eighteenth century to the present. Locke, Ricardo, Smith, Rousseau, Mill, Bentham, Marx, Keynes, Kalecki, Hayek, Friedman, Lucas and Minsky shall be examined.
Fall POLS1822BS01 15361 Th 4:00-6:30(04) (M. Blyth)

POLS 1822C. Congress.
Taking 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 POLS1822CS01 15399 F 3:00-5:30(11) (R. Arenberg)

Understanding and promoting economic, social, and political development is one of the primary challenges facing the world in the twenty-first century. This seminar explores key problems of development and globalization from a comparative and interdisciplinary perspective. Prerequisite: discretion of instructor. Enrollment limited to 20 juniors and seniors.
Fall POLS1822GS01 15402 T 4:00-6:30(09) 'To Be Arranged'

POLS 1822I. Geopolitics of Oil and Energy.
Oil is the single most valuable commodity traded on global markets. This course is designed to introduce students to the international political economy and security dimensions of oil and energy. The course explores the industry's many impacts on politics and economics, including: Dutch disease and the resource curse; the relationship between oil, authoritarianism, and civil wars; the role of the rentier state; the influence of oil on international warfare; global energy governance (e.g., OPEC); political differences within OPEC; US energy policy and energy security. The materials focus primarily on the political economy of oil-exporters, especially those in the Middle East. WRIT
Fall POLS1822I S01 15366 W 3:00-5:30(17) (J. Colgan)

POLS 1822J. Technology and International Politics.
This seminar examines the connections between technological change and international politics. Technologies have always been central to how states conduct war, cooperate with one another, and rule their subjects. We will consider this connection both theoretically and through a number of historical and contemporary case studies of technological changes and their relationship to international politics, including the technologies of warfare, communication, and transport. It is strongly recommended that students have taken the introductory international relations course (POLS 0400) before enrolling in this seminar. Enrollment limited to 20 juniors and seniors.
Spr POLS1822JS01 24120 Th 4:00-6:30(17) (J. Branch)

POLS 1822K. Foundations of American Politics.
The constitutional basis of the U.S. government and its representative institutions and processes; the rise of American political parties; the role of interest groups; the organization of the federal government; issues of representation, representation, and participation. Prerequisite: POLS 1822I
Fall POLS1822KS01 15392 Th 4:00-6:30(04) (K. Tate)

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

Spr POLS1823Z S01 24133 M 3:00-5:30(13) (R. Weitz-Shapiro)

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

Fall POLS1824B S01 15359 M 3:00-5:30(15) (R. Blair)

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 POLS1824C S01 24148 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 15396 Th 4:00-6:30(04) (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 15401 M 3:00-5:30(11) (M. Weir)
POLS 2165. Territorial Conflict. This graduate seminar examines the relationship between territory and conflict. Territorial claims have been central to numerous violent and intractable disputes, both between states and within them. Why, how, and when does territory become the subject of violent conflict? Topics covered in this seminar include the origins of territoriality, historical and contemporary territorial disputes, and theoretical explanations for these conflicts. Graduate students only.

Spr POLS2165 S01 24581 Arranged (J. Branch)

POLS 2230. Ethnic Conflict. What is ethnicity? What does it share with nationalism and in what respects is it different? Why do ethnic groups fight violently and kill wantonly, especially after living peacefully for a long time? Under what conditions do they manage their relations peacefully? Do people participate in ethnic insurgencies because of greed or grievance? Will ethnic groups disappear as modernity proceeds further? These questions will guide our intellectual journey over the semester. Graduate students only; qualified undergraduates with instructor's permission. Enrollment limited to 14.

Spr POLS2320 S01 24145 Arranged (A. Varshney)

POLS 2450. Exchanged Scholar Program. Fall POLS2450 S01 14777 Arranged 'To Be Arranged'

Spr POLS2450 S01 23865 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.

Fall POLS2580 S01 15383 Arranged (W. Schiller)

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 only.

Spr POLS2590 S01 24118 Arranged (R. Blair)

POLS 2975. Field Survey and Research Design. An independent study directed by a tenure-line faculty member of the Department of Political Science. Only third-year graduate students may register for the course; it is intended to provide a framework for producing a formal research design modeled on the dissertation prospectus.

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.

Fall POLS2990 S01 14778 Arranged (R. Cheit)

Spr POLS2990 S01 23866 Arranged 'To Be Arranged'

POLS 2991. Thesis Research and Preparation. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Portuguese and Brazilian Studies

POBS 0100. Elementary Portuguese. Designed for students with little or no preparation in the language. Stresses the fundamental language skills of understanding, speaking, reading and writing. Aspects of Portuguese and Brazilian culture are also presented. Uses a situational/natural approach that emphasizes communication in Portuguese from the very first class. A year course; only in exceptional circumstances is credit given for one semester alone.

Fall POBS0100 S01 15933 MW 2:00-2:50(10) (P. Sobral)

Fall POBS0100 S01 15933 TTh 1:00-2:20(10) (P. Sobral)

POBS 0110. Intensive Portuguese. A highly intensive course for students with little or no preparation in the language. Stresses the fundamental language skills of understanding, speaking, reading, and writing. Aspects of Portuguese and Brazilian culture are also presented. Uses a situational/natural approach that emphasizes communication in Portuguese from the very first class. A two-semester sequence in one semester with ten contact hours each week. Carries the credit and covers the equivalent of two semesters. This course should be chosen, in the fall, by students beginning the study of Portuguese as sophomores who would like to participate in the Brown-in-Brazil Program as juniors. Offered every semester.

Fall POBS0110 S01 15934 F 11:00-11:50 (P. Sobral)

Fall POBS0110 S01 15934 TTh 10:30-11:50(13) (P. Sobral)

Spr POBS0110 S01 24692 MW 11:00-11:50(04) (P. Sobral)

Spr POBS0110 S01 24692 MWF 1:00-1:50(04) (P. Sobral)

Spr POBS0110 S01 24692 TTh 9:00-10:20(04) (P. Sobral)

POBS 0200. Elementary Portuguese. Designed for students with little or no preparation in the language. Stresses the fundamental language skills of understanding, speaking, reading and writing. Aspects of Portuguese and Brazilian culture are also presented. Uses a situational/natural approach that emphasizes communication in Portuguese from the very first class. A year course; only in exceptional circumstances is credit given for one semester alone. Prerequisite: POBS 0100.

Spr POBS0200 S01 24697 MW 2:00-2:50(10) (P. Sobral)

Spr POBS0200 S01 24697 TTh 1:00-2:20(10) (P. Sobral)

POBS 0400. Writing and Speaking Portuguese. Designed to improve the students' ability in contemporary spoken and written Portuguese. Using such cultural items as short stories, plays, films, videos, newspaper and magazine articles, and popular music, students discuss a variety of topics with the aim of developing good communication skills. Attention also given to developing writing ability. A systematic review of Portuguese grammar is included. Prerequisite: POBS 0200, or POBS 0110, or placement. Conducted in Portuguese. Completion of POBS 0400 is the minimum requirement for participation in the Brown-in-Brazil Program. Offered every semester. WRIT

Fall POBS0400 S01 15935 MW 11:00-12:50 (P. Sobral)

Fall POBS0400 S01 15935 F 11:00-11:50 (P. Sobral)

Spr POBS0400 S01 24698 MW 10:00-11:50(09) (N. Parker)

Spr POBS0400 S01 24698 TTh 10:30-11:50(09) (N. Parker)

POBS 0610. Mapping Portuguese-Speaking Cultures: Brazil. Selected literary and cultural texts that serve as vehicles for a deeper understanding of Brazilian society. Literary materials will be taken from several genres and periods with special attention to contemporary writings. Other media such as film and music will also be included. Considerable emphasis on strengthening speaking and writing skills. Prerequisite: POBS 0400, placement or instructor's permission. Conducted in Portuguese.

Fall POBS0610 S01 15936 TTh 1:00-2:20(10) (P. Sobral)

POBS 0620. Mapping Portuguese-Speaking Cultures: Portugal and Africa. Selected literary and cultural texts that serve as vehicles for a deeper understanding of Portuguese and Luso-African societies. Literary materials 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. Carries the credit and covers the equivalent of two semesters. This course should be chosen, in the fall, by students beginning the study of Portuguese as sophomores who would like to participate in the Brown-in-Brazil Program as juniors. Offered every semester.

Fall POBS0620 S01 15934 F 11:00-11:50 (P. Sobral)

Fall POBS0620 S01 15934 TTh 10:30-11:50(13) (P. Sobral)

Spr POBS0620 S01 24692 MW 11:00-11:50(04) (P. Sobral)

Spr POBS0620 S01 24692 MWF 1:00-1:50(04) (P. Sobral)

Spr POBS0620 S01 24692 TTh 9:00-10:20(04) (P. Sobral)
will be taken from several genres and periods with special attention to contemporary writings. Other media such as film and music will also be included. Considerable emphasis on strengthening speaking and writing skills. Prerequisite: POBS 0400, placement or instructor's permission. Conducted in Portuguese. DLL/WIR

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. FYS LILE WRIT

Fall: POBS0910 S01 15938 M 3:00-5:30(15) (O. Almeida)

POBS 0915. On Cultural and Personal Identity.
A close analysis of concepts such as cultural and personal identities by means of a variety of interdisciplinary readings, including a combination of essays and a set of works of literature by diverse authors from various countries and cultures. SOPH

Fall: POBS0915 S01 15939 W 3:00-5:30(17) (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 Diaz, Milton Hatoum, Chang-Rae Lee, Clarice Lispector, Dinaw Mengestu, Nélida Piñon, Salman Rushdie, Taiye Selasi and others. No experience in the arts necessary. SOPH

Spr: POBS0990 S01 24707 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 15940 T 12:00-2:20 (L. Simas-Almeida)

POBS 1080. Performing Brazil: Language, Theater, Culture.
Designed to deepen the students’ understanding of Brazilian culture and society through the performing arts. Students will read a series of plays and respond to them in a variety of ways: in writing, verbally, and through performance. The course will include poetry and music as these can also be performed. Throughout the semester students will also be working on creating their own performance pieces. Conducted in Portuguese. WRIT

Spr: POBS1080 S01 24710 Arranged (P. Sobral)
Spr: POBS1080 S02 24776 F 9:29-11:50 (P. Sobral)

POBS 1500A. African Literatures of Portuguese Expression.
A survey of representative African narrative literature of Portuguese expression (Cape Verde, Guinea-Bissau, São Tomé e Príncipe, Angola, and Mozambique). The selections will cover the periods before and after the independence of these former Portuguese colonies. Conducted in Portuguese. Enrollment limited to 40.

Spr: POBS1500A S01 24705 Th 4:00-6:30(17) (L. Simas-Almeida)

POBS 1601E. Travels and Exhibitions: Writing, Collecting + Displaying the World in the 19th + 20th Centuries.
To explore a cultural and historical history of the Portuguese-speaking world, concentrating on the circulation of objects, images, ideas and people within Brazil, Angola, Goa and different European spaces, from Lisbon to Paris. To discuss the history of science, the relationship between knowledge and colonial contexts, the interdependence between ideological agendas and exhibitions, the affirmation of national and imperial identities through spaces of visual and material knowledge. Through a series of comparative and transnational case studies this course will promote the crossing of contemporary theoretical questions engaging with historical written and visual sources. Conducted in English.

Fall: POBS1601E S01 16633 T 4:00-6:30(09) "To Be Arranged"

POBS 1601I. Media + Propaganda in Contemporary History.
This course intends to study what was the role of the media and propaganda in the construction of the political reality by means an interdisciplinary and empirical analysis of several paradigmatic cases of the contemporary history in the Iberophone and Iberian worlds. Special attention is paid to the following relevant topics: the historical evolution of the Portuguese media in the United States of America; the creation of the New State of Salazar in Portugal and the New Spain of Franco; the Portuguese diplomacy in the Spanish Civil War; or the transition to democracy in the Iberian Peninsula. Conducted in English.

Spr: POBS1601I S01 25463 F 10:00-12:30 "To Be Arranged"

POBS 1720. Literacy, Culture, and Schooling for the Language Minority Student.
Focuses on increasing awareness of the intersection of language and literacy, the sociocultural influences on literacy development, and the application of diverse strategies that support the acquisition of second-language literacy. Combines a theoretical exploration of literacy processes and methodological implications with a clinical requirement of four hours weekly in a second-language field-teaching practicum. Conducted in English.

Fall: POBS1720 S01 15949 M 4:00-6:20 (S. Smith)

POBS 1750. Language, Culture, and Society.
Investigates the meanings of language, culture, and society and the interrelationship among them. Examines the functional and dysfunctional uses they can play in public education, particularly from the public school administrators’ and teachers’ viewpoints. Explores concerns directly related to the nature, quality, and future of English-as-a-Second-Language programs. Reflective activities, lectures, simulations, case studies, role plays, and small group discussions. Conducted in English. Enrollment limited to 25.

Spr: POBS1750 S01 24716 T 4:00-6:30(16) (M. Pacheco)

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 colonization. Manuel Bonfim, Sérgio Buarque de Holanda, Paulo Prado, Gilberto Freyre, Vianna Moog, Caio Prado, Celso Furtado, Paulo Freire, Oswald the Andrade, Roberto DaMattá. Attention to film, music and the visual arts. Conducted in Portuguese.

Spr: POBS1800E S01 24713 M 3:00-5:30(13) (L. Valente)

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

This independent study course is designed for students working on honors projects. Written permission of the concentration advisor (Prof. Sobral) is required. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

POBS 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.

Spr: POBS2020D S01 24177 Su 4:00-6:20 (S. Smith)

POBS 2120A. ESL Methodology Assessment and Evaluation.
An overview of the current principles, practices and approaches that inform assessment and evaluation for English language learners. Participants engage in class activities that duplicate selected assessment approaches and identify strategies for integrating assessment with planning and instruction appropriate to the language proficiency of students. Participants explore assessment research and theoretical
background for an understanding of the complexity of evaluating student achievement. Conducted in English.
Fall POBS2120F S01 15954 T 4:00-6:30(09) (M. Pacheco)

POBS 2500B. Portuguese Overseas Encounters.
A critical analysis of some classic Portuguese travel writings from the 15th to the 20th century. The readings include Zurrara, Camões, Fernão Mendes Pinto, História Trágico-Martiria, Ramalho Ortigão, Raul Brandão, as well as the contemporary Pedro Rosa Mendes. Conducted in Portuguese.
Spr POBS2500E S01 24711 T 6:30-9:00PM (O. Almeida)

POBS 2500G. Nation and Narration.
The invention and transformation of the idea of Brazil as a nation narrative texts since the middle of the 19th century. Manoel Antônio de Almeida, José de Alencar, Adolfo Caminha, Machado de Assis, Monteiro Lobato, Mário de Andrade, Adalzira Bittencourt, Antônio Callado and João Ubaldo Ribeiro. Theoretical texts by Benedict Anderson, Homi Bhabha, Edward Said, Eric Hobsbawn, Frantz Fanon, Roberto Schwarz and others. Conducted in Portuguese.
Fall POBS2500C S01 15943 M 3:00-5:30(15) (L. Valente)

POBS 2500H. The City and the Street: Tradition, Modernity and Human Subjectivity in Brazilian Urban Literature.
From Machado de Assis's streetcar chronicles, João do Rio's belle-époque flâneur crônicas, and modernists' views of São Paulo down to the urban paranoia of Rubem Fonseca's crime narratives and the destabilizing subjectivities of contemporary writers, this seminar examines diverse urban bodies and cartographies for understanding spatial and temporal relationships between the city and bodies, sexual cultures, gender roles, violence, peripheries, and metropolitan apocalyptic tensions. Conducted in Portuguese.
Spr POBS2500I S01 24715 W 3:00-5:30(14) (N. Vieira)

POBS 2600B. Saramago and His Contemporaries.
Focuses mainly on the "oeuvre" of José Saramago, the recently deceased Portuguese Nobel Prize winner. Four other well-known Portuguese writers (Vergílio Ferreira, Agustina Bessa-Luís, António Lobo Antunes, Lidia Jorge) are also studied as a way of contextualizing Saramago's work but, more importantly, for their own merit as outstanding novelists. Complementary readings will mostly consist of theoretical texts concerning an approach to contemporary novels based on the nexus between history and fiction on the one hand, and the construction of emotions in literature on the other. Conducted in Portuguese. Enrollment limited to 25.
Fall POBS2600E S01 15941 T 4:00-6:30(04) (L. Simas-Almeida)

POBS 2600C. Foundations of Literary Theory.
Designed to provide a solid foundation on the development of literary theory from its ancient roots in Plato, Aristotle, Horace and Plotinus to the contemporary period. Includes Kant, the Russian Formalists, Lukács, Jakobson, Bakhtin, Barthes, Derrida, Ricoeur, Said and others. Conducted in English.
Spr POBS2600C S01 25466 F 10:00-12:30 (L. Valente)

This seminar will examine the major novels, short story collections, and crônicas by the Brazilian writer Clarice Lispector and analyze the development of her literary voice and her unique use of language. Reading her work through and beyond the existential, feminist and poststructuralist views manifested in the best critical and theoretical analyses of her work, this seminar will focus especially upon her passionate struggle with language as well as her genre-breaking narratives, alongside her ontological quest for narrative subjectivity. Seminar presentations and papers will explore these issues with the aim of understanding Clarice's spiritual and philosophical impulses as well as her original linguistic contribution to Brazilian and World Literatures. Conducted in Portuguese.
Fall POBS2600A S01 15942 W 3:00-5:30(17) (N. Vieira)

POBS 2970. Preliminary Examination Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.
Fall POBS2970 S01 14775 Arranged 'To Be Arranged'
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.

PHP 0850. Fundamentals of Epidemiology
Fall
PHP0320 S01 16583 MWF 11:00-11:50(02) (A. Harrison)

PHP 1070. The Burden of Disease in Developing Countries
Fall
PHP0850 S01 16584 TTh 2:30-3:30(03) (S. Buka)

PHP 1100. Comparative Health Care Systems
Fall
PHP1070 S01 16585 MW 8:30-9:50(01) (S. McGarvey)

PHP 1400. HIV/AIDS in Africa: A Multidisciplinary Approach to Support HIV/AIDS Care and Treatment Programs
Spr
PHP1100 S01 16586 Arranged (C. Sammartino)

PHP 1500. Global Health Nutrition
Spr
PHP1400 S01 25403 T 4:00-5:30(16) (M. Ghee)

PHP 1501. Essentials of Data Analysis
Spr
PHP1500 S01 25404 TTh 2:30-3:50(11) (S. McGarvey)

Spr
PHP1530 S01 25405 W 3:00-5:30(14) (B. Becker)

PHP 1530. Case Studies in Public Health: The Role of Governments, Communities and Professions
Spring
PHP1520 S01 25406 T 3:00-5:20 (P. Nolan)

PHP 1680L. Pathology to Power: Disability, Health and Community
Spring
PHP1680I S01 16590 L 3:00-5:30(17) (S. Skellie)

PHP 1700. Current Topics in Environmental Health
Spring
PHP1700 S01 16591 F 1:00-3:30 (K. Kelsey)

PHP 1854. The Epidemiology and Control of Infectious Diseases
Fall
PHP1854 S01 16593 MW 1:00-2:20 (P. Risica)

PHP 1910. Public Health Senior Seminar
Fall
PHP1910 S01 16595 L 2:30-3:50 (S. MacGreevy)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
effective workplace skills. The course provides opportunities to synthesize and reflect on the knowledge gained during the undergraduate program, provide support for solidifying effective next career steps, and provide important soft skills for excelling in the workplace. Prerequisite: PHP 0310 and 0320. Open to Senior Public Health concentrators only. WRIT
Fall PHP1910 S01 16646 W 3:00-5:30(17) (E. Loucks)

**PHP 1920. Social Determinants of Health.**
The course provides an overview of social determinants of health. Examples of topics include health effects of educational attainment, social integration, neighborhood socioeconomic characteristics, racial discrimination, gender, income inequality, childhood socioeconomic circumstances, parental neglect, and job strain. Mixed teaching methods are used, including small group discussions, problem-based learning and guest lectures. Open to graduate students and advanced undergraduates. DPLL
Spr PHP1920 S01 25409 Arranged (E. Loucks)

**PHP 1970. Independent Study.**
A special project may be arranged in consultation with an individual faculty sponsor. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

**PHP 1980. Honors Thesis Preparation.**
Two semesters of PHP 1980, Honors Thesis Preparation, will be devoted to the development and implementation of an Honors project, and to the writing of the Honors Thesis for the Community Health Concentration.

**PHP 199. Measurement Issues in Health Care.**
Provides a theoretical and practical basis for measurement in health care. Introduces measurement theory, scale development, and criteria to be considered when choosing measures in clinical practice and research. Practical exercises include questionnaire development and a written research protocol for the development and validation of a new measure. Prerequisites: PHP 2120, 2130
Spr PHP2019 S01 25411 Arranged (V. Mor)

**PHP 2025. Ethics of Global Public Health Engagement.**
This course explores the ethics of global public health engagement. The course begins with case studies that highlight the intentional and unintentional exploitation of populations and communities in global public health. The next portion of the course focuses on complex challenges that arise in global public health including for example, conflicts that occur when ethical norms and guidelines differ across international settings and ethical tensions that have arisen in response to pressuring global public health challenges. The final portion of the course focuses upon strategies to meaningfully engage populations involved in public health research, policy, and practice. Pre Requisites: Previous completion in PHP 2120 or PHP 2150 and PHP 1070. Equivalent introductory-level courses in epidemiology and global health, taken at another department/institution can also satisfy these requirements. Interested students must submit a request and syllabus for the prior course to the instructor.
Fall PHP2025 S01 16627 Arranged (C. Kuo)

**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 16594 M 1:00-3:30 (I. Gareen)

**PHP 2040. Applied Research Methods.**
Emphasizes the theory of sampling and survey methods and their application to public health research. Topics include: survey design and planning; principles of sampling and survey terminology; questionnaire construction; protection of human subjects; data collection (including interviewing and data coding procedures); and application, presentation, and evaluation of results. Suggested prerequisites: PHP 2120, and PHP 2508 or 2510. Open to graduate students only.
Spr PHP2040 S01 25412 M 5:40-8:30PM (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 25413 F 9:00-11:30 (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 health-related 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 16595 Arranged (P. Vivier)
Spr PHP2070 S01 25414 Arranged (P. Vivier)

**PHP 2080. Public Health Law and Ethics.**
The protection and preservation of the public’s health are quintessential goals of government. Equally critical is the need to respect individual rights and morals in American society. The classic conundrum of public health law and ethics is the extent to which government may restrain or impinge citizens’ interests, directly or indirectly, to promote the health and safety of the community. This course, Public Health Law and Ethics, explores the inherent tensions between promoting the public’s health and protecting the legal and ethical rights and interests of individuals.
Spr PHP2080 S01 25415 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 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 16596 Th 2:30-5:00 "To Be Arranged"

**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 16597 TTh 10:30-11:50(13) "To Be Arranged"

**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 25416 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-
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 16598 F 9:30-12:00 (Y. Huang)

**PHP 2180. Interpretation and Application of Epidemiology.**

This course builds upon the foundation of introductory epidemiology and a basic understanding of quantitative and conceptual methods, with a focus on the interpretation of the strength and meaning of epidemiologic findings. The goal is to help students develop critical thinking skills in order to become more sophisticated interpreters of epidemiologic evidence for guiding policy, clinical practice, and individual decisions, combining subject matter knowledge and epidemiologic methods to wisely evaluate the available research findings. We will focus on judging causality and identifying gaps that future research would need to fill to strengthen our understanding. Prerequisite required or permission of instructor.

Fall PHP2350 S01 16060 1:00-2:20 (D. Operario)

**Spr PHP2200. 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 25419 MW 1:00-2:20 (T. Zheng)

**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). Undergraduates with PHP0850 and instructor's permission.

Spr PHP2220E S01 25420 Th 8:30-10:50 (J. Braun)

**PHP 2250. Advanced Quantitative Methods in Epidemiologic Research.**

This course provides students with conceptual and quantitative tools based on counterfactual theory to make causal inference using data obtained from observational studies. Causal diagrams will be used to provide alternative definitions of and inform correcting for common biases. Non-, semi-, and fully parametric methods for addressing these biases will be discussed. These methods include standard regression, instrumental variables, propensity scores, inverse probability weighting, and marginal structural models. Settings when such methods may not be appropriate will be emphasized. Prerequisite: PHP 2250 and 2511; or PHP 2220 and 2508; or instructor permission. Enrollment limited to 25 graduate students.

Fall PHP2250 S01 16060 TTh 1:00-2:20(10) (C. Howe)

**PHP 2260. Applied Epidemiologic Analysis Using SAS.**

Epidemiologic and health services research requires the use of statistical software to describe and analyze data. This computer lab-based course will introduce students to applied epidemiologic analysis using the SAS® system. In addition, students will be directed through the process of writing a journal style article in which their SAS analyses will be incorporated. Offered to graduate and medical students.

Spr PHP2260 S01 25421 Th 2:30-5:00 (G. Wellenius)

**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 16601 T 9:00-11:30 (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 16602 T 12:00-2:20 (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 25422 W 12:20-2:50 (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 25423 W 3:00-5:30(14) (M. Mimiaga)

**PHP 2365. Public Health Issues in LGBT Populations.**

This seminar is designed for graduate students interested in health disparities and determinants of health in LGBT populations (also referred to as sexual minority populations). Students will become familiar with key epidemiological reports, behavioral and social science theories/methods, intervention studies, and scientific debates related to the determinants of and disparities affecting the health of LGBT and sexual minority populations. The course will focus primarily on US populations, but will also include global LGBT and sexual minority populations. Readings and discussion will be considered in light of social, policy, and cultural contexts that frame the lives of LGBT populations.

Spr PHP2365 S01 25469 W 1:00-3:30 (D. Operario)

**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.

Spr PHP2370 S01 25426 T 4:30-6:00 (A. Trivedi)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
PHP 2371. Psychosocial and Pharmacologic Treatment of Substance Use Disorders.
Intended to provide an overview of the history of the treatment of substance use disorders; assessment methods designed to determine progress in substance use treatment; and the current most common types of psychosocial and pharmacologic treatments for substance use. Enrollment limited to 20 graduate and medical students. Instructor permission required.
Fall PHP2371 S01 16603 F 1:00-3:30 (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. DPIL
Spr PHP2380 S01 25424 M 2:30-5:00 (K. Carey)

PHP 2390. Quantitative Methods for Behavioral and Social Sciences Intervention Research.
This course provides broad coverage of the quantitative methods used in behavioral intervention research ranging from descriptive data analysis to longitudinal methods. Students will learn to conduct, interpret, and write up a range of statistical procedures including basic psychometrics, t-tests and ANOVAs, correlations, and multiple regression. Students also will be introduced to more advanced techniques used for longitudinal data analysis in order to understand their common uses in behavioral intervention research. The course provides students in the Master’s program in Behavioral and Social 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 16604 Th 12:00-2:20 (C. Kahler)

Reviews the development of the health care delivery, financing and regulatory control systems in the U.S. and reviews the literature on the relationship between health system structure and the services used and health outcomes that populations experience. A case-study approach is used to understand the inter-relationship between financing, delivery and regulatory components of the health system and their implications for public health by drawing on epidemiological, economic, political and sociological principles. Prerequisites: Graduate standing or PHP 0310 or PHP 0070 (not available to first year students or sophomores). Instructor permission required.
Spr PHP2400 S01 25470 M 9:30-11:50 (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 16606 Th 12:00-2:20 (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, 2508, 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 25425 W 9:00-11:30 'To Be Arranged'

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 16607 T 3:00-5:30 (P. Nolan)

PHP 2440. Introduction to Pharmacoepidemiology.
The course will focus on substantive topics in pharmacoepidemiology, including relevant principles of pharmacology, inference from spontaneous case reports, study design considerations, premarketing pharmacoepidemiology, common data sources for pharmacoepidemiologic studies, drug utilization review, adherence, and the development, implementation, and assessment of therapeutic risk management policies. The course will also focus on issues in pharmacovigilance, including the legal and historical basis of pharmacovigilance, evaluation of individual adverse drug events, signal detection, active safety surveillance, and medication errors. A clinical background is not required. Prerequisites are PHP2120 and PHP2510 (or PHP2507) or permission of the instructor.
Spr PHP2440 S01 25473 Th 4:00-6:30 (T. Shireman)

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 16608 M 3:30-6:00 (A. Trivedi)

PHP 2451. Exchange Scholar Program.
Fall PHP2451 S01 14770 Arranged '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 exercises.
Fall PHP2455A S01 16809 W 12:00-2:30 (A. Trivedi)

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. Prerequisites: 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 16610 W 6:00-8:00PM (A. Gjelsvik)
Fall PHP2507 S01 16610 Th 1:00-2:20 (A. Gjelsvik)
PHP 2508. BioStatistics and Data Analysis II.
Biostatistics and Applied Data Analysis II is the second course in a year-long, two-course sequence designed to develop the skills and knowledge to use data to address public health questions. The 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 25427 W 6:00-8:00PM (A. Gjelsvik)
Spr PHP2508 S01 25427 Th 1:00-2:20 (A. Gjelsvik)

PHP 2510. Principles of Biostatistics and Data Analysis.
Intensive first course in biostatistical methodology, focusing on problems arising in public health, life sciences, and biomedical disciplines. Summarizing and representing data; basic probability; fundamentals of inference; hypothesis testing; likelihood methods. Inference for means and proportions; linear regression and analysis of variance; basics of experimental design; nonparametrics; logistic regression. Open to advanced undergraduates with permission from the instructor.
Fall PHP2510 S01 16614 Th 9:00-10:20(08) ‘To Be Arranged’

Applied multivariate statistics, presenting a unified treatment of modern regression models for discrete and continuous data. Topics include multiple linear and nonlinear regression for continuous response data, analysis of variance and covariance, logistic regression, Poisson regression, and Cox regression. Prerequisite: APMA 1650 or PHP 2510. Open to advanced undergraduates with permission from the instructor.
Spr PHP2511 S01 25431 MW 10:30-11:50 (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 16616 MW 9:00-10:20 (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 25432 MW 9:00-10:20 ‘To Be Arranged’

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 16617 MW 10:30-11:50 ‘To Be Arranged’

Statistical computing is an essential part of analysis. Statisticians need not only be able to run existing computer software but understand how that software functions. Students will learn fundamental concepts – Data Management, Data types, Data cleaning and manipulation, databases, graphics, functions, loops, simulation and Markov Chain Monte Carlo through working with various statistical analysis. Students will learn to write code in an organized fashion with comments. This course will be taught using the R language.
Spr PHP2560 S01 25433 Th 2:30-3:50(11) (A. Sullivan)

PHP 2580. Statistical Inference II.
This course presents a comprehensive introduction to the theory of modern inference. PHP 2580 covers such topics as nonparametric statistics, quasi-likelihood, resampling techniques, statistical learning, and methods for high-dimensional Bioinformatics data. Prerequisite: PHP 2520. Open to advanced undergraduates with permission from the instructor.
Spr PHP2580 S01 25434 MW 10:30-11:50 (C. Gatsonis)

PHP 2601. Linear Models.
This course will focus on the theory and applications of linear models for continuous responses. Linear models deal with continuously distributed outcomes and assume that the outcomes are linear combinations of observed predictor variables and unknown parameters, to which independently distributed errors are added. Topics include matrix algebra, multivariate normal theory, estimation and inference for linear models, and model diagnostics. Prerequisites: APMA 1650 or 1660, or taking PHP 2520 concurrently.
Note: The course will cover fundamental and advanced topics in linear models, and concepts related to the generalized linear models will not be covered during the course.
Fall PHP2601 S01 16619 Th 1:00-2:20(10) (A. Eloyan)

PHP 2602. Analysis of Lifetime Data.
Comprehensive overview of methods for inference from censored event time data, with emphasis on nonparametric and semiparametric approaches. Topics include nonparametric hazard estimation, semiparametric proportional hazards models, frailty models, multiple event processes, with application to biomedical and public health data. Computational approaches using statistical software are emphasized. Prerequisites: PHP 2510 and 2511, or equivalent. Open to advanced undergraduates with permission from the instructor.
Fall PHP2602 S01 16620 Th 2:30-3:50(03) ‘To Be Arranged’

This course will focus on the theory and application of generalized linear models (GLM), a unified statistical framework for regression analyses. Specifically, we will focus on using GLMs to model the categorical outcomes. The GLM for categorical outcomes include logistic regression, proportional odds model, and Poisson regression. Maximum likelihood estimation and inference will be introduced in the GLM context. The students are expected to have knowledge of probability and inference (at the level of APMA1650, APMA1660, or PHP2520), knowledge of matrix algebra (at the level of MATH0520), knowledge of regression analysis (at the level of PHP2511) and knowledge of R.
Spr PHP2605 S01 25436 MW 1:00-2:20 ‘To Be Arranged’

PHP 2610. Causal Inference and Missing Data.
Systematic overview of modern statistical methods for handling incomplete data and for drawing causal inferences from "broken experiments" and observational studies. Topics include modeling approaches, propensity score adjustment, instrumental variables, inverse weighting methods and sensitivity analysis. Case studies used throughout to illustrate ideas and concepts. Prerequisite: MATH 1610 or PHP 2511. Open to advanced undergraduates with permission from the instructor.
Fall PHP2610 S01 16621 Th 9:00-10:30 ‘To Be Arranged’

PHP 2950. Doctoral Seminar in Public Health.
The purpose of this seminar is to facilitate discussions of current scientific literature in epidemiology, biostatistics, health services, 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 only open to doctoral students in Epidemiology, Behavioral and Social Health Sciences, Biostatistics and Health Services Research.
Fall PHP2950 S01 16622 Arranged ‘To Be Arranged’
Fall PHP2950 S02 16623 Arranged ‘To Be Arranged’
Fall PHP2950 S03 16624 Arranged ‘To Be Arranged’
Fall PHP2950 S04 16625 Arranged ‘To Be Arranged’

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
community organizing and implementation have defined how successful
for this course. Please check Banner for the correct section number and CRN to use when registering for this course.

**PHP 2900. 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.

**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 PLCY0100 S01 15197 TTh 2:30-3:50(03) (R. Hackey)
Spr PLCY0100 S01 24037 TTh 2:30-3:50(11) (R. Hackey)

**PLCY 1700K. Health Policy Challenges.**
This course examines the topic of health reform through a variety of lenses – politics, policy, community organizing, and bureaucratic implementation. 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 16665 W 3:00-5:30(17) "To Be Arranged"

**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 15355 TTh 1:00-2:20(10) (R. Cheit)

**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 16666 T 4:00-6:30(09) (R. Kerbel)

**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 16667 M 3:00-5:30(15) "To Be Arranged"

**PLCY 1701J. Policy Implementation.**
Why do well-intentioned policies sometimes produce unfortunate results? This course will examine how policies designed by elected officials, bureaucrats, and courts are translated into practice through implementation, how and why public policies succeed or fail to produce changes in practice, and how policy implementation bears on democratic governance. The course will consider policy implementation across policy domains, with recurring attention to k-12 education policy. Enrollment is limited to 20.

Fall PLCY1701J S01 16671 W 3:00-5:30(15) (S. Moffitt)

**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://goo.gl/forms/aawHGV9Ro 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 15354 TTh 10:30-11:50(13) (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 16668 Arranged "To Be Arranged"

**PLCY 2305. 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 be 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 PLCY2305 S01 16669 W 3:00-5:30(01) (J. Owens)
PLCY 2040. Policy Analysis and Program Evaluation. 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 15357 TTh 9:00-10:20(08) "To Be Arranged" Fall PLCY2040 S02 16670 W 3:00-5:30(17) "To Be Arranged"

PLCY 2450. Exchange Scholar Program. 

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 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 16673 T 3:00-5:30 (G. Augusto)

PLCY 2980. Graduate Independent Study. Please check Banner for the correct section number and CRN to use when registering for this course.

Religious Studies

Contemplative Studies

COST 0100. Introduction to Contemplative Studies. Introduction to the new field of Contemplative Studies focusing on identifying methods human beings have found, across cultures and across time, to concentrate, broaden and deepen conscious awareness. We will study what these methods and experiences entail, how to critically appraise them, how to experience them ourselves, and how they influence the development of empathy, health, and well-being. Prerequisites: None. Preference given to Contemplative Studies Concentrators. Enrollment limit is 20. LILE WRIT Spr COST0100 S01 25582 W 3:00-5:30(14) "To Be Arranged"

COST 0530. Laozi and the Daodejing. Seminar on the historical and philosophical origins of the Daodejing, heretofore acknowledged as the foundational text of the Daoist tradition. Recently discovered and translated manuscripts from Ma-wang-tui and from Guodian that cast new light on these questions will be the basis for the course. Recent research on early commentarial traditions to the Daodejing and on its philosophical significance will also be studied. Perquisites: RELS 0040, RELS 0120, or UNIV 0540 or permission of instructor. Limited enrollment: 20 Spr COST0530 S01 25597 Th 4:00-6:30(17) (H. Roth)

COST 0650. Psychology and Philosophy of Happiness (PHIL 0650). Interested students must register for PHIL 0650. Fall COST0650 S01 16769 Arranged "To Be Arranged"

COST 0855. The Bhagavad Gita (CLAS 0855). Interested students must register for CLAS 0855. Fall COST0855 S01 16638 Arranged "To Be Arranged"

COST 0990. Concepts of the Self in Classical Indian Literature (CLAS 0990). Interested students must register for CLAS 0990. Spr COST0990 S01 25467 Arranged "To Be Arranged"

COST 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. 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. This is a 2016 GELT course. Course has an experiential learning component that includes travel to Japan for on-site learning. Students admitted to the course must be able to travel to Japan in January of 2017. Priority Given To: Students with declared Contemplative Studies or Religious Studies or East Asian Studies Concentration and who have taken three of the following courses: RELS 0040, RELS 0290E, RELS 0500, UNIV 0090, UNIV 0456, UNIV 0540, UNIV 1000, UNIV 1950; prior coursework in Buddhism or Japanese Religions at Brown will also be considered. Permission of instructor required. Fall COST1442 S01 16534 Th 4:00-6:30(03) (H. Roth)

COST 1870. Neuroethics (SCSO 1700P). Interested students must register for SCSO 1700P. Spr COST1870 S01 25603 Arranged "To Be Arranged"

COST 1950. Capstone Seminar in Contemplative Studies. 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 COST1950 S01 16461 W 3:00-5:30(17) (H. Roth)

Religious Studies

RELS 0015. Sacred Stories. Ancient narrative imagination and the formation of western culture. Foundational religious stories underlie culture in all of its expressions, whether literary, aesthetic, philosophical, or political. This course with examine narrativity - the telling of stories, the growth of legends or "myths" - as a means for construction and maintenance of religious identity, community, and world view in western history. Creation, fall, redemption; heroes and heroines, saints and sinners, the demonized Religious Other; saviors, apocalypse, heaven and hell. Jewish, Christian, and Muslim materials. DPLL LILE WRIT Fall RELS0015 S01 16531 MWF 12:00-12:50(12) (S. Harvey)

RELS 0065. On Being Human: Religious and Philosophical Conceptions of Self. An examination of classic and contemporary views on the nature of human existence. Central themes include human freedom, the relation between reason and emotion, and the significance of personal history and memory. We also ask how conceptions of who we are shape views about how we should live. Sources include religious and philosophical texts as well as recent films. LILE WRIT Fall RELS0065 S01 15549 MWF 1:00-1:50(06) (T. Lewis)

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 human rights declarations 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 24316 MWF 1:00-1:50(06) (B. Bush)

RELS 0260. Religion Gone Wild: Spirituality and the Environment. A study of the dynamic relation between religion and nature. Religion, in this course, includes forms of spirituality within and outside the bounds of conventional religious traditions (for example, Buddhism and Christianity, on one hand; ecofeminism and nature writing on the other). Topics in this study of religion, philosophy, and ecology will include environmental justice, environmental degradation, and depictions of humans in relation to the natural world. Enrollment limited to 20. LILE DPLL Fall RELS0260 S01 15550 TTh 1:00-2:20(10) (M. Cladis)

RELS 0440. The World of Byzantium (CLAS 0660). Interested students must register for CLAS 0660. Fall RELS0440 S01 16225 Arranged "To Be Arranged"

RELS 0530. Laozi and the Daoeijing. Seminar on the historical and philosophical origins of the Daoeijing, heretofore acknowledged as the foundational text of the Daoist tradition.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
RELS 1380A. Money, Media, and Religion.
This course explores the relationship between religious life, forms of capitalism, and media technologies in the history of the United States. From constructing buildings and printing texts to disseminating teachings and communicating with members: essential aspects of religious life require both money and media. Yet forms of money and media continually have changed, and those changes have taken shape in dialogue with religious beliefs, practices, and sensibilities. This seminar examines this dialogue by visiting such varied sites as Puritan marketplaces, Santa Claus displays, Bible factories, television talk shows, and Occupy protests. DPLL LILE
Fall RELS1380A S01 15554 Th 4:00-6:30(04) (D. Vacas)

RELS 1385. Religion and Postmodernism.
This advanced seminar treats the central ideas in the thought of Zizek, Sloterdijk, Bauman, and others. It will pay particular attention to the idea of God in the works of Derrida, Foucault, and Deleuze as it filters through these contemporary, popular efforts. Students will trace some of the normative aspects of a postmodern ethics and theology by looking at "Emergent" churches, "New Thought", and post-foundational Christian theology in practice.
Spr RELS1385 S01 24320 T 4:00-6:30(16) (A. Willis)

RELS 1430. Buddhist Classics.
An opportunity to read and understand the canonical texts of East Asian Buddhism. Through close reading, written analysis, and discussion, participants will become conversant with the major Mahayana Buddhist teachings in their original scriptural or literary articulations. Selected later interpretations may also be considered. All readings are in English translation. Previous study of Buddhism is recommended, but not required.
Enrollment limited to 20 students. WRIT LILE
Fall RELS1430 S01 15555 W 3:00-5:30(17) (J. Sawada)

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. 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. This is a 2016 GELT course. This course has an experiential learning component that includes travel to Japan for on-site learning. Students admitted to the course must be able to travel to Japan in January of 2017.
Priority Given To: Students with declared Contemplative Studies or Religious Studies or East Asian Studies Concentration and who have taken three of the following courses: RELS 0040, RELS 0290E, RELS 0500, UNIV 0090, UNIV 0456, UNIV 0540, UNIV 1005, UNIV 1950; prior coursework in Buddhism or Japanese Religions at Brown will also be considered. Permission of instructor required.
Fall RELS1442 S01 16532 Th 4:00-6:30(03) (R. Hopst)

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.

RELS 2100B. Exegesis at Qumran.
Focusses on Hebrew, Aramaic, and specific texts such as the Temple Scroll, MMT, pHab, 4QHab, 4QJub, CD. Intended for doctoral students and others with sufficient knowledge of Hebrew.
Spr RELS2100B S01 24323 M 3:00-5:30(13) (S. Olyan)

RELS 2100C. 1 and 2 Kings.
Translation and exegesis of Kings. Intended for those with advanced Hebrew.
Fall RELS2100C S01 15556 W 5:30-8:00PM(17) (S. Olyan)

Recently discovered and translated manuscripts from Ma-wang-tui and from Guodian that cast new light on these questions will be the basis for the course. Recent research on early commentarial traditions to the Daodejing and on its philosophical significance will also be studied.
Prequisites: RELS 0040, 0120, or UNIV 0540 or permission of instructor.
Limited enrollment: 20
Spr RELS0530 S01 24366 Th 4:00-6:30(17) (H. Roth)

This course explores how Americans have cultivated, articulated, and contested religious and cultural identities during the twentieth- and twenty-first centuries. Identifying and interrogating apparent oppositions between religious conservatives and liberals, students will consider whether and why such oppositions have developed and persisted. Throughout the seminar, students will engage varied theoretical, historical, and thematic approaches to the study of religious identity, evaluating how attention to such issues as politics, ideology, gender, and class illuminate the ways in which people come to understand themselves and others.
Spr RELS8010 S01 24317 W 3:00-5:30(14) (D. Vacas)

MLK, Jr. and Malcolm X are two iconic figures in the pantheon of black religious leadership. Their profoundly influential ideas about justice, freedom, democracy and racism, along with their activist strategies and personal biographies have generated extraordinary interest over the past 50 years. Despite this, the rich and complex tradition out of which their ideas and world-views evolve; the 300 year old religious strategies and practices employed by African-Americans have been understudied, disconnected from our understanding of their significance. This course will examine these traditions and these two central figures' roles within them in order to shed important light on both. DPLL LILE WRIT
Spr RELS8020 S01 24318 MWF 12:00-12:50(05) (A. Willis)

RELS 0830. Religion, Reason, and Ethics from Kant to Nietzsche.
The nineteenth century witnessed revolutionary transformations in thinking about the power and limits of human reason, the relation between reason and religion, revelation, the role of humanity in creating religion, morality and religion, the significance of history, and the plurality of religions. This course examines major thinkers from this period who continue to shape our own assumptions and reflection. WRIT LILE
Fall RELS8030 S01 15551 MWF 10:00-10:50(14) (T. Lewis)

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 15552 TTh 9:00-10:20(08) (P. Nahm)

An introduction to the history of Japanese religion in the early and medieval periods, with some attention to related modern and contemporary manifestations. Emphasis on the development of both native practices ("Shinto") and Buddhism, and on the historical interaction between them. Readings include primary texts in translation and selected modern interpretations. A previous course in Asian religion or culture is recommended but not required. LILE
Fall RELS1190 S01 15553 TTh 10:30-11:50(13) (J. Sawada)

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, psychopathological, and neuroscientific. Previous work in philosophy courses (or philosophically-intensive courses) is highly recommended. Enrollment limited to 20.
Spr RELS1370B S01 24319 M 3:00-5:30(13) (S. Bush)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
RELS 2110B: Radical American Romanticism: Democratic, Environmental, and Religious Traditions in America.
Is America fundamentally defined by Romanticism? We will explore the sustained legacies of Romanticism in America, giving special attention to the topic of religion, by reading such authors as Emerson, Margaret Fuller, Thoreau, Whitman, and Fredrick Douglas; William James, George Santayana, and W.E.B. Du Bois; and Terry-Tempest Williams, Barry Lopez, and Wendell Berry.

RELS 2200J: The Virgin Mary in Late Antiquity.
A study in the developing theological and devotional traditions regarding Mary the Mother of Jesus, focusing on the fourth through the sixth centuries A.D. Major theological positions; relationship to pre-existing civic cults and goddess traditions; the role of popular violence in the Mariological definitions of the Council of 431; imperial Marian piety; Marian relics; Mary as cultural metaphor.

RELS 2450: Exchange Scholar Program.
Fall RELS2450 S01 14779 Arranged ‘To Be Arranged’
Spr RELS2450 S01 ‘To Be Arranged’

To Be Determined
Spr RELS2600E S01 24325 Th 12:00-2:30 (T. Lewis)

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 14780 Arranged ‘To Be Arranged’
Spr RELS2890 S01 23867 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.
Fall RELS2910 S01 14781 Arranged ‘To Be Arranged’
Spr RELS2910 S01 23868 Arranged ‘To Be Arranged’

REMS 0310E: Shakespeare: The Screenplays (ENGL 0310E).
Interested students must register for ENGL 0310E.
Fall REMS0310E S01 16759 Arranged ‘To Be Arranged’

Interested students must register for POBS 0910.
Fall REMS0910 S01 16216 Arranged ‘To Be Arranged’

REMS 1360Z: Shakespeare and Embodiment (ENGL 1360Z).
Interested students must register for ENGL 1360Z.
Fall REMS1360Z S01 16744 Arranged ‘To Be Arranged’

REMS 1825H: Science, Medicine, and Technology in the 17th Century (HIST 1825H).
Interested students must register for HIST 1825H.
Fall REMS1825H S01 16776 Arranged ‘To Be Arranged’

REMS 1980: 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.

REMS 2130E. Corps et esprits libertins (FREN 2130E).
Interested students must register for FREN 2130E.
Fall REMS2130E S01 16709 Arranged ‘To Be Arranged’

REMS 2360S. Alternative Milltons (ENGL 2360S).
Interested students must register for ENGL 2360S.

Science and Society

SCSO 0070E. The Anthropology of Gender and Science (ANTH 0077N).
Interested students must register for ANTH 0077N.
Fall SCSO0070E S01 25325 Arranged ‘To Be Arranged’

SCSO 0251. Ancient Philosophy (PHIL 0350).
Interested students must register for PHIL 0350.
Fall SCSO0251 S01 16707 Arranged ‘To Be Arranged’

SCSO 0270. Poetic Cosmologies (ENGL 0700Q).
Interested students must register for ENGL 0700Q.
Fall SCSO0270 S01 16779 Arranged ‘To Be Arranged’

SCSO 0380. A Global History of the Atomic Age (HIST 0276).
Interested students must register for HIST 0276.
Fall SCSO0380 S01 16781 Arranged ‘To Be Arranged’

Interested students must register for AMST 1601.
Fall SCSO1110 S01 16703 Arranged ‘To Be Arranged’

Interested students must register for BIOL 1465.
Fall SCSO1160 S01 16778 Arranged ‘To Be Arranged’

SCSO 1270. Zoopoetics (ENGL 1900J).
Interested students must register for ENGL 1900J.
Spring SCSO1270 S01 25610 Arranged ‘To Be Arranged’

SCSO 1390. Science at the Crossroads (HIST 1825M).
Interested students must register for HIST 1825M.
Fall SCSO1390 S01 25609 Arranged ‘To Be Arranged’

SCSO 1392. Science, Medicine, Technology (HIST 1825H).
Interested students must register for HIST 1825H.
Fall SCSO1392 S01 16760 Arranged ‘To Be Arranged’

Interested students must register for HIST 1820G.
Fall SCSO1393 S01 16780 Arranged ‘To Be Arranged’

SCSO 1522. Philosophy of Science (PHIL 1590).
Interested students must register for PHIL 1590.
Fall SCSO1522 S01 16379 Arranged ‘To Be Arranged’

SCSO 1524. Aristotle (PHIL 1250).
Interested students must register for PHIL 1250.
Spring SCSO1524 S01 25327 Arranged ‘To Be Arranged’

SCSO 1700F. Health Inequality in Historical Perspective (BIOL 1920B).
Interested students must register for BIOL 1920B.
Spring SCSO1700F S01 25516 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
Spring SCSO1700P S01 26504 T 4:00-6:30 (16) (J. Poland)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
SCSO 1900. Senior Seminar in Science and Society. This is an advanced seminar that uses a Problem Based Learning style pedagogy to explore real-world problems in STS. To solve assigned problems students will want to explore critical scholarship in areas such as laboratory studies, feminist science and technology studies, the rhetoric and discourse of science and technology, expertise and the public understanding of science. Course is intended for Science and Society senior concentrators, but is open to others with appropriate background. Enrollment limited to 20.

Fall SCSO1900 S01 16122 T 4:00-6:30(09) (J. Poland)

SCSO 1970. Independent Study in Science and Society. Independent reading and research work in Science and Society is available to students who have completed introductory and intermediate level work in Science and Society. A decision to enroll must be made via consultation with the concentration advisor and the faculty advisor for the course. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Prerequisite: SCSO 1400. Open to junior and senior concentrators in Science and Society; instructor permission required. S/NC.

SCSO 1971. Independent Study in Science and Society. Independent reading and research work in Science and Society is available to students who have completed introductory and intermediate level work in Science and Society. A decision to enroll must be made via consultation with the concentration advisor and the faculty advisor for the course. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Prerequisite: SCSO 1400. Open to junior and senior concentrators in Science and Society; instructor permission required.

SCSO 2700E. Plato's Theaetetus (PHIL 2150l). Interested students must register for PHIL 2150l.

Fall SCSO2700E S01 16522 Arranged "To Be Arranged"

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 15544 Arranged (M. Fidler)

CZCH 0200. Introductory Czech. Introduces the performance of basic tasks in Standard Czech, highlights of Czech culture, and a worldview of a nation uniquely located on the threshold of western and eastern Europe. Emphasis on oral communication. CZCH 0200 includes readings of annotated literary texts on the Web. Five meetings per week and use of audio/visual materials. Enrollment limited to 18.

Spr CZCH0200 S01 24584 Arranged (M. Fidler)

CZCH 0320A. Czech Animation: Cross-cultural Dialogs. Czech animation has a long tradition and international reputation. Jiří Trnka beat Walt Disney at the post-war Cannes Film Festival. Karel Zeman is a pioneer in creating fantasy films with animation. Surrealist films by Jan Švankmajer continue to shock the audience. Younger animators such as Barta, Klimt, and Pospíšilová have been developing new modes of expression after the fall of socialism. This course explores a variety of Czech animated films from the 1960’s to the 21st century and its cross-cultural dialog, especially with the Japanese anime. Readings in English and films with English subtitles. DPLL, LILE, FYYS, WRIT.

Spring CZCH0320A S01 24586 W 3:00-5:30(14) (M. Fidler)

CZCH 0410B. Coming of Age in Postwar Czechoslovakia. Examines political and cultural changes in the post-World War II Czechoslovakia through the eyes of a child. Centerpiece of the course is a film on elementary school in post-war Prague as a symbolic representation of the society that is about to emerge. Other materials such as literary and journalistic texts are used. Places equal emphasis on the acquisition of language, including exposure to Colloquial Czech. Separate language tasks are given to students of two proficiency levels (2nd and 3rd year). Conducted in Czech. For students who completed CZCH 0200 or equivalent. Four meetings per week and use of audio/visual materials. Enrollment limited to 18.

Fall CZCH0410B S01 15545 Arranged (M. Fidler)

CZCH 0610C. Czech Cultural Icons, Emblems, and National Identity. The "most famous Czech" Jára Cimrman and his most active period, namely the late 19th to early 20th-century Bohemia. Highlights of Czech cultural icons and emblems, and discussions on what constitutes Czech national identity reflected in the Cimrman phenomenon. Readings on several Czech cultural icons. Two different sets of requirements for students of two language proficiency levels. The course is for students who have completed CZCH 0410 or the equivalent. Enrollment limited to 18.

Spr CZCH0610C S01 24585 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 16223 TTh 12:00-12:50(14) (M. Harrison)
Fall PLSH0100 S01 16223 MWF 10:00-10:50(14) (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.

Fall PLSH0200 S01 16290 Arranged (M. Harrison)
Fall PLSH0200 S01 25065 TTh 12:00-12:50(03) (M. Harrison)
Fall PLSH0200 S01 25065 MWF 10:00-10:50(03) (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 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 16224 MWF 11:00-11:50(02) (M. Harrison)
Fall PLSH0300 S01 16224 TTh 1:00-1:50(02) (M. Harrison)
Fall PLSH0300 S02 16291 Arranged (M. Harrison)
Spr PLSH0300 S01 25128 Arranged (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 conversations 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 through class interactions and listening to authentic Polish audio and video recordings.

Spr PLSH0400 S01 25129 Arranged (M. Harrison)

Russian

RUSS 0100. Introductory Russian. Introduction to Russian language and culture. Oral and written communication in Russian; emphasis on the literary and everyday culture of Russia and the former U.S.S.R., including the changes that have reshaped everyday life for citizens of Russia. Five meetings per week, plus use of audio, video, and web materials. Enrollment limited to 18.

Fall RUSS0100 S01 15564 MWF 9:00-9:50(01) (L. DeBenedette)
Fall RUSS0100 S01 15564 TTh 12:00-12:50(01) (L. DeBenedette)
Fall RUSS0100 S02 15565 MWF 10:00-10:50(14) (L. DeBenedette)
Fall RUSS0100 S02 15565 TTh 12:00-12:50(14) (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 25006 MWF 9:00-9:50(02) (L. DeBenedette)
Spr RUSS0200 S01 25006 TTh 12:00-12:50(02) (L. DeBenedette)
Spr RUSS0200 S02 25007 MWF 10:00-10:50(03) (L. DeBenedette)
Spr RUSS0200 S02 25007 TTh 12:00-12:50(03) (L. DeBenedette)

RUSS 0300. Intermediate Russian

Continues development of language proficiency while broadening understanding of contemporary Russian culture via readings in literature and history. Expansion of vocabulary for dealing with conversational topics and review of Russian grammar. Features literary and nonliterary readings in Russian, as well as video and computer resources. Five class meetings per week. Prerequisite: RUSS 0110 or RUSS 0200 or RUSS 0250 or placement by exam. Enrollment limited to 18.

Fall RUSS0300 S01 15566 TTh 9:30-10:20(04) (L. DeBenedette)
Fall RUSS0300 S01 15566 MWF 11:00-11:50(04) (L. DeBenedette)
Fall RUSS0300 S02 15567 MWF 11:00-11:50(04) 'To Be Arranged'
Fall RUSS0300 S02 15567 TTh 12:00-12:50(04) 'To Be Arranged'

RUSS 0320C. Demons and Angels in Russian Literature

The literary images of fallen angels, as well as various poetic demonologies in Russian literature extend from the medieval apocrypha, up to famous works of the twentieth-century literature, like, for example, Bulgakov's Master and Margarita or Dostoevsky's Demons. Although, the Russian literary angels are in many respects related to their Western counterparts, the apocalyptic character of Russian spiritual culture makes them in many respects unique. Examining these images, the course addresses the important questions concerning the human condition in general. Angels as one critic said, "represent something that was ours and that we have the potential to become again"; their essence is otherness. Consequently, their literary representations explore the possibilities of human existence as well as its central paradigms like, love, rebirth, mortality, or 'fallenness.' The course will analyze the images of angels and fallen angels (devils) in the works of the nineteenth and the twentieth-century Russian prose, visual art, and film - from romanticism to 'postmodernism' - in the context of the world literature and culture. Authors to be studied: Byron, Lermontov, Balzac, Dostoevskii, Sologub, Bulgakov, Nabokov, Erofeev. We will also discuss films by Tarkovskii and Wenders, Russian icons, and paintings by Vrubel. In English. Enrollment limited to 20 first year students. DPLL FYS LILE

Fall RUSS0320CS01 15617 M 3:00-5:30(15) (M. Oklot)

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 25008 TTh 12:00-12:50(04) (L. DeBenedette)
Spr RUSS0400 S01 25008 MWF 11:00-11:50(04) (L. DeBenedette)

RUSS 0500. Advanced Russian

Examines selected topics in Russian culture and history as depicted in readings, the media, and Russian and Soviet films. Language work emphasizes increasing facility with spoken Russian and developing writing skills. Includes work on advanced grammar and syntax. Four class meetings per week. Prerequisites: RUSS 0500 or placement. Enrollment limited to 18.

Spr RUSS0500 S01 25009 MWF 1:00-1:50(06) (L. DeBenedette)
Spr RUSS0500 S01 25009 TTh 12:00-12:50(06) (L. DeBenedette)

RUSS 1090. Esoteric Russia

A survey of the main currents of mystical, esoteric, occult, and magical theories and practices in Russia from the 11th century onward. Topics include pagan survivals, Orthodox mysticism and magic, heresies and schisms, Freemasonry and Rosicrucianism, Mesmerism and Spiritualism, H. P. Blavatsky, and G. I. Gurdjieff. No knowledge of Russian is necessary. Prerequisite: HIST 1400, 1410, or UNIV 0820, or instructor permission.

Fall RUSS1090 S01 16478 MWF 1:00-1:50(06) 'To Be Arranged'

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 15576 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 be repeated once with permission of the instructor. Enrollment limited to 18.

Spr RUSS1120 S01 25010 MWF 12:00-12:50(05) 'To Be Arranged'

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 25001 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.

Spr RUSS1250 S01 25018 Th 4:00-6:30(17) (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 15562 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, Mayakovsky, Babel, Olesha, Zamiatin, Bulgakov, and Solzhenitsyn. Lectures and discussion. No knowledge of Russian required. WRIT

Spr RUSS1300 S01 25017 TTh 1:00-2:20(07) (V. Golstein)

RUSS 1330. Soviet and Post-Soviet Literature (1953 to Present)

A survey of contemporary Soviet and post-Soviet literature in translation from the death of Stalin through the Glastnost era to the present. Includes

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
prose writers and poets as well as women writers and authors from non-Russian republics. Texts by Aitmatov, Aksyonov, Bitov, Evtkhenko, Ibragimbekov, Iskander, Makine, Makarin, Nagbin, Petrusheskovskaya, Rasputin, Shukshin, Sokolov, Soloukhin, Solzhensyn, Tolstaya, Trifonov, Uiltskaya. Enrollment limited to 30.

RUSS 1812. Fathers and Children in Literature and Culture. This seminar explores the representations of generational conflict in both Western and Russian literature. We’ll examine Russian culture’s tendency to view social, political and religious conflicts in terms of a family model, thus merging psychology, politics, and religion. Focusing on formal and ideological aspects of these texts, we’ll discuss the issue of genre, the use of rhetoric and ideology, and the connection between authors’ politics and art. Russian application of a family model to such issues as political or religious radicalism will be considered from the perspective of Western studies of generational conflicts. Readings and discussions in English.

RUSS 1820. Dostoevsky. An examination of Dostoevsky’s major texts tracing his development as an artist, thinker, and religious visionary. The texts will be considered against the background of literary and cultural history of Dostoevsky’s period. No knowledge of Russian required. WRIT

RUSS 1840. Nabokov. The course examines Vladimir Nabokov’s (1899-1977) major achievements in prose in both Russian and American periods, paying particular attention to their cultural context (Russian émigré culture of the 1920s and 1930s); the questions of his aesthetics, ethics, and metaphysics, as well as his engagement in the dialogue with other European modernist writers, especially with the existentialists. Readings include Nabokov’s selected short stories and novels, such as The Defense, Invitation to a Beheading, Despair, The Eye The Gift, Pnin, or Lolita. In English. DPLL LILE

RUSS 1960. Independent Study. Independent research project on topics related to Russian culture. Enrollment permitted only after the written proposal (instructions in the department office) is submitted to the Concentration Advisor and Chair of the department (deadline: the last day of Add a course without fee period during the semester when the project is undertaken). Please check Banner for the correct section number and CRN to use when registering for this course. Each section limited to 10 students; instructor permission required.

RUSS 1967. Russian Postmodernism. This course will focus on Russian postmodern literature from the 1960s to the present. We will explore the extent to which its themes and experimental stylistic techniques ummask the sense of fragmentation, disorientation and instability that characterize late 20th-century and contemporary Russia. The fictions studied (including film) offer parodies of philosophical and ideological discourses; reveal an obsession with bodily functions, sexuality, and violence; and playfully reinterpret the grand "metanarratives" of Russian culture. We will relate these trends in Russian fiction to broader discourses of the postmodern in the West. Authors include: Bitov, Erofeev, Limonov, Sorokin, Pelevin, Bakhtin, Ibragimbekov, Ibragimbekov, Iskander, Makine, Makarin, Nagbin, Petrusheskovskaya, Tolstaya. DPLL LILE WRIT

RUSS 2160C. Russian Romanticism. This course will examine the works of Zhukovsky, Batulushkov, Pushkin, Lermontov, Tютчев, Bestuzhev-Marlinsky, Odoevsky, and Gogol in the context of Romanticist literary culture. Students will also read works by other European authors associated with Romanticism to elucidate the extent of the adherence of Russian writers to Romanticist aesthetics and philosophy.

RUSS 2710C. In Memoriam in Russian Literature. A study of the philosophical vein in Russian poetry about the meaning of the poetic and cultural heritage of the past, as well as reactions of the rising voices in Russian poetry in succeeding generations to the individual deaths of their immediate predecessors.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
SLAV 2970. Preliminary Examination Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.
Fall SLAV2970 S01 14786 Arranged "To Be Arranged"
Spr SLAV2970 S01 23872 Arranged "To Be Arranged"

SLAV 2880. Advanced Reading and Research.
Only for graduate students. Independent research project on topics in Slavic Studies. Enrollment permitted only after the written proposal (instructions in the department office) is submitted to the DGS and Chair of the department (deadline: the last day of Add a course without fee period during the semester when the project is undertaken). Please check Banner for the correct section number and CRN to use when registering for this course. Each section limited to 10 students; instructor permission required.

SLAV 2990. Thesis Preparation.
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.
Fall SLAV2990 S01 14787 Arranged "To Be Arranged"
Spr SLAV2990 S01 23873 Arranged "To Be Arranged"

SLAV XLIST. Courses of Interest to Concentrators in Slavic Languages.

Sociology

SOC 0010. Culture, Power and Social Change.
Revolution and Social Movements. Urbanization and Globalization. War and Genocide. These are all examples of social change, and sociology, the discipline for which this course serves as introduction, seeks to understand, and explain, them all and other transformations too. We focus in particular on how technology and power relations help us explain variations in social change, and how culture shapes our recognition and evaluation of those transformations. Although analyzing the USA today is our common ground, our method is both comparative (other societies) and historical (focusing especially on the 20th and 21st centuries).
Spr SOC0010 S01 24874 MWF 2:00-2:50(07) (M. Kennedy)

SOC 0020. Perspectives on Social Interaction: An Introduction to Social Psychology.
An introduction to the discipline of sociology examining the individual in social situations. Explores the social development of the person, the development of interpersonal relationships, and the problems of integrating the individual and social system. For each area, the personal and situational factors that bear upon the issues are investigated. The objective is to deepen understanding of the behavior of people in a social context.
WRIT Fall SOC0020 S01 16024 MWF 11:00-11:50(02) (G. Elliott)

America professes equality but exhibits many forms of inequality in schools, race relations, and income. An examination of contrasting elements of American society and a review of the role social science plays in public debate. To illuminate the debates, key topics, such as welfare, immigration, affirmative action, and environmental equity are considered.
Spr SOC0130 S01 24840 TTh 2:30-3:50(11) (M. White)

Emphasis on understanding the interrelations among economic, political, and cultural aspects of change in developing countries. The experience of currently developing nations is contrasted to that of nations which industrialized in the 19th century. Compares the different development strategies which have been adopted by currently developing nations and their consequences for social change.
Spr SOC0150 S01 24841 MWF 12:00-12:50(05) (P. Henry)

SOC 0170. The Family.
The state of the contemporary family generates debate within and beyond sociology. That debate is considered by examining different definitions of family, changing gender roles within the family, and the family in cross-cultural context. Special issues include new family forms, such as gay and lesbian families and biological and step-parenthood, as well as changing patterns of work and housework.
Spr SOC0170 S01 24844 MWF 10:00-10:50(03) (C. Spearin)

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.
Fall SOC0230 S01 16026 MWF 9:00-9:50(01) (C. Spearin)

SOC 0300D. Who Am I?.
A study of self in contemporary society. We examine the structural and situational forces that shape the self and their impact on personal development, orientations to the world, and interpersonal behavior; we investigate the development of the self as a way of being in the world that makes everyday doings and, ultimately, society, possible. Enrollment limited to 20 first year students. Instructor permission required. FYS WRIT
Spr SOC0300D S01 24843 TTh 1:00-2:20(10) (G. Elliott)

The current HIV/AIDS crisis is not merely medical. It also involves fundamental political, social and economic issues. Through extensive readings, class discussions and the writing of research papers, we will explore issues such as, what are the sociological barriers to changing sexual behavior? Why do some government, but not others, fail to commit resources to fight the disease? How was improved access to expensive drugs achieved? Instructor permission required. Enrollment limited to 20 first year students. FYS WRIT
Fall SOC0300E S01 15683 W 3:00-5:30(17) (N. Chorev)

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.
Spr SOC0310 S01 24935 T 4:00-5:30(16) "To Be Arranged"

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 metropolis, the decline of religion, and much more -- they developed arguments that allow us to better understand ourselves, our actions, and the contemporary political, economic and social transformations around us. WRIT
Fall SOC1010 S01 16027 TTh 9:00-10:20(08) (S. Frickel)

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.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Introduction to descriptive and inferential statistics: measures of central tendencies and variability, sampling, tests of significance, correlation, and regression. Also includes the use of computers in data analysis. Knowledge of elementary algebra is assumed. Enrollment is limited to 144 students.
Fall SOC1100 S01 15662 TTh 10:30-11:50(13) (D. Lindstrom)
Spr SOC1100 S01 24846 TTh 10:30-11:50(09) (E. Russell)

This course brings design thinking into conversation with qualitative research methods, examining the elements of a comprehensive perspective of context. It introduces students to design research methods, ethnographic research methods, and how they work together. Students will learn how to use these methods to identify and engage in "deep hanging out" with the problem, gap or inefficiency in question. They will then move on to patient contextualized opportunity identification for meaningful innovation. By the end of the course, students will have developed a process for effective, through innovation context analysis. Relevant for designers of products, services, organizations, and experience. LILE
Fall SOC1118 S01 16029 MW 8:30-9:50(01) (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; database 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 16028 MWF 10:00-10:50(14) (C. Speakn)

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 24864 MWF 11:00-11:50(04) (C. Speakn)

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 national and ethnic relations in the U.S., but also has a strong international comparative component.
Fall SOC1270 S01 16030 MWF 1:00-1:50(06) (J. Iztigojohn)

SOC 1311. Micro-Organizational Theory: Social Behavior in Organizations.
Micro-O rganizational 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 behavior 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 15680 TTh 1:00-2:20(10) (M. Suchman)

Macro-O rganizational 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 24866 TTh 1:00-2:20(10) (M. Suchman)

SOC 1330. Remaking the City.
Cities are being reshaped by immigration, economic restructuring, and other forces. This course reviews these changes from several perspectives, including the patterns and causes of change, the role of politics and public policy, and how different groups of people (by class, race, and national origin) manage under the new conditions. Readings will emphasize historical and cross-national comparisons.
Spr SOC1330 S01 24867 MW 8:30-9:50(02) (J. Logan)

An introduction to the fundamental principles and methods of geographic information systems (GIS). Topics include (a) handling different types of geographic datasets, (b) geo-analytical and modeling tools in GIS, (c) conceptual and theoretical aspects of GIS application development, and (d) errors and uncertainty analysis of GIS applications. Laboratory assignments and the project work provide hands on experiences in GIS. Enrollment limited to 39 juniors and seniors. Instructor permission required. WRIT
Fall SOC1340 S01 15684 MW 8:30-9:50(01) (R. Franklin)

SOC 1440. Intimate Violence.
Explores sociological perspectives of violence in intimate relationships. Begins with theories of violence, including social learning theory, the frustration-aggression hypothesis, and violence as catharsis. Examines the contributions of gender, race status, media violence, and pornography to the issue. Investigates specific forms of intimate violence: sexual aggression (including "acquaintance rape"), partner abuse, elderly abuse, and child abuse. Not open to first year students. WRIT
Fall SOC1440 S01 16032 MWF 2:00-2:50(07) (G. Elliott)

SOC 1550. Sociology of Medicine.
The aim of this course is to give conceptual framework and some analytic tools to examine the context of health, illness and well-being at the micro, meso and macro levels. The focus of our attention will be on health inequalities: how they are produced, their relationships with socioeconomic status, and how to minimize their effects. Special attention will be given to the phenomenon of medicalization, to the ways in which a diagnosis is socially constructed, issues of social justice and equity, and the implications of biotechnological innovation and the rise of health and wellness-oriented culture.
Spr SOC1550 S01 24868 MWF 1:00-1:50(06) 'To Be Arranged'

SOC 1640. Social Exclusion.
Why are some groups rejected and others accepted? This course examines the mechanisms of belonging and ostracism, social integration and exclusion, theories of diversity and hierarchy, and policies to reduce exclusion and inequality.
Fall SOC1640 S01 16023 TTh 2:30-3:50(03) (H. Silver)

SOC 1650. Unequal Societies.
This course compares nation-states in terms of various forms of inequality and assesses theories explaining international inequalities. It examines why poverty, income inequality, and poor health are greater in the United States than in comparably affluent countries, why intergenerational mobility varies, and why some societies treat women more equally or are more accepting of immigrants and cultural minorities than others. It asks whether the high standard of living in the Global North comes at the expense of the Global South. What holds unequal societies together and pulls them apart? Can inequalities be reduced?
SOC 1870A. Investing in Social Change.
Philanthropy -- "giving away money" -- sounds attractive and simple. But the very acts of contributing and receiving resources affect dynamics and relationships among all involved. We explore philanthropic strategies, social change, the sociological dimensions of philanthropy in historic and current practice. Students engage in teams to investigate a particular community concern, design an investment strategy, recommend the investment of grant dollars. Instructor permission required. Course enrollment is by application only. Applications can be found at swearengin.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
Spr SOC1870A S01 24870 TTh 9:00-10:20(08) (H. Silver)

SOC 1871D. Sophomore Seminar in Sociology of Development.
This seminar provides an introduction to the study of development. It looks at the diversity of understandings of the concept of development as well as its practical importance in the world. Students will read texts that present pressing questions and issues concerning development practices, policies, and theories. Efforts to connect broad theoretical debates to understanding contemporary problems will be encouraged. Enrollment limited to 20 sophomores. WRIT
Spr SOC1871D S01 24871 M 3:00-5:30(13) (J. Itzigsohn)

SOC 1871L. 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
Spr SOC1871L S01 24872 T 4:00-6:30(16) (L. DiCarlo)

SOC 1871O. Law, Innovation and Entrepreneurship
This course provides an introduction to the legal environment and macro-organizational change. The course devotes particular attention to the legal and organizational processes that shape (and are shaped by) the emergence of new technologies, new enterprises, and new industries. Although discussions may touch on technical aspects of law and/or entrepreneurship, most topics and materials focus on the general sociological processes that underlie changing organizational environments. The seminar is aimed at advanced students who have some prior familiarity with the sociology of law is helpful, but not essential. Through shared and individual readings, weekly discussions, and e-mail dialogues, the course provides an opportunity for students to refine and extend their thinking on important and controversial topics at the intersection of the contemporary organizational and socio-legal literatures. Prerequisite: SOC 1030 required (waivable by permission of instructor). Enrollment limited to 20 juniors, seniors, and graduate students. WRIT
Fall SOC1871O S01 16033 Th 4:00-6:30(04) (M. Suchman)

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 relation, 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.
Fall SOC1872C S01 16559 F 3:00-5:30(11) (Z. Qian)

SOC 1872F. Solidarity and Social Change.
What is solidarity and what enables its expression in the making of social change? Through this course, we shall refine our understandings of the various conceptions of solidarity in the process of altering those power relations, policies, and practices organizing our social world.

Although we shall engage different kinds of social change making -- from social entrepreneurship and social innovation to social movements and revolution -- our focus will be on how different kinds of solidarity are conceived and enabled within and across the world's principal axes of difference of those transformational practices. DPLL
Fall SOC1872F S01 16013 M 3:00-5:30(15) (M. Kennedy)

Colleges have expanded their focus on diversity to include the social class origins of prospective students. One consequence is the emergence of the notion of first-generation college students: those who are the first in their families to attend college. We examine the challenges facing first-gens as they pursue higher education, focusing on two sources of difficulty: gaining admission and acclimating oneself to college, both academically and socially. Our goals are two-fold: (1) To understand the social barriers, compromises, and internal conflicts that first-generation college students face, and, (2) consider how institutional and structural forces impact and shape these students. SOPH
Spr SOC1872G S01 25552 TTh 10:30-11:50(09) (G. Elliott)

SOC 1950. Senior Seminar.
Advanced research seminar for sociology concentrators. Students take 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. In the course, 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 swearengin.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 20 sophomores. WRIT
Spr SOC1950 S01 24906 Arranged To Be Arranged
SOC1950 S01 24906 Arranged To Be Arranged

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 16035 T 1:00-4:00 (M. White)

SOC 2020. Multivariate Statistical Methods II.
This course is a graduate-level introduction to multivariate regression models for categorical and limited dependent variables. Subject matter includes modeling nominal and ordinal outcomes; truncated distributions; and selection processes. The course also reviews strategies for sample design; handling missing data and weighting in multivariate models. The course employs contemporary statistical software. Special emphasis is placed on model selection and interpretation. Prerequisite: SOC 2010
Spr SOC2020 S01 24829 T 1:00-4:00 (D. Lindstrom)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 16036 M 9:00-12:00 (D. Hirschman)

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 then, critically reviews the works of Jurgen Habermas, Michel Foucault on disciplinary and governmental modes of power, Bruno Latour on modernity and modern science, Pierre Bourdieu on field and habitus and among others. No prerequisites.
Spr SOC2050 S01 24830 W 1:00-4:00 (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 16632 Th 2:00-5:00 (E. Fussell)

SOC 2090. Culture and Social Structure.
An analysis of the interrelations of religious ideas, value patterns, and various forms of knowledge on the one hand, and of the societal structures and changes in organizations and roles on the other hand. Offered in alternate years.
Fall SOC2090 S01 16037 Th 9:00-12:00 (P. Henry)

SOC 2210. Qualitative Methods.
Emphasis on ethnographic field work through participant observation and interview techniques. Social training in 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.
Fall SOC2210 S01 16038 W 2:00-5:00 (J. Pacewicz)

SOC 2230. Techniques of Demographic Analysis.
Procedures and techniques for the collection, evaluation, and analysis of demographic data; measures of population composition, fertility, mortality, and migration; construction of life tables, population and projections, population dynamics; responsible use of demographic methodology. Mandatory S/NC.
Spr SOC2230 S01 24831 T 9:00-12:00 (Z. Qian)

SOC 2260D. Race, Ethnicity, and Nation: Boundaries, Identities, Inequalities.
This seminar aims to provide students a solid base in the analysis of racial and ethnic boundaries, identities, and inequalities. The seminar addresses a number of central topics in the field and acquaints the students with some key works. The course is divided in three parts. The first part focuses on how race constituted the modern world and on contemporary forms of racialization. The second part focuses on the construction of nations and challenges to their ethnic and racial boundaries. The third part of the course looks at contemporary boundaries of race and ethnicity in the United States. Open to upper level undergraduates with permission of instructor.
Spr SOC2260D S01 24832 Th 9:00-12:00 (J. Itzigsohn)

SOC 2300. Welfare States.
This seminar examines the political sociology of welfare states and social policies in the United States and abroad. It reviews major theories accounting for the origins and subsequent development of welfare states, explains the "exceptional" nature of American social policy, and discusses recent welfare reforms in the US and Europe as well as welfare state prospects in less developed countries.
Spr SOC2300 S01 24833 Th 2:00-5:00 (J. Pacewicz)

SOC 2430. Fields and Methods of Social Research.
Introduction to strategies sociologists use to formulate theories and conduct methodologically sound research. Hypothesis formulation and research design; special emphasis on identifying causal mechanisms, techniques of operationalization, and choice of relevant comparisons.
Spr SOC2430 S01 24834 M 9:00-12:00 (S. Short)

SOC 2450. Exchange Scholar Program.
Fall SOC2450 S01 14788 Arranged 'To Be Arranged'
Spr SOC2450 S01 23874 Arranged 'To Be Arranged'

SOC 2460. Sociology Paper Writing Seminar.
This is a special seminar for graduate students in Sociology on the art of writing research papers for publication. The goals of the course are to: 1) learn the process of writing by drafting or redrafting a complete research paper, one section at a time 2) participate in the process of critical peer review 3) become knowledgeable about the process of submission/publication in peer-reviewed journals in Sociology and related social science fields 4) become more familiar with the often hidden processes of journal review, publication ethics, and interpreting/responding to editorial decisions
Spr SOC2460 S01 24835 M 2:30-5:30 (M. Suchman)

SOC 2500. Teaching Practicum in Sociology.
No description available.
Fall SOC2500 S01 14884 Arranged 'To Be Arranged'

SOC 2510. Teaching Practicum in Sociology.
No description available.
Spr SOC2510 S01 23883 Arranged 'To Be Arranged'

SOC 2610. Spatial Thinking in Social Science.
This course reviews ways in which social scientists have incorporated concepts about space, place, and distance into their theories and research. Examples are drawn from many substantive areas, including the spatial organization of communities, spatial inequalities, and mobility. Separate laboratory meetings introduce methods of spatial analysis encountered in the course readings, including an introduction to GIS and related mapping tools.
Spr SOC2610 S01 24836 T 9:00-12:00 (J. Logan)

SOC 2960G. Spatial Data Analysis Techniques in the Social Sciences.
Survey course of statistical methods that can be used to analyze spatial and/or clustered data at the individual and aggregate levels. Topics include multilevel analysis; fixed effects approaches; spatial choice; spatial autocorrelation, heterogeneity and dependence. Application with real data.
No description available.
Fall SOC2960G S01 16042 F 9:00-12:00 (L. Anselin)

SOC 2960L. Special Topics in Population.
No description available.
Fall SOC2960L S01 16051 M 2:00-5:00 (S. Short)

SOC 2960Q. Sociology of Culture and Knowledge.
We focus in this course on a few of the important theoretical and empirical developments in cultural sociology since the 1960s. In particular, we address ways in which culture is conceived and researched and how the sociology of knowledge and understanding underlies this address. We also consider the forms in which such a cultural sociology can inform a wide range of sociological questions, from the formation of the self to the articulation of historical epochs.
Fall SOC2960Q S01 16041 W 9:00-12:00 (M. Kennedy)

SOC 2960R. Urbanization in a Global System.
The world is undergoing an unprecedented wave of urban growth, and already more than half of the world's population in living in towns and cities. This course takes a global view of urban issues. In earlier developing regions such as North America and Europe, the focus is on a large scale restructuring of cities related to cycles of growth and decline, challenges to the social safety net, and replacement of local populations by immigrants with different racial, and ethnic or religious backgrounds.
Fall SOC2960R S01 16037 T 9:00-12:00 (J. Logan)
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 14789 Arranged "To Be Arranged"
Spr SOC2970 S01 23875 Arranged "To Be Arranged"

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

SOC 2981. Reading and Research. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

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

Fall SOC2990 S01 14790 Arranged "To Be Arranged"
Spr SOC2990 S01 23876 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 16391 TTh 9:30-11:50 (C. Crawford)
Fall TAPS0030 S02 16393 TTh 3:00-5:20 (C. Crawford)
Spr TAPS0030 S01 25253 TTh 9:30-11:50 (C. Crawford)
Spr TAPS0030 S02 25254 TTh 3:00-5:20 (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/N/C. W/W.

Fall TAPS0100 S01 16421 F 10:00-12:50 "To Be Arranged"
Fall TAPS0100 S02 16422 TTh 1:00-2:20(10) (E. Terry-Morgan)
Spr TAPS0100 S01 25263 T 1:00-3:50 "To Be Arranged"

TAPS 0200. Playwriting II. Emphasis is placed on dramatic conventions, such as monologues, dialogue, mise-en-scene and time. Writing includes frequent exercises 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 14 undergraduates per section. Instructor permission required. S/N/C. W/W.

Fall TAPS0200 S01 16418 T 1:00-3:50 "To Be Arranged"
Spr TAPS0200 S01 25280 F 1:00-3:50 "To Be Arranged"

TAPS 0220. Persuasive Communication. Provides an introduction to public speaking, and helps students develop confidence in public speaking through the presentation of persuasive speeches. Primarily for seniors. Limited to 18. Instructor 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 16412 MW 9:00-11:50 (B. Tannenbaum)
Fall TAPS0220 S02 16413 MW 1:00-3:50 (B. Tannenbaum)
Fall TAPS0220 S03 16414 MW 9:00-11:50 (B. Tannenbaum)
Fall TAPS0220 S04 16415 MW 1:00-3:50 (B. Tannenbaum)
Fall TAPS0220 S05 16416 MW 9:00-11:50 (B. Tannenbaum)
Spr TAPS0220 S01 25258 MW 9:00-11:50 (B. Tannenbaum)
Spr TAPS0220 S02 25259 MW 1:00-3:50 (B. Tannenbaum)
Spr TAPS0220 S03 25260 MW 9:00-11:50 (B. Tannenbaum)
Spr TAPS0220 S04 25261 MW 1:00-3:50 (B. Tannenbaum)
Spr TAPS0220 S05 25262 MW 9:00-11:50 (B. Tannenbaum)

TAPS 0230. Acting. Focus on elements of dramatic analysis and interpretation as applied to the art of acting, and, by extension, directing. Monologues, scene study, and improvisation are basis for comment on individual problems. Reading of dramatic texts and theory. Substantial stage 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/N/C.

Fall TAPS0230 S01 16396 TTh 1:00-3:50 (K. Moore)
Fall TAPS0230 S02 16398 MW 11:00-1:50 "To Be Arranged"
Spr TAPS0230 S01 25252 MW 12:00-2:50 (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 16410 MW 10:00-11:50 (A. Haynes)
Spr TAPS0250 S02 25257 MW 10:00-11:50 (A. Haynes)

TAPS 0260. Stage Lighting. This course is an introduction to stage lighting. Enrollment limited to 20.

Fall TAPS0260 S01 16420 TTh 10:00-12:50 (T. Hett)

TAPS 0310. Beginning Modern Dance. Introduction to the art of movement. Focuses on building a common vocabulary based on ballet, vernacular forms, improvisation, Laban movement analysis, American modern dance, and the body therapies. Individual work is explored. One and one-half hours of class, four days a week. Enrollment limited to 40. S/N/C.

Fall TAPS0310 S01 16381 MTWTh 1:00-2:20 (J. Strandberg)

TAPS 0310E. Shakespeare: The Screenplays (ENGL 0310E). Interested students must register for ENGL 0310E.

Fall TAPS0310E S01 16757 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/N/C.

Fall TAPS0320 S01 16378 MW 10:00-11:50 (M. Bach-Coulibaly)

TAPS 0390A. 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 analysis 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/N/C.

TAPS 0390A S01 25275 MW 4:00-5:50 (T. Jones)

TAPS 0390C. 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 16386 TTh 9:00-11:50 "To Be Arranged"


Interested students must register for AFRI 0990.

Spr TAPS0980 S01 25321 Arranged "To Be Arranged"

TAPS 1000. Intermediate Dance.

Designed to expand the student's knowledge of and proficiency in dance as an art form. Mainly a studio course, but selected readings, papers, critiques, and field trips are important components of the course. Prerequisite: TAPS 0310 or equivalent. Enrollment limited to 40. S/N.C.

Spr TAPS1000 S01 25242 MTWTh 1:00-2:20 "To Be Arranged"

TAPS 1100. Stage Management.

To introduce students to the principles and techniques of modern stage management from script selection to closing. Through the study of various models of stage management (both professional and academic), students will develop an appreciation of the role of the stage manager as the facilitator, mediator and organizer of the production process. Students will apply theory learned in the classroom by stage-managing or assistant stage-managing a TAPS production and/or observing other TAPS and Trinity Rep stage managers during the production process. Enrollment limited to 12.

Fall TAPS1100 S01 16399 M 1:00-3:30 (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 25266 TTh 9:00-11:50 "To Be Arranged"

TAPS 1210. Solo Performance.

An exploration of the challenges and rewards of performing solo. Students research, write, and perform a one-person show. Other projects may include performance art, stand-up comedy, and monologuing. Substantial time commitment. Attendance mandatory. For advanced students with appropriate background and experience. Submit proposal and resume in the fall. For guidelines and information contact taps@brown.edu. Permission required in advance. Enrollment limited to 20.

Spr TAPS1210 S01 25270 TTh 1:00-3:30 (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 16417 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 25264 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 25265 TTh 1:00-2:20(10) (S. Golub)

TAPS 1280C. Advanced Stage Lighting.

This course focuses on the implementation of lighting techniques learned in the introductory course. Emphasizes work in a studio environment with other theatre designers, implementing CAD and vector works techniques as well as scale models. Course culminates in a full lighting design for a production. Prerequisite: TAPS 0260.

Spr TAPS1280C S01 25272 TTh 10:00-11:50 (T. Hett)

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 16403 W 11:00-2:50 "To Be Arranged"

TAPS 1281A. Director/Designer Collaborative Studio.

Students will explore the relationship between director and designer within the production process. The main objective is to improve collaboration and production output by learning the language, tools, and skills involved in each area of discipline so as to enhance creative output. Enrollment limited to 17 student designers.

Fall TAPS1281A S01 16401 MW 4:00-5:50 (K. Moore)

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 TAPS1281M S01 16426 W 3:00-6:50 (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 TAPS1281W S01 16423 TTh 2:30-3:50(03) (J. Strandberg)

TAPS 1281Z. Artists and Scientists as Partners: Theory to Practice.

This course focuses on the application of current research in neuroscience, education, narrative medicine, and best practices in the arts for persons with neurological disorders. Through site placements, students 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 25273 TTh 2:30-3:50(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 25256 MW 1:00-4:50 "To Be Arranged"

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 16383 MW 3:00-4:20(17) "To Be Arranged"

Fall TAPS1310 S01 16383 TTh 2:30-3:50(17) "To Be Arranged"

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Instructor</th>
<th>CRN</th>
<th>Section</th>
<th>Time</th>
<th>Days</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAPS 1340</td>
<td>Dance Styles</td>
<td>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/NC.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spr TAPS1340 S01 25243 MW 3:00-4:20(14)</td>
<td>'To Be Arranged'</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spr TAPS1340 S01 25243 Th 2:30-3:50(14)</td>
<td>'To Be Arranged'</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TAPS 1350</td>
<td>Dance Performance and Repertory.</td>
<td>Half credit each semester. A study of dance repertory through commissioned new works, reconstruction, coaching, rehearsal, and performance. Guest artists and consultants from the American Dance Legacy Institute. Enrollment is by audition. Limited to skilled dancers. Instructor permission required. S/NC.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fall TAPS1350 S01 16573 Th 8:00PM-10:00PM</td>
<td>(J. Strandberg)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fall TAPS1350 S01 16573 MW 6:30-9:30PM</td>
<td>(J. Strandberg)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TAPS 1360</td>
<td>Dance Performance and Repertory.</td>
<td>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.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spr TAPS1360 S01 25244 Th 8:00PM-10:00PM</td>
<td>(J. Strandberg)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spr TAPS1360 S01 25244 MW 6:30-9:30PM</td>
<td>(J. Strandberg)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TAPS 1370</td>
<td>New Works/World Traditions.</td>
<td>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.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fall TAPS1370 S01 16385 T 6:00-9:30PM</td>
<td>(M. Bach-Coulibaly)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fall TAPS1370 S01 16385 Th 6:00-7:30</td>
<td>(M. Bach-Coulibaly)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fall TAPS1370 S01 16385 M 7:15-10:30PM</td>
<td>(M. Bach-Coulibaly)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spr TAPS1370 S01 25250 S 3:00-6:00</td>
<td>(M. Bach-Coulibaly)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spr TAPS1370 S01 25250 Th 6:00-7:30</td>
<td>(M. Bach-Coulibaly)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spr TAPS1370 S01 25250 T 8:00PM-11:00PM</td>
<td>(M. Bach-Coulibaly)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TAPS 1380</td>
<td>Mise en Scene.</td>
<td>A reconstruction of the idea of a stage and a frame on the evidence of theory, novels, plays, and especially films-the seen and the unseen using the organizing strategies of mystery. Art's &quot;impossible&quot; 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</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spr TAPS1380 S01 25276 W 3:00-5:30(14)</td>
<td>(S. Golub)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TAPS 1390</td>
<td>Contemporary Mande Performance.</td>
<td>This course examines the influences of contemporary society upon traditional Mande Performance. Equal emphasis will be given to the theory and practice of embodied performance as it responds to selected music traditions, oral literatures, and aesthetic traditions. Films, readings, guest lectures and collaborative research projects will help to facilitate a deeper understanding of contemporary Mande society and its artistic production. Students MUST register for a conference and a lecture section. Enrollment limited to 150. Students must attend the first class meeting, as final enrollment is determined by application/tryout.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spr TAPS1390 S01 25245 T 6:00-7:50</td>
<td>(M. Bach-Coulibaly)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spr TAPS1390 S01 25245 Th 4:00-5:50</td>
<td>(M. Bach-Coulibaly)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TAPS 1400</td>
<td>Advanced Performance.</td>
<td>An investigation into abstract and nonlinear modes of performance, working from fragmentary and recombinant narrative, dramatic, and found sources. Seeks to evolve a conceptual approach to performance of the individual actor-director-writer through supervised and independent exercises and projects. Prerequisite: TAPS 0230. For juniors and especially seniors. Enrollment limited to 20. WRIT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fall TAPS1400 S01 16387 MW 1:00-3:20</td>
<td>(S. Golub)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TAPS 1520</td>
<td>Seminar in Theatre Arts.</td>
<td>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.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

### TAPS 2310. Graduate Playwriting.
With Word as the bodifying 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 PV” in the subject line. Permission will be given once manuscripts have been reviewed. S/NC

<table>
<thead>
<tr>
<th>Term</th>
<th>Course Code</th>
<th>S/C</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>TAPS2310</td>
<td>S01</td>
<td>16427 Th 11:00-3:50 (E. Ehn)</td>
</tr>
<tr>
<td>Spr</td>
<td>TAPS2310</td>
<td>S01</td>
<td>25277 Th 11:00-3:50 (E. Ehn)</td>
</tr>
</tbody>
</table>

This course is open only to students of the Consortium. It will include fundamental exercises, textual analysis, rehearsal techniques, character and scene work designed to provide the student actor with a working method based upon the general principles of the Stanislavsky system. A major part of this course will include rehearsal and performance responsibilities.

<table>
<thead>
<tr>
<th>Term</th>
<th>Course Code</th>
<th>S/C</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>TAPS2500</td>
<td>S01</td>
<td>11059 Arranged (B. McEleney)</td>
</tr>
<tr>
<td>Spr</td>
<td>TAPS2500</td>
<td>S01</td>
<td>11060 Arranged (B. McEleney)</td>
</tr>
</tbody>
</table>

### 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.

<table>
<thead>
<tr>
<th>Term</th>
<th>Course Code</th>
<th>S/C</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>TAPS2510</td>
<td>S01</td>
<td>11060 Arranged (T. Jones)</td>
</tr>
</tbody>
</table>

### 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.

<table>
<thead>
<tr>
<th>Term</th>
<th>Course Code</th>
<th>S/C</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>TAPS2520</td>
<td>S01</td>
<td>11061 Arranged &quot;To Be Arranged&quot;</td>
</tr>
</tbody>
</table>

### 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.

<table>
<thead>
<tr>
<th>Term</th>
<th>Course Code</th>
<th>S/C</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>TAPS2530</td>
<td>S01</td>
<td>11062 Arranged (B. McEleney)</td>
</tr>
</tbody>
</table>

### 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 Moliere and Shakespeare. 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.

<table>
<thead>
<tr>
<th>Term</th>
<th>Course Code</th>
<th>S/C</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>TAPS2550</td>
<td>S01</td>
<td>11066 Arranged (B. McEleney)</td>
</tr>
<tr>
<td>Spr</td>
<td>TAPS2550</td>
<td>S01</td>
<td>20163 Arranged (B. McEleney)</td>
</tr>
</tbody>
</table>

### TAPS 2560. Acting: Shakespeare and Moliere.
This is also open only to students of the MFA Consortium program. This is a scene study class with an emphasis on the process and progress. Must 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.

<table>
<thead>
<tr>
<th>Term</th>
<th>Course Code</th>
<th>S/C</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spr</td>
<td>TAPS2560</td>
<td>S01</td>
<td>20163 Arranged (B. McEleney)</td>
</tr>
</tbody>
</table>

### 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.

<table>
<thead>
<tr>
<th>Term</th>
<th>Course Code</th>
<th>S/C</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>TAPS2570</td>
<td>S01</td>
<td>20160 Arranged (B. Mertes)</td>
</tr>
<tr>
<td>Spr</td>
<td>TAPS2570</td>
<td>S01</td>
<td>20161 Arranged (B. Mertes)</td>
</tr>
</tbody>
</table>

### 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.

<table>
<thead>
<tr>
<th>Term</th>
<th>Course Code</th>
<th>S/C</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>TAPS2580</td>
<td>S01</td>
<td>11063 Arranged (B. McEleney)</td>
</tr>
</tbody>
</table>

### TAPS 2600. Acting: Shakespeare and Moliere.
This is a two-credit course and is open only to students of the MFA Consortium program. This is a scene study class with an emphasis on the problems of style and language in the plays of Moliere and Shakespeare.

<table>
<thead>
<tr>
<th>Term</th>
<th>Course Code</th>
<th>S/C</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>TAPS2600</td>
<td>S01</td>
<td>11063 Arranged (T. Jones)</td>
</tr>
</tbody>
</table>

### 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.

<table>
<thead>
<tr>
<th>Term</th>
<th>Course Code</th>
<th>S/C</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>TAPS2610</td>
<td>S01</td>
<td>11064 Arranged (T. Jones)</td>
</tr>
</tbody>
</table>

### 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.

<table>
<thead>
<tr>
<th>Term</th>
<th>Course Code</th>
<th>S/C</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>TAPS2620</td>
<td>S01</td>
<td>11065 Arranged &quot;To Be Arranged&quot;</td>
</tr>
</tbody>
</table>

### 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.

<table>
<thead>
<tr>
<th>Term</th>
<th>Course Code</th>
<th>S/C</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>TAPS2630</td>
<td>S01</td>
<td>11066 Arranged (B. McEleney)</td>
</tr>
</tbody>
</table>

### 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.

<table>
<thead>
<tr>
<th>Term</th>
<th>Course Code</th>
<th>S/C</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spr</td>
<td>TAPS2650</td>
<td>S01</td>
<td>20162 Arranged (B. McEleney)</td>
</tr>
</tbody>
</table>

### 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.

<table>
<thead>
<tr>
<th>Term</th>
<th>Course Code</th>
<th>S/C</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spr</td>
<td>TAPS2660</td>
<td>S01</td>
<td>20163 Arranged (T. Jones)</td>
</tr>
</tbody>
</table>

### 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.

<table>
<thead>
<tr>
<th>Term</th>
<th>Course Code</th>
<th>S/C</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spr</td>
<td>TAPS2670</td>
<td>S01</td>
<td>20164 Arranged &quot;To Be Arranged&quot;</td>
</tr>
</tbody>
</table>

### 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 assist direct a professional production at Trinity Rep Company.

<table>
<thead>
<tr>
<th>Term</th>
<th>Course Code</th>
<th>S/C</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spr</td>
<td>TAPS2680</td>
<td>S01</td>
<td>20165 Arranged (B. McEleney)</td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 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 11067 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 11068 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 11069 Arranged "To Be Arranged"

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 11070 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 20167 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 20168 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 20169 Arranged (B. Mertes)

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 14791 Arranged "To Be Arranged"
Spr TAPS2970 S01 23877 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.

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 25442 F 3:00-5:30(15) (T. Flanagan)
Spr UNIV0400 S02 25443 W 3:00-5:30(14) (T. Flanagan)

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 freshwater 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 24712 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.
Spr UNIV1700 S01 25187 M 3:00-5:30(13) (W. Simmons)

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 15262 TTh 1:00-2:20(10) (D. Neumann)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
URBN 1000. Fieldwork in the Urban Community. A fieldwork course with limited enrollment. Each student undertakes a fieldwork project in close collaboration with a government agency, a nonprofit association, or a planning firm. In weekly seminar meetings, the class examines a series of urban issues and discusses fieldwork methodology. Students also schedule regular appointments with the instructor. Restricted to Urban Studies concentrators. WRIT DLLL

Fall VISA0100 S01 16142 MW 10:00-11:50 (M. Smick)
Fall VISA0100 S02 16143 TTh 10:00-11:50 (E. Villanueva)
Fall VISA0100 S03 16144 TTh 1:00-2:50 (E. Villanueva)
Fall VISA0100 S04 16145 MW 4:00-5:50 (K. Kodi)
Fall VISA0100 S05 16146 MW 7:00-8:50PM (K. Kodi)
Fall VISA0100 S06 16147 TTh 1:00-2:50 (E. Irons)
Fall VISA0100 S07 16148 TTh 4:00-5:50 (E. Irons)
Fall VISA0100 S08 16149 Th 6:00-7:50 PM (E. Donisky)
Fall VISA0100 S09 16150 F 10:00-11:50 (E. Donisky)
Spr VISA0100 S01 24988 Th 9:00-10:50 (P. Myoda)
Spr VISA0100 S02 24982 Th 10:00-11:50 (L. Tarentino)
Spr VISA0100 S03 24983 MW 10:00-11:50 (M. Smick)
Spr VISA0100 S04 24984 Th 1:00-2:50 (E. Villanueva)
Spr VISA0100 S05 24985 Th 4:00-5:50 (E. Villanueva)
Spr VISA0100 S06 24986 MW 4:00-5:50 (K. Kodi)
Spr VISA0100 S07 24987 MW 7:00-8:50PM (K. Kodi)
Spr VISA0100 S08 24988 Th 6:00-7:50PM (E. Donisky)
Spr VISA0100 S09 24989 F 10:00-11:50 (E. Donisky)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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.
Fall VISA1110 S01 16153 TTh 1:00-4:50 (H. Doyle)
Spr VISA1110 S01 24992 TTh 1:00-4:50 (H. Doyle)

VISA 1240. Art of the Book.
Will examine the book, structurally and conceptually, as artist's medium. Students will learn the materials, tools and techniques of making books, as they explore the expressive and narrative possibilities of the book form. Topics and projects may include digital imaging, combining text and image, traditional binding or digital publishing. Students who are not admitted during pre-registration or were unable to pre-register should attend the first meeting.
Fall VISA1240 S01 16154 MW 1:00-4:50 (L. Tarentino)

VISA 1250. Art of the Book.
We will examine the artist's book from the printer/publisher perspective. Students will learn the basics of book design, traditional typographic & the letterpress printing. Students will consider the book and its related printed matter in service of its content. The course will be run as a fine press publishing house. 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. Students who are not admitted during pre-registration or were unable to pre-register should attend the first meeting.
Spr VISA1250 S01 24993 MW 1:00-4:50 (L. Tarentino)

VISA 1310. Painting: Beginning to Intermediate.
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. Images, related books, and articles are discussed. Individual criticism is given; participation in group discussions is required. Students not admitted during pre-registration should attend the first class.
Fall VISA1310 S01 16155 TTh 1:00-4:50 (L. Tarentino)
Fall VISA1310 S02 16160 MW 1:00-4:50 (W. Edwards)

VISA 1320A. Advanced Painting: The Mediated Image.
The tradition of painting experienced a monumental shift in form, content, and function with the advent of photography. In this studio course we will explore painting as a practice might reflect on our present-day image saturated networked world where a constant stream of instantly forgotten images are routinely borrowed, recycled, stolen and repurposed. Relevant moments in 20th and 21st century art will be covered, including Dada, Pop Art, the Pictures Generation as well as current strategies of image appropriation within a painting tradition. The course introduces photo-silkscreen, digital printing, and image transfer techniques into painting-based studio practices.
Spr VISA1320A S01 25012 TTh 1:00-4:50 (L. Tarentino)

VISA 1410. Sculpture: Material Investigations.
This studio course addresses basic sculptural methods, i.e., additive + subtractive modeling, casting, and assemblage, and common sculptural materials, i.e., wood, metal, plaster, and found objects. Demos + workshops on a number of sculptural tools and materials form the foundation for this studio. Students develop sculptural solutions to a given set of problems. Contemporary issues raised in critiques and readings. Extensive outside work is expected. Students who are not admitted during pre-registration or were unable to pre-register should attend the first meeting of the class.
Fall VISA1410 S01 16156 TTh 12:00-3:50 (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 VISA 1410 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. Please attend first day of class.
Spr VISA1420 S01 24996 TTh 12:00-3:50 (P. Myoda)

VISA 1510. Black and White Photography.
This course offers introduction to traditional black and white 35mm darkroom techniques, including processing film, silver gelatin printing and related techniques. While the class is primarily a studio course, it will be supplemented by weekly slide presentations and discussions of assigned readings. Slide presentations will focus on individual photographers in the history of the medium. Topics of discussion will include photographic genres, the photo essay, editing and sequencing a body of work, personal visions, social and political context, documentary versus art photography. Students may check out 35 mm film camera from the Dept.
Fall VISA1510 S01 16158 MW 9:00-11:50 (T. Ganz)
Spr VISA1510 S01 24997 MW 1:00-3:50 (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. Prior experience in photography preferred not required. A digital SLR type camera may be checked out from the Department.
Fall VISA1520 S01 16159 MW 1:00-3:50 (T. Ganz)
Spr VISA1520 S01 24998 MW 9:00-11:50 (T. Ganz)

VISA 1720. 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. Demonstrations, lectures and critical discussion of work will be given to develop concepts and technical skills.
Fall VISA1720 S01 16170 MW 1:00-4:50 (E. Osborn)

VISA 1800C. Honors Seminar.
Required for students who have been accepted as candidates for honors. The seminar meets weekly to discuss readings and for group critiques. Includes group trips to New York and Boston, to visit galleries, museums, and artists’ studios. Instructor permission required. WRIT
Fall VISA1800C S01 16157 TTh 10:00-11:50 (L. Tarentino)

VISA 1800L. Hybrid Art: Bricolage.
The theme of the course is bricolage; a process which develops novel solutions to problems by making use of previously unrelated knowledge, ideas and objects.
We will utilize low tech materials on mid to large-scale three-dimensional work and will foster multidisciplinary studio practice. Students will be encouraged to take risks, cultivate new ideas and expand their creative process. Students must be highly motivated and committed to extensive work outside of class. Preference will be given to students with prior experience in sculpture.
First class List Art, Rm. 323 All other classes at the Tockwotton Studio Monday Wednesday 1:00 -4:50 PM
Spr VISA1800L S01 24999 MW 1:00-4:50 (R. Fishman)

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

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
a visual artist. Enrollment limited to 20 juniors and seniors in Visual Art.

WRIT
Spr  VISA1800P S01  25000  F  1:00-4:50  (H. Bhandan)

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.
Undergraduate Concentrations

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:

- AFR 0090 An Introduction to Africana Studies (Fall ONLY)
- AFR 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, 2016. Final drafts must be submitted by December 1, 2016. For students completing graduation requirements by Semester II (Spring), the first complete draft of the thesis should be submitted by March 14, 2017. The final draft of the thesis should be submitted by April 20, 2017. 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, appropriated and consumed? What is the role of artists and the expressive arts, including literature, visual arts and performance?

- **Science, Technology, and Everyday Life**: How does work and the deployment of science and technology shape American culture? How do everyday social practices of work, leisure and consumption provide agency for people?

### How we study

American Studies at Brown emphasizes four intersecting approaches that are critical tools for understanding these themes:

- **Cultural and Social Analysis**: Reading and analyzing different kinds of texts, including literary, visual, aural, oral, material objects and landscapes. Examining ethnic and racial groups, institutions, organizations and social movements.

- **Global/International Contextualization**: Comprehending the United States as a society and culture that has been shaped by the historical and contemporary flows of people, goods and ideas from around the world and in turn, learning about the various ways in which America has shaped the world.

- **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. The department also allows students to pursue the Engaged Scholars Program (https://www.brown.edu/academics/college/special-programs/public-service/engaged-scholars-program). ESP is for students with an interest in making deeper connections between their concentration curriculum and long-term engaged activities such as internships, public service, humanitarian development work, archaeological excavations, and many other possible forms of community involvement.

Concentrators should select their courses in anthropology in consultation with the concentration advisor. At least nine courses in anthropology are required, including:

Select one of the following sociocultural/linguistic anthropology classes:

- ANTH 0100 Introduction to Cultural Anthropology 1
- ANTH 0110 Anthropology and Global Social Problems: Environment, Development, and Governance
- ANTH 0200 Culture and Human Behavior
- ANTH 0300 Culture and Health

### Prerequisites

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

Ten additional semester courses approved by the Division of Applied Mathematics. These classes must include:

1. MATH 0090 Introductory Calculus, Part I
2. MATH 0100 and Introductory Calculus, Part II

Select one course on programming from the following:

1. APMA 0090 Introduction to Mathematical Modeling
2. APMA 0160 Introduction to Scientific Computing
3. CSCI 0040 Introduction to Scientific Computing and Problem Solving
4. CSCI 0150 Introduction to Object-Oriented Programming and Computer Science
5. CSCI 0170 Computer Science: An Integrated Introduction

Additional Courses

Select one of the following sequences:

1. APMA 0330, APMA 0340 will sometimes be accepted as substitutes for APMA 0350, APMA 0360.

Notes:

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
2. MATH 0100 and Introductory Calculus, Part II
3. MATH 0180 Intermediate Calculus
4. MATH 0520 Linear Algebra
5. APMA 0350 Applied Ordinary Differential Equations
6. APMA 0360 Methods of Applied Mathematics I, II

Select one senior seminar from the APMA 1930 or APMA 1940 series, or an approved equivalent.

Select one course on programming from the following:

1. APMA 0090 Introduction to Mathematical Modeling
2. APMA 0160 Introduction to Scientific Computing
3. CSCI 0040 Introduction to Scientific Computing and Problem Solving
4. CSCI 0150 Introduction to Object-Oriented Programming and Computer Science
5. CSCI 0170 Computer Science: An Integrated Introduction

Additional Courses

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

Notes:

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.

Applied Mathematics-Biology

The Applied Math - Biology concentration recognizes that mathematics is essential to address many modern biological problems in the post genomic era. Specifically, high throughput technologies have rendered vast new biological data sets that require novel analytical skills for the most basic analyses. These technologies are spawning a new "data-driven" paradigm in the biological sciences and the fields of bioinformatics and systems biology. The foundations of these new fields are inherently mathematical, with a focus on probability, statistical inference, and systems dynamics. These mathematical methods apply very broadly in many biological fields including some like population growth, spread of disease, that predate the genomics revolution. Nevertheless, the application of these methods in areas of biology from molecular genetics to evolutionary biology has grown very rapidly in with the availability of vast amounts of genomic sequence data. Required coursework in this program aims at ensuring expertise in mathematical and statistical sciences, and their application in biology. The students will focus in particular areas of biology. The program culminates in a senior capstone experience that pairs student and faculty in creative research collaborations.

Standard program for the Sc.B. degree

Required coursework in this program aims at ensuring expertise in mathematical and statistical sciences, and their application in biology. The students will focus in particular areas of biology. The program culminates in a senior capstone experience that pairs student and faculty in creative research collaborations. Applied Math – Biology concentrators are prepared for careers in medicine, public health, industry and academic research.

Required Courses:

Students are required to take all of the following courses.

- MATH 0090 Introductory Calculus, Part I
- MATH 0100 Introductory Calculus, Part II
- MATH 0180 Intermediate Calculus (or equivalent placement)
- MATH 0520 Linear Algebra
- CHEM 0330 Equilibrium, Rate, and Structure
- PHYS 0030 Basic Physics
- PHYS 0050 Foundations of Mechanics

Select one of the following sequences:

- APMA 0350 Applied Ordinary Differential Equations
- APMA 0360 Methods of Applied Mathematics I, II
- APMA 0330 Methods of Applied Mathematics I, II
- APMA 0340 Methods of Applied Mathematics I, II
- APMA 1650 Statistical Inference I
- APMA 1070 Quantitative Models of Biological Systems
- APMA 1080 Inference in Genomics and Molecular Biology
- BIOL 0200 The Foundation of Living Systems (or equivalent)

Additional Courses

In addition to required courses listed above, students must take the following:

Two additional courses in Applied Math or Biology. At least one of these must be a directed research course, e.g. a senior seminar or independent study in Applied Math or a directed research/independent study in Biology. For example:

- A course from the APMA 1930 series
- A course from the APMA 1940 series
- APMA 1970 Independent Study
- BIOL 1950 Directed Research/Independent Study
- BIOL 1960 Directed Research/Independent Study

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Four classes in the biological sciences agreed upon by the student and advisor. These four courses should form a cohesive grouping in a specific area of emphasis, at least two of which should be at the 1000-level. Some example groupings are below:

**Areas of Emphasis and Suggested Courses:**
Some areas of possible emphasis for focusing of elective courses are listed below. Given the large number of course offerings in the biosciences and neuroscience, students are free to explore classes in these areas that are not listed below. However, all classes must be approved by the concentration advisor.

**Biochemistry**
- BIOL 0280 Introductory Biochemistry
- BIOL 1270 Advanced Biochemistry
- CHEM 0350/0360 Organic Chemistry
- CHEM 1230 Chemical Biology

**Biotechnology and Physiology**
- BIOL 0800 Principles of Physiology
- BIOL 1100 Cell Physiology and Biophysics

and/or appropriate bioengineering courses, such as:
- BIOL 1090 Polymer Science for Biomaterials
- BIOL 1120 Biomaterials
- BIOL 1140 Tissue Engineering
- BIOL 1150 Stem Cell Engineering
- BIOL 1210 Synthetic Biological Systems

**Ecology, Evolution, and Genetics**
- BIOL 0410 Invertebrate Zoology
- BIOL 0420 Principles of Ecology
- BIOL 0430 And The Evolution of Plant Diversity
- BIOL 0470 Genetics
- BIOL 1420 Experimental Design in Ecology
- BIOL 1430 Computational Theory of Molecular Evolution and Population Genetics
- BIOL 1465 Human Population Genomics
- BIOL 1540 Molecular Genetics

**Neuroscience**
- APMA 0410 Mathematical Methods in the Brain Sciences

Neurosciences courses; See https://www.brown.edu/academics/neuroscience/undergraduate/neuroscience-concentration-requirements
- BIOL 1100 Cell Physiology and Biophysics
- BIOL 1110 Topics in Signal Transduction
- BIOL 1190 Synaptic Transmission and Plasticity

**Total Credits:** 18

1 Students whose independent study is expected to be in an experimental field are strongly encouraged to take APMA 1660, which covers experimental design and the analysis of variance (ANOVA), a method commonly used in the analysis of experimental data.

**Honors**
Requirements and Process: Honors in the Applied Math-Biology concentration is based primarily upon an in-depth, original research project carried out under the guidance of a Brown (and usually Applied Math or BioMed) affiliated faculty advisor. Projects must be conducted for no less than two full semesters, and student must register for credit for the project via APMA 1950 or BIOL 1950/BIOL 1960 or similar independent study courses. The project culminates in the writing of a thesis which is reviewed by the thesis advisor and a second reader. It is essential that the student have one advisor from the biological sciences and one in Applied Mathematics. The thesis work must be presented in the form of an oral presentation (arranged with the primary thesis advisor) or posted at the annual Undergraduate Research Day in either Applied Mathematics or Biology. For information on registering for BIOL 1950/BIOL 1960, please see https://www.brown.edu/academics/biology/undergraduate-education/undergraduate-research

Excellence in grades within the concentration as well as a satisfactory evaluation by the advisors are also required for Honors. The student’s grades must place them within the upper 20% of their cohort, in accordance with the university policy on honors. Honors recipients typically maintain a Grade Point Average of 3.4 or higher in the concentration. However, in the case of outstanding independent research as demonstrated in the thesis and supported by the Thesis Committee, candidates with a GPA between 3.0 an 3.4 will be considered and are encouraged to apply.

The deadline for applying to graduate with honors in the concentration are the same as those of the biology concentrations. However, students in the joint concentration must inform the undergraduate chair in Applied Mathematics of their intention to apply for honors by these dates.

**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
- MATH 0350 Honors Calculus
- MATH 0520 Linear Algebra
- MATH 0540 Honors Linear Algebra
- MATH 0550 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 Introduction to Object-Oriented Programming and Computer Science
- & CSCI 0160 Computer Science and 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

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
and an additional CS course not otherwise used to satisfy a concentration requirement; (this course may be CSCI 0180, an intermediate-level CS course, or a 1000-level course)

Select three of the following intermediate-level courses, one of which must be math-oriented and one systems-oriented:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 0220</td>
<td>Introduction to Discrete Structures and Probability (math)</td>
</tr>
<tr>
<td>CSCI 0320</td>
<td>Introduction to Software Engineering (systems)</td>
</tr>
<tr>
<td>CSCI 0310 or CSCI 0330</td>
<td>Introduction to Computer Systems</td>
</tr>
<tr>
<td>CSCI 0510</td>
<td>Models of Computation (math)</td>
</tr>
</tbody>
</table>

Three 1000-level Computer Science courses. These three courses must include a pair of courses with a coherent theme. A list of approved pairs may be found at the approved-pairs web page. You are not restricted to the pairs on this list, but any pair not on the list must be approved by the director of undergraduate studies.

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

**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 you using in your summer's work? Which topics, in particular, were important?
- In retrospect, which courses should you have taken before embarking on your summer experience? What are the topics from these courses that would have helped you over the summer if you had been more familiar with them?
- Are there topics you should have been familiar with in preparation for your summer experience, but are not taught at Brown? What are these topics?
- What did you learn from the experience that probably could not have been picked up from course work?
- Is the sort of work you did over the summer something you would like to continue doing once you graduate? Explain.
- Would you recommend your summer experience to other Brown students? Explain.

**Applied Mathematics-Economics**

The Applied Mathematics-Economics concentration is designed to reflect the mathematical and statistical nature of modern economic theory and empirical research. This concentration has two tracks. The first is the advanced economics track, which is intended to prepare students for graduate study in economics. The second is the mathematical finance track, which is intended to prepare students for graduate study in finance, or for careers in finance or financial engineering. Both tracks have A.B. degree versions and Sc.B. degree versions, as well as a Professional track option.

**Standard program for the A.B. degree (Advanced Economics track) - through the class of 2015:**

**Prerequisites:**

- MATH 0100 Introductory Calculus, Part II
- MATH 0520 Linear Algebra

**Course Requirements:**

**Applied Math 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
- CSCI 0040 Introduction to Scientific Computing and Problem Solving
- APMA 0350 Introduction to Object-Oriented Programming and Computer Science
- CSCI 0170 Computer Science: An Integrated Introduction

Select one of the following:

- APMA 1200 Operations Research: Probabilistic Models
- APMA 1210 Operations Research: Deterministic Models
- APMA 1650 Statistical Inference I

(b) 1

Select 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
- ECON 1630 Econometrics I

Two 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

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

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:

<table>
<thead>
<tr>
<th>Prerequisites:</th>
<th></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>

<table>
<thead>
<tr>
<th>Course requirements:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Mathematics requirements:</td>
<td></td>
</tr>
<tr>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>APMA 0350 &amp; APMA 0360</td>
<td>Applied Ordinary Differential Equations and Methods of Applied Mathematics I, II</td>
</tr>
<tr>
<td>Select one of the following:</td>
<td></td>
</tr>
<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>
<tr>
<td>Select one of the following:</td>
<td></td>
</tr>
<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>
<tr>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>Select two of the following:</td>
<td></td>
</tr>
<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 1690</td>
<td>Computational Probability and 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>

<table>
<thead>
<tr>
<th>Economics requirements:</th>
<th></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>
<tr>
<td>Three 1000-level courses from the &quot;mathematical-economics&quot; group:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<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: Theory and Applications</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>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Prerequisites:</th>
<th></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>

<table>
<thead>
<tr>
<th>Requirements:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Mathematics requirements:</td>
<td></td>
</tr>
<tr>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>APMA 0350 &amp; APMA 0360</td>
<td>Applied Ordinary Differential Equations and Methods of Applied Mathematics I, II</td>
</tr>
<tr>
<td>Select one of the following:</td>
<td></td>
</tr>
<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>
<tr>
<td>Select one of the following:</td>
<td></td>
</tr>
<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>
<tr>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>Select one of the following:</td>
<td></td>
</tr>
<tr>
<td>APMA 1180</td>
<td>Introduction to Numerical Solution of Differential Equations</td>
</tr>
<tr>
<td>APMA 1330</td>
<td>Methods of Applied Mathematics III, IV</td>
</tr>
<tr>
<td>APMA 1660</td>
<td>Statistical Inference II</td>
</tr>
<tr>
<td>APMA 1670</td>
<td>Statistical Analysis of Time Series</td>
</tr>
<tr>
<td>APMA 1680</td>
<td>Nonparametric Statistics</td>
</tr>
<tr>
<td>APMA 1690</td>
<td>Computational Probability and Statistics</td>
</tr>
<tr>
<td>APMA 1700</td>
<td>The Mathematics of Insurance</td>
</tr>
<tr>
<td>APMA 1720</td>
<td>Monte Carlo Simulation with Applications to Finance (most preferred in this list)</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>

<table>
<thead>
<tr>
<th>Economics Requirements:</th>
<th></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>
<tr>
<td>Three 1000-level courses from the &quot;financial economics&quot; group:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>ECON 1650</td>
<td>Financial Econometrics</td>
</tr>
<tr>
<td>ECON 1710</td>
<td>Investments I</td>
</tr>
<tr>
<td>ECON 1720</td>
<td>Corporate Finance</td>
</tr>
<tr>
<td>ECON 1750</td>
<td>Investments II</td>
</tr>
<tr>
<td>ECON 1759</td>
<td>Data, Statistics, Finance</td>
</tr>
<tr>
<td>ECON 1760</td>
<td>Financial Institutions</td>
</tr>
<tr>
<td>ECON 1765</td>
<td>Finance, Regulation, and the Economy: Research</td>
</tr>
<tr>
<td>ECON 1770</td>
<td>Fixed Income Securities</td>
</tr>
<tr>
<td>ECON 1780</td>
<td>Corporate Strategy</td>
</tr>
<tr>
<td>ECON 1790</td>
<td>Corporate Governance and Management</td>
</tr>
<tr>
<td>Select one 1000-level course from the &quot;mathematical economics&quot; group:</td>
<td></td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</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</td>
</tr>
<tr>
<td></td>
<td>Stabilization Policies</td>
</tr>
<tr>
<td>ECON 1465</td>
<td>Market Design: Theory and Applications</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 1760</td>
<td>Financial Institutions</td>
</tr>
<tr>
<td>ECON 1765</td>
<td>Finance, Regulation, and the Economy: Research</td>
</tr>
<tr>
<td>ECON 1770</td>
<td>Fixed Income Securities</td>
</tr>
<tr>
<td>ECON 1780</td>
<td>Corporate Strategy</td>
</tr>
<tr>
<td>ECON 1790</td>
<td>Corporate Governance and Management</td>
</tr>
<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>

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 2
(b) Select one of the following:
   - APMA 0160 Introduction to Scientific Computing
   - CSCI 0040 Introduction to Scientific Computing and Problem Solving
   - CSCI 0150 Introduction to Object-Oriented Programming and Computer Science
   - CSCI 0170 Computer Science: An Integrated Introduction
   - APMA 1200 Operations Research: Probabilistic Models
   - APMA 1650 Statistical Inference I

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
- ECON 1630 Econometrics I

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

Total Credits 15

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 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) APMA 0350 & APMA 0360 Applied Ordinary Differential Equations and Methods of Applied Mathematics I, II 2
(b) 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

Select one of the following: 1
### Undergraduate Concentrations

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>APMA 1200</td>
<td>Operations Research: Probabilistic Models</td>
</tr>
<tr>
<td>APMA 1210</td>
<td>Operations Research: Deterministic Models</td>
</tr>
<tr>
<td>APMA 1660</td>
<td>Statistical Inference II</td>
</tr>
<tr>
<td>APMA 1670</td>
<td>Statistical Analysis of Time Series</td>
</tr>
<tr>
<td>APMA 1680</td>
<td>Nonparametric Statistics</td>
</tr>
<tr>
<td>APMA 1690</td>
<td>Computational Probability and Statistics</td>
</tr>
<tr>
<td>APMA 1700</td>
<td>The Mathematics of Insurance</td>
</tr>
<tr>
<td>APMA 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>

**Economics Requirements:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1130</td>
<td>Intermediate Microeconomics (Mathematical)</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:

- 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:

- 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
- ECON 1759 Data, Statistics, Finance
- ECON 1765 Finance, Regulation, and the Economy: Research

One additional 1000-level economics course

Total Credits: 13

(a) 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

(b) Select two of the following:

- APMA 1200 Operations Research: Probabilistic Models
- APMA 1210 Operations Research: Deterministic Models
- APMA 1650 Statistical Inference I

Three 1000-level 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

One additional 1000-level economics course

Total Credits: 16

---

1. No course may be used to simultaneously satisfy (a) and (b).
2. APMA 0330 and APMA 0340 may be substituted with advisor approval.
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

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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
- Select one of the following: 1
  - APMA 0160 Introduction to Scientific Computing (preferred)
  - CSCI 0040 Introduction to Scientific Computing and Problem Solving (preferred)
  - CSCI 0150 Introduction to Object-Oriented Programming and Computer Science
  - CSCI 0170 Computer Science: An Integrated Introduction
  - APMA 1200 Operations Research: Probabilistic Models
- APMA 1650 Statistical Inference I
(b)  
- Select one of the following: 1
  - APMA 1180 Introduction to Numerical Solution of Differential Equations
  - APMA 1330 Methods of Applied Mathematics III, IV

Select two 1000-level courses from the "financial economics" group: 2 1
- ECON 1130 Intermediate Microeconomics (Mathematical)
- ECON 1210 Intermediate Macroeconomics
- ECON 1630 Econometrics I

Select one 1000-level course from the "mathematical economics" group: 1
- ECON 1170 Welfare Economics and Social Choice Theory

Select one 1000-level course from the "data methods" group: 2
- 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
- ECON 1759 Data, Statistics, Finance
- ECON 1765 Finance, Regulation, and the Economy: Research

Total Credits: 13

1. APMA 0330 and APMA 0340 may be substituted with advisor approval.
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.

Standard program for the Sc.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
- Select one of the following: 1
  - APMA 0160 Introduction to Scientific Computing (preferred)
  - CSCI 0040 Introduction to Scientific Computing and Problem Solving (preferred)
  - CSCI 0150 Introduction to Object-Oriented Programming and Computer Science
  - CSCI 0170 Computer Science: An Integrated Introduction
  - APMA 1200 Operations Research: Probabilistic Models
- APMA 1650 Statistical Inference I
(b)  
- Select two 1000-level courses from the "financial economics" group: 2 1
  - ECON 1650 Financial Econometrics
  - ECON 1759 Data, Statistics, Finance
  - ECON 1765 Finance, Regulation, and the Economy: Research

Select one 1000-level course from the "mathematical economics" group: 1
- ECON 1170 Welfare Economics and Social Choice Theory

Select two 1000-level courses from the "data methods" group: 2
- ECON 1180 Introduction to Numerical Solution of Differential Equations
- APMA 1330 Methods of Applied Mathematics III, IV

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

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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>APMA 1660</td>
<td>Statistical Inference II</td>
</tr>
<tr>
<td>APMA 1670</td>
<td>Statistical Analysis of Time Series</td>
</tr>
<tr>
<td>APMA 1680</td>
<td>Nonparametric Statistics</td>
</tr>
<tr>
<td>APMA 1690</td>
<td>Computational Probability and Statistics</td>
</tr>
<tr>
<td>APMA 1700</td>
<td>The Mathematics of Insurance</td>
</tr>
<tr>
<td>APMA 1720</td>
<td>Monte Carlo Simulation with Applications to Finance (preferred)</td>
</tr>
<tr>
<td>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>

### Economics Requirements:

- **ECON 1130** Intermediate Microeconomics (Mathematical) \(^3\) 1
- **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

Select one 1000-level course from the "data methods" group: 1

- **ECON 1305** Economics of Education: Research
- **ECON 1310** Labor Economics
- **ECON 1360** Health Economics
- **ECON 1410** Urban Economics
- **ECON 1510** Economic Development
- **ECON 1520** The Economic Analysis of Institutions
- **ECON 1530** Health, Hunger and the Household in Developing Countries
- **ECON 1640** Econometrics II
- **ECON 1650** Financial Econometrics
- **ECON 1759** Data, Statistics, Finance
- **ECON 1765** Finance, Regulation, and the Economy: Research

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.
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 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 0150 Introduction to Egyptian Archaeology and Art
  - ARCH 0420 Archaeologies of the Greek Past

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 Assyriology, 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 Near Eastern archaeology and art.
- Two courses in Mediterranean (prehistoric, Greek, Roman, medieval) archaeology and art.
- Two additional courses, in EITHER Mediterranean (prehistoric, Greek, Roman, medieval) archaeology OR Egyptian or Near Eastern archaeology and art, at or above the 1000-level.

**Classical Archaeology:**

- One course in Egyptian or Near Eastern 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:
  - GREEK 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 or 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 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:

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

<table>
<thead>
<tr>
<th>Program</th>
<th>Select one of the following mathematics courses:</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MATH 0520 Linear Algebra</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MATH 0540 Honors Linear Algebra</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PHYS 0720 Methods of Mathematical Physics</td>
<td></td>
</tr>
<tr>
<td></td>
<td>APMA 0330 Methods of Applied Mathematics I, II</td>
<td></td>
</tr>
<tr>
<td></td>
<td>APMA 0340 Methods of Applied Mathematics I, II</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Program</th>
<th>Select two of the following astrophysics courses:</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PHYS 1100 Introduction to General Relativity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PHYS 1250 Stellar Structure and the Interstellar Medium</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PHYS 1270 Extragalactic Astronomy and High-Energy Astrophysics</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PHYS 1280 Introduction to Cosmology</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Program</th>
<th>Three additional 1000- or 2000-level courses in physics or a related field, suggestions:</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>APMA 1670 Statistical Analysis of Time Series</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ENGL 1860 Advanced Fluid Mechanics</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GEOL 0810 Planetary Geology</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GEOL 1710 Remote Sensing of Earth and Planetary Surfaces</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GEOL 1810 Physics of Planetary Evolution</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MATH 1060 Differential Geometry</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PHYS 0500 Advanced Classical Mechanics</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PHYS 0560 Experiments in Modern Physics</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PHYS 1410 Quantum Mechanics A</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PHYS 1510 Advanced Electromagnetic Theory</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PHYS 1530 Thermodynamics and Statistical Mechanics</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PHYS 1560 Modern Physics Laboratory</td>
<td></td>
</tr>
</tbody>
</table>

| Total Credits | 11-12 |

### Biochemistry & Molecular Biology

How does life work at the molecular level? This question is at the core of the concentration program Biochemistry and Molecular Biology. In earlier years of this discipline, the focus was on structure and function of proteins, nucleic acids, lipids, carbohydrates and small molecules such as vitamins. Today the logical approach and tools of biochemical science are being expanded to new areas in neuroscience, developmental biology, immunology, pharmacology and synthetic biology (the design of analogs of biological systems). Training in biochemistry begins with a foundation in mathematics, physics, chemistry and biology. Some courses offered in other departments, including engineering, geology and computer science, are also useful. A key component of this program is the year of hands-on research carried out in collaboration with a faculty member here at Brown. Faculty sponsors are drawn from both the Chemistry Department and the Division of Biology and Medicine, and include basic science and clinical faculty.

#### Standard program for the Sc.B. degree

Students must take twenty courses in biology, chemistry, mathematics, and physics, including the following core requirements, some of these may be fulfilled with AP credits. Students are expected to take courses that will count toward the concentration ABC/NC. Students should discuss their S/NC option with their concentration advisor if circumstances warrant consideration. Students should not register S/NC for a concentration course without advisor pre-approval.

#### Biochemistry 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:
- NEUR 1020 Principles of Neurobiology
- NEUR 1670 Neuropharmacology and Synaptic Transmission

#### Chemistry Electives:
- CHEM 0500 Inorganic Chemistry
- CHEM 1140 Physical Chemistry: Quantum Chemistry

#### 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

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
The Biology concentration invites students to study, in depth and in breadth, the science of life and living matter. Whether pursuing the 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/Biotechnology; 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:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 0330</td>
<td>Equilibrium, Rate, and Structure</td>
</tr>
<tr>
<td>CHEM 0350</td>
<td>Organic Chemistry</td>
</tr>
<tr>
<td>MATH 0090</td>
<td>Introductory Calculus, Part I (or placement)</td>
</tr>
<tr>
<td></td>
<td>MATH 0050/MATH 0060 may be substituted for MATH 0090.</td>
</tr>
</tbody>
</table>

One of the following:

- MATH 0100 Introductory Calculus, Part II (or placement)
- MATH 0170 Advanced Placement Calculus (or equivalent placement)

**Ten Core Courses:**

<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 (Required course; AP credit or similar IB or A-levels accepted, placement test available.)</td>
</tr>
</tbody>
</table>

The Area requirement must be fulfilled by taking at least one course in each of these groups:

### 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 Inquiry in Plant Biology: Analysis of Plant Growth, Reproduction and Adaptive Responses
- BIOL 0800 Principles of Physiology
- BIOL 1120 Biomaterials
- BIOL 1310 Developmental Biology
- BIOL 1330 Biology of Reproduction
- BIOL 1880 Comparative Biology of the Vertebrates
- NEUR 0010 The Brain: An Introduction to Neuroscience

### Area 3 (Organismal Biology)

- BIOL 1040K 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**

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/BIOL 1960, (Directed Research) may be included, but is not required. If a lab project, this can count for ONE of the three lab course requirements, and one advanced course.
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.

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

**Honors:** Honors in biology requires a thesis and presentation based on a research project (conducted via BIOL 1950/BIOL 1960), and quality grades in the concentration. Guidelines and information on faculty research are available in the Office of Biology Undergraduate Education or found at [http://www.brown.edu/academics/biology/undergraduate-education/](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 seventeen prerequisite courses in math, chemistry, and physics as well as thirteen to fourteen courses in biological sciences, including courses in each of the following three areas: Area 1: Cell/Molecular Biology, Area 2: Structure/Function, and Area 3: Organismal Biology, and the three-course Track. The biological sciences requirement also requires research (BIOL 1950/BIOL 1960), which should reflect the advanced cluster.

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:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0090</td>
<td>Introductory Calculus, Part I (or placement, MATH 0050/MATH 0060 may be substituted for MATH 0090)</td>
</tr>
<tr>
<td>MATH 0100</td>
<td>Introductory Calculus, Part II</td>
</tr>
<tr>
<td>or MATH 0170</td>
<td>Advanced Placement Calculus</td>
</tr>
<tr>
<td>CHEM 0330</td>
<td>Equilibrium, Rate, and Structure (or IB credit)</td>
</tr>
<tr>
<td>CHEM 0350</td>
<td>Organic Chemistry</td>
</tr>
<tr>
<td>or BIOL 0280</td>
<td>Introductory Biochemistry</td>
</tr>
<tr>
<td>PHYS 0030</td>
<td>Basic Physics (or equivalent, PHYS 0050 or ENGN 0030 may be substituted for PHYS 0030.)</td>
</tr>
<tr>
<td>PHYS 0040</td>
<td>Basic Physics (or equivalent, PHYS 0060 or ENGN 0040 may be substituted for PHYS 0040.)</td>
</tr>
</tbody>
</table>

**Core Courses:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 0200</td>
<td>The Foundation of Living Systems (or placement)</td>
</tr>
<tr>
<td>BIOL 0280</td>
<td>Introductory Biochemistry</td>
</tr>
<tr>
<td>BIOL 0470</td>
<td>Genetics</td>
</tr>
<tr>
<td>BIOL 0500</td>
<td>Cell and Molecular Biology</td>
</tr>
<tr>
<td>BIOL 0510</td>
<td>Introductory Microbiology</td>
</tr>
<tr>
<td>BIOL 0530</td>
<td>Principles of Immunology</td>
</tr>
<tr>
<td>BIOL 1050</td>
<td>Biology of the Eukaryotic Cell</td>
</tr>
<tr>
<td>BIOL 1310</td>
<td>Developmental Biology</td>
</tr>
<tr>
<td>NEUR 1020</td>
<td>Principles of Neurobiology</td>
</tr>
</tbody>
</table>

**Area 1 (Cell/Molecular Biology)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 0400</td>
<td>Biological Design: Structural Architecture of Organisms</td>
</tr>
<tr>
<td>BIOL 0410</td>
<td>Invertebrate Zoology</td>
</tr>
<tr>
<td>BIOL 0440</td>
<td>Inquiry in Plant Biology: Analysis of Plant Growth, Reproduction and Adaptive Responses</td>
</tr>
<tr>
<td>BIOL 0800</td>
<td>Principles of Physiology</td>
</tr>
<tr>
<td>BIOL 1120</td>
<td>Biomaterials</td>
</tr>
<tr>
<td>BIOL 1310</td>
<td>Developmental Biology</td>
</tr>
<tr>
<td>BIOL 1330</td>
<td>Biology of Reproduction</td>
</tr>
<tr>
<td>BIOL 1880</td>
<td>Comparative Biology of the Vertebrates</td>
</tr>
<tr>
<td>NEUR 0010</td>
<td>The Brain: An Introduction to Neuroscience</td>
</tr>
</tbody>
</table>

**Area 3 (Organismal Biology)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 0140K</td>
<td>Conservation Medicine</td>
</tr>
<tr>
<td>BIOL 0210</td>
<td>Diversity of Life</td>
</tr>
<tr>
<td>BIOL 0350</td>
<td>The Fossil Record: Life through Time on Earth</td>
</tr>
<tr>
<td>BIOL 0370</td>
<td>Experimental Evolution</td>
</tr>
<tr>
<td>BIOL 0410</td>
<td>Invertebrate Zoology</td>
</tr>
<tr>
<td>BIOL 0415</td>
<td>Microbes in the Environment</td>
</tr>
<tr>
<td>BIOL 0420</td>
<td>Principles of Ecology</td>
</tr>
<tr>
<td>BIOL 0430</td>
<td>The Evolution of Plant Diversity</td>
</tr>
<tr>
<td>BIOL 0480</td>
<td>Evolutionary Biology</td>
</tr>
<tr>
<td>BIOL 1880</td>
<td>Comparative Biology of the Vertebrates</td>
</tr>
<tr>
<td>ENVS 0490</td>
<td>Environmental Science in a Changing World</td>
</tr>
</tbody>
</table>

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. See listing at [http://biology.brown.edu/bug/](http://biology.brown.edu/bug/) for options.

**RESEARCH:** Typically, two courses in Track is advanced level research (BIOL 1950, 1960).

**TRACK:**

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. See listing at [http://biology.brown.edu/bug/](http://biology.brown.edu/bug/) for options. Related sciences must be above prerequisite level, and suitable for science concentrators.
4. If substantial research is carried out away from Brown, it must be approved by an appropriate Brown BioMed faculty member but does not carry course credit toward the Core program.
5. At least two, and preferably all three, must be above 1000-level. Courses used for the cluster, must be approved by an advisor and/or Associate Dean of Biology, Katherine Smith.

**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/](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.

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

ENGN 0030 Introduction to Engineering 1
ENGN 0040 Dynamics and Vibrations 1
ENGN 0510 Electricity and Magnetism 1
ENGN 0720 Thermodynamics 1
ENGN 0810 Fluid Mechanics 1
BIOL 0200 The Foundation of Living Systems 1
or NEUR 0010 The Brain: An Introduction to Neuroscience
BIOL 0800 Principles of Physiology 1
CHEM 0330 Equilibrium, Rate, and Structure 1
CHEM 0350 Organic Chemistry 1
MATH 0190 Advanced Placement Calculus (Physics/Engineering) 1
or MATH 0170 Advanced Placement Calculus
MATH 0200 Intermediate Calculus (Physics/Engineering) 1
or MATH 0180 Intermediate Calculus
or MATH 0350 Honors Calculus
APMA 0330 Methods of Applied Mathematics I, II 1
or APMA 0350 Applied Ordinary Differential Equations
APMA 0650 Essential Statistics 1
or APMA 1650 Statistical Inference I

2. Upper Level Biomedical Engineering Curriculum

ENGN 1110 Transport and Biotransport Processes 1
ENGN 1210 Biomechanics 1
ENGN 1230 Instrumentation Design 1
ENGN 1490 Biomaterials 1
Three Additional Upper Level Biomedical Engineering Courses 3

Select at least one of the following: 3

BIOL 1140 Tissue Engineering
or ENGN 1220 Neuroengineering
or ENGN 1400 Analytical Methods in Biomaterials
or ENGN 1930E Photonics and Biophotonics
or ENGN 1930F Molecular and Cell Biology for Engineers
or ENGN 2910 Cancer Nanotechnology

Select at most two of the following: 4

BIOL 1150 Stem Cell Engineering
or BIOL 1210 Synthetic Biological Systems
or BIOL 1800 Animal Locomotion
or BIOL 2110 Drug and Gene Delivery
or BIOL 2130 Techniques in Molecular and Cell Science

3. Capstone Design 5

ENGN 1930L Biomedical Engineering Design, Research and Modeling 1

* 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.

Standard program for the Sc.B. degree

Requirements

Select one of the following Series: 2

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
PHYS 0470 Electricity and Magnetism 1
CHEM 0330 Equilibrium, Rate, and Structure 1
CHEM 0350 Organic Chemistry 1
CHEM 0360 Organic Chemistry 1

Select one of the following: 1

CHEM 0400 Biophysical and Bioinorganic Chemistry
CHEM 1140 Physical Chemistry: Quantum Chemistry

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

**Business, Entrepreneurship and Organizations**

Business, Entrepreneurship and Organizations (BEO), formerly Commerce, Organizations and Entrepreneurship (COE), is a multidisciplinary concentration that provides a rigorous and synergistic program in the study of commercial activity grounded in economics, sociology and engineering. BEO focuses on the formation, growth, and organization of new ventures, innovation in commercial applications, financial markets and the marketplace, and management and organizational theory. Concentrators seek to understand the basic principles, approaches and vocabulary relevant to the study of entrepreneurship from the disciplines of economics, organizational sociology and engineering. Building on this multidisciplinary base, students develop specialized expertise in one of the three disciplinary approaches, with special emphasis on critical reasoning and quantitative research methods. In senior year capstone projects, students apply and integrate multi-disciplinary learning by working in groups on real world projects, including the creation of new ventures.

The three tracks of the concentration are as follows:

1. **Business Economics**
2. **Organizational Studies**
3. **Entrepreneurship and Technology Management**

Upon completion of all concentration requirements, students receive the Bachelor of Arts (A.B.) degree in Business, Entrepreneurship and Organizations.

**The Curriculum**

**Business Economics Track**

**Foundation Requirements (foundation requirements must be completed before taking the capstone in fall of senior year)**

- ECON 0110 Principles of Economics 1
- ECON 1110 Intermediate Microeconomics 1
- SOC 1311 Micro-Organizational Theory: Social Behavior in Organizations 1
- SOC 1315 Macro-Organizational Theory: Organizations in Social Context 1
- ENGN 0020 or ENGN 0030 Introduction to Engineering 1
- ENGN 1010 The Entrepreneurial Process: Innovation in Practice 1

**Math and Statistics Requirements**

- MATH 0090 Introductory Calculus, Part I 1
- ECON 1620 Introduction to Econometrics 1

**Track Requirements**

- ECON 0710 Financial Accounting 1
- ECON 1210 Intermediate Macroeconomics 1
- ECON 1710 Investments I 1
- ECON 1720 Corporate Finance 1

One Data Methods-intensive course from the following list:

- ECON 1301 Economics of Education I
- ECON 1305 Economics of Education: Research
- ECON 1310 Labor Economics
- ECON 1355 Environmental Issues in Development Economics (ENVS 1355)
- ECON 1360 Health Economics
- ECON 1375 Inequality of Opportunity in the US
- ECON 1400 The Economics of Mass Media
- ECON 1420 Urbanization in China
- ECON 1480 Public Economics
- ECON 1510 Economic Development
- ECON 1520 The Economic Analysis of Institutions

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1530</td>
<td>Health, Hunger and the Household in Developing Countries</td>
</tr>
<tr>
<td>ECON 1629</td>
<td>Applied Research Methods for Economists</td>
</tr>
<tr>
<td>ECON 1640</td>
<td>Econometrics II</td>
</tr>
<tr>
<td>ECON 1650</td>
<td>Financial Econometrics</td>
</tr>
<tr>
<td>ECON 1660</td>
<td>Big Data</td>
</tr>
<tr>
<td>ECON 1750</td>
<td>Investments II</td>
</tr>
<tr>
<td>ECON 1759</td>
<td>Data, Statistics, Finance</td>
</tr>
<tr>
<td>ECON 1765</td>
<td>Finance, Regulation, and the Economy: Research</td>
</tr>
<tr>
<td>One 1000-level economics course, including a second data methods intensive course from the list above</td>
<td>1</td>
</tr>
<tr>
<td>Capstone: one-semester required (must be taken fall of senior year)</td>
<td>1</td>
</tr>
<tr>
<td>BEO 1930C</td>
<td>BEO Capstone I: Business Economics Track</td>
</tr>
</tbody>
</table>

**Total Credits: 15**

1 Or an optional two-semester capstone from the BEO 1930 and 1940 series

## 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>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 0110</td>
<td>Principles of Economics</td>
</tr>
<tr>
<td>ECON 1110</td>
<td>Intermediate Microeconomics</td>
</tr>
<tr>
<td>SOC 1311</td>
<td>Micro-Organizational Theory: Social Behavior in Organizations</td>
</tr>
<tr>
<td>SOC 1315</td>
<td>Macro-Organizational Theory: Organizations in Social Context</td>
</tr>
<tr>
<td>ENGN 0020</td>
<td>Transforming Society-Technology and Choices for the Future</td>
</tr>
<tr>
<td>or ENGN 0030</td>
<td>Introduction to Engineering</td>
</tr>
<tr>
<td>ENGN 1010</td>
<td>The Entrepreneurial Process: Innovation in Practice</td>
</tr>
</tbody>
</table>

### Math and Statistics Requirements

<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>SOC 1100</td>
<td>Introductory Statistics for Social Research</td>
</tr>
<tr>
<td>or APMA 0650</td>
<td>Essential Statistics</td>
</tr>
<tr>
<td>or ECON 1620</td>
<td>Introduction to Econometrics</td>
</tr>
</tbody>
</table>

### Track Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Introduction to Research Methods course (selected from the following):</td>
<td>1</td>
</tr>
<tr>
<td>SOC 1020</td>
<td>Methods of Social Research</td>
</tr>
<tr>
<td>SOC 1050</td>
<td>Methods of Research in Organizations</td>
</tr>
<tr>
<td>One Advanced Research Methods course (selected from the following):</td>
<td>1</td>
</tr>
<tr>
<td>ANTH 1940</td>
<td>Ethnographic Research Methods</td>
</tr>
<tr>
<td>ECON 1390</td>
<td>Research Methods for Economists</td>
</tr>
<tr>
<td>ECON 1630</td>
<td>Econometrics I</td>
</tr>
<tr>
<td>EDUC 1100</td>
<td>Introduction to Qualitative Research Methods</td>
</tr>
<tr>
<td>EDUC 1160</td>
<td>Evaluating the Impact of Social Programs</td>
</tr>
<tr>
<td>PHP 1320</td>
<td>Survey Research in Health Care</td>
</tr>
<tr>
<td>PLCY 1200</td>
<td>Policy Analysis and Program Evaluation</td>
</tr>
<tr>
<td>PLCY 2035</td>
<td>Statistics II for Public Policy Analysis</td>
</tr>
<tr>
<td>PLCY 2040</td>
<td>Policy Analysis and Program Evaluation</td>
</tr>
<tr>
<td>PLCY 2050</td>
<td>Program Evaluation</td>
</tr>
<tr>
<td>SOC 1117</td>
<td>Focus Groups for Market and Social Research</td>
</tr>
<tr>
<td>SOC 1118</td>
<td>Context Research for Innovation</td>
</tr>
<tr>
<td>SOC 1120</td>
<td>Market and Social Surveys</td>
</tr>
<tr>
<td>SOC 1260</td>
<td>Market Research in Public and Private Sectors</td>
</tr>
<tr>
<td>SOC 1340</td>
<td>Principles and Methods of Geographic Information Systems</td>
</tr>
<tr>
<td>SOC 1871W</td>
<td>Geographical Analysis of Society</td>
</tr>
<tr>
<td>SOC 2020</td>
<td>Multivariate Statistical Methods II</td>
</tr>
<tr>
<td>SOC 2210</td>
<td>Qualitative Methods</td>
</tr>
<tr>
<td>SOC 2220</td>
<td>Advanced Quantitative Methods of Sociology Analysis</td>
</tr>
<tr>
<td>SOC 2240</td>
<td>Event History Analysis</td>
</tr>
<tr>
<td>SOC 2610</td>
<td>Spatial Thinking in Social Science</td>
</tr>
</tbody>
</table>

One Advanced Organization Studies course (selected from the following):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLPS 1730</td>
<td>Psychology in Business and Economics</td>
</tr>
<tr>
<td>ECON 1790</td>
<td>Corporate Governance and Management</td>
</tr>
<tr>
<td>PLCY 1700V</td>
<td>Nonprofit Organizations</td>
</tr>
<tr>
<td>PLCY 1700Y</td>
<td>Crisis Management</td>
</tr>
<tr>
<td>PLCY 2020</td>
<td>Public Budgeting and Management</td>
</tr>
<tr>
<td>PLCY 2350</td>
<td>Thinking, Planning and Acting Strategically</td>
</tr>
<tr>
<td>PLCY 2550</td>
<td>Managing and Leading in Public Affairs</td>
</tr>
<tr>
<td>PLCY 2700</td>
<td>Advanced Organizational and Management Strategies</td>
</tr>
<tr>
<td>SOC 1060</td>
<td>Leadership in Organizations</td>
</tr>
<tr>
<td>SOC 1080</td>
<td>Groups in Organizations</td>
</tr>
<tr>
<td>SOC 1121</td>
<td>Creative Companies: Entrepreneurship, Markets, and the Culture Industry</td>
</tr>
<tr>
<td>SOC 1352</td>
<td>Employment and Labor in the New Economy</td>
</tr>
<tr>
<td>SOC 1540</td>
<td>Human Needs and Social Services</td>
</tr>
<tr>
<td>SOC 1870A</td>
<td>Investing in Social Change</td>
</tr>
<tr>
<td>SOC 1871L</td>
<td>Migration, Displacement and Emerging Community Experiences: Contemporary Turkey</td>
</tr>
<tr>
<td>SOC 1871M</td>
<td>Theories of the Third Sector and Civil Society</td>
</tr>
<tr>
<td>SOC 1871O</td>
<td>Law, Innovation and Entrepreneurship</td>
</tr>
<tr>
<td>SOC 1871T</td>
<td>Who Governs Markets?</td>
</tr>
<tr>
<td>SOC 1872A</td>
<td>Stratification and Labor Markets</td>
</tr>
<tr>
<td>SOC 1872B</td>
<td>Sociology of Money</td>
</tr>
<tr>
<td>SOC 2060</td>
<td>Complex Organizations and Health Policy</td>
</tr>
<tr>
<td>SOC 2960F</td>
<td>Global Political Economy</td>
</tr>
<tr>
<td>SOC 2960M</td>
<td>Sociology of Organizations Graduate Seminar</td>
</tr>
</tbody>
</table>

Two Organization-Relevant Electives (selected from the following): 2

Any from the Advanced Research Methods or Advanced Organization-Studies lists; or

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMST 1610A</td>
<td>American Advertising: History and Consequences</td>
</tr>
<tr>
<td>ECON 1760</td>
<td>Financial Institutions</td>
</tr>
<tr>
<td>EDUC 1020</td>
<td>The History of American Education</td>
</tr>
<tr>
<td>EDUC 1040</td>
<td>Sociology of Education</td>
</tr>
<tr>
<td>EDUC 1060</td>
<td>Politics and Public Education</td>
</tr>
<tr>
<td>EDUC 1150</td>
<td>Education, the Economy and School Reform</td>
</tr>
<tr>
<td>EDUC 1200</td>
<td>History of American School Reform</td>
</tr>
<tr>
<td>EDUC 1650</td>
<td>Policy Implementation in Education</td>
</tr>
<tr>
<td>EDUC 1730</td>
<td>American Higher Education in Historical Context</td>
</tr>
<tr>
<td>ENGN 1930S</td>
<td>Land Use and Built Environment: An Entrepreneurial View</td>
</tr>
<tr>
<td>ETHN 1890C</td>
<td>Business, Culture, and Globalization: An Ethnographic Perspective</td>
</tr>
<tr>
<td>PHP 2400</td>
<td>The U.S. Health Care System: Case Studies in Financing, Delivery, Regulation and Public Health</td>
</tr>
<tr>
<td>PLCY 1700R</td>
<td>Urban Revitalization: Lessons from the Providence Plan</td>
</tr>
<tr>
<td>PLCY 1701J</td>
<td>Policy Implementation</td>
</tr>
<tr>
<td>PLCY 1701K</td>
<td>Governance in the Academy: A University at Work in the 21st Century</td>
</tr>
<tr>
<td>PLCY 1701O</td>
<td>Labor Market Policy</td>
</tr>
<tr>
<td>PLCY 1701Q</td>
<td>Leading Social Ventures - Social Entrepreneurship in Action</td>
</tr>
<tr>
<td>PLCY 1800</td>
<td>Investigating Modes of Social Change</td>
</tr>
<tr>
<td>PLCY 1910</td>
<td>Social Entrepreneurship</td>
</tr>
</tbody>
</table>

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

Chemical Physics is an interdisciplinary field at the crossroads of chemistry and physics and is administered jointly by the two departments. The concentration provides students with a broad-based understanding in fundamental molecular sciences, as well as a background for graduate studies in physical chemistry, chemical physics, or molecular engineering. Concentrators are required to take twenty courses in chemistry, physics, and mathematics, although approved courses in applied mathematics, biology, computer science, geological sciences, or engineering may be substitutes. Chemical Physics concentrators are also advised to take at least six courses in the humanities and social sciences. Chemical Physics concentrators at all levels (first-year through seniors) are actively involved in research with faculty members in both departments.

### Standard program for the Sc.B. degree

Twenty-one semester courses in chemistry, physics, and mathematics, with a minimum of four semester courses in mathematics. The expectation is that courses required for a concentration in Chemical Physics will be taken for a letter grade. Core courses are:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 0330</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 0350</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 0500</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 1140</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 0070</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 0160</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 0470</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL CREDITS</td>
<td>10</td>
</tr>
</tbody>
</table>

Select one of the following laboratory courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1160</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 0560</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 1560</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL CREDITS</td>
<td>3</td>
</tr>
</tbody>
</table>

### Standard program for the A.B. degree

The Chemistry concentration offers courses and research opportunities that range from fundamental studies involving the characterization and preparation of synthetic and naturally occurring molecules, to interdisciplinary studies at the interfaces of chemistry with biology, medicine, physics, engineering, and nanoscience. As early as their first year, undergraduates are able to work one-on-one or in small groups with faculty members on cutting edge research projects. The Sc.B. degree provides a thorough foundation for further graduate study or for entry-level technical positions in each area. Students seeking the Sc.B. may either pursue the standard Chemistry concentration or one of the two optional tracks: Chemical Biology or Materials Chemistry. Students may also pursue the A.B. degree in Chemistry, which provides a core education in the discipline.

### Standard program for the A.B. degree

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 0330</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 0350</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL CREDITS</td>
<td>2</td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Standard program for the Sc.B. degree

The Chemistry Department offers three tracks for the Sc.B. Chemistry Concentration – a Chemistry track, a Chemical Biology track and a Materials Chemistry track. These tracks are not separate concentrations – your degree will still be an Sc.B. in Chemistry. The Chemical Biology track is designed for students who have a strong interest in the interface of chemistry with biology. The Materials Chemistry track is designed for students who have a strong interest in the interface of chemistry with nanoscience and materials science. The expectation is that courses required for the concentration will be taken for a letter grade.

Concentrating in Chemistry – Three Tracks

The required/recommended courses for the three tracks are given below.

**Chemistry Track:**

- CHEM 0330 Equilibrium, Rate, and Structure 1
- CHEM 0350 Organic Chemistry 1
- CHEM 0360 Organic Chemistry 1
- CHEM 0500 Inorganic Chemistry 1
- CHEM 0970 Undergraduate Research 1
- CHEM 0980 Undergraduate Research 1
- CHEM 1140 Physical Chemistry: Quantum Chemistry 1
- CHEM 1150 Physical Chemistry: Thermodynamics and Statistical Mechanics 1
- CHEM 1160 Physical Chemistry Laboratory 1
- MATH 0180 or equivalent 3 1
- Two Physics courses 2
- Seven electives (at least three must be in Chemistry) 1

Total Credits 19

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.

**Chemical Biology Track:**

- CHEM 0330 Equilibrium, Rate, and Structure 1
- CHEM 0350 Organic Chemistry 1
- CHEM 0360 Organic Chemistry 1
- CHEM 0400 Biophysical and Bioinorganic Chemistry 1
- CHEM 0970 Undergraduate Research 1
- CHEM 0980 Undergraduate Research 1
- CHEM 1140 Physical Chemistry: Quantum Chemistry 1
- CHEM 1230 Chemical Biology 1
- CHEM 1240 Biochemistry 1
- BIOL 0280 Introductory Biochemistry 1
- MATH 0180 or equivalent 3 1
- Two Physics courses 2
- Select three of the following: 4
  - BIOL 0470 Genetics
  - BIOL 0500 Cell and Molecular Biology
  - BIOL 0510 Introductory Microbiology
  - BIOL 0530 Principles of Immunology
  - BIOL 0800 Principles of Physiology

Total Credits 19

1 BIOL 0280 is credited as an elective for the chemistry concentration.
2 For students with a more Engineering bent, the following substitutions can be made - ENGR 0030/ENGR 0040 can be substituted for PHYS; ENGR 0410 can be substituted for CHEM 1060; ENGR 0720 for CHEM 1150.
3 NOTE: MATH 0180 has additional prerequisites.
4 NOTE: Many of the BIOL courses have BIOL 0200 as a prerequisite.

In each of these cases, CHEM 0970/CHEM 0980 should be carried out with a faculty member with an appointment in the Chemistry Department. Research with faculty advisors outside Chemistry may be allowed in some special cases. In this event, the student should a) prepare a proposal for the research to be carried out and b) identify a faculty member in the Chemistry Department who will serve as a second advisor and the second reader for the thesis.

**Honors Requirements for Chemistry**

All ScB Chemistry concentrators, and any AB concentrator who completes the following requirements, are candidates for Honors; no separate application is necessary.

The requirements for Honors in Chemistry are:

* A strong grade record in concentration courses. This means a grade point average for the concentration that is higher than 3.50.
* Two semesters of Independent Study (CHEM 0970, CHEM 0980 or equivalent. Guidelines and requirements associated with Independent Study are in the Undergraduate Concentration Handbook which can be found at the department website (http://www.brown.edu/academics/chemistry/undergraduate).
* A Thesis in a form approved by the research advisor, and recommended by the research advisor. Additional information about thesis guidelines will be provided by the Concentration Advisor in the first half of the fall semester.
* A Poster presentation at the chemistry department's spring undergraduate poster session.

**Classics**

Classics focuses on the languages, literature, history, and culture of Greco-Roman antiquity. It provides specialized training for students intending to enter graduate school, and a broad liberal education for those with more general interests. Students may choose to study Ancient Greek, Latin, Sanskrit, or Modern Greek and gain knowledge in literature, mythology, ancient history, philosophy, and religion. Students may either pursue the standard Classics concentration - the most popular choice
- or they may pursue one of the several optional tracks: Greek, Latin, Greek and Latin, South Asian Classics, Sanskrit, Greek and Sanskrit, or Latin and Sanskrit. Concentrators are strongly encouraged to integrate their studies in various fields of Classics by writing a senior thesis, by participating in an undergraduate seminar, or by undertaking a senior capstone project.

All tracks except "Greek and Latin," "Greek and Sanskrit," and "Latin and Sanskrit" require the satisfactory completion of eight courses as described below. Programs are flexible and students are encouraged to discuss their plans with the concentration advisor. The introductory courses in Greek and Latin may not usually be counted toward a concentration, but those in Sanskrit may be counted in some of the tracks.

**Classics**

One course in Greek or Latin on the 1000-level or above.  
Select one of the following series:

- CLAS 1210 & CLAS 1220 The History of Greece from Archaic Times to the Death of Alexander and The Fall of Empires and Rise of Kings: Greek History 479 to 323 BC
- CLAS 1310 & CLAS 1320 Roman History I: The Rise and Fall of an Imperial Republic and Roman History II: The Roman Empire and Its Impact

Five other courses in classics, including classical archaeology, Greek, Latin, Ṣaṅskṛīt, or related areas to be approved by the concentration advisor.  

Total Credits 8

1. Options offered in 2016/2017 include, but are not limited to: GREK 1050F, GREK 1100E, GREK 1100F, GREK 1110I, GREK 1111E, GREK 1150, GREK 1810, LATN 1040A, LATN 1060H, LATN 1110F, LATN 11110, LATN 1110R and LATN 1820.

2. Options offered by the Department of Classics in 2016/2017 include, but are not limited to: CLAS 0010, CLAS 0150, CLAS 0210L, CLAS 0660, CLAS 0780, CLAS 0810A, CLAS 0820, CLAS 0855, CLAS 0900, CLAS 0990, CLAS 1120E, CLAS 1120G, CLAS 1120W, CLAS 1120X, CLAS 1131, CLAS 1750L, CLAS 1770, GREK 0100, GREK 0110, GREK 0200, GREK 0300, GREK 0400, GREK 1050F, GREK 1100E, GREK 1100F, GREK 1110I, GREK 1111E, GREK 1150, GREK 1810, LATN 0100, LATN 0110, LATN 0200, LATN 0300, LATN 0400, LATN 1040A, LATN 1060H, LATN 1110F, LATN 1110I, LATN 1110Q, LATN 1110R, LATN 1820, SANS 0100 and SANS 0200.

**Greek**

Four Greek courses on the 1000-level or above, at least one of which is to be:

- GREK 1810 Early Greek Literature
- or GREK 1820 Fifth Century Survey

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

CLAS 1220 The Fall of Empires and Rise of Kings: Greek History 479 to 323 BC

Two additional courses in classics, including classical archaeology, Greek, Latin, or related areas to be approved by the concentration advisor.  

Total Credits 8

1. Options offered in 2016/2017 include, but are not limited to: GREK 1050F, GREK 1100E, GREK 1100F, GREK 1110I, GREK 1111E, GREK 1150, GREK 1810, and with instructor permission for those who are very advanced in Greek: GREK 2000A, GREK 2110E and GREK 2150.

2. See options listed under Classics track.

**Latin**

Four Latin courses on the 1000-level or above, at least one of which is to be:

- LATN 1810 Survey of Republican Literature  
- or LATN 1820 Survey of Roman Literature II: Empire
- CLAS 1310 Roman History I: The Rise and Fall of an Imperial Republic

CLAS 1320 Roman History II: The Roman Empire and Its Impact

Two additional courses in classics, including classical archaeology, Greek, Latin, or related areas to be approved by the concentration advisor.  

Total Credits 8

1. Options offered in 2016/2017 include, but are not limited to: LATN 1040A, LATN 1060H, LATN 1110F, LATN 1110I, LATN 1110O, LATN 1110R, LATN 1820, and with instructor permission for those who are very advanced in Latin: LATN 2010H and LATN 2080H.

2. See options listed under Classics track.

**Greek and Latin**

Four Latin courses on the 1000-level or above, at least one of which is to be:

- LATN 1810 Survey of Republican Literature  
- or LATN 1820 Survey of Roman Literature II: Empire

Four Greek courses on the 1000-level or above, at least one of which is to be:

- GREK 1810 Early Greek Literature  
- or GREK 1820 Fifth Century Survey
- CLAS 1210 The History of Greece from Archaic Times to the Death of Alexander
- CLAS 1220 The 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

Total Credits 12

1. Options offered in 2016/2017 include, but are not limited to: LATN 1040A, LATN 1060H, LATN 1110F, LATN 1110I, LATN 1110O, LATN 1110R, LATN 1820, and with instructor permission for those who are very advanced in Latin: LATN 2010H and LATN 2080H.

2. Options offered in 2016/2017 include: SANS 0400, SANS 1080 and SANS 1600.

**South Asian Classics**

At least one Sanskrit course above Sanskrit 0300  
Three of the Sanskrit Classics Courses in Translation  
Four other courses in Classics or related areas (such as Comparative Literature, Religious Studies, South Asian Studies, Early Cultures, etc.) to be approved by the concentration advisor

Total Credits 8

1. Options offered in 2016/2017 include: SANS 0400, SANS 1080 and SANS 1600.

2. Options offered in 2016/2017 include: CLAS 0210Y, CLAS 0820, CLAS 0855 and CLAS 0990.

**Sanskrit**

Two Sanskrit courses at the 1000-level or above  
Two of the Sanskrit Classics Courses in Translation  

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

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

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 Auditory Perception: Sensing the World through Sounds
- 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
- NEUR 1930N Region of Interest: An In-Depth Analysis of One Brain Area
- NEUR 1930F Brain Interfaces for Humans
- NEUR 1930G Disease, Mechanism, Therapy: Harnessing Basic Biology for Therapeutic Development

Primarily Computational/Modeling:

Students are advised to take APMA 0330 (Methods of Applied Analysis I) and APMA 0340 (Methods of Applied Analysis II) as their two supporting science courses. Note that MATH 0100 is a prerequisite for these courses. See CLPS listings (above) for other computational/modeling courses. See CLPS Topics listings for other computational/modeling courses.

APMA 1360 Topics in Chaotic Dynamics
- CLPS 1211 Human and Machine Learning
- CLPS 1291 Computational Methods for Mind, Brain and Behavior
- CLPS 1470 Mechanisms of Motivated Decision Making
- CLPS 1492 Computational Cognitive Neuroscience
- CLPS 1520 Computational Vision
- CSCI 1410 Applied Artificial Intelligence
- CSCI 1430 Computer Vision
- CSCI 1460 Computational Linguistics
- CSCI 1480 Building Intelligent Robots
- CSCI 1950A Computational Modeling and Algorithmic Thinking
- ENGN 1220 Neuroengineering
- ENGN 1610 Image Understanding

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

<table>
<thead>
<tr>
<th>Gateway</th>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLPS 0020</td>
<td>Approaches to the Mind: Introduction to Cognitive Science (or alternative, with permission of Concentration Advisor)</td>
<td></td>
</tr>
</tbody>
</table>

**Required core courses**

- **CORE IN COGNITION**
  - CLPS 0200 Human Cognition

- **CORE IN LINGUISTICS**
  - CLPS 0300 Introduction to Linguistic Theory

- **CORE IN PERCEPTION**
  - CLPS 0500 Perception and Mind

Select one of the following:

- **CORE IN COGNITIVE NEUROSCIENCE**
  - NEUR 0100 The Brain: An Introduction to Neuroscience
  - CLPS 0400 Mind and Brain: Introduction to Cognitive Neuroscience

**Required courses in skills and methodology**

One Experimental Laboratory 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 0400 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**

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
- 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 Auditory Perception: Sensing the World through Sounds
- CLPS 1520 Computational Vision
- CLPS 1530 3D Shape Perception
- CLPS 1600 History and Theories of Child Development (EDUC 1710)
- CLPS 1610 Cognitive Development
- 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
- 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
- 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

Total Credits: 13

Note: Students cannot use an AP Statistics course in lieu of this requirement. APMA 0650 and SOC 1100 will not fulfill this requirement.
In most cases, electives must be at the 1000-level and must show coherence and provide the concentrator with depth in one or more focus areas. Only one course below the 1000-level can be included in this list, and only with permission of the concentration advisor. Students are strongly encouraged to work out their program of electives with the concentration advisor.

II. Standard program for the Sc.B. degree: 18 Courses

Gateway:
CLPS 0020 Approaches to the Mind: Introduction to Cognitive Science (or alternative, with permission of the Concentration Advisor)

Required 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:
CLPS 0900 Quantitative Methods in Psychology
APMA 1650 Statistical Inference I

Required Capstone:
CLPS 1900 Senior Seminar in Cognitive Science

Electives
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
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 Auditory Perception: Sensing the World through Sounds
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
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

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 Sc.B. programs should identify a faculty honors sponsor and sign up with the concentration advisor during Semester 6. Although there is no minimum grade point average to enter the program, admission to the program is limited to students who have accumulated a strong academic record and is at the discretion of the department. It is expected that honors candidates will conduct a year-long research project under the direction of a faculty sponsor in the CLPS department culminating in a written thesis and oral examination at the end of Semester 8. Students doing honors work must enroll for CLPS 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.

Comparative Literature

The concentration in Comparative Literature enables students to study literature in cross-cultural perspectives. The aim of the program is to encourage students to study a varied and illustrative range of literary topics rather than the total development of a single literary tradition. True to the spirit of Brown’s New Curriculum, a concentration in Comparative Literature affords great academic freedom. For example: advanced courses in any literature department at Brown count for concentration credit; although English is commonly one of the languages that students apply to their Comparative Literature studies, basically any language—ancient or modern—supported at Brown may form part of a Comparative Literature concentration program. In essence, concentrators study a generous range of literary works—from Western cultures, both ancient and modern, to Chinese, Japanese, and Arabic—and develop a focused critical understanding of how cultures differ from one another. Comparative Literature differs from other literature concentrations largely through its international focus and its broad-gauged view of art and culture in which the study of languages is combined with the analysis of literature and literary theory. All students take a course in literary theory and have the opportunity to complete a senior essay.

Please contact Professor Stephanie Merrim (stephanie_merrim@brown.edu), the Director of Undergraduate Studies, with questions.

There are three concentration tracks in Comparative Literature, as follows:

**Track 1: Concentration in Comparative Literature with two languages**

- Complete prerequisites(s) for taking 1000-level courses in your two languages by Semester V (students working in non-European languages may be allowed more latitude; be sure to consult a concentration advisor about constructing an individualized plan).
- Comparative Literature 1210, 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,
  b. ONE COURSE chiefly devoted to EACH of the three major literary genres: poetry, drama and narrative.
- 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,
  b. ONE COURSE chiefly devoted to EACH of the three major literary genres: poetry, drama and narrative.
- 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,
  b. ONE COURSE chiefly devoted to EACH of the three major literary genres: poetry, drama and narrative.

**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,
  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).
- 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,
  b. ONE COURSE chiefly devoted to EACH of the three major literary genres: poetry, drama and narrative.
  c. ONE literature course chiefly devoted to EACH OF THREE of the following five historical periods:
    - Antiquity
    - Middle Ages
    - Renaissance/Early Modern
    - Enlightenment
    - Modern. Please note that the 19th, 20th, and 21st centuries count as one period, the Modern Period.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
languages may be allowed more latitude; be sure to consult a concentration advisor about constructing an individualized plan).

- Comparative Literature 1210, Introduction to the Theory of Literature,
- Comparative Literature 1710 (Comparative Literature 2720 strongly urged).
- ONE course or MORE in Linguistics, drawn from among these courses: Cognitive, Linguistic and Psychological Sciences 0410, Anthropology 0800, English 1210, Hispanic Studies 1210 or an acceptable substitute.
- FIVE or SIX advanced literature courses (generally 1000-level courses), including Comparative Literature 1210 and:
  a. At least TWO courses in the literature of each of your languages, and the remainder drawn chiefly from among the offerings of Comparative Literature and English, and other national literature departments.
  b. ONE COURSE chiefly devoted to EACH of the three major literary genres: poetry, drama and narrative.
  c. ONE literature course chiefly devoted to EACH OF THREE of the following five historical periods:
     • Antiquity
     • Middle Ages
     • Renaissance/Early Modern
     • Enlightenment
     • Modern. Please note that the 19th, 20th, and 21st centuries count as one period, the Modern Period.
- TWO workshops or MORE in Creative Writing
- A senior project to consist of:
  A substantial work in translation (length will vary depending upon language and genre);
  A critical introduction outlining the method used and specific problems encountered, and commenting on the history of the original work together with other translations, if any. For thesis, the student may register for COLT 1990, which will be taken in addition to the ten required courses listed above. Successful completion of the thesis constitutes Honors. (See Guidelines for Honors Theses).

For additional information, please visit the Comparative Literature website (http://www.brown.edu/Departments/Comparative_Literature/) or see the 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, Biomedical Sciences, or Applied Mathematics & Statistics. Both programs require a senior capstone experience that pairs students and faculty in creative research collaborations.

Standard program for the A.B. degree

Prerequisites: 2
- MATH 0100 Introductory Calculus, Part II
or MATH 0170 Advanced Placement Calculus
- BIOL 0200 The Foundation of Living Systems

General Core Requirements: Biology 2
- BIOL 0470 Genetics
- BIOL 0280 Introductory Biochemistry
or BIOL 0500 Cell and Molecular Biology

General Core Requirements: Chemistry 1
- CHEM 0330 Equilibrium, Rate, and Structure
or CHEM 0350 Organic Chemistry

General Core Requirements: Computer Science 2
- CSCI 0150 Introduction to Object-Oriented Programming and
  & CSCI 0160 Computer Science and Introduction to Algorithms and Data Structures
or
- CSCI 0170 Computer Science: An Integrated Introduction
  & CSCI 0180 and Computer Science: An Integrated Introduction
or
- CSCI 0190 Accelerated Introduction to Computer Science
  & CSCI 0180 and Computer Science: An Integrated Introduction
  & CSCI 0320 and Introduction to Software Engineering
  & CSCI 0330 and Introduction to Computer Systems
  & CSCI 0510 and Models of Computation

General Core Requirements: Probability & Statistics 1
- APMA 1650 Statistical Inference I
or
- CSCI 1450 Probability and Computing
or
- MATH 1610 Probability

Comp Bio Core Course Requirements 4
- CSCI 1810 Computational Molecular Biology
- APMA 1080 Inference in Genomics and Molecular Biology
AND two of the following:
- CSCI 1820 Algorithmic Foundations of Computational Biology
- BIOL 1430 Computational Theory of Molecular Evolution and Population Genetics
- BIOL 1465 Human Population Genomics
- CSCI 1420 Machine Learning
- APMA 1690 Computational Probability and Statistics
- APMA 1660 Statistical Inference II

Additional course with Director approval

Total Credits 12

University Writing Requirement:
As part of Brown’s writing requirement, all students must demonstrate that they have worked on their writing both in their general studies and their concentration. There are a number of ways for Computational Biology concentrators to fulfill these requirements:

- Writing an Honors Thesis
- Taking a “WRIT” course in the final two years

Capstone Experience
Students enrolled in the computational biology concentration will complete a research project in their senior year under faculty supervision. The themes of such projects evolve with the field and the technology, but should represent a synthesis of the various specialties of the program. The requirements are either one semester of reading and research with a CCMB Faculty member or approved advisor, or a 2000-level Computational Biology course.

Standard program for the Sc.B. degree

Prerequisites
- MATH 0100 Introductory Calculus, Part II (or equivalent) 1
or MATH 0170 Advanced Placement Calculus
- BIOL 0200 The Foundation of Living Systems (or equivalent) 1

General Core Course Requirements: Biology
- BIOL 0470 Genetics (prerequisite BIOL 0200 or equivalent) 1
- BIOL 0280 Introductory Biochemistry
or BIOL 0500 Cell and Molecular Biology

General Core Requirements: Chemistry 1
- CHEM 0330 Equilibrium, Rate, and Structure

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
or CHEM 0350  Organic Chemistry

General Core Requirements: Computer Science 2-4

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 0150 &amp; CSCI 0160</td>
<td>Introduction to Object-Oriented Programming and Computer Science and Introduction to Algorithms and Data Structures</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>CSCI 0170 &amp; CSCI 0180</td>
<td>Computer Science: An Integrated Introduction and Computer Science: An Integrated Introduction</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>CSCI 0190 &amp; CSCI 0180</td>
<td>Accelerated Introduction to Computer Science and Computer Science: An Integrated Introduction</td>
</tr>
<tr>
<td>&amp; CSCI 0320</td>
<td>and Introduction to Software Engineering</td>
</tr>
<tr>
<td>&amp; CSCI 0330</td>
<td>and Introduction to Computer Systems</td>
</tr>
</tbody>
</table>

CSCI 0220  Introduction to Discrete Structures and Probability 1

General Core Requirements: Probability & Statistics 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>APMA 1650</td>
<td>Statistical Inference I</td>
</tr>
<tr>
<td>or CSCI 1450</td>
<td>Probability and Computing</td>
</tr>
<tr>
<td>or MATH 1610</td>
<td>Probability</td>
</tr>
</tbody>
</table>

General Core Requirements: Computational Biology 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 1810</td>
<td>Computational Molecular Biology</td>
</tr>
<tr>
<td>APMA 1080</td>
<td>Inference in Genomics and Molecular Biology</td>
</tr>
</tbody>
</table>

Capstone Experience 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1430</td>
<td>Computational Theory of Molecular Evolution and Population Genetics</td>
</tr>
<tr>
<td>APMA 1690</td>
<td>Computational Probability and Statistics</td>
</tr>
<tr>
<td>BIOL 1465</td>
<td>Human Population Genomics</td>
</tr>
</tbody>
</table>

Six courses in one of the following three tracks: 6

Computer Science Track:

Three of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 1230</td>
<td>Introduction to Computer Graphics</td>
</tr>
<tr>
<td>CSCI 1270</td>
<td>Database Management Systems</td>
</tr>
<tr>
<td>CSCI 1410</td>
<td>Applied Artificial Intelligence</td>
</tr>
<tr>
<td>CSCI 1550</td>
<td>Probability and Computing: Randomized Algorithms and Probabilistic Analysis</td>
</tr>
<tr>
<td>CSCI 1570</td>
<td>Design and Analysis of Algorithms</td>
</tr>
</tbody>
</table>

or other Computer Science courses approved by the concentration advisor

Three of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 0330</td>
<td>Introduction to Computer Systems</td>
</tr>
<tr>
<td>or CSCI 0320</td>
<td>Introduction to Software Engineering</td>
</tr>
<tr>
<td>CSCI 1820</td>
<td>Algorithmic Foundations of Computational Biology</td>
</tr>
<tr>
<td>PHP 2620</td>
<td>Statistical Methods in Bioinformatics, I</td>
</tr>
<tr>
<td>APMA 1660</td>
<td>Statistical Inference II</td>
</tr>
<tr>
<td>BIOL 1430</td>
<td>Computational Theory of Molecular Evolution and Population Genetics</td>
</tr>
<tr>
<td>BIOL 1465</td>
<td>Human Population Genomics</td>
</tr>
<tr>
<td>APMA 1690</td>
<td>Computational Probability and Statistics</td>
</tr>
</tbody>
</table>

Biological Sciences track

At least four courses comprising a coherent theme in one of the following areas: Biochemistry, Ecology, Evolution, or Neurobiology.

AND select two courses from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 1820</td>
<td>Algorithmic Foundations of Computational Biology</td>
</tr>
<tr>
<td>PHP 2620</td>
<td>Statistical Methods in Bioinformatics, I</td>
</tr>
<tr>
<td>APMA 1660</td>
<td>Statistical Inference II</td>
</tr>
<tr>
<td>BIOL 1430</td>
<td>Computational Theory of Molecular Evolution and Population Genetics</td>
</tr>
<tr>
<td>BIOL 1465</td>
<td>Human Population Genomics</td>
</tr>
<tr>
<td>APMA 1690</td>
<td>Computational Probability and Statistics</td>
</tr>
</tbody>
</table>

Applied Mathematics & Statistics Track:

At least three courses from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>APMA 1660</td>
<td>Statistical Inference II</td>
</tr>
<tr>
<td>APMA 1690</td>
<td>Computational Probability and Statistics</td>
</tr>
<tr>
<td>CSCI 1410</td>
<td>Applied Artificial Intelligence</td>
</tr>
<tr>
<td>APMA 0340</td>
<td>Methods of Applied Mathematics I, II</td>
</tr>
<tr>
<td>APMA 0330</td>
<td>Methods of Applied Mathematics I, II</td>
</tr>
</tbody>
</table>

Honors:

In order to be considered a candidate for honors, students will be expected to maintain an outstanding record, with no "C's" in concentration courses and with a minimum of an "A-" average in concentration courses. In addition, students should take at least one semester, and are strongly encouraged to take 2 semesters, of reading and research with a CCMB faculty member or approved advisor. Students must submit to a public defense of their theses to be open to the CCMB community.

- Students seeking honors are advised to choose a Thesis Advisor prior to the end of their Junior year
- Students must complete the Registration form for Comp Bio and submit it to CCMB@BROWN.EDU

Any deviation from these rules must be approved by the director of undergraduate studies, in consultation with the student's advisor.

Computer Science

Computer science is now a critical tool for pursuing an ever-broadening range of topics, from outer space to the workings of the human mind. In most areas of science and in many liberal arts fields, cutting-edge work depends increasingly on computational approaches. The undergraduate program at Brown is designed to combine breadth in practical and theoretical computer science with depth in specialized areas. These areas range from traditional topics, such as analysis of algorithms, artificial intelligence, databases, distributed systems, graphics, mobile computing, networks, operating systems, programming languages, robotics and security, to novel areas including games and scientific visualization.

Requirements for the Standard Track of the Sc.B. degree

Prerequisites (1 or 2 courses)

Two semesters of Calculus, for example:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0090</td>
<td>Introductory Calculus, Part I</td>
</tr>
<tr>
<td>&amp; MATH 0100</td>
<td>and Introductory Calculus, Part II</td>
</tr>
<tr>
<td>or MATH 0170</td>
<td>Advanced Placement Calculus</td>
</tr>
</tbody>
</table>

Concentration Requirements (15 courses)

Core-Computer Science:

Select one of the following introductory course Series: 2

Series A

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 0150 &amp; CSCI 0160</td>
<td>Introduction to Object-Oriented Programming and Computer Science and Introduction to Algorithms and Data Structures</td>
</tr>
</tbody>
</table>

Series B

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 0170 &amp; CSCI 0180</td>
<td>Computer Science: An Integrated Introduction</td>
</tr>
</tbody>
</table>

Series C

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 0190</td>
<td>Accelerated Introduction to Computer Science</td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
and an additional CS course not otherwise used to satisfy a concentration requirement; this course may be CSCI 0180, an intermediate-level course, or an advanced course

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 0220</td>
<td>Introduction to Discrete Structures and Probability (math)</td>
</tr>
<tr>
<td>CSCI 0320</td>
<td>Introduction to Software Engineering (systems)</td>
</tr>
<tr>
<td>CSCI 0330</td>
<td>Introduction to Computer Systems (systems)</td>
</tr>
<tr>
<td>CSCI 0310</td>
<td>Introduction to Computer Systems</td>
</tr>
<tr>
<td>CSCI 0510</td>
<td>Models of Computation (math)</td>
</tr>
<tr>
<td>CSCI 1450</td>
<td>Probability and Computing</td>
</tr>
</tbody>
</table>

**Additional Computer Science Courses:**

- Select one theoretical computer science course: 2
- Select one artificial intelligence course: 2
- Select one computer science systems course: 2

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 1490</td>
<td>Introduction to Combinatorial Optimization</td>
</tr>
<tr>
<td>CSCI 1510</td>
<td>Introduction to Cryptography and Computer Security</td>
</tr>
<tr>
<td>CSCI 1550</td>
<td>Probability and Computing: Randomized Algorithms and Probabilistic Analysis</td>
</tr>
<tr>
<td>CSCI 1570</td>
<td>Design and Analysis of Algorithms</td>
</tr>
<tr>
<td>CSCI 1590</td>
<td>Introduction to Computational Complexity</td>
</tr>
<tr>
<td>CSCI 1760</td>
<td>Multiprocessor Synchronization</td>
</tr>
<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>
<tr>
<td>CSCI 1410</td>
<td>Applied Artificial Intelligence</td>
</tr>
<tr>
<td>CSCI 1420</td>
<td>Machine Learning</td>
</tr>
<tr>
<td>CSCI 1430</td>
<td>Computer Vision</td>
</tr>
<tr>
<td>CSCI 1450</td>
<td>Probability and Computing</td>
</tr>
<tr>
<td>CSCI 1460</td>
<td>Computational Linguistics</td>
</tr>
<tr>
<td>CSCI 1480</td>
<td>Building Intelligent Robots</td>
</tr>
<tr>
<td>CSCI 1490</td>
<td>Introduction to Combinatorial Optimization</td>
</tr>
<tr>
<td>CSCI 1580</td>
<td>Information Retrieval and Web Search</td>
</tr>
<tr>
<td>CSCI 1230</td>
<td>Introduction to Computer Graphics</td>
</tr>
<tr>
<td>CSCI 1260</td>
<td>Compilers and Program Analysis</td>
</tr>
<tr>
<td>CSCI 1270</td>
<td>Database Management Systems</td>
</tr>
<tr>
<td>CSCI 1290</td>
<td>Computational Photography</td>
</tr>
<tr>
<td>CSCI 1310</td>
<td>Fundamentals of Computer Systems</td>
</tr>
<tr>
<td>CSCI 1320</td>
<td>Creating Modern Web Applications</td>
</tr>
<tr>
<td>CSCI 1340</td>
<td>Innovating Game Development</td>
</tr>
<tr>
<td>CSCI 1380</td>
<td>Distributed Computer Systems</td>
</tr>
<tr>
<td>CSCI 1600</td>
<td>Real-Time and Embedded Software</td>
</tr>
<tr>
<td>CSCI 1610</td>
<td>Building High-Performance Servers</td>
</tr>
<tr>
<td>CSCI 1660</td>
<td>Introduction to Computer Systems Security</td>
</tr>
<tr>
<td>CSCI 1670</td>
<td>Operating Systems</td>
</tr>
<tr>
<td>CSCI 1680</td>
<td>Computer Networks</td>
</tr>
<tr>
<td>CSCI 1730</td>
<td>Design and Implementation of Programming Languages</td>
</tr>
<tr>
<td>CSCI 1900</td>
<td>csciStartup</td>
</tr>
</tbody>
</table>

**Four additional advanced computer science courses:** 4

- A capstone course 4

**Math:** Two semesters of Mathematics or Applied Mathematics beyond MATH 0100/0170. One of these courses must be a linear algebra course

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0520</td>
<td>Linear Algebra</td>
</tr>
<tr>
<td>MATH 0540</td>
<td>Honors Linear Algebra</td>
</tr>
<tr>
<td>CSCI 0530</td>
<td>Directions: The Matrix in Computer Science</td>
</tr>
</tbody>
</table>

**Total Credits:** 15

---

**Requirements for the Professional Track of the Sc.B. degree.**

The requirements for the professional track include all those of the standard track, as well as the following:

- Students must complete two two-to-four-month full-time professional experiences, doing work that is related to their concentration programs. Such work is normally done within an industrial organization, but may also be at a university under the supervision of a faculty member.

- On completion of each professional experience, the student must write and upload to ASK a reflective essay about the experience addressing the following prompts, to be approved by the student's concentration advisor:
  - Which courses were put to use in your summer's work? Which topics, in particular, were important?
  - In retrospect, which courses should you have taken before embarking on your summer experience? What are the topics from these courses that would have helped you over the summer if you had been more familiar with them?
  - Are there topics you should have been familiar with in preparation for your summer experience, but are not taught at Brown? What are these topics?
  - What did you learn from the experience that probably could not have been picked up from course work?
  - Is the sort of work you did over the summer something you would like to continue doing once you graduate? Explain.
  - Would you recommend your summer experience to other Brown students? Explain.

**Requirements for the Standard Track of the A.B. degree**

**Prerequisites**

- Two semesters of Calculus, for example:
  - MATH 0090 and MATH 0100
  - MATH 0170

**Concentration Requirements (9 courses)**

**Core Computer Science:**

- Select one of the following series: 2

<table>
<thead>
<tr>
<th>Series</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series A</td>
<td>CSCI 0150 Introduction to Object-Oriented Programming and CSCI 0160 Computer Science and Introduction to Algorithms and Data Structures</td>
</tr>
<tr>
<td>Series B</td>
<td></td>
</tr>
</tbody>
</table>

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

Economics and Psychology

Welfare Economics and Social Choice Theory

Directions: The Matrix in Computer Science (math)

Market Design: Theory and Applications

Introductory Calculus, Part II

Econometrics II

Investments II

Introduction to Computer Systems

Principles of Economics

following prompts, to be approved by the student's concentration advisor:

aspects of economics and computer technology and for academic careers and upload to ASK a reflective essay about the experience addressing the

On completion of each professional experience, the student must write
economics. It prepares students for professional careers that incorporate
advantage of required courses is compatible with a liberal education. The

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:

2

Series A

CSCI 0150 Introduction to Object-Oriented Programming and
& CSCI 0160 Computer Science
and Introduction to Algorithms and Data Structures

Series B

CSCI 0170 Computer Science: An Integrated Introduction
& CSCI 0180 and Computer Science: An Integrated Introduction

Series C

CSCI 0190 Accelerated Introduction to Computer Science
and an additional CS course not otherwise used to satisfy a
concentration requirement; this course may be CSCI 0180, an
intermediate-level CS course, or a 1000 level course.

Two of the following intermediate courses, one of which must be math-
oriented and one systems-oriented.

2

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.

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 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.

Four additional courses in computer science or related areas are
required. 1

Total Credits

9

• 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.

• 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 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.

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.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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: 2

1. CSCI 1450 Probability and Computing 1
2. APMA 1650 Statistical Inference I

Series A

- CSCI 0150 Introduction to Object-Oriented Programming and Computer Science
- & CSCI 0160 and Introduction to Algorithms and Data Structures

Series B

- CSCI 0170 Computer Science: An Integrated Introduction
- & CSCI 0180 and Computer Science: An Integrated Introduction

Series C

- CSCI 0190 Accelerated Introduction to Computer Science

and an additional CS course not otherwise used to satisfy a concentration requirement; this course may be CSCI 0180, an intermediate-level course, or a 1000-level course

Two of the following intermediate courses, one of which must be math-oriented and one systems-oriented: 2

- 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)

Two additional CS courses; at least one must be at the 1000-level. 2

The other must either be at the 1000-level or be an intermediate course not already used to satisfy concentration requirements.

- ECON 1130 Intermediate Microeconomics (Mathematical) 1
- ECON 1210 Intermediate Macroeconomics
- ECON 1630 Econometrics I

Three courses from the "mathematical-economics" group: 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

or any graduate Economics course

Total Credits 13

1. Or ECON 1110, with permission.

2. 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.

3. A one-semester course, normally taken in the student's last undergraduate year, in which the student (or group of students) use a significant portion of their undergraduate education, broadly interpreted, in studying some current topic (preferably at the intersection of computer science and economics) in depth, to produce a culminating artifact such as a paper or software project.

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)

- COST 0100 Introduction to Contemplative Studies 1

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

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 ofSelf
- 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)

### 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)

- 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)

### 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:

<table>
<thead>
<tr>
<th>Contemplative Religious Traditions</th>
<th>Humanities Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLAS 0850 Mythology of India</td>
<td>RELS 1441 Zen Meditation in China, Korea, and Japan</td>
</tr>
<tr>
<td>CLAS 0855 The Bhagavad Gītā</td>
<td>RELS 1370B Philosophy of Mysticism</td>
</tr>
<tr>
<td>EAST 1420 The Confucian Mind</td>
<td>RELS 0911 Buddhism in India</td>
</tr>
<tr>
<td>EAST 1880D Early Daoist Syncretism: Zhuang Zi and Huainan Zi</td>
<td>RELS 0530 Laozi and the Daodejing</td>
</tr>
<tr>
<td>RELS 0056 Spiritual But Not Religious: Making Spirituality in America</td>
<td>RELS 1370B Philosophy of Mysticism</td>
</tr>
<tr>
<td>RELS 0910 On Being Human: Religious and Philosophical Conceptions of Self</td>
<td>RELS 1441 Zen Meditation in China, Korea, and Japan</td>
</tr>
</tbody>
</table>

### Honors Requirement

Students with a minimum GPA of 3.5 in the concentration may apply for entrance into the Honors program in the middle of their sixth semester. To apply, students submit a proposal for a senior thesis project describing the work to be undertaken and its relevance to the field of Contemplative Studies, along with a copy of their academic transcript. Students accepted into Honors must complete the required Capstone seminar, UNIV 1010, and enroll in an additional semester of independent study in their advisor’s department. Students must complete an Honors Thesis to the satisfaction of their advisor and present the results of their studies in formal talks or poster sessions open to all interested faculty and students.

### Development Studies

Development Studies is an interdisciplinary concentration whose main mission is to provide students with the knowledge, critical perspectives and skills they need to engage with the issues of economic and social development, especially as they relate to the Global South. The concentration is grounded in the social sciences – anthropology, sociology, political science, and economics – but it also heavily draws from history, art, and other disciplines in the humanities. The requirements are designed with three goals in mind: first, provide concentrators a solid foundation in the question of development; second, allow concentrators to develop expertise in a specific region that is of interest to them; third, give concentrators access to a wide range of courses in a large number of disciplines of interest to them. Concentrators are encouraged to do their own original field research. During the senior year, concentrators complete a capstone experience tailored to their interests (http://brown.edu/academics/development-studies/about/what-ds-capstone) in some aspect of international development. Towards this end, they benefit from extensive faculty and peer support.
Requirements

10 Courses + Language + Capstone

CORE

All core courses must be taken prior to senior year

Choose TWO from the following:

- SOC 1620 Globalization and Social Conflict (2)
- POLS 1240 Politics, Markets and States in Developing Countries (2)
- ANTH 0110 Anthropology and Global Social Problems: Environment, Development, and Governance (1)
- Seminars in Sociology of Development (1)
- DEVL 1000/1871D 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)

Elective Courses

Three courses chosen from a list of pre-approved electives or by special approval.

Foreign Language

Equivalent of three full years of university study or above.

Senior Capstone

- a. Thesis option: DEVL 1980 (fall senior year) and DEVL 1990 (spring senior year), or
- b. Capstone seminar option: approved senior seminar in Development Studies, with seminar-length paper requirement.

See the Development Studies website (http://brown.edu/academics/development-studies) for the list of pre-approved elective courses.

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)
   a. The Concentrators' Seminar (two courses)
   b. 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)
   c. 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)
   d. 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
For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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

<table>
<thead>
<tr>
<th>Mathematics Course Requirements:</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0100 Introductory Calculus, Part II</td>
<td>1</td>
</tr>
</tbody>
</table>

or a higher-level math course.

<table>
<thead>
<tr>
<th>Economics Course Requirements:</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 0110 Principles of Economics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1110 Intermediate Microeconomics</td>
<td>1</td>
</tr>
<tr>
<td>or ECON 1130 Intermediate Microeconomics (Mathematical)</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1210 Intermediate Macroeconomics</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1620 Introduction to Econometrics</td>
<td>1</td>
</tr>
<tr>
<td>ECON 1629 Applied Research Methods for Economists</td>
<td>1</td>
</tr>
<tr>
<td>or ECON 1630 Econometrics I</td>
<td>1</td>
</tr>
</tbody>
</table>

At least five additional 1000-level Economics courses. 2

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.
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 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 Policy-and-History or Human Development. Policy-and-History provides the historical underpinnings and intellectual skills for students to think critically about education issues in a number of settings. In the Human Development area, students learn about psychological, social, and cultural processes in a variety of contexts, including schools, families, peer groups, and neighborhoods, particularly in urban settings. 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 Policy-and-History track. Yoko Yamamoto (yoko_yamamoto@brown.edu) advises juniors on the Human Development track and all sophomores.

### Concentration Requirements

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 Policy, 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. Electives may include any Education courses taken outside the Area of Emphasis or approved courses taken in other departments.

Concentrators are required to take at least one foundational course in each of four Core Categories: Human Development, History, Policy, 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:

#### Foundational Courses

<table>
<thead>
<tr>
<th>Human Development</th>
<th>History</th>
<th>Policy</th>
<th>Research Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 0800</td>
<td>EDUC 1020</td>
<td>EDUC 1060</td>
<td>EDUC 1100</td>
</tr>
<tr>
<td>Introduction to Human Development and Education</td>
<td>The History of American Education</td>
<td>Politics and Public Education</td>
<td>Introduction to Qualitative Research Methods</td>
</tr>
<tr>
<td>OR</td>
<td>OR</td>
<td>OR</td>
<td>OR</td>
</tr>
<tr>
<td>EDUC 1450</td>
<td>EDUC 1200</td>
<td>EDUC 1130</td>
<td>EDUC 1110</td>
</tr>
<tr>
<td>The Psychology of Teaching and Learning</td>
<td>History of American School Reform</td>
<td>Economics of Education I</td>
<td>Introductory Statistics for Education Research and Policy Analysis</td>
</tr>
</tbody>
</table>

#### Courses in Human Development Area of Emphasis

<table>
<thead>
<tr>
<th>Courses in Human Development (from the list below)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 0410E Empowering Youth: Insights from Research on Urban Adolescents</td>
</tr>
<tr>
<td>EDUC 0800 Introduction to Human Development and Education</td>
</tr>
<tr>
<td>EDUC 1270 Adolescent Psychology</td>
</tr>
<tr>
<td>EDUC 1430 Social Psychology of Race, Class, and Gender</td>
</tr>
<tr>
<td>EDUC 1450 The Psychology of Teaching and Learning</td>
</tr>
<tr>
<td>EDUC 1580 Cross-Cultural Perspectives on Child Development</td>
</tr>
<tr>
<td>EDUC 1700 The Asian American Experience in Higher Education</td>
</tr>
<tr>
<td>EDUC 1710 History and Theories of Child Development</td>
</tr>
<tr>
<td>EDUC 1750 Contemporary Social Problems: Views from Human Development and Education</td>
</tr>
<tr>
<td>EDUC 1850 Moral Development and Education</td>
</tr>
<tr>
<td>EDUC 1860 Social Context of Learning and Development</td>
</tr>
<tr>
<td>EDUC 1870 Education and Human Development in East Asia</td>
</tr>
<tr>
<td>EDUC 1880 Human Development in the Context of Immigration</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1 Foundational course in History</th>
<th>1 Foundational course in Policy</th>
<th>1 Methods course</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

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

The concentration in Egyptology and Assyriology offers students a choice of two tracks: Assyriology or Egyptology. The department promotes collaborations with other academic units at Brown devoted to the study of antiquity including Archaeology, Classics, Judaic Studies, and Religious Studies. Egyptology and Assyriology also collaborates with Brown’s Joukowsky Institute for Archaeology and the Ancient World.

Assyriology Track

Also known as the Near East or Middle East, Western Asia includes present-day Iraq, Syria, Turkey, and other neighboring states, a broad geographic area that was connected in antiquity with the wider world—the Mediterranean, North Africa, the Arabian Peninsula, Central Asia, and the Asian subcontinent. Students will be exposed to the critical study of the ancient cultures of this region (ca. 3400 B.C.E.–100 C.E.) using the tools of archaeology, epigraphy, and historical inquiry. A variety of interdisciplinary, comparative, and theoretical approaches will be introduced to give students the tools and methods to explore this region’s ancient languages and literatures, political and socio-economic modes of organization, art and architecture, religious traditions and other systems of knowledge, such as early science.

The Assyriology (ASYR) track requires a total of at least ten (10) courses that are determined in the following way:

- **Introductory courses:** 3
  - 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 2310A 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.

Elective: At least one elective course on the ancient world broadly defined. Usually this course will be offered in Ancient Western Asian Studies, Anthropology, Archaeology, Classics, Comparative Literature, East Asian Studies, Egyptology, History, History of Art and Architecture, Judaic Studies, Philosophy, or Religious Studies. The elective course must be approved by the undergraduate concentration advisor.

**Total Credits**

1

1 This list contains possible offerings but should not be considered exhaustive.

Egyptology Track

The Egyptology track requires a total of at least ten courses. Six of these must be taken by all concentrators, but the remaining four can be chosen from a fairly broad range of courses, to suit individual interests.

- **Introductory Courses:**
  - EGYT 1310 & EGYT 1320 Introduction to Classical Hieroglyphic Egyptian Writing and Language (Middle Egyptian I)
  - EGYT 1430 & EGYT 1440 History of Egypt I and History of Egypt II

- **ARCH 0150** Introduction to Egyptian Archaeology and Art

- **ARCH 1420** Ancient Egyptian Religion and Magic

- **ARCH 1625** Temples and Tombs: Egyptian Religion and Culture

- **EGYT 1330** Selections from Middle Egyptian Hieroglyphic Texts

- **EGYT 1410** Ancient Egyptian Literature

- **Total Credits**

1

1 Required for all students pursuing the Egyptology track.

2 Or an EGYT or ARCH course in material culture.

Capstone

All students pursuing either the Assyriology or Egyptology tracks are required to complete a capstone project. The project can take many forms, but the common feature shared among all possible projects will be a public presentation. Typically in the final semester before graduating, the concentrator will give this capstone presentation before faculty, fellow students, and other interested audiences. If the concentrator is writing an undergraduate honors thesis, the procedure for which is detailed below, this work should provide the content for the capstone presentation. Students not writing an honors thesis will base their presentation on a research project more in depth than a class project, though the topic may stem from a course project or paper. The format of the presentation may vary; suggestions range from an illustrated lecture to a video or an installation presented with discussion. Both the content and the format of the capstone project should be discussed with and agreed upon by the
concentration advisor no later than the end of the first semester of the senior year.

**Honors in Egyptology and Assyriology**

1. **Becoming an honors candidate**

   Students who wish to consider pursuing honors should meet with the Undergraduate Concentration Advisor in the first half of their sixth semester. Eligibility is dependent on:
   - Being in good standing
   - Having completed at least two thirds of the concentration requirements by the end of the sixth semester
   - Having earned two-thirds "quality grades" in courses counted towards the concentration. A "quality grade" is defined as a grade of "A" or a grade of "S" accompanied by a course performance report indicating a performance at the "A" standard.

To pursue honors candidacy, eligible students must:
- Secure a faculty advisor and discuss plans for the proposed thesis project well before the established deadline; this can be done by email when a student is abroad.
- Prepare a thesis prospectus (see below).
- Submit the prospectus to the advisor, one other proposed faculty reader (at least one of the readers must be in the department) and the department chair no later than the first week of the seventh semester.

The structure of a thesis prospectus:
An honors thesis in Egyptology or Assyriology is a substantial piece of research with some degree of originality that demonstrates the student's ability to frame an appropriate question and deal critically with the range of original and secondary sources. A thesis prospectus is a short analytical document consisting of several parts. It will normally include a concise and focused research question; a justification for that question that demonstrates familiarity with previous research on the topic; a project description that includes a discussion of the types of evidence available and appropriate to answering the proposed question; a discussion of methods of collecting and analyzing that evidence; a conclusion that returns to the research question and assures the reader that the project will add value to our understanding of the topic; and a bibliography. The prospectus will ordinarily be in the range of 5-7 pages in length, exclusive of bibliography. The prospectus will include proper citations throughout.

Determination of whether or not a student may pursue the proposed project will be made on review of the prospectus by the readers and department chair. Prospectuses will be evaluated on the following scale:
1. **No concerns about the viability of the project**.
2. **No concerns about the viability of the project, but minor weaknesses in the execution of the prospectus**.
3. **Concerns about the viability of the project, but willingness to reevaluate a revised prospectus submitted within two weeks of receipt of evaluation**.
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).
   - Two-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.
   - Completed 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 originally, and may engage with a well-studied topic, it will usually include a new insight into or interpretation of the material considered.

   **Scope:**
   An honors thesis is not a book or dissertation. It is, however, a very serious piece of research and writing for which two dedicated study courses have provided substantial time to the honors student. The question upon which the honors thesis is based should be focused enough to allow an in-depth treatment, generally in under 100 pages or 30,000 words (exclusive of bibliography and illustrations). Appropriate length will vary considerably depending on the topic itself and the nature of the primary sources being considered, particularly if substantial translation of ancient textual sources is required.

   **Argument:**
   The thesis should present a sustained analytic argument in answer to its structuring question. A thesis should not be primarily descriptive or narrative in nature. Each chapter should contain a sub-argument that is clearly related to the overall argument of the thesis. The significance of the argument and its relationship to prior scholarship should be clearly articulated. Honors theses are not expected to demonstrate comprehensive familiarity with the secondary literature, but they are expected to engage critically and maturely with important works on the defined topic.

   **Methodology:**
   Egyptology and Assyriology are very broad fields, and the appropriate methods will be determined in conjunction with the thesis advisor on the basis of the questions and types of evidence - textual, archaeological, art historical - under consideration. With very few exceptions the methodology of the thesis is expected to be conventional rather than innovative, rooted in the accepted practices of the field in question.

   **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

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
of any section to the larger whole should be clear, and segues 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 A.B. degrees in Engineering may be designed in consultation with a faculty advisor. These programs must meet the general requirements for concentration programs in the School of Engineering. Students interested in an individualized program should consult with an Engineering faculty member willing to serve as an advisor and obtain the approval of the Engineering Concentration Committee. Engineering students with a particular interest in using their technical skills for the public benefit might also consider the Engaged Scholars Program (https://www.brown.edu/academics/engineering/undergraduate-study/engaged-scholars-program).

Please note that all student concentration forms must be approved by the Engineering Concentration Committee, which reviews them for compliance with all relevant program and accreditation requirements.

Mathematics

Mathematics 0190, 0200 is the preferred sequence of courses to be taken in the 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 been approved by a sufficiently broad set of 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 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 prepared 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:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 0030</td>
<td>Introduction to Engineering</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 0040</td>
<td>Dynamics and Vibrations</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 0410</td>
<td>Materials Science</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 0510</td>
<td>Electricity and Magnetism</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 0520</td>
<td>Electrical Circuits and Signals</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 0720</td>
<td>Thermodynamics</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 0810</td>
<td>Fluid Mechanics</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 0200</td>
<td>The Foundation of Living Systems</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 0330</td>
<td>Equilibrium, Rate, and Structure</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0190</td>
<td>Advanced Placement Calculus (Physics/Engineering)</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 0170</td>
<td>Advanced Placement Calculus</td>
<td>1</td>
</tr>
<tr>
<td>or 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>
</tbody>
</table>

2. Upper-Level Chemical & Biochemical Engineering Curriculum

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</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 1120</td>
<td>Chemical and Biochemical Reactor Design 1</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 1130</td>
<td>Phase and Chemical Equilibria 1</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 1710</td>
<td>Heat and Mass Transfer</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 0350</td>
<td>Organic Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>Advanced Chemistry elective course 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHEM 0360</td>
<td>Organic Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>or CHEM 0400</td>
<td>Biophysical and Bioinorganic Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>or CHEM 0500</td>
<td>Inorganic Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>or CHEM 1140</td>
<td>Physical Chemistry: Quantum Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>Advanced Natural Sciences elective course 3</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>ENGN 1140</td>
<td>Chemical Process Design</td>
<td>1</td>
</tr>
</tbody>
</table>

3. Capstone Design Course

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
</table>

*In addition to program requirements above, students must take four courses in the humanities and social sciences.

Total Credits: 21

**Note:** ENGN 1120 and 1130 are only offered in alternate years.

An advanced chemistry course approved by concentration advisor; the following courses are pre-approved for this requirement.

An advanced course in the natural sciences approved by the concentration advisor. For suggestions of acceptable courses that fulfill this requirement, please see the concentration advisor.

**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 Name</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 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>or 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>
</tbody>
</table>

2. Upper-Level Civil Engineering Curriculum

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</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 1120</td>
<td>Chemical and Biochemical Reactor Design 1</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 1130</td>
<td>Phase and Chemical Equilibria 1</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 1710</td>
<td>Heat and Mass Transfer</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 0350</td>
<td>Organic Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>Advanced Chemistry elective course 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHEM 0360</td>
<td>Organic Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>or CHEM 0400</td>
<td>Biophysical and Bioinorganic Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>or CHEM 0500</td>
<td>Inorganic Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>or CHEM 1140</td>
<td>Physical Chemistry: Quantum Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>Advanced Natural Sciences elective course 3</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>ENGN 1140</td>
<td>Chemical Process Design</td>
<td>1</td>
</tr>
</tbody>
</table>

3. Capstone Design Course

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
</table>

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

1. Core Courses:
   - ENGN 0030 Introduction to Engineering 1
   - ENGN 0040 Dynamics and Vibrations 1
   - ENGN 0510 Electricity and Magnetism 1
   - ENGN 0520 Electrical Circuits and Signals 1
   - APMA 1650 Statistical Inference I 1
   - MATH 0190 Advanced Placement Calculus (Physics/Engineering) 1
   - or MATH 0170 Advanced Placement Calculus
   - MATH 0200 Intermediate Calculus (Physics/Engineering) 1
   - or MATH 0180 Intermediate Calculus
   - or MATH 0350 Honors Calculus
   - APMA 0330 Methods of Applied Mathematics I, II 1
   - or APMA 0350 Applied Ordinary Differential Equations
   - CHEM 0330 Equilibrium, Rate, and Structure 1
   - or ENGN 0410 Materials Science
   - Select one of the following series (Other CSCI courses subject to approval):
     - CSCI 0150 & CSCI 0160 Introduction to Object-Oriented Programming and Computer Science and Introduction to Algorithms and Data Structures 2
     - CSCI 0170 & CSCI 0180 Computer Science: An Integrated Introduction and Computer Science: An Integrated Introduction
     - CSCI 0190 Accelerated Introduction to Computer Science (and one additional CSCI course subject to approval) 1

2. Advanced Core:
   - MATH 0520 Linear Algebra 1
   - or MATH 0540 Honors Linear Algebra
   - CSCI 0330 Introduction to Computer Systems 1
   - ENGN 1570 Linear System Analysis 1
   - ENGN 1630 Digital Electronics Systems Design 1

3. Specialty Courses: (Complete one of the following 5-course specialty sequences)
   - ENGN 1620 Analysis and Design of Electronic Circuits 1
   - ENGN 1640 Design of Computing Systems 1
   - Select one of the following (other ENGN courses subject to approval):
     - ENGN 1580 Communication Systems
     - ENGN 1600 Design and Implementation of Very Large-Scale Integrated Systems
     - ENGN 1650 Embedded Microprocessor Design
     - ENGN 1680 Design and Fabrication of Semiconductor Devices
     - ENGN 2910A Advanced Computer Architecture
     - ENGN 2912E Low Power VLSI System Design
     - ENGN 2911X Reconfigurable Computing
   - Select two of the following (other CSCI courses subject to approval):
     - CSCI 0320 Introduction to Software Engineering
     - CSCI 1230 Introduction to Computer Graphics
     - CSCI 1270 Database Management Systems
     - CSCI 1380 Distributed Computer Systems
     - CSCI 1410 Applied Artificial Intelligence
     - CSCI 1480 Building Intelligent Robots
     - CSCI 1570 Design and Analysis of Algorithms
     - CSCI 1670 Operating Systems
     - CSCI 1680 Computer Networks
     - CSCI 1730 Design and Implementation of Programming Languages
     - CSCI 1760 Multiprocessor Synchronization
     - CSCI 1900 csciStartup

3b. For the Multimedia Signal Processing Specialty:
   - APMA 1170 Introduction to Computational Linear Algebra 1
   - Select two or three of the following (other ENGN courses subject to approval):
     - ENGN 1580 Communication Systems
     - ENGN 1610 Image Understanding
     - ENGN 2500 Medical Image Analysis
     - ENGN 2520 Pattern Recognition and Machine Learning
     - ENGN 2530 Digital Signal Processing
     - ENGN 2560 Computer Vision
   - Select one or two of the following (other CSCI courses subject to approval):
     - CSCI 0320 Introduction to Software Engineering
     - CSCI 1230 Introduction to Computer Graphics
     - CSCI 1290 Computational Photography
     - CSCI 1410 Applied Artificial Intelligence
     - CSCI 1420 Machine Learning
     - CSCI 1430 Computer Vision
     - CSCI 1460 Computational Linguistics
     - CSCI 1570 Design and Analysis of Algorithms

4. Capstone Design
   - ENGN 1930D Large Scale Engineering Design Project 1

Total Credits: 21

*In addition to program requirements above, students must take four courses in the humanities and social sciences.
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 (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
APMA 0340 Methods of Applied Mathematics I, II
1
or APMA 0360 Methods of Applied Mathematics I, II
1
CSCI 0150 Introduction to Object-Oriented Programming and Computer Science
1
or CSCI 0040 Introduction to Scientific Computing and Problem Solving
1
or CSCI 0170 Computer Science: An Integrated Introduction
1
or CSCI 0190 Accelerated Introduction to Computer Science
1
2. Upper-Level Electrical Engineering Curriculum

ENGN 1570 Linear System Analysis
1
ENGN 1620 Analysis and Design of Electronic Circuits
1
ENGN 1630 Digital Electronics Systems Design
1
PHYS 0790 Physics of Matter
1
or PHYS 1410 Quantum Mechanics A
1
3. Electrical Engineering Specialty Option: (Complete one of the following 3-course specialty sequences)

ENGN 1230; and one of (ENGN 1220, ENGN 1930B, ENGN 2500 or ENGN 2912L); and one additional course from the following (ENGN 1220, ENGN 1610, ENGN 1930B, ENGN 2500, ENGN 2912L, CLPS 1491, CLPS 1520, NEUR 1680 or NEUR 2110)

3a. Bioelectrical Engineering

3b. Communications Systems

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 2540, ENGN 2560 or CSCI 1230)

3e. Microelectronic Systems

ENGN 1600; ENGN 1640; and one additional course from the following (ENGN 1580, 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
1
or 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

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.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
APMA 0340 Methods of Applied Mathematics I, II
1
or APMA 0360 Methods of Applied Mathematics I, II
1
CSCI 0150 Introduction to Object-Oriented Programming and Computer Science
1
or CSCI 0040 Introduction to Scientific Computing and Problem Solving
1
or CSCI 0170 Computer Science: An Integrated Introduction
1
or CSCI 0190 Accelerated Introduction to Computer Science
1
2. Upper-Level Electrical Engineering Curriculum

ENGN 1570 Linear System Analysis
1
ENGN 1620 Analysis and Design of Electronic Circuits
1
ENGN 1630 Digital Electronics Systems Design
1
PHYS 0790 Physics of Matter
1
or PHYS 1410 Quantum Mechanics A
1
3. Electrical Engineering Specialty Option: (Complete one of the following 3-course specialty sequences)

ENGN 1230; and one of (ENGN 1220, ENGN 1930B, ENGN 2500 or ENGN 2912L); and one additional course from the following (ENGN 1220, ENGN 1610, ENGN 1930B, ENGN 2500, ENGN 2912L, CLPS 1491, CLPS 1520, NEUR 1680 or NEUR 2110)

3a. Bioelectrical Engineering

3b. Communications Systems

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 2540, ENGN 2560 or CSCI 1230)

3e. Microelectronic Systems

ENGN 1600; ENGN 1640; and one additional course from the following (ENGN 1580, 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
1
or 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

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
ENVS 0490 Environmental Science in a Changing World 1
MATH 0190 Advanced Placement Calculus (Physics/Engineering) 1
or MATH 0170 Advanced Placement Calculus
MATH 0200 Intermediate Calculus (Physics/Engineering) 1
or MATH 0180 Intermediate Calculus
or MATH 0350 Honors Calculus
APMA 0330 Methods of Applied Mathematics I, II 1
or APMA 0350 Applied Ordinary Differential Equations
APMA 0650 Essential Statistics 1
or APMA 1650 Statistical Inference I

2. Advance Science Courses
GEOL 1370 Environmental Geochemistry 1
or GEOL 1580 Quantitative Elements of Physical Hydrology
BIOL 0415 Microbes in the Environment (or an approved alternative Natural Science Course) 1
or BIOL 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
Up to one of the following:
ENGN 0310 Mechanics of Solids and Structures
or ENGN 0520 Electrical Circuits and Signals
Up to one of the following:
CSCI 0040 Introduction to Scientific Computing and Problem Solving
or CHEM 0350 Organic Chemistry
or ENV 1400 Sustainable Design in the Built Environment
or ENV 1570 Guts of the City: Perspectives on Urban Infrastructure and Environmental Planning (URBN 1570)

3b. Energy Specialty
At least three of the following:
ENGN 1340 Water Supply and Wastewater Treatment
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
Up to one of the following:
ENGN 0310 Mechanics of Solids and Structures
or ENGN 0520 Electrical Circuits and Signals
Up to one of the following:
CSCI 0040 Introduction to Scientific Computing and Problem Solving
or ENV 1400 Sustainable Design in the Built Environment
or ENV 1570 Guts of the City: Perspectives on Urban Infrastructure and Environmental Planning (URBN 1570)
or ENGN 1930U Renewable Energy Technologies

4. Capstone Design 1
ENGN 1000 Projects in Engineering Design
or ENGN 1140 Chemical Process Design

* In addition to program requirements above, students must take four courses in the humanities and social sciences.

Total Credits 21

1 Subject to approval by the concentration advisor, an independent study course (ENGN1970/1971) may be used to fulfill the Engineering Capstone Design requirement. To qualify for such approval, the independent study project must: (1) contain a significant and definable design component; (2) be based on the knowledge and skills acquired in earlier course work, (3) incorporate appropriate engineering standards; and (4) address multiple realistic constraints. To request approval, please complete the online form available at: http://www.brown.edu/academics/engineering/undergraduate-study

Materials Engineering Track:
The Materials Engineering program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org. The education objectives of the Materials Engineering program are to prepare graduates: (1) to pursue multidisciplinary scientific and technical careers beginning with entry-level engineering positions in industry or graduate study in materials science and engineering and related fields; (2) to apply an engineering problem-solving approach combined with a broad appreciation for the liberal arts to inform and develop their understanding of current societal needs and values to achieve leadership positions in their chosen fields of endeavor. The student outcomes of this program are the (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
CHEM 0330 Equilibrium, Rate, and Structure 1
MATH 0190 Advanced Placement Calculus (Physics/Engineering) 1
or MATH 0170 Advanced Placement Calculus
MATH 0200 Intermediate Calculus (Physics/Engineering) 1
or MATH 0180 Intermediate Calculus
or MATH 0350 Honors Calculus
APMA 0330 Methods of Applied Mathematics I, II 1
or APMA 0350 Applied Ordinary Differential Equations
APMA 0340 Methods of Applied Mathematics I, II 1
or APMA 0360 Methods of Applied Mathematics I, II

2. Upper-Level Materials Engineering Curriculum
ENGN 1410 Physical Chemistry of Solids 1
ENGN 1420 Kinetics Processes in Materials Science and Engineering
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

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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
- ENGN 0040 Dynamics and Vibrations
- ENGN 0310 Mechanics of Solids and Structures
- ENGN 0410 Materials Science
- ENGN 0510 Electricity and Magnetism
- ENGN 0520 Electrical Circuits and Signals
- ENGN 0720 Thermodynamics
- ENGN 0810 Fluid Mechanics
- CHEM 0330 Equilibrium, Rate, and Structure
- MATH 0190 Advanced Placement Calculus (Physics/Engineering)
- or MATH 0170 Advanced Placement Calculus
- MATH 0200 Intermediate Calculus (Physics/Engineering)
- or MATH 0180 Intermediate Calculus
- or MATH 0350 Honors Calculus
- APMA 0330 Methods of Applied Mathematics I, II
- or APMA 0350 Applied Ordinary Differential Equations
- APMA 0340 Methods of Applied Mathematics I, II
- or APMA 0360 Methods of Applied Mathematics I, II
- CSCI 0040 Introduction to Scientific Computing and Problem Solving
- or CSCI 0150 Introduction to Object-Oriented Programming and Computer Science
- or CSCI 0170 Computer Science: An Integrated Introduction
- or CSCI 0190 Accelerated Introduction to Computer Science

2. Upper-Level Mechanical Engineering Curriculum

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 1470</td>
<td>Structure and Properties of Nonmetallic Materials</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 1480</td>
<td>Metallic Materials</td>
<td>1</td>
</tr>
<tr>
<td>ENGN 1490</td>
<td>Biomaterials</td>
<td>1</td>
</tr>
</tbody>
</table>

3. Capstone Design

- 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 21

- 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.

- 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

Specialty Options (Complete one of the following seven course specialty sequences)

2a. Aerospace Applications
- PHYS 0790 Physics of Matter
- ENGN 1370 Advanced Engineering Mechanics
- ENGN 1700 Jet Engines and Aerospace Propulsion
- ENGN 1720 Design of Engines and Turbines
- ENGN 1760 Design of Space Systems
- ENGN 1860 Advanced Fluid Mechanics

One of the following:
- ENGN 1710 Heat and Mass Transfer
- ENGN 1300 Structural Analysis
- ENGN 1740 Computer Aided Visualization and Design
- ENGN 1750 Advanced Mechanics of Solids

Capstone Design

- ENGN 1000 Projects in Engineering Design
- or ENGN 1930 Industrial Design
- or ENGN 1931 Design of Mechanical Assemblies

2b. Biomechanics
- BIOL 0800 Principles of Physiology
- ENGN 1210 Biomechanics
- ENGN 1230 Instrumentation Design
- ENGN 1370 Advanced Engineering Mechanics

One of the following courses:
- ENGN 1700 Jet Engines and Aerospace Propulsion
- ENGN 1710 Heat and Mass Transfer
- ENGN 1860 Advanced Fluid Mechanics

One of the following courses:
- ENGN 1220 Neuroengineering
- ENGN 1300 Structural Analysis
- ENGN 1490 Biomaterials
- ENGN 1740 Computer Aided Visualization and Design
- ENGN 1750 Advanced Mechanics of Solids

Capstone Design

- ENGN 1000 Projects in Engineering Design
- or ENGN 1930 Industrial Design
- or ENGN 1931 Design of Mechanical Assemblies

2c. Energy Conversion: Fluids and Thermal Systems
- PHYS 0790 Physics of Matter
- ENGN 1700 Jet Engines and Aerospace Propulsion
- ENGN 1710 Heat and Mass Transfer
- ENGN 1720 Design of Engines and Turbines
- ENGN 1860 Advanced Fluid Mechanics

One of the following courses:
- ENGN 1750 Advanced Mechanics of Solids
- or ENGN 1300 Structural Analysis
- or ENGN 1370 Advanced Engineering Mechanics

Capstone Design

- ENGN 1000 Projects in Engineering Design
- or ENGN 1930 Industrial Design
- or ENGN 1931 Design of Mechanical Assemblies

2d. Engineering Mechanics
- PHYS 0790 Physics of Matter
- ENGN 1370 Advanced Engineering Mechanics
- ENGN 1710 Heat and Mass Transfer
- ENGN 1750 Advanced Mechanics of Solids
- ENGN 1860 Advanced Fluid Mechanics

One of the following:
- ENGN 1300 Structural Analysis

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

ENGN 1000 Projects in Engineering Design
or ENGN 1380 Design of Civil Engineering Structures
or ENGN 1720 Design of Engines and Turbines
or ENGN 1760 Design of Space Systems
or ENGN 1930 Industrial Design
or ENGN 1931 Design of Mechanical Assemblies

2e. Mechanical Systems: Dynamics, Materials, and Design

PHYS 0790 Physics of Matter
or ENGN 1370 Advanced Engineering Mechanics
or ENGN 1750 Advanced Mechanics of Solids

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

ENGN 1000 Projects in Engineering Design
or ENGN 1930 Industrial Design
or ENGN 1931 Design of Mechanical Assemblies

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 1440 Mechanical Properties of Materials
or ENGN 1620 Analysis and Design of Electronic Circuits
or ENGN 1740 Computer Aided Visualization and Design

2f. Structural Mechanics

PHYS 0790 Physics of Matter
or ENGN 1300 Structural Analysis
or ENGN 1370 Advanced Engineering Mechanics
or ENGN 1710 Heat and Mass Transfer
or ENGN 1860 Advanced Fluid Mechanics

One of the following courses:

ENGN 1740 Computer Aided Visualization and Design
or ENGN 1750 Advanced Mechanics of Solids
or ENGN 1760 Design of Space Systems

Capstone Design

ENGN 1380 Design of Civil Engineering Structures

*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:

1. ENRN 0030 Introduction to Engineering & ENRN 0040 and Dynamics and Vibrations
2. PHYS 0050 Foundations of Mechanics & PHYS 0060 and Foundations of Electromagnetism and Modern Physics

PHYS 0070 Analytical Mechanics & PHYS 0160 and Introduction to Relativity and Quantum Physics

MATH 0190 Advanced Placement Calculus (Physics/Engineering)
or MATH 0170 Advanced Placement Calculus
or MATH 0200 Intermediate Calculus (Physics/Engineering)
or MATH 0180 Intermediate Calculus
or MATH 0350 Honors Calculus

Select three additional higher-level math, applied math, or mathematical physics (PHYS 0720) courses.

CSCI 0040 Introduction to Scientific Computing and Problem Solving
or CSCI 0150 Introduction to Object-Oriented Programming and Computer Science
or CSCI 0170 Computer Science: An Integrated Introduction
or CSCI 0190 Accelerated Introduction to Computer Science

ENGN 0510 Electricity and Magnetism
or PHYS 0470 Electricity and Magnetism
or ENGN 1560 Applied Electromagnetics
or PHYS 1510 Advanced Electromagnetic Theory

PHYS 0500 Advanced Classical Mechanics
or ENGN 1370 Advanced Engineering Mechanics
PHYS 1410 Quantum Mechanics A
PHYS 1420 Quantum Mechanics B

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

English

We study how literature works, how we understand it, and how we write about it. We examine closely matters of language, form, genre, and critical method. We invite you to new practices of reading and writing that promote the understanding of literatures and cultures in English through history, criticism, and theory. We are committed to the understanding of literature from a transnational perspective, emphasizing the movement of texts and peoples across borders of nation, race, gender, and sexuality, now and in the past. And we encourage students to commit themselves to the creation of original knowledge in their reading and writing.

In addition to the English concentration, we offer an English concentration track in the practice of Nonfiction Writing. The concentration in English and the English/Nonfiction track follow the same core requirements, and students in the English concentration may elect Nonfiction Writing courses as electives. We invite applications from qualified juniors to the honors programs in both English and Nonfiction. One of the largest humanities concentrations at Brown, English provides a strong foundation for a liberal education and for work in many sectors of employment, especially in the many areas where new media creates demand for transformative writing: the press, publishing, advertising, visual media, public relations, public service, 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):

1. ONE "How Literature Matters" course (ENGL0100):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 0100D</td>
<td>Matters of Romance</td>
</tr>
<tr>
<td>ENGL 0100F</td>
<td>Devils, Demons, and Do Gooders</td>
</tr>
<tr>
<td>ENGL 0100G</td>
<td>The Literature of Identity</td>
</tr>
<tr>
<td>ENGL 0100P</td>
<td>Love Stories</td>
</tr>
</tbody>
</table>

2. ONE course before 1700:

These are courses that focus on the early modern period, i.e. medieval and renaissance literatures.

3. ONE course after 1700:

These are courses that focus on the 18th-century and beyond.

4. ONE course in "Literature Across Borders": 1

5. ONE theory course: 1

6. FIVE electives 2

Total Credits 19

1. Each course may fulfill ONE requirement. Five courses must be 1000-level courses. With advisor approval, two of the ten required courses may be taken in departments other than English.

2. Only TWO courses dealing primarily with the practice of writing at the 1000-level may be counted as electives. One ENGL0200 may be counted toward the 10-course requirement only as an elective.

All substitutions and/or exceptions must be approved by the concentration advisor in consultation with the Director of Undergraduate Studies. A substitution or exception is not approved until specified in writing in the student’s concentration file housed in the English Department.

English Concentration -- Nonfiction Writing Track (10 courses)

The English concentration also includes a Nonfiction Writing Track. The requirements are the same as 1 through 6 above, but three of the five electives must be 1000-level Nonfiction Writing courses (only ONE of which may be intermediate). Only THREE Nonfiction courses may count toward the concentration.

Honors in English

The English Honors program is intended for students who have been highly successful in their English concentration coursework and who want the opportunity to pursue a research project in more depth than is possible in an undergraduate seminar. The program is intended for those students with a strong desire to conduct independent research under the
supervision of a thesis advisor and culminates in the writing of a thesis during the senior year.

**Admission**

Students apply to the Honors Program early in the second semester of their junior year. 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 ability and promise in the study of literature. To be eligible for admission, students must have received more As than Bs (and no Cs or below) in concentration courses completed. Students must complete an application; supply a brief writing sample, and request two letters of recommendation from English faculty with whom they have taken courses. If necessary, letters may come from faculty in related departments. Letters from teaching assistants may only serve as supporting recommendations.

Candidates must also submit a one-page project proposal signed by the faculty member who has agreed to serve as the thesis advisor. See procedures and application (http://brown.edu/academics/english/english-honors-procedures) for more details.

**Requirements**

The course requirements for the English Honors Program are the same as those for the regular concentration, with the following additions:

As part of regular coursework, and counting toward the concentration requirements, honors candidates must complete at least three upper-level seminars or comparable small courses in which students have the opportunity to do independent research, take significant responsibility for discussion, and do extensive scholarly and critical writing. Students are encouraged to include at least one graduate seminar in their program. (Permission to take a graduate course must be obtained from the instructor.) Honors candidates should discuss their proposed course of study with the Honors Advisor.

During the Fall and Spring of the senior year, honors candidates must complete two additional courses beyond the ten courses required by the regular concentration: ENGL 1991 and ENGL 1992. ENGL 1991 is the Senior Honors Seminar, in which students begin to research and write their theses, as well as 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 Advisor 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 work. Specifically, it allows those who have an expressed and proven interest in nonfiction writing to pursue more completely a single project under the supervision of a first reader. The intention is to help students to complete work worthy of publication. The program culminates in the writing of a thesis during the senior year.

**Admission**

Students apply to the Nonfiction Writing Honors Program in the second semester of their junior year 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/NC; ENGL 1994 must be taken for a grade. Honors candidates should discuss their proposed course of study with the faculty member they choose to direct their thesis.

Honors candidates must continue to receive more As than Bs in courses taken as part of the concentration. Courses completed with a grade of C will not count toward an Honors concentration. A student who receives a "C" after admission to Nonfiction Honors and wishes to continue in the program must complete an additional course in a comparable subject area, with a grade higher than C.

**The Honors Thesis**

The Nonfiction Writing Honors thesis is an extended project, usually of between 50 and 80 pages, written under the supervision of one of the Nonfiction Writing faculty and a second reader (who can be from literature or another department). The specific topic and approach of the thesis are worked out between the student and the 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.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 these 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 in Environmental Studies and Environmental Science:**

The Institute at Brown for Environment and Society administers two concentrations, one offering an A.B. degree in Environmental Studies (requires 14-15 courses) and the other a Sc.B. degree in Environmental Science (requires 19-20 courses). Below are a set of course offerings arranged into four tracks:

1. Air, Climate & Energy
2. Conservation Science & Policy
3. Land, Water & Food Security
4. Sustainability in Development

**Requirements for the A.B. in Environmental Studies:**

**Core Requirements**

- ECON 0110 Principles of Economics  
- ENVS 0490 Environmental Science in a Changing World  
- ENVS 0495 Introduction to Environmental Social Science  
- BIOL 0210 Diversity of Life  
- or GEOL 0240 Earth: Evolution of a Habitable Planet  

**Methods - one course**

- ENVS 1920 Methods for Interdisciplinary Environmental Research

**Electives - three courses**

You may choose among any ENVS course, any course shown on one or more of the tracks, and any prerequisites listed for a required course.

**Capstone - one or two courses**

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.

**Track Specific Requirements**

**Track 1 - Air, Climate, and Energy**

**Climate:** Select One

- GEOL 1350 Weather and Climate
- GEOL 1430 Principles of Planetary Climate

**Physics:**

- PHYS 0050 Foundations of Mechanics
- ENGN 1930U Renewable Energy Technologies
- PHYS 0114 The Science and Technology of Energy

**Energy Technology:** Select One

- ENVS 1410 Environmental Law and Policy
- ENVS 1415 Power, Justice, and Climate Change
- ENVS 1530 From Locke to Deep Ecology: Property Rights and Environmental Policy
- ENVS 1575 Engaged Climate Policy at the UN Climate Change Talks
- ENVS 1615 Making Connections: The Environmental Policy Process
- ENVS 1755 Globalization and the Environment
- ENVS 1925 Energy Policy and Politics

**Sustainable Infrastructure:** Select One

- ENVS 1400 Sustainable Design in the Built Environment
- ENVS 1580 Environmental Stewardship and Resilience in Urban Systems

**Track 2 - Conservation Science and Policy**

**Ecology:**

- BIOL 0420 Principles of Ecology
- BIOL 1470 Conservation Biology

**Ecology & Conservation Topics:** Select One

- ENVS 0455 Coastal Ecology and Conservation
- BIOL 1450 Community Ecology
- BIOL 1480 Terrestrial Biogeochemistry and the Functioning of Ecosystems

**Policy:** Select One

- ENVS 0510 International Environmental Law and Policy
- ENVS 1410 Environmental Law and Policy
- ENVS 1530 From Locke to Deep Ecology: Property Rights and Environmental Policy
- ENVS 1575 Engaged Climate Policy at the UN Climate Change Talks
- ENVS 1615 Making Connections: The Environmental Policy Process
- ENVS 1925 Energy Policy and Politics

**Statistics:** Select One

- APMA 0650 Essential Statistics
- APMA 1650 Statistical Inference I
- BIOL 0495 Statistical Analysis of Biological Data
- ECON 1620 Introduction to Econometrics

**Track 3 - Land, Water & Food Security**

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 1350</td>
<td>Weather and Climate</td>
</tr>
<tr>
<td>GEOL 1430</td>
<td>Principles of Planetary Climate</td>
</tr>
</tbody>
</table>

Biology: Select One

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 0210</td>
<td>Diversity of Life</td>
</tr>
<tr>
<td>BIOL 0190H</td>
<td>Plants, Food, and People</td>
</tr>
<tr>
<td>BIOL 0420</td>
<td>Principles of Ecology</td>
</tr>
<tr>
<td>BIOL 0430</td>
<td>The Evolution of Plant Diversity</td>
</tr>
<tr>
<td>ENV 0455</td>
<td>Coastal Ecology and Conservation</td>
</tr>
</tbody>
</table>

Environmental History: Select One

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENV 1530</td>
<td>From Locke to Deep Ecology: Property Rights and Environmental Policy</td>
</tr>
<tr>
<td>HIST 1820A</td>
<td>Environmental History</td>
</tr>
<tr>
<td>HIST 1976E</td>
<td>The Anthropocene: Climate Change as Social History</td>
</tr>
</tbody>
</table>

Policy: Select One

<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 1350</td>
<td>Environmental Economics and Policy</td>
</tr>
<tr>
<td>ENVS 1410</td>
<td>Environmental Law and Policy</td>
</tr>
<tr>
<td>ENVS 1530</td>
<td>From Locke to Deep Ecology: Property Rights and Environmental Policy</td>
</tr>
<tr>
<td>ENVS 1555</td>
<td>Urban Agriculture: The Importance of Localized Food Systems</td>
</tr>
<tr>
<td>ENVS 1575</td>
<td>Engaged Climate Policy at the UN Climate Change Talks</td>
</tr>
<tr>
<td>ENVS 1615</td>
<td>Making Connections: The Environmental Policy Process</td>
</tr>
<tr>
<td>ENVS 1925</td>
<td>Energy Policy and Politics</td>
</tr>
<tr>
<td>POLS 1740</td>
<td>Politics of Food</td>
</tr>
</tbody>
</table>

Tools: Select One

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 1320</td>
<td>Introduction to Geographic Information Systems for Environmental Applications</td>
</tr>
<tr>
<td>GEOL 1330</td>
<td>Global Environmental Remote Sensing</td>
</tr>
<tr>
<td>SOC 1100</td>
<td>Introductory Statistics for Social Research</td>
</tr>
<tr>
<td>SOC 1117</td>
<td>Focus Groups for Market and Social Research</td>
</tr>
<tr>
<td>SOC 1340</td>
<td>Principles and Methods of Geographic Information Systems</td>
</tr>
</tbody>
</table>

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

**Additional Track specific requirements for the Sc.B.**

**Track 1 - Air, Climate, and Energy**

Math: Select Both

- MATH 0090 Introductory Calculus, Part I
- MATH 0100 Introductory Calculus, Part II

Environmental Economics: Select One

- ENVS 1350 Environmental Economics and Policy

Advanced Climate: Select One

- GEOL 1510 Introduction to Atmospheric Dynamics
- GEOL 1520 Ocean Circulation and Climate

Thermal/Chem: Select One

- ENGN 0720 Thermodynamics
- GEOL 1370 Environmental Geochemistry

**Track 2 - Conservation Science and Policy**

Math: Select One

- MATH 0090 Introductory Calculus, Part I

Evolution: Select One

- BIOL 0480 Evolutionary Biology

Organismal Diversity: Select One

- BIOL 0410 Invertebrate Zoology
- BIOL 0430 The Evolution of Plant Diversity (BIOL 0460 - Insect Biology)
- BIOL 0940C Sophomore Seminar: Insect Biology
- BIOL 0940D Rhode Island Flora: Understanding and Documenting Local Plant Diversity
- BIOL 1880 Comparative Biology of the Vertebrates

Env. Econ: Select One

- ENVS 1350 Environmental Economics and Policy

Tools: Select One

- GEOL 1320 Introduction to Geographic Information Systems for Environmental Applications
- GEOL 1330 Global Environmental Remote Sensing
- SOC 1340 Principles and Methods of Geographic Information Systems

**Track 3 - Land, Water & Food Security**

Math: Select One

- MATH 0090 Introductory Calculus, Part I

Chemistry: Select One

- CHEM 0330 Equilibrium, Rate, and Structure

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Ethnic Studies is an interdisciplinary, comparative concentration that examines the construction of race and ethnicity in social, cultural, historical, political, and economic contexts. Concentrators develop individual programs based on areas of focus in consultation with faculty advisors, drawing from courses in the humanities and social sciences. Typical areas of focus are social issues (such as inequality, education, or health), cultural production and the representation of racial groups, processes of racialization, the historical formation of transnational communities and of diaspora, and the history of particular ethnic or racial groups.

The Ethnic Studies concentration (https://www.brown.edu/academics/american-studies/ethnic-studies) at Brown emphasizes the histories of diverse racial groups within and across the borders of the United States, including examining issues of diaspora, migration, social movements, and the political economies of social inequality and racial formation. Concentrators strive for intellectual fluency in a range of critical approaches to race and ethnicity across disciplines, and demonstrate this fluency through the composition or creation of a significant piece of original research or creative work.

Brown University established an Ethnic Studies concentration in 1996, originally within the Center for the Study of Race and Ethnicity in America (https://www.brown.edu/academics/race-ethnicity) (CSREA). In the Fall of 2013, as part of changes to the CSREA and to better support students, Ethnic Studies joined a long established Brown department, American Studies (https://www.brown.edu/academics/american-studies/home). Many American Studies faculty members (https://www.brown.edu/academics/american-studies/people) work in the areas of race and ethnicity and have held joint appointments in Ethnic and American Studies while American Studies PhD students (https://www.brown.edu/academics/american-studies/graduate-students) have done some of the most exciting Ethnic Studies research on campus. Faculty and students in Ethnic Studies and American Studies are eager to see how the two programs move forward together.

As an academic field, Ethnic Studies is rooted in the protests of the 1960s and 1970s, out which emerged the very first Latino/a Studies, Asian American Studies, African American Studies, and Native American studies programs. Organized around straightforward political goals – the enrichment through diversification of the curriculum and the systematic, multi-disciplinary, and the often comparative study of racial and ethnic inequality – Ethnic Studies has become an important feature of major research universities.

Faculty, both core and affiliated, create and participate in groundbreaking Ethnic Studies scholarship. Areas of faculty research include borderlands history, Latina/o literary studies, and indigenous movements. Students can focus in Native American, Asian American, or Latino Studies and choose a thematic interest including such current examples as: “social issues affecting racialized groups” (students have looked at health disparities or educational inequality); “the study of cultural production or cultural representations;” “the history of a particular racial or ethnic group,” and “the study of comparative processes of racialization.”

Requirements:

| ETHN 0500 | Introduction to American/Ethnic Studies | 1 |
| AFRI 0090 | An Introduction to Africana Studies | 2 |
| ANTH 1121 | From Coyote to Casinos: Native North American Peoples and Cultures | 3 |
| SOC 1270 | Race, Class, and Ethnicity in the Modern World | 3 |
| ANTH 1400 | Race, Culture, and Ethnic Politics | 1 |
| or ANTH 1420 | Ethnicity, Race, and Gender in the Americas | 1 |

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 series, or a course from the list of cross-listed courses, or a course approved by their advisor.

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.

Honors

Candidates for honors must have at least a B+ average in the concentration and be approved by the Concentration Committee. Honors
candidates will propose a thesis project to be completed by the end of their final semester. The development of a thesis project will begin during the sixth semester. Honors candidates will have two readers, at least one of whom must be Ethnic Studies core faculty.

Concentrators who choose not to request consideration for honors will be required to complete a major essay or project by the end of their final semester. The essay or project can be the result of major work completed in the senior seminar.

Students seeking information about the Ethnic Studies Program or in need of advising should contact (401-863-7034).

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 concentration in French and Francophone Studies is committed to the interdisciplinary and textually informed study of the language, literature, and cultural and critical traditions of the French-speaking world. Concentrators engage actively through their coursework with a wide range of texts and critical perspectives, pertaining to multiple literary genres and media (the novel; theater; poetry; cinema; special topics in contemporary politics and culture). They have opportunities to study different periods of French literature and intellectual history (from the Renaissance to the present) as well as Francophone cultures beyond France (West Africa, the Maghreb and the Caribbean). Courses cover a wide diversity of topics, while placing a shared emphasis on language-specific study, critical writing skills, and the vital place of literature and art for intellectual inquiry.

The concentration program is designed to encourage and support language-specific study. Literary texts and cultural documents are read principally in the original. Likewise, in most courses, French is the language of class discussions, presentations and research/critical papers. All French Studies courses are designated writing-intensive (WRIT).

Concentrators in French and Francophone Studies are strongly encouraged to spend one or two semesters (usually in their junior year) in France or in a Francophone country to derive the richest benefits of linguistic and cultural immersion. Information on Brown in France or in a Francophone country to derive the richest benefits of linguistic and cultural immersion. Information on Brown in France and approved alternative programs in French-speaking countries is available from the Office of International Programs (http://www.brown.edu/Administration/OIP) office and the OIP website. Other summer programs can be found on the French Embassy website.

Students who have performed outstandingly in their concentration courses, have completed at least six concentration courses by the first semester of their senior year, and are highly recommended by two professors are eligible to apply for admission to the Honors program (http://www.brown.edu/academics/french-studies/undergraduate/honors-program).

Concentration Requirements

A minimum of 10 courses is required for the concentration in French and Francophone Studies. Concentrators must observe following guidelines when planning their concentration. It is recommended that course choices for each semester be discussed with the department’s concentration advisor.

Note: A maximum of four courses 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), administered by OIP and departmental faculty, students can enroll directly in French institutions.

FREN 0600 Writing and Speaking French II (is accepted for concentration credit)

Required Courses

One (and no more than two) of the following of 0720, 0750, 0760 series gateway courses:

FREN 0720A De l'Amour courtois au désir postmoderne
FREN 0720B The French Novel Today
FREN 0750B Au carrefour des sciences sociales: introduction à l’interprétation de la fiction littéraire
FREN 0750C Cinéma et histoire
FREN 0750D Nous et les autres: les Français et le monde de la Renaissance à la Révolution
FREN 0750E Lost in Translation: Representations of America by French Writers
FREN 0750F L’Idée de l’empire dans l’imaginaire français
FREN 0750G L’animal dans la culture contemporaine
FREN 0760A Introduction à l’analyse littéraire

One of the following:

FREN 1510A Advanced Oral and Written French: Traduction
FREN 1510F Advanced Written and Oral French: Regards sur la France actuelle
FREN 1510C Advanced Oral and Written French: A table!
FREN 1510J Advanced Oral and Written French: Photographie

The senior seminar (senior year spring)

FREN 1900A Boulevard du crime
FREN 1900H La France en guerre

Electives

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 1000A Littérature et intertextualité: du Moyen-Age jusqu’à la fin du XVIIIème siècle
FREN 1000B Littérature et culture: Chevaliers, sorcières, philosophes, et poètes
FREN 1030A L’univers de la Renaissance: XVe et XVe 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 Moi l’artiste et mon 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 Age
FREN 1100G Old French Language and Literature Seminar

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

**FREN 1100I** Hostages and Prisoners of War in Medieval French Literature  
**FREN 1100H** Histoires et contes du Moyen Age  
**FREN 1410E** Lire et voir la Révolution française  
**FREN 1410I** Sorcellerie et Renaissance: le sort de la sorcière  
**FREN 1410O** Nous et les autres: Les Français et le monde de la Renaissance à la Révolution  

At least one course a post-Revolutionary period

- **FREN 1130E** Le Poétique et le quotidien  
- **FREN 1060A** Décadence  
- **FREN 1060B** Gender and the Novel  
- **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  
- **FREN 1330A** Fairy Tales and Culture  
- **FREN 1330C** French Women Writers  
- **FREN 1410A** Des monstres et de l’ anormal  
- **FREN 1410C** La culture franco-américaine en Nouvelle Angleterre  
- **FREN 1410P** Paris et la province : je t’aime, un peu, beaucoup...  
- **FREN 1410D** L’identité française  
- **FREN 1410F** Comment peut-on être Français? L’identité française en question  
- **FREN 1410R** Images d’une guerre sans nom: the Algerian War in Literature and Film  
- **FREN 1420C** Gender Theory and Politics in France  
- **FREN 1610C** Advanced Written French: Atelier d’écriture  
- **FREN 1710C** Politics, Democracy, and Corruption in Francophone Africa

**Total Credits** 10

---

#### Gender and Sexuality Studies

Gender and Sexuality Studies is an interdisciplinary concentration that examines the construction of gender and sexuality in social, cultural, political, economic, or scientific contexts. Each concentrator focuses on a well-defined topic or question and works closely with a concentration advisor to develop a program that investigates this focus area rigorously and supplements it with foundational courses in the relevant disciplines. Typical areas of focus include the acculturation of gender, sexuality and race in American politics or activism, the construction of sexual and gendered identities in educational institutions or in various forms of visual media, a contrast between different cultural understandings of sexual identity, a particular national literature and history. Such topics will frequently bring questions of gender and sexuality together; however students may also organize their concentrations to emphasize questions specifically related to gender or to sexuality. Introductory and methodology courses in the disciplines appropriate to students’ focus will help them understand the principles grounding such practices as historical research, literary interpretation, and sociological analysis.

#### Requirements:

The concentration requires 10 courses, 12 for honors concentrators. No more than two courses may count for multiple concentrations.

1. **GNSS 0120.** Introductory course on gender and sexuality across the disciplines  
2. Four–course focus on some thematic, theoretical, or historical aspect of gender and sexuality  
3. Two introductory or methodology courses in disciplines pertinent to the focus  
4. One course in gender history, women's history, or history of sexuality  
5. One course in feminist theory or theory of sexuality  
6. **GNSS 1990.** A senior seminar which counts as your capstone course. Senior seminar participants are expected to write a research essay. The senior seminar fulfills the second half of Brown’s writing requirement.  
7. Prior to Commencement, all graduating senior concentrators are required to give a short presentation of either their senior essay or thesis project.

#### Honors

Candidates for honors must apply to the program’s director at the beginning of their seventh semester. Honors concentrators fulfill the regular requirements plus completing a two–semester thesis as their capstone project.


#### Geological Sciences

Geological science involves the study of the Earth (and other planetary bodies), including their compositions and histories and the physical chemical and biological processes that shape them. The geosciences are highly interdisciplinary, thus students must take some supporting math and science courses. Geoscience courses emphasize a process-oriented approach, with hands-on experiences in labs and on field trips. There is a strong emphasis on active and collaborative learning, and on practice in communication. Students may choose an AB (total of 13 courses) or an ScB (19 total courses, including one semester of research). There are many opportunities for students to do research work (typically in paid positions) during the academic year or in the summer, in areas such as deformation and properties of geological materials, deciphering the geologic history of some local rocks, or analysis of planetary images.

#### Standard program for the A.B. degree

This program provides a broad introduction to the geological sciences. Recommended for students seeking a liberal education and a general understanding of Earth processes and Earth history. Especially attractive for double concentrations, such as geology and economics as a career path to law or business, or geology and English as a career path to journalism or technical writing.

**Basic supporting science courses**

| CHEM 0330 | Equilibrium, Rate, and Structure (or advanced placement) | 1 |

Select three of the following:

---

For up-to-date course information please visit Courses@Brown.edu.
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**
Select two of the following:
- 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 1110 Estuarine Oceanography
- GEOL 1240 Stratigraphy and Sedimentation
- GEOL 1330 Global Environmental Remote Sensing
- GEOL 1350 Weather and Climate
- GEOL 1370 Environmental Geochemistry

Select four courses from upper level geological sciences, mathematics, or supporting sciences with approval from the departmental concentration advisor.

**Total Credits** 13

---

**Brown University**

**Standard program for the Sc.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**
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)

Select two of the following:
- 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

Select three Biology courses from the following:
- BIOL 0200 The Foundation of Living Systems (or more advanced)
- CHEM 0330 Equilibrium, Rate, and Structure (or advanced placement)

**Concentration courses**
Select one of the following:
- GEOL 1110 Estuarine Oceanography
- GEOL 1240 Stratigraphy and Sedimentation
- GEOL 1410 Mineralogy
- GEOL 1420 Petrology
- GEOL 1450 Structural Geology

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** 19

---

**Advanced placement may be substituted for the first semester of physics.**

**Geology-Biology**

Geology-Biology involves study of the interactions of the Earth and its hydrosphere and atmosphere with the great diversity of life forms, and how they have evolved and influenced one another over the entire history of the Earth. Many courses emphasize climate and biogeochemistry; this concentration is a good one for students interested in quantitative approaches to environmental science. Students take a basic suite of geoscience courses and at least 4 bio courses of their choosing, plus some supporting math and science courses; the AB degree requires a total of 14 courses and the ScB degree requires a total of 19, including one semester of research. There is a strong emphasis on active and collaborative learning, and on practice in communication. There are many opportunities for students to do research work (typically in paid positions) during the academic year or in the summer, in areas such as determining the history of climate change during the recent ice age, investigating the causes of major extinctions, and using paleoenvironmental records to determine the vulnerability of different regions of the globe to droughts and other processes that strongly affect society.

**Standard program for the A.B. degree**

This program provides a broad introduction to the geologic and biologic processes that shape the Earth and our environment. It is recommended for students seeking a liberal education and a general understanding of Earth processes, including the evolution of climate and the environment, global environmental change and Earth history. The program prepares students for careers in environmental science, geology, ecology, oceanography, and global change.

**Basic supporting science courses**
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)

Select two of the following:
- 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

Select three Biology courses from the following:
- BIOL 0200 The Foundation of Living Systems (or more advanced)
- CHEM 0330 Equilibrium, Rate, and Structure (or advanced placement)

**Concentration courses**
Select one of the following:
- GEOL 1110 Estuarine Oceanography
- GEOL 1240 Stratigraphy and Sedimentation
- GEOL 1410 Mineralogy
- GEOL 1420 Petrology
- GEOL 1450 Structural Geology

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** 19

---

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

<table>
<thead>
<tr>
<th>Standard program for the Sc.B. degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
</tr>
</tbody>
</table>

**Five basic supporting science courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 0200</td>
<td>The Foundation of Living Systems (or more advanced)</td>
</tr>
<tr>
<td>CHEM 0330</td>
<td>Equilibrium, Rate, and Structure (or advanced placement)</td>
</tr>
<tr>
<td>PHYS 0050</td>
<td>Foundations of Mechanics (or more advanced)</td>
</tr>
<tr>
<td>or ENGN 0030</td>
<td>Introduction to Engineering</td>
</tr>
</tbody>
</table>

Select two courses in mathematics at the level of:

<table>
<thead>
<tr>
<th>Course</th>
<th>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 (or more advanced, or advanced courses in data analysis)</td>
</tr>
</tbody>
</table>

**Fourteen (14) concentration courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 0220</td>
<td>Physical Processes in Geology</td>
</tr>
<tr>
<td>GEOL 0230</td>
<td>Geochemistry: Earth and Planetary Materials and Processes</td>
</tr>
<tr>
<td>GEOL 0240</td>
<td>Earth: Evolution of a Habitable Planet</td>
</tr>
<tr>
<td>GEOL 1240</td>
<td>Stratigraphy and Sedimentation</td>
</tr>
<tr>
<td>Three biology courses from the following:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 0390</td>
<td>Vertebrate Evolution and Diversity</td>
</tr>
<tr>
<td>BIOL 0410</td>
<td>Invertebrate Zoology</td>
</tr>
<tr>
<td>BIOL 0415</td>
<td>Microbes in the Environment</td>
</tr>
<tr>
<td>BIOL 0420</td>
<td>Principles of Ecology</td>
</tr>
<tr>
<td>BIOL 0430</td>
<td>The Evolution of Plant Diversity</td>
</tr>
<tr>
<td>BIOL 0440</td>
<td>Inquiry in Plant Biology: Analysis of Plant Growth, Reproduction and Adaptive Responses</td>
</tr>
<tr>
<td>BIOL 0480</td>
<td>Evolutionary Biology</td>
</tr>
<tr>
<td>BIOL 1470</td>
<td>Conservation Biology</td>
</tr>
<tr>
<td>BIOL 1480</td>
<td>Terrestrial Biogeochemistry and the Functioning of Ecosystems</td>
</tr>
<tr>
<td>BIOL 1500</td>
<td>Plant Physiological Ecology</td>
</tr>
<tr>
<td>BIOL 1880</td>
<td>Comparative Biology of the Vertebrates</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 0580</td>
<td>Foundations of Physical Hydrology</td>
</tr>
<tr>
<td>GEOL 1110</td>
<td>Estuarine Oceanography</td>
</tr>
<tr>
<td>GEOL 1120</td>
<td>Paleoceanography</td>
</tr>
<tr>
<td>GEOL 1130</td>
<td>Ocean Biogeochemical Cycles</td>
</tr>
<tr>
<td>GEOL 1150</td>
<td>Limnology: The Study of Lakes</td>
</tr>
<tr>
<td>GEOL 1330</td>
<td>Global Environmental Remote Sensing</td>
</tr>
<tr>
<td>GEOL 1350</td>
<td>Weather and Climate</td>
</tr>
<tr>
<td>GEOL 1370</td>
<td>Environmental Geochemistry</td>
</tr>
<tr>
<td>GEOL 1380</td>
<td>Environmental Stable Isotopes</td>
</tr>
<tr>
<td>GEOL 1510</td>
<td>Introduction to Atmospheric Dynamics</td>
</tr>
</tbody>
</table>

Three additional courses from upper level geological sciences, mathematics, or supporting sciences with approval from the concentration advisor.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 1970</td>
<td>Individual Study of Geologic Problems (Senior Research Thesis)</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, and an advanced placement course. The concentration advisor emphasizes 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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0090</td>
<td>Introductory Calculus, Part I (or more advanced)</td>
</tr>
<tr>
<td>MATH 0100</td>
<td>Introductory Calculus, Part II (or more advanced)</td>
</tr>
<tr>
<td>CHEM 0330</td>
<td>Equilibrium, Rate, and Structure</td>
</tr>
<tr>
<td>PHYS 0050</td>
<td>Foundations of Mechanics (or more advanced)</td>
</tr>
<tr>
<td>or ENGN 0030</td>
<td>Introduction to Engineering</td>
</tr>
</tbody>
</table>

**Concentration courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 0220</td>
<td>Physical Processes in Geology</td>
</tr>
<tr>
<td>GEOL 0230</td>
<td>Geochemistry: Earth and Planetary Materials and Processes</td>
</tr>
<tr>
<td>GEOL 0240</td>
<td>Earth: Evolution of a Habitable Planet</td>
</tr>
<tr>
<td>Three additional chemistry courses</td>
<td></td>
</tr>
</tbody>
</table>

Select one of the following Series:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 1410 &amp; GEOL 1420</td>
<td>Mineralogy and Petrology</td>
</tr>
<tr>
<td>GEOL 1130 &amp; GEOL 1370</td>
<td>Ocean Biogeochemical Cycles and Environmental Geochemistry</td>
</tr>
</tbody>
</table>

Two additional courses from upper level geological sciences, math, or supporting sciences with approval from the department concentration advisor.

**Total Credits: 14**

### Standard program for the Sc.B. degree

This program is recommended for students interested in graduate study and careers in geochemistry and related fields.

**Basic Supporting Science Courses:**

Select two courses in mathematics at the level of:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0090</td>
<td>Introductory Calculus, Part I (or more advanced)</td>
</tr>
<tr>
<td>MATH 0100</td>
<td>Introductory Calculus, Part II (or more advanced)</td>
</tr>
<tr>
<td>CHEM 0330</td>
<td>Equilibrium, Rate, and Structure</td>
</tr>
</tbody>
</table>

**Total Credits: 14**

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Select one of the following series:  
PHYS 0050 Foundations of Mechanics  
& PHYS 0060 and Foundations of Electromagnetism and Modern Physics  
ENGN 0030 Introduction to Engineering  
& ENGN 0040 and Dynamics and Vibrations  
or a more advanced course

Concentration Courses:
Either the geochemistry/inorganic option or the geochemistry/organic 1 option:

Geochemistry/Inorganic Option:
GEOL 0220 Physical Processes in Geology  
GEOL 0230 Geochemistry: Earth and Planetary Materials and Processes  
GEOL 0240 Earth: Evolution of a Habitable Planet  
GEOL 1130 Ocean Biogeochemical Cycles  
or GEOL 1370 Environmental Geochemistry  
GEOL 1410 Mineralogy  
GEOL 1420 Petrology  
Plus one from:  
GEOL 1240 Stratigraphy and Sedimentation  
GEOL 1330 Global Environmental Remote Sensing  
GEOL 1450 Structural Geology  
Three from:  
CHEM 0350 Organic Chemistry  
CHEM 0500 Inorganic Chemistry  
CHEM 1080 Advanced Inorganic Chemistry  
CHEM 1140 Physical Chemistry: Quantum Chemistry  
CHEM 1150 Physical Chemistry: Thermodynamics and Statistical Mechanics  
Geochemistry/Organic Option:  
GEOL 0220 Physical Processes in Geology  
GEOL 0230 Geochemistry: Earth and Planetary Materials and Processes  
GEOL 0240 Earth: Evolution of a Habitable Planet  
GEOL 1130 Ocean Biogeochemical Cycles  
GEOL 1370 Environmental Geochemistry  
GEOL 1410 Mineralogy  
Plus one from:  
GEOL 1240 Stratigraphy and Sedimentation  
GEOL 1330 Global Environmental Remote Sensing  
GEOL 1380 Environmental Stable Isotopes  
Three Chemistry courses:  
CHEM 0350 Organic Chemistry  
CHEM 0360 Organic Chemistry  
CHEM 0370 Organic Chemistry  
Plus one additional chemistry course  
Four additional courses from upper level geological sciences, mathematics, or supporting sciences with approval of the departmental concentration advisor  
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 3 math and applied courses; students can choose courses from both solid Earth geophysics and climate science themes. Geoscience courses emphasize an analytical and process-oriented approach, with hands-on experiences in labs and on field trips. Active and collaborative learning is encouraged, as is practice in written and oral communication. There are many opportunities for students to engage in research (typically in paid positions) during the academic year or in the summer, in areas such as analysis of seismic waves in subduction zones, theoretical modeling of convection in the Earth’s mantle, modeling the effects of the warming climate in the oceans and atmosphere, and remote sensing of how climate change affects vegetation.

Standard program for the A.B. degree

Recommended for students seeking a liberal education and interested in applying physical and mathematical principles toward an understanding of the processes affecting planets, Earth, and the environment and how they are modeled. Some course requirements may be flexible based on consultation with concentration advisor.

GEOL 0220 Physical Processes in Geology  
GEOL 0250 Computational Approaches to Modelling and Quantitative Analysis in Natural Sciences: An Introduction  
or GEOL 0350 Mathematical Methods of Fluid and Solid Geophysics and Geology  
Four theme courses (choose either the Solid Earth Geophysics Theme or the Climate Science Theme)  
Solid Earth Geophysics Theme  
GEOL 0230 Geochemistry: Earth and Planetary Materials and Processes (solid Earth geophysics theme)  
GEOL 1610 Solid Earth Geophysics (solid Earth geophysics theme)  
And select two of the following:  
GEOL 1410 Mineralogy (solid Earth geophysics theme)  
GEOL 1420 Petrology  
GEOL 1450 Structural Geology (solid Earth geophysics theme)  
GEOL 1620 Continuum Physics of the Solid Earth (solid Earth geophysics theme)  
Climate Science Theme  
GEOL 0240 Earth: Evolution of a Habitable Planet (climate science theme)  
GEOL 1350 Weather and Climate (climate science theme)  
And select two from the following:  
GEOL 1130 Ocean Biogeochemical Cycles (climate science theme)  
GEOL 1310 Global Water Cycle (climate science theme)  
GEOL 1430 Principles of Planetary Climate (climate science theme)  
GEOL 1510 Introduction to Atmospheric Dynamics (climate science theme)  
GEOL 1520 Ocean Circulation and Climate  
Choose one of the following:  
PHYS 0050 Foundations of Mechanics  
PHYS 0070 Analytical Mechanics  
ENGN 0040 Dynamics and Vibrations  
Choose one of the following:  
PHYS 0060 Foundations of Electromagnetism and Modern Physics  
ENGN 0310 Mechanics of Solids and Structures  
ENGN 0810 Fluid Mechanics  
Choose one of the following:  
PHYS 0470 Electricity and Magnetism  
PHYS 0500 Advanced Classical Mechanics  
PHYS 1600 Computational Physics

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
ENGN 0510 Electricity and Magnetism
ENGN 0810 Fluid Mechanics
ENGN 1370 Advanced Engineering Mechanics
GEOL 1820 Geophysical Fluid Dynamics

Three courses in Mathematics, including: 3
- APMA 0330 Methods of Applied Mathematics I, II
- or APMA 0340 Methods of Applied Mathematics I, II
- CHEM 0330 Equilibrium, Rate, and Structure (or advanced placement)

One additional course from upper level geological sciences, mathematics, or supporting sciences with approval from the departmental concentration advisor. 3

Total Credits 14

1 One course cannot be used to satisfy two requirements.
2 ENGN 0810 or GEOL 1820 are recommended for those completing the Climate Science theme.
3 In addition to courses listed elsewhere, in the Geology-Physics/Math concentrations, these courses are of particular relevance: GEOL 0810, GEOL 1320, GEOL 1710, GEOL 1960A.

Standard program for the Sc.B. degree

This program is recommended for students interested in graduate study and careers in geophysics, climate science, and related fields. Students will be prepared to understand and use models, make measurements, and use theories of the processes studied in these fields. Some course requirements may be flexible based on consultation with concentration advisor.

GEOL 0220 Physical Processes in Geology
GEOL 1430 Principles of Planetary Climate
GEOL 1610 Solid Earth Geophysics
GEOL 0250 Computational Approaches to Modelling and Quantitative Analysis in Natural Sciences: An Introduction
or GEOL 0350 Mathematical Methods of Fluid and Solid Geophysics and Geology

Five theme courses (choose either the Solid Earth Geophysics theme or the Climate Science Theme):

Solid Earth Geophysics Theme
- GEOL 0230 Geochimistry: Earth and Planetary Materials and Processes
- GEOL 1450 Structural Geology
- GEOL 1620 Continuum Physics of the Solid Earth
And choose two from the following:
- GEOL 1410 Mineralogy
- GEOL 1420 Petrology
- GEOL 1560 Global Tectonics
- GEOL 1650 Earthquake Seismology (Climate Science Theme)
Or a field course

Climate Science Theme
- GEOL 0240 Earth: Evolution of a Habitable Planet

Choose one:
- GEOL 1510 Introduction to Atmospheric Dynamics
- GEOL 1520 Ocean Circulation and Climate
And choose three from the following: 1
- GEOL 1130 Ocean Biogeochemical Cycles
- GEOL 1310 Global Water Cycle
- GEOL 1330 Global Environmental Remote Sensing
- GEOL 1510 Introduction to Atmospheric Dynamics
- GEOL 1520 Ocean Circulation and Climate
Or a field or sea course

PHYS 0050 Foundations of Mechanics 1

or PHYS 0070 Analytical Mechanics
or ENGN 0040 Dynamics and Vibrations
PHYS 0060 Foundations of Electromagnetism and Modern Physics
or ENGN 0310 Mechanics of Solids and Structures
or ENGN 0810 Fluid Mechanics
Select two of the following: 1, 2
- PHYS 0470 Electricity and Magnetism
- PHYS 0500 Advanced Classical Mechanics
- PHYS 1600 Computational Physics
- ENGN 0510 Electricity and Magnetism
- ENGN 0810 Fluid Mechanics

Two additional courses from upper level geological sciences, mathematics, or supporting sciences, with approval from the departmental concentration advisor. 3

Total Credits 20

1 One course cannot be used to satisfy two requirements.
2 ENGN 0810 or GEOL 1820 are recommended for those completing the Climate Science theme.
3 In addition to courses listed elsewhere, in the Geology-Physics/Math concentrations, these courses are of particular relevance: GEOL 0810, GEOL 1320, GEOL 1710, GEOL 1960A.

German Studies

German Studies exposes students to the language, literature, and culture of the German speaking areas of Central Europe. Concentrators combine intensive study of the German language with interdisciplinary studies by complementing courses from the German Studies core program with courses from other departments that deal with topics from the German cultural tradition. The quest for national identity that dominated German history in the nineteenth and twentieth centuries has been augmented by contemporary Germany’s efforts to come to terms with its past and create new ways of dealing with diversity. Our curriculum therefore looks back at the German literary, cultural, and historical tradition, examining figures from Goethe or Christa Wolf to Marx, Freud, Nietzsche, and Heidegger, alongside the “texts” of contemporary German media, including television, film, and music. Most concentrators study abroad for one or two semesters.

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;

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
• At least five of the nine courses must be taken in the Department of German Studies (or four if a student spends a whole year in Germany on Study Abroad);
• Completion of a Senior Seminar during the senior year (i.e. a course from the German Studies 1900 series) as part of the five courses within the Department of German Studies; and
• If a student studies abroad for one semester, as many as four courses, in the case of two semesters, as many as five courses, from study abroad may count toward the concentration.

Honors
Candidates for honors will be expected to have a superior record in departmental courses and will have to be approved by the Department of German Studies. Honors candidates must take one additional course at the 1000-level from the German studies offerings and present an acceptable Senior Honors Thesis. The additional course may be used for preparation of the honors thesis. Students are encouraged to discuss their thesis topics with the concentration advisor no later than the third week of classes in Fall of their Senior year.

Health & Human Biology
Health and Human Biology is an interdisciplinary concentration that provides a rigorous foundation in the biological sciences with substantive course work in humanities and social sciences within a subfield of Human Health and Disease. The program includes: background courses, biology core courses, a set of theme courses, and a Senior Capstone activity. Background courses provide the essential foundations in chemistry, mathematics, methods, and basic biology. These support the Biology core, which is comprised of a flexible menu of intermediate and advanced courses. A required portion of the Biology core is Genetics, a cornerstone of human biology and its interface with other fields. The Biology core underscores the related coursework within the Health and Disease Theme. The Theme courses are social science and humanities courses that form a cohesive, thoughtful grouping. Theme groupings must be approved by the advisor. A required senior capstone course or activity builds on the program’s focus.

Program Requirements

REQUIRED BACKGROUND:
Four (4) courses including:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0090 Introductory Calculus, Part I (or equivalent placement)</td>
<td>1</td>
</tr>
</tbody>
</table>
| OR
| MATH 0050 Analytic Geometry and Calculus & MATH 0060 and Analytic Geometry and Calculus | 1       |
| OR
| MATH 0100 Introductory Calculus, Part II or MATH 0170 Advanced Placement Calculus | 1       |
| CHEM 0330 Equilibrium, Rate, and Structure | 1       |
| BIOL 0200 The Foundation of Living Systems | 1       |
| 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).

BIOL 0470 Genetics
-OR-
BIOL 0480 Evolutionary Biology & BIOL 0500 and Cell and Molecular Biology
-OR-

Select one course in structure/function/development such as:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 0400 Biological Design: Structural Architecture of Organisms</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 0800 Principles of Physiology</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 1310 Developmental Biology</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 1800 Animal Locomotion</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 1880 Comparative Biology of the Vertebrates</td>
<td>1</td>
</tr>
<tr>
<td>NEUR 0010 The Brain: An Introduction to Neuroscience</td>
<td>1</td>
</tr>
</tbody>
</table>

Select one course in organismal/population biology such as:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 0370 - Experimental Evolution</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 0380 The Ecology and Evolution of Infectious Disease</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 0390 Vertebrate Evolution and Diversity</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 0400 Biological Design: Structural Architecture of Organisms</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 0410 Invertebrate Zoology</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 0415 Microbes in the Environment</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 0420 Principles of Ecology</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 0480 Evolutionary Biology</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 1470 Conservation Biology</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 1880 Comparative Biology of the Vertebrates</td>
<td>1</td>
</tr>
<tr>
<td>ENVS 0490 Environmental Science in a Changing World</td>
<td>1</td>
</tr>
</tbody>
</table>

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:

SENIOR CAPSTONE ACTIVITY: Must be conducted during the senior year, fulfilled by one of the following, and related to the student’s chosen theme:

1) Advisor approved senior seminar or advanced course related to the theme
2) One semester of independent research/independent study (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.

Total Credits: 14

Theme:
• Approved courses must be above the introductory level and at least one must be 1000-level or above.
• No more than TWO courses from a given department may be included in the theme portion.

Note: Beginning with the Class of 2020: Health Systems, Structure and Policy will be eliminated.

Students will then select from FOUR theme options: 1) Health Behavior, 2) Environmental Health, 3) Global/International Health, 4) Social Context of Health and Disease.

Capstone: See http://www.brown.edu/academics/biology/undergraduate-education/ for more information on the Capstone Activity.

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

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 work in the Spanish language and/or 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 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:
To be confirmed.

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.)

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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. Students who are interested in a thematic or transnational focus (such as Science, Technology, Environment, and Medicine or the Ancient World) may include courses from different geographic areas. All students should consult a concentration advisor early in the process. All fields are subject to approval by the concentration advisor.

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 may count 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 will receive essential training in perceptual, historical, and analytical analysis. Concentrators often study abroad for first-hand knowledge of works of art and monuments as well as exposure to foreign languages and cultures. Because foreign language skills are essential for pursuing art historical studies in a professional environment or in graduate school, HIAA requires two years of foreign language study.

**History of Art and Architecture Requirements**

To complete the concentration, you will be expected to take a minimum of ten courses (11 for honors). Our goal in setting out these requirements is to welcome students into a lively and diverse department that also shares a cohesive and strong commitment to the field. We as a faculty want students to cultivate their special interests and also to venture into areas that may not be so familiar but that will open new and exciting possibilities for them. Ten courses are only the minimum requirement. Beyond that students are encouraged to take courses at RISD, participate in study abroad programs, and take courses in other Brown departments. As we are a truly interdisciplinary department, you will also find that our faculty collaborates with members of other departments to teach courses that bring together the strengths of different disciplines. We encourage both experimentation and concentration.

Our general survey in history of art and architecture (HIAA 0010) is an excellent foundation for the concentration. It is not a prerequisite for taking other lecture courses but you can count it as one of the 4 non-core courses required for the concentration (see below for core and non-core courses).

Since the history of art and architecture addresses issues of practice within specific historical contexts, concentrators are encouraged to take at least 1 studio art course. Courses in history also train students in methods and approaches that are highly relevant to the history of art and architecture. Study abroad can be a valuable enrichment of the academic work available on campus, in that it offers opportunities for first-hand knowledge of works of art and monuments as well as providing exposure to foreign languages and cultures. Study abroad should be planned in

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
consultation with the concentration advisor in order to make sure that foreign course work will relate meaningfully to the concentrators program of study.

Four core general lecture courses, numbered HIAA 0020 - HIAA 0940. The courses should be distributed between three of the seven available areas of the discipline: Ancient; Medieval; Islamic; East Asian; Latin American; Early Modern (ca. 1400-1800); Modern, Contemporary.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIAA 0010</td>
<td>A Global History of Art and Architecture</td>
</tr>
<tr>
<td>HIAA 0011</td>
<td>Introduction to the History of Architecture and Urbanism</td>
</tr>
<tr>
<td>HIAA 0012</td>
<td>Theories of Architecture from Vitruvius to Venturi</td>
</tr>
<tr>
<td>HIAA 0013</td>
<td>Introduction to Indian Art</td>
</tr>
<tr>
<td>HIAA 0031</td>
<td>Pre-Islamic Empires of Iran</td>
</tr>
<tr>
<td>HIAA 0040</td>
<td>Introduction to Medieval Art and Architecture</td>
</tr>
<tr>
<td>HIAA 0041</td>
<td>The Architecture of Islam</td>
</tr>
<tr>
<td>HIAA 0042</td>
<td>Islamic Art and Architecture</td>
</tr>
<tr>
<td>HIAA 0061</td>
<td>Baroque</td>
</tr>
<tr>
<td>HIAA 0062</td>
<td>The Age of Rubens and Rembrandt: Visual Culture of the Netherlands in the Seventeenth Century</td>
</tr>
<tr>
<td>HIAA 0070</td>
<td>Introduction to American Art: The 19th Century</td>
</tr>
<tr>
<td>HIAA 0074</td>
<td>Nineteenth-Century Architecture</td>
</tr>
<tr>
<td>HIAA 0075</td>
<td>Introduction to the History of Art: Modern Photography</td>
</tr>
<tr>
<td>HIAA 0081</td>
<td>Architecture of the House Through Space and Time</td>
</tr>
<tr>
<td>HIAA 0089</td>
<td>Contemporary Photography</td>
</tr>
<tr>
<td>HIAA 0321</td>
<td>Toward a Global Late Antiquity: 200-800 CE</td>
</tr>
<tr>
<td>HIAA 0340</td>
<td>Roman Art and Architecture: From Julius Caesar to Hadrian</td>
</tr>
<tr>
<td>HIAA 0400</td>
<td>Early Christian, Jewish, and Byzantine Art and Architecture</td>
</tr>
<tr>
<td>HIAA 0440</td>
<td>Gothic Art and Architecture</td>
</tr>
<tr>
<td>HIAA 0460</td>
<td>Muslims, Jews and Christians in Medieval Iberia</td>
</tr>
<tr>
<td>HIAA 0550</td>
<td>Gold, Wool and Stone: Painters and Bankers in Renaissance Tuscany</td>
</tr>
<tr>
<td>HIAA 0560</td>
<td>Constructing the Eternal City: Popes and Pilgrims in Renaissance Rome</td>
</tr>
<tr>
<td>HIAA 0570</td>
<td>The Renaissance Embodied</td>
</tr>
<tr>
<td>HIAA 0580</td>
<td>Word, Image and Power in Renaissance Italy</td>
</tr>
<tr>
<td>HIAA 0600</td>
<td>From Van Eyck to Bruegel</td>
</tr>
<tr>
<td>HIAA 0630</td>
<td>Cultural History of the Netherlands in a Golden Age and a Global Age</td>
</tr>
<tr>
<td>HIAA 0710</td>
<td>The Other History of Modern Architecture</td>
</tr>
<tr>
<td>HIAA 0770</td>
<td>Architecture and Urbanism of the African Diaspora</td>
</tr>
<tr>
<td>HIAA 0771</td>
<td>African American and Caribbean Architectures: Domestic Space</td>
</tr>
<tr>
<td>HIAA 0801</td>
<td>Art After ’68</td>
</tr>
<tr>
<td>HIAA 0810</td>
<td>20th Century Sculpture</td>
</tr>
<tr>
<td>HIAA 0830</td>
<td>Revolutionary Forms: 100 Years of Art and Politics in Latin America</td>
</tr>
<tr>
<td>HIAA 0840</td>
<td>History of Rhode Island Architecture</td>
</tr>
<tr>
<td>HIAA 0850</td>
<td>Modern Architecture</td>
</tr>
<tr>
<td>HIAA 0860</td>
<td>Contemporary Architecture</td>
</tr>
<tr>
<td>HIAA 0861</td>
<td>City and Cinema</td>
</tr>
<tr>
<td>HIAA 0870</td>
<td>20th Century British Art: Edwardian to Contemporary</td>
</tr>
<tr>
<td>HIAA 0881</td>
<td>City and Cinema</td>
</tr>
</tbody>
</table>

Two core seminar courses, numbered between HIAA 1040 and HIAA 1890.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIAA 1020</td>
<td>Topics in East Asian Art</td>
</tr>
<tr>
<td>HIAA 1090</td>
<td>Writing About the Arts</td>
</tr>
<tr>
<td>HIAA 1101</td>
<td>Introduction to Architectural Design Studio</td>
</tr>
<tr>
<td>HIAA 1101A</td>
<td>Illustrating Knowledge</td>
</tr>
<tr>
<td>HIAA 1101B</td>
<td>Seeing and Writing on Contemporary Arts</td>
</tr>
<tr>
<td>HIAA 1102</td>
<td>Architectural Drawing and Sketching</td>
</tr>
<tr>
<td>HIAA 1103</td>
<td>Introduction to Architectural Design</td>
</tr>
<tr>
<td>HIAA 1120B</td>
<td>History of Urbanism, 1300-1700</td>
</tr>
<tr>
<td>HIAA 1120C</td>
<td>History of Western European Urbanism 1200-1600</td>
</tr>
<tr>
<td>HIAA 1150C</td>
<td>El Greco and Velazquez</td>
</tr>
<tr>
<td>HIAA 1150D</td>
<td>El Greco and the Golden Age of Spanish Painting</td>
</tr>
<tr>
<td>HIAA 1170B</td>
<td>Twentieth-Century American Painting</td>
</tr>
<tr>
<td>HIAA 1181</td>
<td>Prefabrication and Architecture</td>
</tr>
<tr>
<td>HIAA 1200A</td>
<td>Ancient Art in the RISD Collection</td>
</tr>
<tr>
<td>HIAA 1200D</td>
<td>Pompeii</td>
</tr>
<tr>
<td>HIAA 1201</td>
<td>Brushwork: Chinese Painting in Time</td>
</tr>
<tr>
<td>HIAA 1300</td>
<td>Topics in Classical Art and Architecture</td>
</tr>
<tr>
<td>HIAA 1301</td>
<td>The Palaces of Ancient Rome</td>
</tr>
<tr>
<td>HIAA 1302</td>
<td>Women and Families in the Ancient Mediterranean</td>
</tr>
<tr>
<td>HIAA 1303</td>
<td>Pompeii: Art, Architecture, and Archaeology in the Lost City</td>
</tr>
<tr>
<td>HIAA 1310</td>
<td>Topics in Hellenistic Art</td>
</tr>
<tr>
<td>HIAA 1400F</td>
<td>Research Seminar Gothic Art</td>
</tr>
<tr>
<td>HIAA 1410A</td>
<td>Topics in Islamic Art: Islamic Art and Architecture on the Indian Subcontinent</td>
</tr>
<tr>
<td>HIAA 1430A</td>
<td>The Visual Culture of Medieval Women</td>
</tr>
<tr>
<td>HIAA 1440D</td>
<td>The Gothic Cathedral</td>
</tr>
<tr>
<td>HIAA 1410B</td>
<td>Painting in Mughal India 1550-1650</td>
</tr>
<tr>
<td>HIAA 1440B</td>
<td>The Medieval Monastery</td>
</tr>
<tr>
<td>HIAA 1460</td>
<td>Topics in Medieval Archaeology</td>
</tr>
<tr>
<td>HIAA 1550B</td>
<td>Topics in the Early History of Printmaking: Festival and Carnival</td>
</tr>
<tr>
<td>HIAA 1560A</td>
<td>Italy and the Mediterranean</td>
</tr>
<tr>
<td>HIAA 1560B</td>
<td>Mannerism</td>
</tr>
<tr>
<td>HIAA 1560C</td>
<td>Renaissance Venice and the Veneto</td>
</tr>
<tr>
<td>HIAA 1560D</td>
<td>Siena from Simone Martini to Beccafumi</td>
</tr>
<tr>
<td>HIAA 1560E</td>
<td>The Arts of Renaissance Courts</td>
</tr>
<tr>
<td>HIAA 1560F</td>
<td>Topics in Italian Visual Culture: The Visible City, 1400-1800</td>
</tr>
<tr>
<td>HIAA 1600A</td>
<td>Bosch and Bruegel: Art Turns the World Upside Down</td>
</tr>
<tr>
<td>HIAA 1600B</td>
<td>Caravaggio</td>
</tr>
<tr>
<td>HIAA 1600C</td>
<td>Italian Baroque Painting and Sculpture</td>
</tr>
<tr>
<td>HIAA 1600D</td>
<td>The Art of Peter Paul Rubens</td>
</tr>
<tr>
<td>HIAA 1600E</td>
<td>The World Turned Upside Down</td>
</tr>
<tr>
<td>HIAA 1600F</td>
<td>Antwerp: Art and Urban History</td>
</tr>
<tr>
<td>HIAA 1600G</td>
<td>Art + Religion in Early Modern Europe</td>
</tr>
<tr>
<td>HIAA 1600H</td>
<td>Comedy in Netherlandish Art From Hieronymus Bosch to Jan Steen</td>
</tr>
<tr>
<td>HIAA 1600I</td>
<td>Collections and Visual Knowledge in Early Modern Europe: 1400-1800</td>
</tr>
<tr>
<td>HIAA 1600J</td>
<td>Rembrandt</td>
</tr>
<tr>
<td>HIAA 1650A</td>
<td>About Face: English Portraiture: 1600-1800</td>
</tr>
<tr>
<td>HIAA 1650B</td>
<td>Visualizing Revolutionary Bodies 1785-1815</td>
</tr>
<tr>
<td>HIAA 1650C</td>
<td>Visual Culture and the Production of Identity in the Atlantic World, 1700-1815</td>
</tr>
<tr>
<td>HIAA 1650D</td>
<td>Souvenirs: Remembering the Pleasures and Perils of the Grand Tour</td>
</tr>
<tr>
<td>HIAA 1711</td>
<td>Black and White: Imagining Africans and African Americans in Visual Culture</td>
</tr>
<tr>
<td>HIAA 1770</td>
<td>Architecture and Visual Culture of Empire</td>
</tr>
<tr>
<td>HIAA 1850A</td>
<td>Frank Lloyd Wright</td>
</tr>
<tr>
<td>HIAA 1850D</td>
<td>Film Architecture</td>
</tr>
</tbody>
</table>

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

Two elective courses. These can include courses taught in the History of Art and Architecture department, cross-listed courses from other departments, or courses in other departments approved by the concentration advisor. 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. A maximum of two (2) credits may be allowed for courses taken at other universities (transfer credits or from study abroad) or courses that also count toward a second concentration. No concentration credit will be granted for AP/A-level scores, or for language classes. One seminar or independent study in architectural history, numbered between HIAA 1100 and HIAA 1890, and marked with an “A” in the course description.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIAA 0017</td>
<td>Introduction to Architectural Design Studio</td>
</tr>
<tr>
<td>HIAA 0018</td>
<td>Illustrating Knowledge</td>
</tr>
<tr>
<td>HIAA 0019</td>
<td>Seeing and Writing on Contemporary Arts</td>
</tr>
<tr>
<td>HIAA 0020</td>
<td>Architectural Drawing and Sketching</td>
</tr>
<tr>
<td>HIAA 0021</td>
<td>Introduction to Architectural Design</td>
</tr>
<tr>
<td>HIAA 1100</td>
<td>History of Urbanism, 1300-1700</td>
</tr>
<tr>
<td>HIAA 1101</td>
<td>History of Western European Urbanism 1200-1600</td>
</tr>
<tr>
<td>HIAA 1102</td>
<td>El Greco and Velazquez</td>
</tr>
<tr>
<td>HIAA 1103</td>
<td>El Greco and the Golden Age of Spanish Painting</td>
</tr>
<tr>
<td>HIAA 1104</td>
<td>Twentieth-Century American Painting</td>
</tr>
<tr>
<td>HIAA 1105</td>
<td>Prefabrication and Architecture</td>
</tr>
<tr>
<td>HIAA 1106</td>
<td>Ancient Art in the RISD Collection</td>
</tr>
<tr>
<td>HIAA 1107</td>
<td>Pompeii</td>
</tr>
<tr>
<td>HIAA 1108</td>
<td>Brushwork: Chinese Painting in Time</td>
</tr>
<tr>
<td>HIAA 1109</td>
<td>Topics in Classical Art and Architecture</td>
</tr>
<tr>
<td>HIAA 1110</td>
<td>The Palaces of Ancient Rome</td>
</tr>
<tr>
<td>HIAA 1111</td>
<td>Women and Families in the Ancient Mediterranean</td>
</tr>
<tr>
<td>HIAA 1112</td>
<td>Pompeii: Art, Architecture, and Archaeology in the Lost City</td>
</tr>
<tr>
<td>HIAA 1113</td>
<td>Topics in Hellenistic Art</td>
</tr>
<tr>
<td>HIAA 1114</td>
<td>The Aesthetics of Color: History, Theory, Critique (GNSS 1960X)</td>
</tr>
<tr>
<td>HIAA 1115</td>
<td>Research Seminar Gothic Art</td>
</tr>
<tr>
<td>HIAA 1116</td>
<td>Topics in Islamic Art: Islamic Art and Architecture on the Indian Subcontinent</td>
</tr>
<tr>
<td>HIAA 1117</td>
<td>The Visual Culture of Medieval Women</td>
</tr>
<tr>
<td>HIAA 1118</td>
<td>The Medieval Monastery</td>
</tr>
</tbody>
</table>

Four elective 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.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIAA 0030</td>
<td>Architecture, Light and Urban Screens</td>
</tr>
<tr>
<td>HIAA 0031</td>
<td>Contemporary American Urbanism: City Design and Planning, 1940-2000</td>
</tr>
<tr>
<td>HIAA 0032</td>
<td>Berlin: Architecture, Politics and Memory</td>
</tr>
<tr>
<td>HIAA 0033</td>
<td>SoCal: Art in Los Angeles, 1945-Present</td>
</tr>
<tr>
<td>HIAA 0034</td>
<td>Contemporary Art of Africa and the Diaspora</td>
</tr>
<tr>
<td>HIAA 0035</td>
<td>Providence Architecture</td>
</tr>
<tr>
<td>HIAA 0036</td>
<td>Project Seminar: The Architecture of Bridges</td>
</tr>
<tr>
<td>HIAA 0037</td>
<td>Water and Architecture</td>
</tr>
<tr>
<td>HIAA 0038</td>
<td>Project Seminar for Architectural Studies Concentrators</td>
</tr>
<tr>
<td>HIAA 0039</td>
<td>Individual Study Project in the History of Art and Architecture</td>
</tr>
<tr>
<td>HIAA 0040</td>
<td>The History and Methods of Art Historical Interpretation</td>
</tr>
<tr>
<td>HIAA 0041</td>
<td>Honors Thesis</td>
</tr>
</tbody>
</table>

Four elective courses. These can include courses taught in the History of Art and Architecture department, cross-listed courses from other departments, or courses in other departments approved by the concentration advisor. HIAA 0010 may count as one of these courses but cannot count as one of the four core lecture courses. Students are encouraged to take a studio class as part of this requirement.

Total Credits: 10

---

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
HIAA 1440D  The Gothic Cathedral
HIAA 1460  Topics in Medieval Archaeology
HIAA 1550A  Prints and Everyday Life in Early Modern Europe
HIAA 1550B  Topics in the Early History of Printmaking: Festival and Carnival
HIAA 1560A  Italy and the Mediterranean
HIAA 1560B  Mannerism
HIAA 1560C  Renaissance Venice and the Veneto
HIAA 1560D  Siena from Simone Martini to Beccafumi
HIAA 1560E  The Arts of Renaissance Courts
HIAA 1560F  Topics in Italian Visual Culture: The Visible City, 1400-1800
HIAA 1600C  Italian Baroque Painting and Sculpture
HIAA 1600D  The Art of Peter Paul Rubens
HIAA 1600A  Bosch and Bruegel: Art Turns the World Upside Down
HIAA 1600B  Caravaggio
HIAA 1600E  The World Turned Upside Down
HIAA 1600F  Antwerp: Art and Urban History
HIAA 1600G  Art + Religion in Early Modern Europe
HIAA 1600H  Comedy in Netherlandish Art From Hieronymus Bosch to Jan Steen
HIAA 1600I  Collections and Visual Knowledge in Early Modern Europe: 1400-1800
HIAA 1770  Architecture and Visual Culture of Empire
HIAA 1850A  Frank Lloyd Wright
HIAA 1850D  Film Architecture
HIAA 1850E  Architecture, Light and Urban Screens
HIAA 1850G  Contemporary American Urbanism: City Design and Planning, 1945-2000
HIAA 1850H  Berlin: Architecture, Politics and Memory
A project seminar from the HIAA 1910 series. This must be taken in the junior or senior year.  
HIAA 1910A  Providence Architecture
One studio art course in design  
Three elective courses. These can include other courses taught in the History of Art and Architecture department and cross-listed courses in other departments that are pertinent to architectural studies. They may also include a select number of non-cross-listed courses approved by the concentration advisor.

Total Credits 10

1  The two seminars cannot be replaced with independent study, honors thesis, or classes taken in other departments or universities.
2  In years where no project seminar is offered, any seminar that qualifies for architectural studies can become the starting point for a senior project.
3  The studio course may be taken at Brown, RISD, Harvard Career Discovery and similar six week + summer programs.
4  The non-cross-listed courses include but are not limited to MATH 0990, MATH 0100, PHYS 0300, PHYS 0400, ENGN 0030, Urban Studies and Engineering courses, and scenic design and technical production courses offered by the department of Theatre Arts and Performance Studies.
5  A maximum of two credits may be awarded for courses taken at other universities or for courses that count toward a second concentration. No concentration credit is awarded for high school AP/A-level courses or for language courses.

The below pertains to ALL concentrators in the department:

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 skill 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 1980 in the Fall and in the Spring. In the Fall, students will meet regularly with both the Honors group and the 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) will 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 courses. 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.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 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/collegedev/advising/curricular-resource-center/independent-concentrations/independent-concentrations), speak with the Curricular Resource Center (http://brown.edu/Administration/Dean_of_the_College/crc/IC)’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. The Statistics Track below is a pre-approved IC program.

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

Computing

APMA 0160 Introduction to Scientific Computing

Introduction to statistical thinking and practice

Select one of the following:

SOC 1100 Introductory Statistics for Social Research
ECON 1620 Introduction to Econometrics
APMA 0650 Essential Statistics

Core Courses in Theory and Data Analysis

PHP 2510 Principles of Biostatistics and Data Analysis

Choose one of the following courses:

APMA 1650 Statistical Inference I
& APMA 1660 and Statistical Inference II
MATH 1610 Probability
& MATH 1620 and Mathematical Statistics

Advanced Courses in Statistical Methods

APMA 1690 Computational Probability and Statistics
PHP 2511 Applied Regression Analysis

Two electives from the following courses:

Social Sciences:
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
- ECON 0110 Principles of Economics
- POLS 0400 Introduction to International Politics
- or POLS 0200 Introduction to Comparative Politics
- HIST 1900 American Empire Since 1890
- SOC 1620 Globalization and Social Conflict (WRIT)

Honors: Honors work in the Independent Concentration, Statistics track requires the completion of a senior thesis and a superior record in the program.

The program is administered by the Department of Biostatistics, located at 121 South Main Street, 7th floor.

For additional information please contact: Roee Gutman, Box G-S-121-7; Telephone: 401-863-2682; Fax: 401-863-9182; e-mail: Roee Gutman

Track Requirements (five courses from ONE track distributed between the sub-themes):

Security and Society:
- Governance and Diplomacy (two or three courses): EXAMPLES
- INTL 1443 History of American Intervention
- INTL 1700 International Law
- INTL 1802C Cyber Conflict and Internet Freedom
- POLS 1500 The International Law and Politics of Human Rights
- POLS 1560 American Foreign Policy
- POLS 1822A Nuclear Weapons and International Politics

Society (two or three courses): EXAMPLES
- ANTH 1232 War and Society
- ANTH 1233 Ethnographies of Global Connection: Politics, Culture and International Relations
- ANTH 1411 Nations within States
- INTL 1400 Religion and Global Politics
- POLS 1380 Ethnic Politics and Conflict

Political Economy and Society:
- Economics (two or three courses): All students MUST take Micro and Macro
- ECON 1110 Intermediate Microeconomics
- ECON 1210 Intermediate Macroeconomics
- Plus an International Economics course: EXAMPLES
- ECON 1500 Current Global Macroeconomic Challenges
- ECON 1540 International Trade
- ECON 1550 International Finance

Political Economy (two or three courses): EXAMPLES
- ANTH 0450 Inequality, Sustainability, and Mobility in a Clogged World
- ANTH 1324 Money, Work, and Power: Culture and Economics
- INTL 1802O Global Corporate Accountability: Issues of Governance, Responsibility and NGOs
- INTL 1802S Politics of International Finance
- POLS 1020 Politics of the Illicit Global Economy
- POLS 1420 Money and Power in the International Political Economy

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:

- Must be taken senior year. Must incorporate language skills.
  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

13

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 COURSES

ITAL 0550  Gold, Wool and Stone: Painters and Bankers in Renaissance Tuscany (HIAA 0550)
ITAL 0560  Constructing the Eternal City: Popes and Pilgrims in Renaissance Rome (HIAA 0560)
ITAL 0600  Advanced Italian II
ITAL 0750  Truth on Trial: Justice in Italy
ITAL 0751  When Leaders Lie: Machiavelli in International Context
ITAL 0950  Introduction to Italian Cinema: Italian Film and History
ITAL 0951  The Grand Tour, or a Room with a View: Italy and the Imagination of Others
ITAL 0981  When Leaders Lie: Machiavelli in International Context
ITAL 0985  Visions of War: Representing Italian Modern Conflicts
ITAL 1000A  Luigi Pirandello: Masks and Society
ITAL 1000B  Reading Recent Italian Fiction
ITAL 1000C  Nord - Sud e Identità Italiana
ITAL 1000D  Italian National Identity: Criticisms and Crises
ITAL 1000E  Masterpieces of Italian Cinema - Capolavori del cinema italiano
ITAL 1000F  20th Century Italian Poetry
ITAL 1000G  Italian Identity
ITAL 1010  Dante in English Translation: Dante’s World and the Invention of Modernity
ITAL 1020  Boccaccio’s Decameron
ITAL 1029  World Cinema in a Global Context
ITAL 1030A  Fellini
ITAL 1310  Literature of the Middle Ages
ITAL 1320  Great Authors and Works of Italian Renaissance
ITAL 1340  The Panorama and 19th-Century Visual Culture
ITAL 1350A  Italian Mysteries and the New Italian Epic
ITAL 1350B  Non Fiction
ITAL 1360  Renaissance Italy
ITAL 1380  Italy: From Renaissance to Enlightenment
ITAL 1390  Modern Italy
ITAL 1400A  *Italian (Mediterranean) Orientalisms*  Major Italian Writers and Filmmakers
ITAL 1400B  Fascism and Antifascism: Culture and Literature between the Two World Wars
ITAL 1400C  Literature and Adolescence
ITAL 1400D  Photography and Literature: Italian Examples of an Uncanny Relationship
ITAL 1400F  Twentieth Century Italian Culture
ITAL 1400H  Early Modern Italy
ITAL 1400I  Rituals, Myths and Symbols
ITAL 1400J  The Many Faces of Casanova
ITAL 1400K  Italy as Other
ITAL 1400L  History of Masculinity and Femininity from the Unification to 1968
ITAL 1400M  Giorgio Agamben and Radical Italian Theory
ITAL 1400P  The Southern Question and the Colonial Mediterranean
ITAL 1400Q  From Neorealism to Reality TV
ITAL 1420  Sex and the Cities: Venice, Florence, and Rome, 1450-1800
ITAL 1430  Popular Culture, 1400-1800
ITAL 1431  Truth on Trial: Justice in Italy, 1400-1800 (HIST 1430)
ITAL 1550  Italian Representations of the Holocaust
ITAL 1550B  Topics in the Early History of Printmaking: Festival and Carnival (HIAA 1550B)
ITAL 1560A  Italy and the Mediterranean (HIAA 1560A)
ITAL 1580  Word, Image and Power in Renaissance Italy
ITAL 1590  Word, Media, Power in Modern Italy
ITAL 1610  The Divina Commedia: Inferno and Purgatorio
ITAL 1620  The Divina Commedia: Dante’s Paradiso: Justifying a Cosmos
ITAL 1920  Independent Study Project (Undergraduate)
ITAL 1990  Senior Conference

COURSES IN OTHER DEPARTMENTS

HIAA 0340  Roman Art and Architecture: From Julius Caesar to Hadrian
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 1301  The Palaces of Ancient Rome
HIAA 1302  Women and Families in the Ancient Mediterranean
HIAA 1303  Pompeii: Art, Architecture, and Archaeology in the Lost City
HIAA 1550B  Topics in the Early History of Printmaking: Festival and Carnival
HIAA 1560A  Italy and the Mediterranean
HIAA 1560C  Renaissance Venice and the Veneto
HIAA 1560D  Siena from Simone Martini to Beccafumi
HIAA 1560F  Topics in Italian Visual Culture: The Visible City, 1400-1800
HIAA 1600C  Italian Baroque Painting and Sculpture
ARCH 1155  Cities, Colonies and Global Networks in the Western Mediterranean
MUSC 0071  Opera

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

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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) as 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. Please note that the following apply to each concentrator:

2) All students must take one full year of Hebrew (two of the ten required courses). Generally, this requirement will consist of two courses in Elementary Hebrew (JUDS 0100/JUDS 0200) or the equivalent as determined by a proficiency examination. Fulfillment of the Hebrew requirement through examination does not reduce the requirement to take ten courses for the concentration.

3) Upon declaring a concentration in Judaic Studies, each student must define his or her primary disciplinary track (History, Religious Studies, or Language/Literature). Concentrators will then be assigned a faculty mentor in that discipline (within the Judaic Studies faculty) to help students select courses and construct a coherent concentration plan.

Program in History or Religious Studies:

For this track, students are expected to complete a minimum of four courses in their area of disciplinary focus (History or Religious Studies), at least one of which must and no more than two of which may be outside the Program in Judaic Studies in the department of disciplinary focus (preferably methods courses, such as in the History department or RELS 1000). Students in this track, in consultation with the concentration adviser and faculty mentor, may apply up to two additional Hebrew language courses (JUDS 0300, JUDS 0400, or JUDS 0500) to the additional four required courses for the concentration.

Program in Language/Literature:

For this track, students are expected to complete five courses in Hebrew language (JUDS 0100/JUDS 0200; JUDS 0300/JUDS 0400; JUDS 0500). In addition, students 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 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.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Work that simply describes and summarizes its sources along with previous research is not acceptable. The goal here is original research and analysis.

Entering the Program
In order to be considered a candidate for Honors, students will be expected to have maintained an outstanding record (at least A in Judaic Studies courses). The Honors thesis, which fulfills the capstone requirement, will normally be written as a two-semester individual study project (numbered JUDS 1975/JUDS 1976) during the senior year.

A student contemplating a thesis should approach the faculty member with whom he or she hopes to work during the sixth semester. Once he or she has agreed to be the advisor (or helped find another member of the program better suited to the project), the student begins a process of consultation in order to determine a topic for the thesis, its sources, and proposed methodology. The contours of the project should also be laid out so that the student can commence productive research at the very beginning of the seventh semester. After this, a second reader for the thesis should be chosen by the advisor in consultation with the student.

This may be a faculty member of the Judaic Studies program, one of the affiliate faculty, or, should the topic require it, a member of a different department. By the last week of the semester, the student should submit a thesis information form detailing the thesis topic with a short description of the proposed project, countersigned by advisor and second reader.

Thesis Proposal
During the first three weeks of the seventh semester, the student should work with the faculty advisor to write a thesis proposal.

This should be a brief document (1,500-2,000 words) explaining the topic chosen for the thesis and its significance to the field of Judaic Studies, with reference to previous research on the subject. The proposal should detail the questions to be asked and the kind of argument that will be made as well as explaining the primary sources and research methodology that will be employed. The proposed research strategy (i.e. the stages by which research and writing will be done) and timetable should be appended together with a brief, one page bibliography of primary sources and major research to be consulted.

Once the advisor is satisfied with the proposal, the student will be considered fully accepted into the Honors program and can enroll in the required independent study course by the last day to add a course in the fourth week of the term.

Research and Writing
It is the responsibility of the student to carry out the research program outlined in the proposal, as well as to write the thesis in an organized and timely fashion. During the process of research and writing, the advisor will continue to work closely with the student, providing guidance on research methods and suggesting further secondary reading. A regular meeting schedule will be set up to help the student meet the short- and long-term deadlines he or she has set. The advisor will also evaluate the progress of the research, providing any necessary direction and detailed feedback on written drafts.

The second reader will also be available to provide a measure of input and guidance during the process of research and writing. This may be particularly important in those areas where the primary advisor has limited expertise. The second reader may also be willing to help with giving feedback on various sections of the thesis drafts. All these roles should be determined by a process of consultation involving the advisor, the student, and the second reader himself/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 process?
- To what extent is the organization adequate to the argument presented?
- How well is the thesis rooted in the common conventions of the field?
- To what degree is the writing clear, cogent, and free of errors of grammar, tone, and style?

The two reports will be circulated to all faculty members in the program, who will review them before making the final determination at the next faculty meeting whether the thesis merits Honors. The meeting must be held, the decision reached, and the candidate informed before the Registrar’s deadline for that semester.

Further Information
Students who are interested in further information about the concentration should contact the Judaic Studies Office at 163 George Street to make an appointment with the undergraduate concentration advisor, [Tel: 401.863.3912] or Judaic@brown.edu.

Latin American and Caribbean Studies

The concentration in Latin American and Caribbean Studies 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, 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 LACA 1990– LACA 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...
Undergraduate Concentrations

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 (LACA 1990-LACA 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 LACA 1990 - LACA 1991. The seminar counts as the research component of the program. The distribution requirements for this option are: language courses, 7 area studies courses and 1 research course (i.e. the seminar for which the paper is written).

Internships/Community Service

The Concentration in Latin American and Caribbean Studies requires students to complete an internship or volunteer service work in Latin America or with a local organization that works primarily with Spanish or Portuguese speaking peoples. The Center maintains a database of local and international internship opportunities. Students are also strongly encouraged to consult with the Swearer Center for Public Service. Internships and community service work are available to Brown students who study abroad at the Brown programs in Mexico (Universidad de las Americas) and in Brazil (Catholic University of Rio de Janeiro). Examples of local service work performed by concentrators in previous years include: helping compile a Spanish language guide to welfare service agencies, developing a culturally appropriate adaptation of a health testing and education program, and ESL instruction to Latin American immigrants. Such extracurricular work can be rewarding in itself; in consultation with a faculty member, it can often be used to earn academic credit and furnish material for either a Senior Thesis or Project.

A minimum of one semester or a summer of internship or volunteer service work is required. Students need to submit an internship/service work proposal form to the Latin American and Caribbean Studies Concentration Advisor for approval prior to starting the internship or service work. Upon completion of the internship or service work, students are required to submit to the Concentration Advisor a brief summary report of their experience, which must be signed by the supervisor of the student’s internship or service work.

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

Language is a uniquely human capacity that enables us to communicate a limitless set of messages on any topic. While human languages can differ greatly in certain respects, all are intricate, complex, rule-governed systems. Linguistics is the scientific study of these systems, their use in communicative and other social settings, and their cognitive and neural underpinnings. The linguistics concentration at Brown gives students a background in the "core" aspects of the language system: phonetics/phonology (the study of speech sounds and their patterning), syntax (the study of combinatorics of words, phrases, and sentences), and semantics/pragmatics (the study of the meanings of words, sentences, and conversation). Beyond this, students may focus more heavily in one or more of these areas and/or explore related questions such as how children and adults learn language (language acquisition), how utterances are produced and understood in real time (psycholinguistics), or how speaking and understanding are anchored in underlying neural systems (neurolinguistics). Other areas such as historical linguistics, sociolinguistics, philosophy of language, and linguistic anthropology can also be pursued in conjunction with offerings in other departments.

Requirements (10 courses)

Prerequisite Course

- CLPS 0030 Introduction to Linguistic Theory (may be waived in special instances)

Required Courses

- CLPS 1310 Introduction to Phonological Theory
- CLPS 1330 Introduction to Syntax

AND one of:

- CLPS 1341 Lexical Semantics
- CLPS 1342 Formal Semantics
- CLPS 1370 Introduction to Pragmatics

One course in Psycholinguistics to be drawn from the following:

- CLPS 0800 Language and the Mind
- CLPS 1650 Child Language Acquisition
- CLPS 1800 Language Processing
- CLPS 1820 Language and the Brain
- CLPS 1821 Neuroimaging and Language
- CLPS 1890 Laboratory in Psycholinguistics
or any Topics Course in Language Acquisition or Language Processing
5 additional appropriate electives forming a thematically related set
5 to be determined in consultation with the Concentration Advisor. At least one of these must be drawn from the list of advanced courses listed below, and we strongly recommend that at least one course be an appropriate methods and a topics course. No more than 2 of these courses may be drawn from below 1000 level courses. The electives can be drawn from any of the above courses, or any of the other linguistic/language related courses in the CLPS department. Electives may also be drawn from courses in other in consultation with the Concentration Advisor; a list of courses which standardly count towards the Linguistics Concentration (provided they form part of the thematically related set) is appended below.

Advanced Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLPS 1320</td>
<td>The Production, Perception, and Analysis of Speech</td>
</tr>
<tr>
<td>CLPS 1332</td>
<td>Issues in Syntactic Theory</td>
</tr>
<tr>
<td>CLPS 1342</td>
<td>Formal Semantics</td>
</tr>
<tr>
<td>CLPS 1360</td>
<td>Introduction to Corpus Linguistics</td>
</tr>
<tr>
<td>CLPS 1821</td>
<td>Neuroimaging and Language</td>
</tr>
<tr>
<td>CLPS 1880 series</td>
<td>Topics in Psycholinguistics</td>
</tr>
<tr>
<td>CLPS 1890</td>
<td>Laboratory in Psycholinguistics</td>
</tr>
</tbody>
</table>

Courses in Other Departments Routinely Fulfilling Linguistics Concentration Requirements (in consultation with the Concentration Advisor):

NOTE: This is NOT an exhaustive list of courses that can be applied towards the Linguistics Concentration requirements.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 0800</td>
<td>Sound and Symbols: Introduction to Linguistic Anthropology</td>
</tr>
<tr>
<td>ANTH 1800</td>
<td>Sociolinguistics, Discourse and Dialogue</td>
</tr>
<tr>
<td>CSCI 1460</td>
<td>Computational Linguistics</td>
</tr>
<tr>
<td>EGYT 2310</td>
<td>History of the Ancient Egyptian Language</td>
</tr>
<tr>
<td>HISP 1210C</td>
<td>History of the Spanish Language</td>
</tr>
<tr>
<td>SLAV 1300</td>
<td>Sociolinguistics (with Case Studies on the Former USSR and Eastern Europe)</td>
</tr>
<tr>
<td>PHIL 0540</td>
<td>Logic</td>
</tr>
<tr>
<td>PHIL 1760</td>
<td>Philosophy of Language</td>
</tr>
</tbody>
</table>

Total Credits 10

1 It is recommended that students take CLPS 1310 and CLPS 1330 before higher level courses.

Honors (12 courses)

Candidates for Honors in Linguistics must meet all of the requirements above, write an Honors thesis, and take two additional courses. One course is normally CLPS 1980 (Directed Research in Cognitive, Linguistic, and Psychological Sciences) - intended for work on the Honors thesis. Three of the total 12 courses must be drawn from the advanced list above (the Directed Research course counts as one of the advanced courses). Normally a 3.5 grade-point average in the concentration is required for admission to the Honors program. Honors candidates should formalize their projects in consultation with their advisors by the end of Semester 6. Refer to the CLPS Honors Program page for detailed information about the Linguistics Honors program.

Independent Study

Independent study is encouraged for the A.B. degree. Students should sign up for CLPS 1980 with a faculty advisor who is a member of the Department of Cognitive and Linguistic Sciences (CLPS). Arrangements should be made in Semester 6 for students expecting to do independent study during Semesters 7 and/or 8.

Do Foreign Language Courses Count?

Foreign language courses will generally not count towards the concentration requirements, except those that focus on the structure or history of the language. Students are, however, advised to gain familiarity with a foreign language, and are encouraged to take at least one course which deals with the structure of a language other than English.

NOTE: Please refer to the Cognitive, Linguistic, and Psychological Sciences undergraduate Linguistics concentration page for updates not listed here.

Literary Arts

Brown’s Program in Literary Arts provides a home for innovative writers of fiction, poetry, playwriting, screenwriting, literary translation, electronic writing and mixed media. The concentration allows student writers to develop their skills in one or more genres while deepening their understanding of the craft of writing. Many courses in this concentration require a writing sample; students should consult a concentration advisor or the concentration website for strategies on getting into the appropriate course(s).

Candidates for the Bachelor of Arts degree with concentration in Literary Arts will be expected to complete the following course work:

1. At least four creative writing workshops from among the following 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 20 September. Interested students should obtain information from the office of the Literary Arts Department.

**Marine Biology**

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 Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 0330</td>
<td>Equilibrium, Rate, and Structure (or equivalent)</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 0030</td>
<td>Basic Physics (or equivalent)</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 0040</td>
<td>Basic Physics (or equivalent)</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0090</td>
<td>Introductory Calculus, Part I (or equivalent)</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0100</td>
<td>Introductory Calculus, Part II (or equivalent)</td>
<td>1</td>
</tr>
</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: 2

<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>
<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. Mathematicians 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>Five other 1000- or 2000-level Mathematics courses</td>
<td>5</td>
</tr>
</tbody>
</table>

Total Credits 8

**Standard program for the Sc.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 1130</td>
<td>Functions of Several Variables</td>
</tr>
<tr>
<td>&amp; MATH 1140</td>
<td>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>
<tr>
<td>Four other 1000- or 2000-level Mathematics courses</td>
<td>4</td>
</tr>
<tr>
<td>Four additional courses in mathematics, science, economics, or applied mathematics approved by the concentration advisor</td>
<td>4</td>
</tr>
</tbody>
</table>

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

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
good grades and must write an honors thesis under the guidance of a faculty member. The honors thesis is usually written while the candidate is enrolled in MATH 1970. The candidate should consult with the concentration advisor for the precise grade requirements.

Those interested in graduate study in mathematics are encouraged to take:

- MATH 1130 Functions of Several Variables
- MATH 1140 Functions Of Several Variables
- MATH 1260 Complex Analysis
- MATH 1410 Combinatorial Topology
- MATH 1540 Topics in Abstract Topology

**Mathematics-Computer Science**

Students may opt to pursue an interdisciplinary Bachelor of Science degree in Math-Computer Science, a concentration administered cooperatively between the mathematics and computer science departments. Course requirements include math- and systems-oriented computer science courses, as well as computational courses in applied math. Students must identify a series of electives that cohere around a common theme. As with other concentrations offered by the Computer Science department, students have the option to pursue the professional track (http://www.cs.brown.edu/ugrad/concentrations/professional.track.html) of the ScB program in Mathematics-Computer Science.

**Requirements for the Standard Track of the Sc.B. degree.**

**Prerequisites**
- Three semesters of Calculus to the level of MATH 0180, MATH 0200, or MATH 0350
- MATH 0520 Linear Algebra
- or MATH 0540 Honors Linear Algebra

**Core Courses**
- MATH 1530 Abstract Algebra
- MATH 1120 Linear Algebra
- MATH 1540 Topics in Abstract Algebra

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
- CSCI 0170 & CSCI 0180 Computer Science: An Integrated Introduction and Computer Science: An Integrated Introduction
- CSCI 0190 Accelerated Introduction to Computer Science

**Series C**
- CSCI 0190 Accelerated Introduction to Computer Science

and an additional CS course not otherwise used to satisfy a concentration requirement; this course may be CSCI 0180, an intermediate-level CS course, or a 1000-level CS course

- CSCI 0320 Introduction to Software Engineering
- CSCI 0320 Introduction to Computer Systems
- CSCI 0220 Introduction to Discrete Structures and Probability
- CSCI 0510 Models of Computation

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

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**

**Standard Mathematics-Economics Concentration**

<table>
<thead>
<tr>
<th>Economics</th>
<th>Mathematics-Economics Concentration</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>
<tr>
<td>Two courses from the &quot;mathematical-economics&quot; group:</td>
<td>2</td>
</tr>
<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: Theory and Applications</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>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Such work is normally done within an industrial organization, but may also be at a university under the supervision of a faculty member.

On completion of each professional experience, the student must write and upload to ASK a reflective essay about the experience addressing the following prompts, to be approved by the student's concentration advisor:

- Which courses were put to use in your summer's work? Which topics, in particular, were important?
- In retrospect, which courses should you have taken before embarking on your summer experience? What are the topics from these courses that would have helped you over the summer if you had been more familiar with them?
- Are there topics you should have been familiar with in preparation for your summer experience, but are not taught at Brown? What are these topics?
- What did you learn from the experience that probably could not have been picked up from course work?
- Is the sort of work you did over the summer something you would like to continue doing once you graduate? Explain.
- Would you recommend your summer experience to other Brown students? Explain.

### Medieval Cultures

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.

Under the supervision of the director of the program, students may choose courses from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLAS 0660</td>
<td>The World of Byzantium</td>
</tr>
<tr>
<td>CLAS 1120G</td>
<td>The Idea of Self</td>
</tr>
<tr>
<td>CLAS 1120V</td>
<td>The Age of Constantine: The Roman Empire in Transition</td>
</tr>
<tr>
<td>CLAS 1750L</td>
<td>Erotic Desire in the Premodern Mediterranean</td>
</tr>
<tr>
<td>COLT 0510K</td>
<td>The 1001 Nights</td>
</tr>
<tr>
<td>COLT 1813P</td>
<td>Captive Imaginations: Writing Prison in the Middle Ages</td>
</tr>
<tr>
<td>ENGL 0100D</td>
<td>Matters of Romance</td>
</tr>
<tr>
<td>ENGL 0150C</td>
<td>The Medieval King Arthur</td>
</tr>
<tr>
<td>ENGL 0300F</td>
<td>Beowulf to Aphra Behn: The Earliest British Literatures</td>
</tr>
<tr>
<td>ENGL 0310F</td>
<td>Prose Sagas of the Medieval North</td>
</tr>
<tr>
<td>ENGL 1310T</td>
<td>Chaucer</td>
</tr>
<tr>
<td>ENGL 1310V</td>
<td>Chaucer: The Canterbury Tales</td>
</tr>
</tbody>
</table>

1. No course may be "double-counted" to satisfy both the mathematical-economics and data methods requirement.

### Honors and Capstone Requirement:

Admission to candidacy for honors in the concentration is granted on the following basis: 3.7 GPA for Economics courses, and 3.5 GPA overall. To graduate with honors, a student must write an honors thesis in senior year following the procedures specified by the concentration (see Economics Department website). 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

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.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1759</td>
<td>Data, Statistics, Finance</td>
</tr>
<tr>
<td>ECON 1810</td>
<td>Economics and Psychology</td>
</tr>
<tr>
<td>ECON 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>
<tr>
<td>ECON 1301</td>
<td>Economics of Education I</td>
</tr>
<tr>
<td>ECON 1305</td>
<td>Economics of Education: Research</td>
</tr>
<tr>
<td>ECON 1310</td>
<td>Labor Economics</td>
</tr>
<tr>
<td>ECON 1360</td>
<td>Health Economics</td>
</tr>
<tr>
<td>ECON 1410</td>
<td>Urban Economics</td>
</tr>
<tr>
<td>ECON 1480</td>
<td>Public Economics</td>
</tr>
<tr>
<td>ECON 1510</td>
<td>Economic Development</td>
</tr>
<tr>
<td>ECON 1520</td>
<td>The Economic Analysis of Institutions</td>
</tr>
<tr>
<td>ECON 1530</td>
<td>Health, Hunger and the Household in Developing Countries</td>
</tr>
<tr>
<td>ECON 1629</td>
<td>Applied Research Methods for Economists</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 1759</td>
<td>Data, Statistics, Finance</td>
</tr>
<tr>
<td>ECON 1765</td>
<td>Finance, Regulation, and the Economy: Research</td>
</tr>
<tr>
<td>ENGL 1305</td>
<td>Prose Sagas of the Medieval North</td>
</tr>
<tr>
<td>ENGL 1310V</td>
<td>Chaucer: The Canterbury Tales</td>
</tr>
</tbody>
</table>

1. Or ECON 1110 with permission.

2. No course may be "double-counted" to satisfy both the mathematical-economics and data methods requirement.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1311E</td>
<td>History of the English Language</td>
</tr>
<tr>
<td>ENGL 1311H</td>
<td>Sagas Without Borders: Multilingual Literatures of Early England</td>
</tr>
<tr>
<td>ENGL 1311L</td>
<td>From Mead-Hall to Mordor: The Celtic and Germanic Roots of Tolkien’s Fiction</td>
</tr>
<tr>
<td>ENGL 1360F</td>
<td>Quest, Vision, Diaspora: Medieval Journey Narratives</td>
</tr>
<tr>
<td>ENGL 1360H</td>
<td>Introduction to the Old English Language</td>
</tr>
<tr>
<td>ENGL 1360J</td>
<td>Middle English Literature</td>
</tr>
<tr>
<td>ENGL 1360U</td>
<td>Europe in the Vernacular</td>
</tr>
<tr>
<td>ENGL 1361D</td>
<td>Women’s Voices in Medieval Literature</td>
</tr>
<tr>
<td>ENGL 1900Y</td>
<td>Medieval Manuscript Studies: Paleography, Codicology, and Interpretation</td>
</tr>
<tr>
<td>ENGL 2360Q</td>
<td>Manuscript, Image, and the Middle English Text</td>
</tr>
<tr>
<td>FREN 1110G</td>
<td>En Marge: Exilés et Hors-la-Loi au Moyen Age</td>
</tr>
<tr>
<td>FREN 2040D</td>
<td>Arts du récit, 1100-1400</td>
</tr>
<tr>
<td>GREEK 1100E</td>
<td>Greek Literature in Italy and by Italians</td>
</tr>
<tr>
<td>GREEK 1110Q</td>
<td>Greek Erotic Literature: From Plato to the Medieval Romances</td>
</tr>
<tr>
<td>GREEK 1110T</td>
<td>Rhetors and Philosophers: Intellectual Thought and Sophistic Style in the Ancient World</td>
</tr>
<tr>
<td>GREEK 1100F</td>
<td>Fiction and Truth in Greek Story-telling</td>
</tr>
<tr>
<td>GREEK 2110F</td>
<td>Greek Palaeography and Premodern Book Cultures</td>
</tr>
<tr>
<td>HIAA 0321</td>
<td>Toward a Global Late Antiquity: 200-800 CE</td>
</tr>
<tr>
<td>HIAA 0460</td>
<td>Muslims, Jews and Christians in Medieval Iberia</td>
</tr>
<tr>
<td>HIAA 1440B</td>
<td>The Medieval Monastery</td>
</tr>
<tr>
<td>HISP 1210C</td>
<td>History of the Spanish Language</td>
</tr>
<tr>
<td>HISP 2030D</td>
<td>Fifteenth-Century Sentimental Romances and Celestina</td>
</tr>
<tr>
<td>HIST 0150B</td>
<td>The Philosophers’ Stone: Alchemy From Antiquity to Harry Potter</td>
</tr>
<tr>
<td>HIST 0521A</td>
<td>Christianity in Conflict in the Medieval Mediterranean</td>
</tr>
<tr>
<td>HIST 0521M</td>
<td>The Holy Grail and the Historian's Quest for the Truth</td>
</tr>
<tr>
<td>HIST 0621B</td>
<td>The Search for King Arthur</td>
</tr>
<tr>
<td>HIST 1205</td>
<td>The Long Fall of the Roman Empire</td>
</tr>
<tr>
<td>HIST 1210A</td>
<td>The Viking Age</td>
</tr>
<tr>
<td>HIST 1260D</td>
<td>Living Together: Muslims, Christians, and Jews in Medieval Iberia</td>
</tr>
<tr>
<td>HIST 1211</td>
<td>Crusaders and Cathedrals, Deviants and Dominance: Europe in the High Middle Ages</td>
</tr>
<tr>
<td>HIST 1963L</td>
<td>Barbarians, Byzantines, and Berbers: Early Medieval North Africa, AD 300-1050</td>
</tr>
<tr>
<td>HIST 1963Q</td>
<td>Sex, Power, and God: A Medieval Perspective</td>
</tr>
<tr>
<td>HIST 1963M</td>
<td>Charlemagne: Conquest, Empire, and the Making of the Middle Ages</td>
</tr>
<tr>
<td>HIST 1974M</td>
<td>Early Modern Globalization</td>
</tr>
<tr>
<td>HIST 2970A</td>
<td>New Perspectives on Medieval History</td>
</tr>
<tr>
<td>JUDS 0050M</td>
<td>Difficult Relations? Judaism and Christianity from the Middle Ages until the Present</td>
</tr>
<tr>
<td>JUDS 0681</td>
<td>Great Jewish Books</td>
</tr>
<tr>
<td>JUDS 1630</td>
<td>The Talmud</td>
</tr>
<tr>
<td>LATN 1110F</td>
<td>Fortunatus</td>
</tr>
<tr>
<td>LATN 1110H</td>
<td>Literature at the Court of Charlemagne</td>
</tr>
<tr>
<td>LATN 1120C</td>
<td>Survey of Late and Medieval Latin</td>
</tr>
<tr>
<td>LATN 1120D</td>
<td>Alcuin</td>
</tr>
<tr>
<td>LATN 2080H</td>
<td>Seminar: The Sixth Century</td>
</tr>
<tr>
<td>MDVL 0360</td>
<td>Cities: Medieval Perspectives</td>
</tr>
<tr>
<td>MDVL 0620</td>
<td>Muslims, Jews, and Christians in Medieval Iberia</td>
</tr>
<tr>
<td>MDVL 1970</td>
<td>Independent Study</td>
</tr>
<tr>
<td>MDVL 1990</td>
<td>Honors Thesis</td>
</tr>
<tr>
<td>PHIL 1100C</td>
<td>Medieval Arabic Philosophy</td>
</tr>
<tr>
<td>RELS 0025</td>
<td>Wealth: Religious Approaches</td>
</tr>
<tr>
<td>RELS 0110</td>
<td>Christian Classics</td>
</tr>
<tr>
<td>RELS 0150</td>
<td>Islam Unveiled</td>
</tr>
<tr>
<td>RELS 0290D</td>
<td>Islamic Sexualities</td>
</tr>
<tr>
<td>RELS 0410</td>
<td>Christianity in Late Antiquity</td>
</tr>
<tr>
<td>RELS 0640</td>
<td>Dying To Be With God: Jihad, Past and Present</td>
</tr>
<tr>
<td>RELS 1300</td>
<td>Ancient Christianity and the Sensing Body</td>
</tr>
<tr>
<td>RELS 1520</td>
<td>Pilgrimage and Sacred Travel in the Lands of Islam</td>
</tr>
<tr>
<td>RELS 1530A</td>
<td>Methods and Problems in Islamic Studies: Narratives</td>
</tr>
<tr>
<td>RELS 1530D</td>
<td>Islamic Sectarianism</td>
</tr>
</tbody>
</table>

**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:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLAS 1310</td>
<td>Roman History I: The Rise and Fall of an Imperial Republic</td>
</tr>
<tr>
<td>CLAS 1320</td>
<td>Roman History II: The Roman Empire and Its Impact (recommended)</td>
</tr>
</tbody>
</table>

**One course in medieval history**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLAS 1320</td>
<td>Roman History II: The Roman Empire and Its Impact (recommended)</td>
</tr>
</tbody>
</table>

**One course at the advanced level (numbered at least 1000) in one approved language**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLAS 1320</td>
<td>Roman History II: The Roman Empire and Its Impact (recommended)</td>
</tr>
</tbody>
</table>

**Six other courses drawn from appropriate offerings and with the approval of the concentration advisor. These courses should support a concentrational area of special interest.**

**Total Credits**

<table>
<thead>
<tr>
<th>Credits</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

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.

Under the supervision of the director of the program, students may choose courses from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLAS 0660</td>
<td>The World of Byzantium</td>
</tr>
<tr>
<td>CLAS 1120G</td>
<td>The Idea of Self</td>
</tr>
<tr>
<td>CLAS 1120V</td>
<td>The Age of Constantine: The Roman Empire in Transition</td>
</tr>
<tr>
<td>CLAS 1750L</td>
<td>Erotic Desires in the Premodern Mediterranean</td>
</tr>
<tr>
<td>COLT 0510K</td>
<td>The 1001 Nights</td>
</tr>
<tr>
<td>COLT 1813P</td>
<td>Captive Imaginations: Writing Prison in the Middle Ages</td>
</tr>
<tr>
<td>ENGL 0100D</td>
<td>Matters of Romance</td>
</tr>
<tr>
<td>ENGL 0150C</td>
<td>The Medieval King Arthur</td>
</tr>
<tr>
<td>ENGL 0300F</td>
<td>Beowulf to Apha Behn: The Earliest British Literatures</td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
ENGL 0310F Prose Sagas of the Medieval North
ENGL 1310T Chaucer
ENGL 1310V Chaucer: The Canterbury Tales
ENGL 1311H Sagas Without Borders: Multilingual Literatures of Early England
ENGL 1311L From Mead-Hall to Mordor: The Celtic and Germanic Roots of Tolkien’s Fiction
ENGL 1360F Quest, Vision, Diaspora: Medieval Journey Narratives
ENGL 1360H Introduction to the Old English Language
ENGL 1360J Middle English Literature
ENGL 1360U Europe in the Vernacular
ENGL 1361D Women’s Voices in Medieval Literature
ENGL 1900Y Medieval Manuscript Studies: Paleography, Codicology, and Interpretation
ENGL 2360Q Manuscript, Image, and the Middle English Text
FREN 1110G En Marge: Exilés et Hors-la-Loi au Moyen Age
FREN 2040D Arts du récit, 1100-1400
GREK 1100E Greek Literature in Italy and by Italians
GREK 1110Q Greek Erotic Literature: From Plato to the Medieval Romances
GREK 1110T Rhetors and Philosophers: Intellectual Thought and Sophistic Style in the Ancient World
GREK 1100F Fiction and Truth in Greek Story-telling
GREK 2110F Greek Palaeography and Premodern Book Cultures
HIAA 0321 Toward a Global Late Antiquity: 200-800 CE
HIAA 0460 Muslims, Jews and Christians in Medieval Iberia
HIAA 1440B The Medieval Monastery
HISP 1210C History of the Spanish Language
HISP 2030D Fifteenth-Century Sentimental Romances and Celestina
HIST 0150B The Philosophers’ Stone: Alchemy From Antiquity to Harry Potter
HIST 0521A Christianity in Conflict in the Medieval Mediterranean
HIST 0521M The Holy Grail and the Historian’s Quest for the Truth
HIST 0621B The Search for King Arthur
HIST 1205 The Long Fall of the Roman Empire
HIST 1210A The Viking Age
HIST 1260D Living Together: Muslims, Christians, and Jews in Medieval Iberia
HIST 1211 Crusaders and Cathedrals, Deviants and Dominance: Europe in the High Middle Ages
HIST 1963L Barbarians, Byzantines, and Berbers: Early Medieval North Africa, AD 300-1050
HIST 1963Q Sex, Power, and God: A Medieval Perspective
HIST 1963M Charlemagne: Conquest, Empire, and the Making of the Middle Ages
HIST 1974M Early Modern Globalization
HIST 2970A New Perspectives on Medieval History
JUDS 0050M Difficult Relations? Judaism and Christianity from the Middle Ages until the Present
JUDS 0681 Great Jewish Books
JUDS 1630 The Talmud
LATN 1110F Fortunatus
LATN 1110H Literature at the Court of Charlemagne
LATN 1120C Survey of Late and Medieval Latin
LATN 1120D Alcuin
LATN 2080H Seminar: The Sixth Century
MDVL 0360 Cities: Medieval Perspectives
MDVL 0620 Muslims, Jews, and Christians in Medieval Iberia
MDVL 1970 Independent Study
MDVL 1990 Honors Thesis
PHIL 1100C Medieval Arabic Philosophy
RELS 0025 Wealth: Religious Approaches
RELS 0110 Christian Classics
RELS 0150 Islam Unveiled
RELS 0290D Islamic Sexualities
RELS 0410 Christianity in Late Antiquity
RELS 0640 Dying To Be With God: Jihad, Past and Present
RELS 1300 Ancient Christianity and the Sensing Body
RELS 1520 Pilgrimage and Sacred Travel in the Lands of Islam
RELS 1530A Methods and Problems in Islamic Studies: Narratives
RELS 1530D Islamic Sectarianism

Honors
When in Late Antique Cultures, these are awarded to students who present a meritorious honors thesis in addition to completing the required courses of the concentration. Application for admission to honors should be made in the spring of the junior year, by which time honors candidates must have completed a minimum of six approved courses in Late Antique Studies. Accepted candidates write the thesis in a two-semester course sequence (MDVL 1990) under the supervision of a director and a second reader to be determined in consultation with the advisor.

Middle East Studies
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

HIST 1968 Approaches to The Middle East
HIST 0150 Islam Unveiled
HIST 0240 Middle East Beginnings
HIST 0243 Modern Middle East Roots: 1492 to the Present
HIST 1455 The Making of the Modern Middle East
HISP 1210C History of the Spanish Language
HISP 1260D Living Together: Muslims, Christians, and Jews in Medieval Iberia
HISP 1455 The Making of the Modern Middle East
HISL 1151 Ethnographies of the Muslim Middle East
HIST 0240 - Middle East Beginnings
HIST 0243 - Modern Middle East Roots: 1492 to the Present
HIST 1455 - The Making of the Modern Middle East
HISL 1151 - Ethnographies of the Muslim Middle East
HIST 1968 - Approaches to The Middle East
HIST 1455 - The Making of the Modern Middle East
HIST 0150 - Islam Unveiled
HISP 1210C - History of the Spanish Language
HISP 1260D - Living Together: Muslims, Christians, and Jews in Medieval Iberia
HISP 1455 - The Making of the Modern Middle East
HISL 1151 - Ethnographies of the Muslim Middle East
HIST 0240 - Middle East Beginnings
HIST 0243 - Modern Middle East Roots: 1492 to the Present
HIST 1455 - The Making of the Modern Middle East
HISL 1151 - Ethnographies of the Muslim Middle East

HIST 1968 Approaches to The Middle East

Foundation Courses, to be elected from the courses below:

MES 0155 Cultures of the Contemporary Middle East
HISP 1210C History of the Spanish Language
HISP 1260D Living Together: Muslims, Christians, and Jews in Medieval Iberia
HISP 1455 The Making of the Modern Middle East
HISP 0240 - Middle East Beginnings
HISP 0243 - Modern Middle East Roots: 1492 to the Present
HIST 1455 - The Making of the Modern Middle East
HISL 1151 - Ethnographies of the Muslim Middle East

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.

 Their are four required courses: HIST 1968 Approaches to The Middle East, HIST 0150 Islam Unveiled, HIST 0240 - Middle East Beginnings, and HIST 0243 Modern Middle East Roots: 1492 to the Present. The remaining four courses are electives.

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.

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Honors students will be required to have at least six semesters of language study (Advanced), two semesters of which may be counted toward the elective requirement. Two semesters of Independent Study (MES 1970) towards the Honors Thesis with the thesis advisor(s) are required. This is typically done during senior year and will raise the total number of required courses to 13.

Honors

To be eligible for honors, students will have earned an "A" in the majority of courses for the concentration. Honors students will be required to have at least six semesters of language study (Advanced), two semesters of which may be counted toward the elective requirement. Two semesters of Independent Study (MES 1970) towards the Honors Thesis with the thesis advisor(s) are required. This is typically done during senior year and will raise the total number of required courses to 13.

Modern Culture and Media

Modern Culture and Media (MCM) is an interdisciplinary concentration that explores the ties between media and broader cultural and social formations. We stress creative thinking and critical production: comparative analysis and theoretical reflection, as well as work that integrates practice and theory. We thus bring together aspects of modern culture that are normally separated by departmental structures such as film and media studies, fine art, literature, literary arts and philosophy. This concentration offers the student a range of possible specializations. A student might decide to focus on the critical study and production of a certain type or combination of media (print, photography, sound recording, cinema, video, television, and digital media); or they might focus on certain cultural, theoretical and/or social formations (for example, gender/sexuality in post-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, postcolonial theory and film, the changing form of the novel, theories of subjectivity and ideology, video games and theories of representation. 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 0150 Text/Media/Culture: Theories of Modern Culture and Media
  - Select two of the following:
    - 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

- Select two of the following:

Track II

Track II concentration combines production courses with the critical study of the cultural role of practice. It aims to engage students in the analysis of theories of production elaborated within philosophical, artistic, and technological traditions, while encouraging them to produce works that interrogate these traditions.

Track II consists of 11 courses:

- Two core courses:
  - MCM 0150 Text/Media/Culture: Theories of Modern Culture and Media
  - Select one of the following Introductory Practice or History of a Medium courses:
    - MCM 0710 Introduction to Filmic Practice: 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

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 Narrative
MCM 1110 The Theory of the Sign

Three additional courses from the MCM 1200 or MCM 1500 series 1 3
Four practice courses selected in consultation with an advisor. 2 4
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:
The honors program in MCM is designed for students who wish to integrate their studies in a special project. Students who qualify for Honors in Track II are eligible to apply to do an Honors project or thesis. Students should submit a letter of interest in their 6th semester, and a formal proposal, by the first day of their 7th semester. Applications will be screened by the MCM Honors Committee. (Application forms are available in the MCM office.) If approved, a student must then register for MCM1970, a one credit course which can count towards their Focus Area requirements, and MCM1990, a one-credit thesis course in which they complete the Honors project/thesis.

Music
The concentration in Music integrates theory, history, ethnomusicology, technology, composition, and performance. 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 Onwig Music Library, a state-of-the-art facility with holdings of over 40,000 books and scores and an equal number of sound and video recordings. Concentrators are encouraged to participate in one or more of the departmentally sponsored performing organizations: Chorus, Orchestra, Jazz Band, Wind Symphony, Chamber Music Performance, Electroacoustic Ensemble, Sacred Harp/Shape-Note Singing, Old-time String Band, Javanese Gamelan, Brazilian Choro Ensemble, or Ghanaian drumming.

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:

Music Theory
MUSC 0550 Theory of Tonal Music (offered every fall) 1
MUSC 0560 Theory of Tonal Music (offered every spring) 1

History
Select two of the following (the third is optional): 2
MUSC 0910 Medieval and Renaissance Music
MUSC 0920 Baroque and Classic Music
MUSC 0930 Romantic and Modern Music

Advanced Theory
Select two of the following: 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 0.5
MUSC 1011 Advanced Musicianship II (offered every spring) 1 0.5

Ethnomusicology
MUSC 1900 Introduction to Ethnomusicology (usually offered annually) 1

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:

Music Theory
MUSC 0550 Theory of Tonal Music (offered every fall) 1
MUSC 0560 Theory of Tonal Music (offered every spring) 1

Other Foundational Courses
ANTH 0100 Introduction to Cultural Anthropology 1
MUSC 1900 Introduction to Ethnomusicology (usually offered annually) 1

History
Select two of the following (the third is optional): 2
MUSC 0910 Medieval and Renaissance Music
MUSC 0920 Baroque and Classic Music
MUSC 0930 Romantic and Modern Music

Electives in Ethnomusicology

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Four additional courses in ethnomusicology numbered 1000 or higher are required.  

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:

Music Theory
MUSC 0550 Theory of Tonal Music (offered every fall) 1
MUSC 0560 Theory of Tonal Music (offered every spring) 1

Computer Music Foundation
MUSC 0200 Computers and Music 1
MUSC 1200 Seminar in Electronic Music: Recording Studio as Compositional Tool 1
MUSC 1210 Seminar in Electronic Music: Real-Time Systems 1

Musicology Ethnomusicology Elective
One scholarly course numbered above MUSC 0900 1

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 also require 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 concentration for the Sc.B. degree

The concentration combines a general science background with a number of specific courses devoted to the cellular, molecular, and integrative functions of the nervous system. The concentration allows considerable flexibility for students to tailor a program to their individual interests. Elective courses focus on a variety of areas including molecular mechanisms, cellular function, sensory and motor systems, neuropharmacology, learning and memory, animal behavior, cognitive function, bioengineering, theoretical neuroscience and computer modeling.

The concentration in neuroscience leads to an Sc.B. degree. The following background courses, or their equivalent, are required for the degree:

Background Courses:
MATH 0090 Introductory Calculus, Part I 1
MATH 0100 Introductory Calculus, Part II 1
PHYS 0030 Basic Physics 1

PHYS 0040 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

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.
PHIL 0350 Ancient Philosophy
PHIL 1250 Aristotle
PHIL 1260 Plato
PHIL 1310 Myth and the Origins of Science

One course in Early Modern Philosophy, e.g.
PHIL 0360 Early Modern Philosophy
PHIL 1700 British Empiricists
PHIL 1710 17th Century Continental Rationalism
PHIL 1720 Kant: The Critique of Pure Reason

One course in Epistemology or Metaphysics, e.g.
PHIL 1660 Metaphysics
PHIL 1750 Epistemology
PHIL 1760 Philosophy of Language
PHIL 1770 Philosophy of Mind

One course in Ethics or Political Philosophy, e.g.
PHIL 0500 Moral Philosophy
PHIL 0560 Political Philosophy
PHIL 1640 The Nature of Morality
PHIL 1650 Moral Theories

One course in Logic, e.g.
PHIL 0540 Logic
PHIL 1630 Mathematical Logic
PHIL 1880 Advanced Deductive Logic

One seminar 1

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

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

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. For requirements please refer to the Bulletin Archive from prior years.

Physics

Physics is the scientific study of the fundamental principles governing the behavior of matter and the interaction of matter and energy. Mathematics is used to describe fundamental physical principles, the behavior of matter, and the interactions of matter and energy. As the most fundamental of sciences, physics provides a foundation for other scientific fields as well as the underpinnings of modern technology. The Physics department is unique because of the breadth of its faculty expertise and research, and the relatively intimate size of its classes above the introductory level. Physics concentrators may choose to pursue either the A.B. or the more intensive Sc.B. degree. Course work on either path covers a broad base of topics (for example, electricity and magnetism, classical and quantum mechanics, thermodynamics, and statistical mechanics). The Sc.B. degree requires additional advanced topics as well as a senior thesis project.

Standard concentration for the A.B. degree

Select one of the following Series:

PHYS 0070 Analytical Mechanics
& PHYS 0160 and Introduction to Relativity and Quantum Physics

PHYS 0030 Basic Physics
& PHYS 0040 and Basic Physics

PHYS 0050 Foundations of Mechanics
& PHYS 0060 and Foundations of Electromagnetism and Modern Physics

PHYS 0470 Electricity and Magnetism

PHYS 0500 Advanced Classical Mechanics

PHYS 0560 Experiments in Modern Physics

PHYS 1410 Quantum Mechanics A

PHYS 1530 Thermodynamics and Statistical Mechanics

One additional 1000-level course or a mathematics course beyond the introductory level.

Total Credits 8

Standard program for the Sc.B. degree

Prerequisites:

Select one of the following series:

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)

Or MATH 0090, MATH 0100

Program:

PHYS 0470 Electricity and Magnetism

PHYS 0500 Advanced Classical Mechanics

PHYS 0560 Experiments in Modern Physics

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

PHYS 1980 Undergraduate Research in Physics

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 In addition, courses in computer programming are recommended.
2 A senior thesis is required. This is to be prepared in connection with PHYS 1990 under the direction of a faculty supervisor. The topic may be in a related department or of interdisciplinary nature. In any event, a dissertation must be submitted.

Honors

Candidates for honors in physics will be expected to pursue a more rigorous and extensive program than those merely concentrating in the subject. In addition they will be required to begin an honors thesis during the seventh semester and to complete it (as part of PHYS 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: 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
PHYS 0270 Introduction to Astronomy 1
Select one of the following Series: 2
MATH 0170 Advanced Placement Calculus
& MATH 0180 and Intermediate Calculus
MATH 0190 Advanced Placement Calculus (Physics/ & MATH 0200 Engineering)
and Intermediate Calculus (Physics/Engineering)
MATH 0350 Honors Calculus (or equivalent)
PHYS 0470 Electricity and Magnetism 1

Program:
MATH 0520 Linear Algebra 1
or MATH 0540 Honors Linear Algebra
or PHYS 0720 Methods of Mathematical Physics
Select one of the following Math courses: 1
APMA 0330 Methods of Applied Mathematics I, II
APMA 0340 Methods of Applied Mathematics I, II
APMA 0350 Applied Ordinary Differential Equations
APMA 0360 Methods of Applied Mathematics I, II
MATH 1110 Ordinary Differential Equations
MATH 1120 Partial Differential Equations
PHYS 0500 Advanced Classical Mechanics 1
PHYS 0560 Experiments in Modern Physics 1
PHYS 1410 Quantum Mechanics A 1
PHYS 1530 Thermodynamics and Statistical Mechanics 1
Three of the following: 3
PHYS 1100 Introduction to General Relativity
PHYS 1250 Stellar Structure and the Interstellar Medium
PHYS 1270 Extragalactic Astronomy and High-Energy Astrophysics
PHYS 1280 Introduction to Cosmology
Two additional 1000- or 2000-level courses in physics or a related field 2
which are not listed as requirements.
PHYS 1990 Senior Conference Course 1
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
PHYS 0070 Analytical Mechanics 1
or PHYS 0050 Foundations of Mechanics
or ENGN 0040 Dynamics and Vibrations
PHYS 0160 Introduction to Relativity and Quantum Physics 1
or PHYS 0060 Foundations of Electromagnetism and Modern Physics
PHYS 0470 Electricity and Magnetism 1
PHYS 0500 Advanced Classical Mechanics 1
PHYS 1410 Quantum Mechanics A 1

PHYS 1530 Thermodynamics and Statistical Mechanics 1
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) 1
Biol 0500 Cell and Molecular Biology 1
Chem 0330 Equilibrium, Rate, and Structure 1

Advanced Biophysical Topics and Techniques
PHYS 1610 Biological Physics 1

Elective Courses (four chosen from the following list, with at least two 1000-level courses, or additional courses approved by the concentration advisor):
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 1

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 the direction of a faculty supervisor. The topic may be in a related department or of interdisciplinary nature. In any event, a dissertation must be submitted.
Mathematical Physics Track for the A.B. degree

Prerequisites:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 090</td>
<td>Introductory Calculus, Part I</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 0100</td>
<td>Introductory Calculus, Part II</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 0190</td>
<td>Advanced Placement Calculus (Physics/Engineering)</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 0050</td>
<td>Foundations of Mechanics</td>
<td>1</td>
</tr>
<tr>
<td>or PHYS 0070</td>
<td>Analytical Mechanics</td>
<td>1</td>
</tr>
</tbody>
</table>

Mathematics Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0180</td>
<td>Intermediate Calculus</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 0200</td>
<td>Intermediate Calculus (Physics/Engineering)</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 0350</td>
<td>Honors Calculus</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0520</td>
<td>Linear Algebra</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 0540</td>
<td>Honors Linear Algebra</td>
<td>1</td>
</tr>
<tr>
<td>MATH 1110</td>
<td>Ordinary Differential Equations</td>
<td>1</td>
</tr>
</tbody>
</table>

Select at least one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1060</td>
<td>Differential Geometry</td>
<td>1</td>
</tr>
<tr>
<td>MATH 1120</td>
<td>Partial Differential Equations</td>
<td>1</td>
</tr>
<tr>
<td>MATH 1610</td>
<td>Probability</td>
<td>1</td>
</tr>
</tbody>
</table>

Physics Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0060</td>
<td>Foundations of Electromagnetism and Modern Physics</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 0100</td>
<td>Introduction to Relativity and Quantum Physics</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 0470</td>
<td>Electricity and Magnetism</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 0500</td>
<td>Advanced Classical Mechanics</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 0560</td>
<td>Experiments in Modern Physics</td>
<td>1</td>
</tr>
</tbody>
</table>

Select at least two of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1410</td>
<td>Quantum Mechanics A</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 1420</td>
<td>Quantum Mechanics B</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 1510</td>
<td>Advanced Electromagnetic Theory</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 1530</td>
<td>Thermodynamics and Statistical Mechanics</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 1560</td>
<td>Modern Physics Laboratory</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Credits: 12

Mathematical Physics Track for the Sc.B. degree

Prerequisites:

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 0070</td>
<td>Analytical Mechanics</td>
<td>2</td>
</tr>
<tr>
<td>&amp; PHYS 0160</td>
<td>and Introduction to Relativity and Quantum Physics</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 0050</td>
<td>Foundations of Mechanics</td>
<td>2</td>
</tr>
<tr>
<td>&amp; PHYS 0060</td>
<td>and Foundations of Electromagnetism and Modern Physics</td>
<td>2</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>MATH 0190</td>
<td>Advanced Placement Calculus (Physics/Engineering)</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0090</td>
<td>Introductory Calculus, Part I</td>
<td>1</td>
</tr>
<tr>
<td>&amp; MATH 0100</td>
<td>and Introductory Calculus, Part II</td>
<td>1</td>
</tr>
</tbody>
</table>

Required courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 0470</td>
<td>Electricity and Magnetism</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 0500</td>
<td>Advanced Classical Mechanics</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 0560</td>
<td>Experiments in Modern Physics</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 1410</td>
<td>Quantum Mechanics A</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 1530</td>
<td>Thermodynamics and Statistical Mechanics</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0180</td>
<td>Intermediate Calculus</td>
<td>1</td>
</tr>
<tr>
<td>&amp; MATH 0200</td>
<td>and Intermediate Calculus (Physics/Engineering)</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 0350</td>
<td>Honors Calculus</td>
<td>1</td>
</tr>
<tr>
<td>MATH 0520</td>
<td>Linear Algebra</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 0540</td>
<td>Honors Linear Algebra</td>
<td>1</td>
</tr>
<tr>
<td>MATH 1530</td>
<td>Abstract Algebra</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 0500</td>
<td>Advanced Placement Calculus (Physics/Engineering)</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 0350</td>
<td>Honors Calculus</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 0540</td>
<td>Honors Linear Algebra</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 0500</td>
<td>Advanced Placement Calculus (Physics/Engineering)</td>
<td>1</td>
</tr>
</tbody>
</table>

Four additional 1000 or 2000 level Physics courses: 4
Two additional 1000 or 2000 level Math courses: 2
PHYS 1990 Senior Conference Course: 1

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.

Physics and Philosophy

The Physics and Philosophy concentration is for students with a deep interest in physics who do not need to acquire the laboratory and computational skills of a professional physicist. The concentration allows students to grapple with computational problems and deepen their investigation of conceptual and epistemological issues. By the end of the program, concentrators possess an excellent conceptual understanding of the most philosophically interesting physics, relativity and quantum mechanics.

This concentration should prepare a student either for graduate study, especially in a history and philosophy of science (HPS) program, or for employment in science education or journalism. Other professions such as law and medicine will look favorably on such concentrators for having versatile interests and being able to master difficult material. The concentration may serve as an excellent preparation for a law school since physics and philosophy both exercise a rigorous approach to problems of immediate relevance to life but at the same time assume two complimentary and sometimes competing viewpoints.

Advising

Concentration advisors from the Departments of Physics and Philosophy will guide students working towards the A.B. degree.

Curriculum

The curriculum builds around the fields of physics that have had the biggest impact on philosophy, especially Quantum Physics, and the fields of philosophy most relevant for physics, such as Epistemology, Metaphysics and Philosophy of Physics. It is strongly recommended that students complete at least one relevant history course.

There are 11 required courses (5 in Physics, 5 in Philosophy or History, one course in mathematics) and a final project. The choice of the courses is dictated by the following considerations. The field of physics with both deepest philosophical implications and deepest influence on the rest of physics is Quantum Mechanics. Thus, a 1000-level course in Quantum Mechanics or a closely related field such as Statistical Mechanics is indispensable. The second field of physics most relevant for the concentration is Relativity. This field touches upon and serves as a foundation for a broad list of subjects with major philosophical implications of their own, for example: PHYS 1170, PHYS 1260, 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:

**Physics Courses**

Select one of the following introductory courses in Modern Physics: 1
- PHYS 0060 Foundations of Electromagnetism and Modern Physics

Select one course in Special Relativity and Classical Field Theory: 1
- PHYS 0470 Electricity and Magnetism

Select one of the following in Methods of Experimental and Theoretical physics:
- PHYS 0500 Advanced Classical Mechanics
- PHYS 0560 Experiments in Modern Physics

Select one of the following in Quantum Mechanics and its applications 1
- PHYS 1410 Quantum Mechanics A
- PHYS 1530 Thermodynamics and Statistical Mechanics

One more 1000-level Physics course 1

**Philosophy Courses**

Select one of the following gateway courses: 1
- PHIL 0210 Science, Perception and Reality
- PHIL 0100 Critical Reasoning
- PHIL 0060 Modern Science and Human Values
- PHIL 0540 Logic

Select one of the following courses in Early Modern Philosophy: 1
- PHIL 0360 Early Modern Philosophy
- PHIL 1700 British Empiricists
- PHIL 1710 17th Century Continental Rationalism
- PHIL 1720 Kant: The Critique of Pure Reason

Select two of the following courses in Epistemology, Metaphysics and Philosophy of Science: 2
- PHIL 1590 Philosophy of Science
- PHIL 1620 Philosophy of Quantum Mechanics
- PHIL 1660 Metaphysics
- PHIL 1670 Time
- PHIL 1750 Epistemology

**History Courses**

Select one of the following courses in History of Science: 1
- HIST 0522N Reason, Revolution and Reaction in Europe
- HIST 1825M Science at the Crossroads
- HIST 1976I The World of Isaac Newton

**Calculus**

Select one of the following: 1
- MATH 0180 Intermediate Calculus
- MATH 0200 Intermediate Calculus (Physics/Engineering)
- MATH 0350 Honors Calculus

**Final Project**

Select one of the following: 1
- PHIL 1990 Independent Studies

---

**Honors**

Seniors wishing to earn honors by presenting a senior honors thesis should consult their concentration advisor during their sixth semester or at the start of the seventh semester concerning procedures and requirements. Students may earn honors by presenting a senior thesis judged to be of honors quality by two readers. In addition to completing the usual nonhonors requirements, the student should also have a grade point average of over 3.4 in physics, philosophy and history of science courses (of which at least five must be taken for a letter grade). Honors theses are usually prepared over a period of two semesters with an advisor from the Department of Physics or the Department of Philosophy.

**Political Science**

Why do Hindus and Muslims live in harmony in one city and fight bitterly in another just a few miles away? Why is the U.S. the only industrialized nation without a complete national health insurance? What is the legacy of slavery in the U.S.? Why are there so few women in Congress? How is radicalism in the Middle East changing? Why and how does democracy flourish? Just what is democracy? How do emotions shape our political behavior? What do war movies tell us about the USA? Would less government lead to more social justice? What is social justice? How does smuggling (of drugs, guns, and people) reshape international relations? How do immigrants see the American Dream? What is the American dream?

Political science is about questions like these. You can grapple with every one of them—and many more—in the classrooms of the Brown political science department. We study how people—nations, regions, cities, communities—live their common lives. How people solve (or duck) their common problems. How people govern themselves. How they think, talk, argue, fight, and vote.

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:** 2
For the American politics and political theory tracks, select two courses from the following list. One of which must be the introductory course associated with the chosen track
- POLS 0010 Introduction to the American Political Process
- POLS 0110 Introduction to Political Thought
- POLS 0200 Introduction to Comparative Politics
- POLS 0400 Introduction to International Politics

**One course in the American politics subfield** 1

**Two courses in the international and comparative politics subfield** 2

**Three upper-level courses in the chosen subfield** 3

**One methods course from Political Science:** 1
- POLS 0500 Foundations of Political Analysis
- POLS 1600 Political Research Methods

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
One research seminar from the POLS 1820, 1821, 1822, 1823 or 1824 offerings that is track related
Two upper-level courses from outside the department related to the specialized track, chosen with the approval of the concentration advisor.

1. A comparable course from an outside department (APMA 0650, ANTH 1940, CLPS0900, ECON 1620, ECON 1630, EDUC 1100, EDUC 1110, GEOL 1320, PHP1501, SOC 1100 or SOC 1120 may also be used). If the methods requirement is fulfilled by an outside department course, it will not count as one of the 12 required courses.

2. Appropriate 1000-level courses offered in (but not limited to) Africana Studies, American Anthropology, Anthropology, Classics, Economics, History, International Relations, Philosophy, Public Policy, Religious Studies, Sociology or Urban Studies may apply. The concentration advisor may approve a course from another department if it clearly meets the intent of the outside course requirement.

To obtain an advisor contact the Concentration Coordinator Patti Gardner.

Honors

Students wishing to undertake the honors program need to complete the same requirements as shown for the concentration. Completion of the methods requirement is required prior to applying to the Honors program. Students must also complete an honors research project and take POLS 1910 and POLS 1920 during the senior year. POLS 1910 and POLS 1920 will count as one credit towards the 10 required Political Science courses for the concentration.

Portuguese and Brazilian Studies

Portuguese and Brazilian Studies examines the Portuguese-speaking world, a large and diverse geographical and cultural area spread over five continents. Inhabited by two hundred fifty million people, this area includes Brazil, Continental and Insular Portugal, Lusophone Africa and Luso-America. Although concentrators are encouraged to examine the global nature of the Portuguese-speaking world, typically they focus on one of the specific geographical entities mentioned above. Concentrators will strengthen their Portuguese language skills (Portuguese 400 or the equivalent is a 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

POBS 0610 Mapping Portuguese-Speaking Cultures: Brazil 1
POBS 0620 Mapping Portuguese-Speaking Cultures: Portugal and Africa 1
POBS 1030 Portuguese Stylistics: Advanced Language Study and Creative Writing
POBS 1800E The Brazilian Puzzle: Confronting the Post-Colonial Legacy 2
or POBS 1800F The Lusophone World and the Struggle for Modernity

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.

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 requirement by submitting AP (score of 4 or 5) or IB (score of 5 or above) test credit or by transferring Introductory Psychology course credits from other 4-year institutions.

Quantitative: Careers in Psychology and related fields require familiarity with statistics. Therefore, the Psychology concentration requires Quantitative Methods in Psychology (CLPS 0900). CLPS 0900 is a prerequisite for most of the laboratory courses, so concentrators should plan to take this course by their fourth semester. The department does not award concentration credit for AP statistics, regardless of score. Students who feel that CLPS 0900 is too elementary can complete AP 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. concentrators are required to take one advanced limited-enrollment seminar/critical readings course. The list of approved seminars varies yearly. Contact one of the concentration advisors for details.

AP and Transfer Credits: Students receiving AP credit for Introductory Psychology can place out of CLPS 0010, and can enroll directly in higher-level psychology courses. AP credits are not accepted for other concentration requirements. Students transferring from another college or university, or students studying abroad or at another US institution, may receive transfer credits for other concentration requirements. Please refer to our departmental policy on applying AP and transfer credits.

The A.B. degree requires 12 courses. The Sc.B. degree requires 17 courses. (Concentrators should complete either the A.B. or Sc.B. Concentration Worksheet before meeting with their Concentration Advisor.)

FOR DETAILED UPDATES, PLEASE REFER TO THE COGNITIVE, LINGUISTIC, AND PSYCHOLOGICAL SCIENCES (CLPS) UNDERGRADUATE PAGE.

Requirements for the A.B. degree

CLPS 0010 Elementary Psychology: An Introduction to Mind and Behavior 1
CLPS 0900 Quantitative Methods in Psychology 1

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Two courses in Perception and Cognition $^2$ 2
Two courses in Comparative/Physiological $^2$ 2
Two courses in Social/Personality/Developmental $^2$ 2
One advanced laboratory course from the following: $^3$ 1

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLPS 1090</td>
<td>Research Methods in Psychology</td>
</tr>
<tr>
<td>CLPS 1092</td>
<td>Psychological Theory</td>
</tr>
<tr>
<td>CLPS 1190</td>
<td>Techniques in Physiological Psychology</td>
</tr>
<tr>
<td>CLPS 1191</td>
<td>Animal Behavior Laboratory</td>
</tr>
<tr>
<td>CLPS 1192</td>
<td>Experimental Analysis of Animal Behavior and Cognition</td>
</tr>
<tr>
<td>CLPS 1193</td>
<td>Laboratory in Genes and Behavior</td>
</tr>
<tr>
<td>CLPS 1194</td>
<td>Sleep and Chronobiology Research</td>
</tr>
<tr>
<td>CLPS 1290</td>
<td>Laboratory in Cognitive Processes</td>
</tr>
<tr>
<td>CLPS 1291</td>
<td>Computational Methods for Mind, Brain and Behavior</td>
</tr>
<tr>
<td>CLPS 1360</td>
<td>Introduction to Corpus Linguistics</td>
</tr>
<tr>
<td>CLPS 1490</td>
<td>Functional Magnetic Resonance Imaging: Theory and Practice</td>
</tr>
<tr>
<td>CLPS 1491</td>
<td>Neural Modeling Laboratory</td>
</tr>
<tr>
<td>CLPS 1492</td>
<td>Computational Cognitive Neuroscience</td>
</tr>
<tr>
<td>CLPS 1510</td>
<td>Auditory Perception: Sensing the World through Sounds</td>
</tr>
<tr>
<td>CLPS 1590</td>
<td>Visualizing Vision</td>
</tr>
<tr>
<td>CLPS 1690</td>
<td>Laboratory in Developmental Psychology</td>
</tr>
<tr>
<td>CLPS 1790</td>
<td>Personality and Clinical Assessment</td>
</tr>
<tr>
<td>CLPS 1791</td>
<td>Laboratory in Social Cognition</td>
</tr>
</tbody>
</table>

An advanced seminar/critical readings course in CLPS, numbered above 1000 $^4$ 1
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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLPS 0010</td>
<td>Elementary Psychology: An Introduction to Mind and Behavior</td>
</tr>
<tr>
<td>CLPS 0900</td>
<td>Quantitative Methods in Psychology</td>
</tr>
<tr>
<td>Two courses in Perception and Cognition $^2$ 2</td>
<td></td>
</tr>
<tr>
<td>Two courses in Comparative/Physiological $^2$ 2</td>
<td></td>
</tr>
<tr>
<td>Two courses in Social/Personality/Developmental $^2$ 2</td>
<td></td>
</tr>
<tr>
<td>An advanced laboratory course from the following: $^3$ 1</td>
<td></td>
</tr>
<tr>
<td>CLPS 1090</td>
<td>Research Methods in Psychology</td>
</tr>
<tr>
<td>CLPS 1092</td>
<td>Psychological Theory</td>
</tr>
<tr>
<td>CLPS 1190</td>
<td>Techniques in Physiological Psychology</td>
</tr>
</tbody>
</table>

An advanced seminar/critical readings course in CLPS, numbered above 1000 $^4$ 1
Six supporting science courses should be selected from the following areas: Applied Mathematics, Biology, Chemistry, Computer Sciences, Engineering, Mathematics, Neuroscience, or Physics $^5$

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLPS 1191</td>
<td>Animal Behavior Laboratory</td>
</tr>
<tr>
<td>CLPS 1192</td>
<td>Experimental Analysis of Animal Behavior and Cognition</td>
</tr>
<tr>
<td>CLPS 1193</td>
<td>Laboratory in Genes and Behavior</td>
</tr>
<tr>
<td>CLPS 1194</td>
<td>Sleep and Chronobiology Research</td>
</tr>
<tr>
<td>CLPS 1290</td>
<td>Laboratory in Cognitive Processes</td>
</tr>
<tr>
<td>CLPS 1490</td>
<td>Functional Magnetic Resonance Imaging: Theory and Practice</td>
</tr>
<tr>
<td>CLPS 1491</td>
<td>Neural Modeling Laboratory</td>
</tr>
<tr>
<td>CLPS 1492</td>
<td>Computational Cognitive Neuroscience</td>
</tr>
<tr>
<td>CLPS 1510</td>
<td>Auditory Perception: Sensing the World through Sounds</td>
</tr>
<tr>
<td>CLPS 1690</td>
<td>Laboratory in Developmental Psychology</td>
</tr>
<tr>
<td>CLPS 1790</td>
<td>Personality and Clinical Assessment</td>
</tr>
<tr>
<td>CLPS 1791</td>
<td>Laboratory in Social Cognition</td>
</tr>
</tbody>
</table>

An advanced seminar/critical readings course in CLPS, numbered above 1000 $^4$ 1

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 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. CLPS 1980 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 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 undergraduate component to the five-year AB/MPH differs in some ways from the Public Health concentration. Please refer to http://brown.edu/academics/public-health/education-training/masters/mph-program-about-us/combined-programs/abmph. Meet early with a concentration adviser to discuss your plans.

1. Core Courses: (non-substitutable)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHP 0310</td>
<td>Health Care in the United States</td>
<td>1</td>
</tr>
<tr>
<td>PHP 0320</td>
<td>Introduction to Public Health</td>
<td>1</td>
</tr>
<tr>
<td>PHP 1501</td>
<td>Essentials of Data Analysis</td>
<td>1</td>
</tr>
<tr>
<td>PHP 1910</td>
<td>Public Health Senior Seminar</td>
<td>1</td>
</tr>
<tr>
<td>PHP 0850</td>
<td>Fundamentals of Epidemiology</td>
<td>1</td>
</tr>
</tbody>
</table>

2. Environmental Health and Policy (Select one of the following): 1

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHP 1700</td>
<td>Current Topics in Environmental Health</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 1820</td>
<td>Environmental Health and Disease</td>
<td></td>
</tr>
<tr>
<td>ENVS 1410</td>
<td>Environmental Law and Policy</td>
<td></td>
</tr>
</tbody>
</table>

3. Health, Health Care Systems and Policy (Select one of the following): 1

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHP 1520</td>
<td>Emergency Medical Systems: An Anatomy of Critical Performance</td>
<td>1</td>
</tr>
<tr>
<td>PHP 1530</td>
<td>Case Studies in Public Health: The Role of Governments, Communities and Professions</td>
<td>1</td>
</tr>
<tr>
<td>PHP 1070</td>
<td>The Burden of Disease in Developing Countries</td>
<td></td>
</tr>
<tr>
<td>PHP 1100</td>
<td>Comparative Health Care Systems</td>
<td></td>
</tr>
<tr>
<td>PHP 1500</td>
<td>Global Health Nutrition</td>
<td></td>
</tr>
<tr>
<td>ECON 1360</td>
<td>Health Economics</td>
<td></td>
</tr>
</tbody>
</table>

4. Social and Behavioral Science for Prevention (Select one of the following): 1

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHP 1010</td>
<td>Doctors and Patients- Clinical Communication in Medicine</td>
<td>1</td>
</tr>
<tr>
<td>PHP 1400</td>
<td>HIV/AIDS in Africa: A Multidisciplinary Approach to Support HIV/AIDS Care and Treatment Programs</td>
<td>1</td>
</tr>
<tr>
<td>PHP 1540</td>
<td>Alcohol Use and Misuse</td>
<td></td>
</tr>
<tr>
<td>PHP 1600</td>
<td>Obesity in the 21st Century: Causes, Consequences and Countermeasures</td>
<td>1</td>
</tr>
<tr>
<td>PHP 1680N</td>
<td>Tobacco, Smoking, and the Evil Empire</td>
<td></td>
</tr>
<tr>
<td>PHP 1740</td>
<td>Principles of Health Behavior and Health Promotion Interventions</td>
<td>1</td>
</tr>
<tr>
<td>PHP 1920</td>
<td>Social Determinants of Health</td>
<td></td>
</tr>
<tr>
<td>PHP 2325</td>
<td>Place Matters: Exploring Community-Level Contexts on Health Outcomes and Disparities</td>
<td>1</td>
</tr>
<tr>
<td>PHP 2340</td>
<td>Behavioral and Social Science Theory for Health Promotion</td>
<td>1</td>
</tr>
<tr>
<td>PHP 2365</td>
<td>Public Health Issues in LGBT Populations</td>
<td></td>
</tr>
<tr>
<td>PHP 2380</td>
<td>Health Communication</td>
<td></td>
</tr>
</tbody>
</table>

5. Approved General Electives (Select four electives; no more than two (2) can be Human Biology/Physiology courses):

The four electives may be selected from: A. the approved courses from the areas listed above or B. the approved general electives listed below.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHP 0030</td>
<td>Health of Hispaniola</td>
<td></td>
</tr>
<tr>
<td>PHP 0050</td>
<td>Pain and the Human Condition: Exploring the Science, Medicine, and Culture of Pain</td>
<td>1</td>
</tr>
<tr>
<td>PHP 1680I</td>
<td>Pathology to Power: Disability, Health and Community</td>
<td></td>
</tr>
<tr>
<td>PHP 1680K</td>
<td>Introduction to Conducting Clinical Research</td>
<td></td>
</tr>
<tr>
<td>PHP 1680M</td>
<td>The Epidemiology of Violence and its Consequences</td>
<td></td>
</tr>
<tr>
<td>ANTH 0300</td>
<td>Culture and Health</td>
<td></td>
</tr>
<tr>
<td>ANTH 1020</td>
<td>AIDS in Global Perspective</td>
<td></td>
</tr>
<tr>
<td>ANTH 1242</td>
<td>Bioethics and Culture</td>
<td></td>
</tr>
<tr>
<td>ANTH 1300</td>
<td>Anthropology of Addictions and Recovery</td>
<td></td>
</tr>
<tr>
<td>ANTH 1310</td>
<td>International Health: Anthropological Perspectives</td>
<td></td>
</tr>
<tr>
<td>BIOL 0030</td>
<td>Principles of Nutrition (Human Biology/Physiology course)</td>
<td></td>
</tr>
<tr>
<td>BIOL 0040</td>
<td>Nutrition for Fitness and Physical Activity</td>
<td></td>
</tr>
<tr>
<td>BIOL 0140K</td>
<td>Conservation Medicine</td>
<td></td>
</tr>
<tr>
<td>BIOL 0180</td>
<td>The Biology of AIDS</td>
<td></td>
</tr>
<tr>
<td>BIOL 0190E</td>
<td>Botanical Roots of Modern Medicine</td>
<td></td>
</tr>
<tr>
<td>BIOL 0200</td>
<td>The Foundation of Living Systems (Human Biology/Physiology course)</td>
<td></td>
</tr>
<tr>
<td>BIOL 0470</td>
<td>Genetics (Human Biology/Physiology course)</td>
<td></td>
</tr>
<tr>
<td>BIOL 0530</td>
<td>Principles of Immunology (Human Biology/Physiology course)</td>
<td></td>
</tr>
<tr>
<td>BIOL 0800</td>
<td>Principles of Physiology (Human Biology/Physiology course)</td>
<td></td>
</tr>
<tr>
<td>BIOL 0860</td>
<td>Diet and Chronic Disease</td>
<td></td>
</tr>
<tr>
<td>BIOL 0920A</td>
<td>Controversies in Medicine (Human Biology/Physiology course)</td>
<td></td>
</tr>
<tr>
<td>BIOL 1920B</td>
<td>Health Inequality in Historical Perspective</td>
<td></td>
</tr>
<tr>
<td>BIOL 1920C</td>
<td>Social Contexts of Disease</td>
<td></td>
</tr>
<tr>
<td>BIOL 1920D</td>
<td>Race, Difference and Biomedical Research: Historical Considerations</td>
<td></td>
</tr>
<tr>
<td>ENVS 0490</td>
<td>Environmental Science in a Changing World</td>
<td></td>
</tr>
<tr>
<td>ENVS 1580</td>
<td>Environmental Stewardship and Resilience in Urban Systems</td>
<td></td>
</tr>
<tr>
<td>ETHN 1890J</td>
<td>Native American Environmental Health Movements</td>
<td></td>
</tr>
<tr>
<td>HMAN 1970G</td>
<td>International Perspectives on NGOs, Public Health, and Health Care Inequalities</td>
<td></td>
</tr>
<tr>
<td>NEUR 0010</td>
<td>The Brain: An Introduction to Neuroscience (Human Biology/Physiology course)</td>
<td></td>
</tr>
<tr>
<td>PLCY 1700V</td>
<td>Nonprofit Organizations</td>
<td></td>
</tr>
<tr>
<td>SOC 0300B</td>
<td>Environment and Society</td>
<td></td>
</tr>
<tr>
<td>SOC 0300E</td>
<td>HIV/AIDS: Politics, Culture and Society</td>
<td></td>
</tr>
<tr>
<td>SOC 0300F</td>
<td>Unequal From Birth: Child Health From a Social Perspective</td>
<td></td>
</tr>
<tr>
<td>SOC 0300K</td>
<td>Inequalities and Health</td>
<td></td>
</tr>
<tr>
<td>SOC 1250</td>
<td>Perceptions of Mental Illness</td>
<td></td>
</tr>
<tr>
<td>SOC 1315</td>
<td>Macro-Organizational Theory: Organizations in Social Context</td>
<td></td>
</tr>
<tr>
<td>SOC 1410</td>
<td>Aging and the Quality of Life</td>
<td></td>
</tr>
<tr>
<td>SOC 1540</td>
<td>Human Needs and Social Services</td>
<td></td>
</tr>
<tr>
<td>SOC 1550</td>
<td>Sociology of Medicine</td>
<td></td>
</tr>
<tr>
<td>SOC 1870D</td>
<td>Aging and Social Policy</td>
<td></td>
</tr>
<tr>
<td>SOC 1871H</td>
<td>Social Perspectives on HIV/AIDS</td>
<td></td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Honors:
An Honors track is available for students who qualify. Honors track students are also required to enroll in PHP 1980 in both semesters of their senior year to conduct research and write the honors thesis. Please visit http://www.brown.edu/academics/public-health/education-training/undergraduate/public-health-concentration/honors-track for details or email Barbara_Dailey@brown.edu for more information.

Study Abroad/Study Away: Courses taken elsewhere may be applied to non-core courses. Meet with a concentration adviser, and be prepared to provide a syllabus or syllabi, that you are interested in transferring to your concentration plan.

Public Policy
Housed in the Watson Institute for International and Public Affairs, the public policy concentration is dedicated to the study 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 with a particular interest in such applications should consider the Engaged Scholars Program (http://watson.brown.edu/public-policy/node/391). All concentrators emerge with a sound understanding of institutional change and are well-equipped to contribute to processes of social change.

Required Courses:

Core Courses:

- PLCY 0100 Introduction to Public Policy 1
- Ethics and Public Policy 1
- POLS 1050 Ethics and Public Policy or PLCY 1700T Good Government 1
- Economics for Public Policy 1

- ECON 1110 Intermediate Microeconomics 1
- ECON 1130 Intermediate Microeconomics (Mathematical) 1
- EDUC 1130 Economics of Education I 1
- POLS 1600 Political Research Methods 1
- EDUC 1100 Introduction to Qualitative Research Methods 1
- ECON 1620 Introduction to Econometrics 1
- ECON 1630 Econometrics I 1
- SOC 1100 Introductory Statistics for Social Research 1
- Policy Analysis and Program Evaluation 1
- PLCY 1200 Policy Analysis and Program Evaluation or EDUC 1160 Evaluating the Impact of Social Programs 1

Elective Courses: 1, 2

Three Broad Elective Courses: May be taken in any policy area 3
Two more electives in one of the areas you have already studied 2

Sample electives may include the following:

**Health Policy**

- PHP 1100 Comparative Health Care Systems
- PHP 1520 Emergency Medical Systems: An Anatomy of Critical Performance
- PHP 1530 Case Studies in Public Health: The Role of Governments, Communities and Professions
- PLCY 1700K Health Policy Challenges

**Technology Policy**

**Environmental Policy**

- ENV 1350 Environmental Economics and Policy
- ENV 1410 Environmental Law and Policy
- ENV 1530 From Locke to Deep Ecology: Property Rights and Environmental Policy
- ENV 1555 Urban Agriculture: The Importance of Localized Food Systems

**Governance, Law, and Ethics**

- PLCY 1700Z State and Local Government
- PLCY 1701H Congressional Leadership, Parties and Public Policy
- POLS 0220 City Politics
- POLS 1010 Topics in American Constitutional Law

**Social Policy**

- ECON 1170 Welfare Economics and Social Choice Theory
- PLCY 1700B Social Welfare Policy in the United States
- PLCY 1700S Policies Affecting Working Families
- PLCY 1701M Juvenile Justice Institutions and Policy
- SOC 1540 Human Needs and Social Services

**Urban Policy**

- ECON 1420 Urbanization in China
- PLCY 1700Q Urban Policy Challenges
- PLCY 1700R Urban Revitalization: Lessons from the Providence Plan
- SOC 1600 Comparative Development
- URBN 1870F Housing and Homelessness

**Modes of Social Change**

- PLCY 1700V Nonprofit Organizations
- PLCY 1701Q Leading Social Ventures - Social Entrepreneurship in Action
- PLCY 1800 Investigating Modes of Social Change
- PLCY 1910 Social Entrepreneurship
- SOC 1870A Investing in Social Change

Senior Capstone 1
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.
2 One elective must be focused on global issues

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

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

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 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.

Nancy Khalek, Director of Undergraduate Studies
Tina Creamer, Departmental Administrator

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.

Under the supervision of the director of the program, students may choose courses from the following:

- COLT 0710I New Worlds: Reading Spaces and Places in Colonial Latin America
- COLT 1410P Shakespeare
- ENGL 0100C Altered States
- ENGL 0150D Shakespeare's Present Tense
- ENGL 0201H Green Shakespeare: Literature, Ecology, and the Nonhuman
- ENGL 0310A Shakespeare
- ENGL 0310E Shakespeare: The Screenplays
- ENGL 1310A Firing the Canon: Early Modern Women's Writing
- ENGL 1310H The Origins of American Literature
- ENGL 1310J Imagining the Individual in Renaissance England
- ENGL 1360K Shakespeare and Company
- ENGL 1310O Restoration and Early Eighteenth-Century Literature
- ENGL 1360P Shakespearean Tragedy
- ENGL 1360S Between Gods and Beasts: The Renaissance Ovid
- ENGL 1360Z Shakespeare and Embodiment
- ENGL 1950A Form and Feeling in Renaissance Poetry
- ENGL 2360O Irony and Satire
- ENGL 2360P Thinking with Romance in the Renaissance
- ENGL 2360S Alternative Miltons
- FREN 0720A De l'Amour courtois au désir postmoderne
- A course from the FREN 1040 Studies in French Literature of the Seventeenth Century series
- FREN 2130E Corps et esprits libertin
- FREN 2130F Façons d'aime: Discourses of Sexuality in Early Modern France
- HIAA 0062 The Age of Rubens and Rembrandt: Visual Culture of the Netherlands in the Seventeenth Century
- 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 0630 Cultural History of the Netherlands in a Golden Age and a Global Age
- HIAA 1560A Italy and the Mediterranean

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIAA 1600I</td>
<td>Collections and Visual Knowledge in Early Modern Europe: 1400-1800</td>
</tr>
<tr>
<td>HISP 2160G</td>
<td>Don Quixote: Contexts and Constructions</td>
</tr>
<tr>
<td>HISP 2520I</td>
<td>Sor Juana Inés de la Cruz in Her Literary Context</td>
</tr>
<tr>
<td>HIST 0286A</td>
<td>History of Medicine I: Medical Traditions in the Old World Before 1700</td>
</tr>
<tr>
<td>HIST 1825H</td>
<td>Science, Medicine and Technology in the 17th Century</td>
</tr>
<tr>
<td>HIST 1964A</td>
<td>Age of Impostors: Fraud, Identification, and the Self in Early Modern Europe</td>
</tr>
<tr>
<td>HIST 1974M</td>
<td>Early Modern Globalization</td>
</tr>
<tr>
<td>ITAL 0981</td>
<td>When Leaders Lie: Machiavelli in International Context</td>
</tr>
<tr>
<td>ITAL 1400J</td>
<td>The Many Faces of Casanova</td>
</tr>
<tr>
<td>ITAL 1580</td>
<td>Word, Image and Power in Renaissance Italy</td>
</tr>
<tr>
<td>ITAL 2550</td>
<td>Gender Matters</td>
</tr>
<tr>
<td>JUDS 1751</td>
<td>Jews Between Christians and Muslims in the Early Modern World</td>
</tr>
<tr>
<td>LATN 2000A</td>
<td>Senecan Tragedy</td>
</tr>
<tr>
<td>POBS 0910</td>
<td>On the Dawn of Modernity</td>
</tr>
<tr>
<td>REMS 1980</td>
<td>Independent Study in REMS</td>
</tr>
</tbody>
</table>

**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 the student taken the course for a grade, the grade would have been an “A.” It is advisable for them to have taken at least one class with the person who will advise the thesis, and have already written a research paper before choosing to undertake this year-long writing project. Honors students are strongly encouraged not to take more than 4 classes either semester of their senior year—the Honors class being considered one of the four classes.

**Application process:**

Each application shall consist of:

1. A very brief (one or two paragraph) cover letter identifying the most appropriate advisor and second readers, and stating also the student’s preparation is for the project. Second readers may be professors who work in areas related to the topic, or in some very special cases (and with advisor’s approval) may be practitioners with whom the student already worked closely, for example.
2. A 2 page double-spaced abstract stating and explaining the topic (subject and argument) of the research to be undertaken, written as clearly as possible.
3. A one-page working bibliography of the most relevant books and major articles to be consulted for the project.
4. A current résumé,
5. A printout of the most recent transcript

The senior project constitutes the capstone for all concentrators. Examples of possible senior projects are: a senior thesis (roughly equivalent to a senior seminar paper), the staging of an early modern play, the performance of early modern music, or an exhibition. The final project will be developed in consultation with two REMS faculty advisors who work closely with the student. Credit is granted through registration for Independent Study in the department for which the topic of research lies.

**Liberal Learning**

This concentration will help develop your aesthetic awareness, close reading skills, collaborative skills, cultural understanding, facility with symbolic languages, historical awareness, and your speaking and writing.

**Science and Society**

Science and Society is an interdisciplinary concentration that examines the processes of scientific discovery and the establishment of scientific policies and systems of belief from historical, philosophical, anthropological, and sociological perspectives. Concentrators analyze the practices, norms, and values that reflect and shape our deepest convictions about what is considered “science.” Students select courses in the physical sciences, life sciences, or mathematics and choose a thematic track that may include the history and philosophy of science, gender and science, race, science and ethnicity, health and medicine, environment and society, or they may create their own independent focus. Science and Society prepares students to follow, guide, and shape scientific knowledge as it travels from the laboratory into the public arena.

**Requirements**

Consisting of 12 courses, the program of study outlined below will be developed by each student in consultation with the concentration advisor. Where appropriate, independent reading, lab courses or GISPS may count for up to three of the twelve total courses. Students will take a minimum of 7 intermediate to advanced courses.

**Required Courses (2)**

The concentration has two required courses.
- SCSC 1000: Gender, Science and Society, or equivalent introductory course: usually taken in the second or third year.
- SCSC 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

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
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 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/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/N/NC he or she will submit CPR’s for consideration by the concentration advisory committee, which will evaluate the student’s candidacy.
3. Complete an Honors Thesis judged by the advisor and an additional reader to be of superior quality.
4. Deliver an oral presentation based on thesis work that is favorably reviewed by the concentration faculty and the advisory committee.

Slavic Studies
Slavic Studies is concerned with the languages, literatures, and civilizations of the Slavic world. Built on sound knowledge of one or two Slavic languages (normally Russian or Czech) the program allows students to develop an in-depth appreciation and understanding of East European cultures and civilizations through a broad spectrum of interdisciplinary fields. Students take courses in literature, history, culture, theater, political science, economics, and international relations. Concentrators focusing on Russia learn one of the world’s most commonly spoken languages and study some of the world’s best-regarded authors and composers: Tolstoy and Dostoevsky, Gogol and Bulgakov, Tchaikovsky and Mussorgsky, and Rachmaninoff and Stravinsky. Focusing on Czech allows students to explore, for example, how Czechs distinguished themselves by peacefully transitioning from communism to capitalism (the “Velvet Revolution”) and separating peacefully with the Slovak Republic (the “Velvet Divorce”). Most concentrators study abroad in a Slavic country, either during the academic year or the summer.

Requirements for the AB degree:
1. Six semesters of one Slavic language or the equivalent (normally Czech or Russian), or a combined total of eight semesters of two Slavic languages or the equivalent.
2. Seven 1000-level courses devoted to the study of the East European civilizations: literature, history, culture, theater, political science, economics, international relations. Typically, at least four of these courses will be from within the Department of Slavic Languages. Students’ choice of courses is subject to the approval of the concentration advisor.

Honors
Honors candidacy in Slavic studies assumes an excellent academic record, particularly in the concentration. Additional requirements are the same as those for a standard concentration, plus the writing of a senior thesis (SLAV 1990). For procedures and schedule for writing a senior thesis, please refer to the department guidelines.

Social Analysis and Research
The Sc.B. concentration in Social Analysis and Research provides both a conceptual and a working knowledge of the techniques for data collection and analysis used for social research in academic and non-academic environments. The centerpiece of the concentration is a rigorous and comprehensive collection of courses: (1) that develop an understanding of the principles underlying the processes of data collection and analysis; and (2) that train students in the application of advanced statistical techniques for data description and analysis. The concepts and skills learned in these courses are reinforced through engagement in applied research with Sociology faculty and/or internships with local organizations in the for profit and not-for-profit sectors.

Concentrators also take courses that provide grounding in the theoretical approaches to social phenomena that are foundational to social research. Graduates develop an understanding of the concepts and processes that underlie the issues studied by sociologists and the analytic techniques that allow sociologists to understand social relations and individual behavior.

Standard program for the Sc.B. degree

<table>
<thead>
<tr>
<th>Required Core</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0090 Introductory Calculus, Part I</td>
<td>1</td>
</tr>
<tr>
<td>SOC 1100 Introductory Statistics for Social Research</td>
<td>1</td>
</tr>
<tr>
<td>or APMA 0650 Essential Statistics</td>
<td></td>
</tr>
<tr>
<td>or ECON 1620 Introduction to Econometrics</td>
<td></td>
</tr>
<tr>
<td>SOC 1020 Methods of Social Research</td>
<td>1</td>
</tr>
<tr>
<td>SOC 2010 Multivariate Statistical Methods I</td>
<td>1</td>
</tr>
<tr>
<td>SOC 1010 Classical Sociological Theory</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: 3

Total Number of Courses (12-13) 12-13

***See the Sociology website http://www.brown.edu/academics/sociology/ for details regarding Honors and Independent Studies

Course Substitutions: Students may petition the 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.

For up-to-date course information please visit Courses@Brown.edu.
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 sixth semester, students must submit a prospectus of the senior thesis to the Concentration Advisor. At the start of the seventh semester students should submit to the Concentration Advisor a proposal (not more than four pages) accompanied by the signature of one faculty member indicating that he or she is willing to serve as primary advisor on the thesis. Only a senior thesis qualifies the student for Honors. A thesis typically includes one or two semesters of course credit through SOC 1980 - Senior Thesis/Project (fall semester) and/or SOC 1990 - Senior Thesis/Project (spring semester). SOC 1980 and SOC 1990 do not count toward the 12-13 course requirement for the concentration.

A senior project differs from a thesis in its scholarly content and form, and it depends only on the evaluation of the senior seminar instructor (although students may elect to have a faculty advisor for the project, in addition to the senior seminar instructor). Whereas the senior thesis follows the form of a conventional research paper, the project allows a wider array of research and creative outputs, including, but not limited to video documentaries, photographic exhibitions, and applied or policy related reports with an off-campus organization. projects should be complemented by an analytical paper that situates the central subject matter of the project within the context of sociological scholarship.

You should decide your senior project in consultation with the Concentration Advisor and the instructor of the Senior Seminar. You may also need to approach a specific faculty member within the department to advise you on your project. At the beginning of your senior year you should file a written statement with the Concentration Advisor describing your senior project and listing your advisor for the project (if you opt to have one outside of the SOC 1950 instructor). Students who have a faculty advisor on their senior project may register for SOC 1980 Senior Thesis/Project (fall semester) and SOC 1990 Senior Thesis/Project (spring semester). SOC 1980 and SOC 1990 do not count toward the 12-13 course requirement for the concentration.

Due Dates

During the second week of March, a complete draft of the senior thesis must be given to the faculty advisor and the reader for comments, and the final version of the senior thesis is due during the second week of April (exact dates vary from year to year and are announced at the start of the academic year).

During the second week of March, a complete draft of the senior project must be given to the instructor of the senior seminar and the faculty advisor (if the student has one) for comments, and the final version of the senior project is due during the second week of April (the exact dates vary from year to year and are announced at the start of the academic year).

These deadlines are essential to allow the faculty time to evaluate theses for awards, and to notify the Registrar with recommendations for honors. NO EXTENSIONS WILL BE GRANTED.

Honors

In order to be considered for honors, students must receive a grade point average of at least 3.5 (A=4, B-3, C=2) on all concentration courses taken, and no more than one (1) of the concentration courses with the “S/NC” option. Honors also requires a senior thesis, with a recommendation of Honors by the advisor and reader, that demonstrates an understanding of empirical research.

Independent Study

Students can use no more than one (1) Independent Study course (SOC 1970 to meet the concentration course requirements. This course counts towards a 1000 level substantive requirement and will not serve as a substitute for any of the core concentration requirement.

Sociology

Sociology seeks to understand human behavior by studying how individuals connect to the groups and institutions in which they live. Sociologists analyze the interrelationship of social structures with political, economic, and cultural forces, from the micro to the macro level. As a discipline, sociology provides students with the conceptual and analytic tools to make sense of complex social structures in a rapidly changing global environment. Brown’s Sociology department brings together a dynamic group of scholars with international reputations for outstanding achievement in a range of important research areas -- social demography, health and medicine, environmental justice and environmental change, development, politics and democracy, urban and spatial analysis, and organizations and occupations.

Standard program for the A.B. degree

Ten courses are required:

Requirements: (10 course)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 0010</td>
<td>Culture, Power and Social Change</td>
</tr>
<tr>
<td>SOC 0020</td>
<td>Perspectives on Social Interaction: An Introduction to Social Psychology</td>
</tr>
<tr>
<td>SOC 0130</td>
<td>American Heritage: Democracy, Inequality, and Public Policy</td>
</tr>
<tr>
<td>SOC 1010</td>
<td>Classical Sociological Theory</td>
</tr>
<tr>
<td>SOC 1020</td>
<td>Methods of Social Research</td>
</tr>
<tr>
<td>SOC 1100</td>
<td>Introductory Statistics for Social Research</td>
</tr>
<tr>
<td></td>
<td>(or APMA 0650 or ECON 1620 or CLPS 0900)</td>
</tr>
</tbody>
</table>

Two semesters of SOC 1950 Senior Seminar (.500 credit each semester in senior year)

Five additional courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a. At least three of the optional courses have to be 1000 level and one of them must be a substantive seminar (1870/1871).</td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
b. Students can choose to take up to two (showcase) lower level (0100 level) courses.
c. Students can petition to take two courses outside of the discipline (this will be allowed only when the proposed course makes sense given the interests of the student, and there is no equivalent sociology course).

Total Credits: 10

***See the Sociology website http://www.brown.edu/academics/sociology/ for detail regarding Honors and Independent Studies

The Senior Seminar

Sociology requires all concentrators to complete a thesis or project in their senior year as a capstone experience. The purpose of the thesis or project is to allow students an opportunity to apply the knowledge they acquired on a topic of their own interests. This capstone experience provides a hands-on experience through which students learn what can be done with Sociology. To fulfill the capstone requirement students enroll in SOC 1950 – Senior Seminar during the senior year. is a one credit course that students take across two successive semesters. Students receive 0.5 credit in each semester. The senior seminar is focused on finalizing a senior project or thesis and giving a presentation of the completed work. Participation in this seminar allows each cohort of concentrators to discuss their diverse interests and expose them to the wide range of applications of Sociological knowledge.

The senior thesis is supervised by a faculty member who serves as the primary advisor, and one additional faculty member who serves as a reader. The primary advisor and the reader are chosen by the student and approved by the Concentration Advisor. The reader will receive a draft and a finished copy of the student's thesis, which the reader will be responsible to grade. The reader may be involved in the earlier development of the thesis depending upon the arrangement made by the student with the reader. The senior thesis will normally consist of a major research paper. By the end of the sixth semester, students must submit a prospectus of the senior thesis to the Concentration Advisor. At the start of the seventh semester students should submit to the Concentration Advisor a proposal (not more than four pages) accompanied by the signature of one faculty member indicating that he or she is willing to serve as primary advisor on the thesis. Only a senior thesis qualifies the student for Honors. A thesis typically includes one or two semesters of course credit through - Senior Thesis/Project (fall semester) and/or - Senior Thesis/Project (spring semester), and do not count toward the 10 course requirement for the concentration.

A senior project differs from a thesis in its scholarly content and form, and it depends only on the evaluation of the senior seminar instructor. (although students may elect to have a faculty advisor for the project, in addition to the senior seminar instructor). Whereas the senior thesis follows the form of a conventional research paper, the project allows a wider array of research and creative outputs, including but not limited to video documentaries, photographic exhibitions, and applied or policy related reports with an off-campus organization. Projects should be complemented by an analytical paper that situates the central subject matter of the project within the context of sociological scholarship.

You should decide your senior project in consultation with the Concentration Advisor and the instructor of the Senior Seminar. You may also need to approach a specific faculty member within the department to advise you on your project. At the beginning of your senior year you should file a written statement the Concentration Advisor describing your senior project (if you opt to have one outside of the instructor). Students who have a faculty advisor on their senior project may register for - Senior Thesis/Project ( fall semester) and/or - Senior Thesis/Project (spring semester). SOC 1980 and 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 project 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

Honors

In order to be considered for honors, students must receive a grade point average of at least 3.5 (A=4, B=3, C=2) on all concentration courses taken, and can take no more than one (1) of the concentration courses with the "SINC" option. Honors also requires a senior thesis with a recommendation of Honors by the advisor and reader, that demonstrates an understanding of empirical research.

Independent Study

Students can use no more than one (1) Independent Study course to meet the concentration course requirements. This course counts only towards a 1000 level substantive requirement and will not serve as a substitute for any of the core concentration requirements.

South Asian Studies

The diversity and shared histories of South Asia's cultures, religions, languages, and nations are an important area of engagement in the world today. While India, Pakistan, Bangladesh, Sri Lanka, Nepal and neighboring nation-states constitute a recognizable geographic region, the equally vital diasporic communities from South Asia and their globally dispersed networks extend our understanding of an old and yet changing South Asia. South Asian Studies is an interdisciplinary concentration in which students work in a specified chronological period (e.g. ancient, medieval, early modern, or contemporary), in a geographical area (e.g. Bangladesh, Bengal, Maharashtra, North India, Pakistan, South India), or in a particular discipline (e.g. anthropology, Hindi/Urdu, history, religion, or Sanskrit) but a 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 1
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>Course 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 0820</td>
<td>Epics of India</td>
</tr>
<tr>
<td>CLAS 0990</td>
<td>Concepts of the Self in Classical Indian Literature</td>
</tr>
<tr>
<td>CLAS 1140</td>
<td>Classical Philosophy of India</td>
</tr>
<tr>
<td>RELS 0140</td>
<td>Religions of South Asia</td>
</tr>
<tr>
<td>RELS 0130</td>
<td>Religions of Classical India</td>
</tr>
</tbody>
</table>

Select at least one of the following social science course:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 1250</td>
<td>Film and Anthropology: Identity and Images of Indian Societies</td>
</tr>
<tr>
<td>ANTH 1321</td>
<td>Impact on Colonialism: Gender and Nationalism in India</td>
</tr>
<tr>
<td>ANTH 1313</td>
<td>Indian Issues in Anthropological Perspective</td>
</tr>
<tr>
<td>ANTH 2321</td>
<td>Coming to Terms with India: Anthropology of Colonialism and Nationalism</td>
</tr>
<tr>
<td>POLS 1280</td>
<td>Politics, Economy and Society in India</td>
</tr>
</tbody>
</table>

At least one course in the visual arts, modern literature, music, cinema, or theatre of South Asia such as:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIAA 1410A</td>
<td>Topics in Islamic Art: Islamic Art and Architecture on the Indian Subcontinent</td>
</tr>
</tbody>
</table>
Hindi-Urdu

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNDI 1080</td>
<td>Advanced Hindi-Urdu</td>
</tr>
<tr>
<td>MUSC 1933</td>
<td>Music of India</td>
</tr>
<tr>
<td>PRSN 1200</td>
<td>Iranian Cinema: Before and After the Islamic Revolution</td>
</tr>
<tr>
<td>RELS 0910</td>
<td>Music, Drama and Religion in India</td>
</tr>
<tr>
<td>TAPS 1270</td>
<td>Masking, Trancing, Performing, and Spectating in Non-Western and Circumpacific Performance</td>
</tr>
</tbody>
</table>

An Honors Thesis or a Capstone Course taken in an appropriate Department.

Five electives  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 0066K</td>
<td>International Perspectives of Women's Agency and Society</td>
</tr>
<tr>
<td>ANTH 1131</td>
<td>Indian Issues in Anthropological Perspective</td>
</tr>
<tr>
<td>ANTH 1220</td>
<td>Comparative Sex Roles</td>
</tr>
<tr>
<td>ANTH 1250</td>
<td>Film and Anthropology: Identity and Images of Indian Societies</td>
</tr>
<tr>
<td>ANTH 2320</td>
<td>Ideology of Development</td>
</tr>
<tr>
<td>ANTH 2321</td>
<td>Coming to Terms with India: Anthropology of Colonialism and Nationalism</td>
</tr>
<tr>
<td>CLAS 0180</td>
<td>Indian Civilization through Its Literature</td>
</tr>
<tr>
<td>CLAS 0800</td>
<td>Religious and Philosophical Thought in Ancient India</td>
</tr>
<tr>
<td>CLAS 0820</td>
<td>Epics of India</td>
</tr>
<tr>
<td>CLAS 0990</td>
<td>Concepts of the Self in Classical Indian Literature</td>
</tr>
<tr>
<td>CLAS 1140</td>
<td>Classical Philosophy of India</td>
</tr>
<tr>
<td>ECON 1520</td>
<td>The Economic Analysis of Institutions</td>
</tr>
<tr>
<td>HIAR 1410A</td>
<td>Topics in Islamic Art: Islamic Art and Architecture on the Indian Subcontinent</td>
</tr>
<tr>
<td>HIST 2971A</td>
<td>Science in a Colonial Context</td>
</tr>
</tbody>
</table>

Several courses in Development Studies are potentially appropriate; check to see if the course allows for a South Asian focus.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNDI 0100</td>
<td>Beginning Hindi or Urdu</td>
</tr>
<tr>
<td>HNDI 0200</td>
<td>Beginning Hindi or Urdu</td>
</tr>
<tr>
<td>HNDI 0300</td>
<td>Intermediate Hindi-Urdu</td>
</tr>
<tr>
<td>HNDI 0400</td>
<td>Intermediate Hindi-Urdu</td>
</tr>
<tr>
<td>HNDI 1080</td>
<td>Advanced Hindi-Urdu</td>
</tr>
<tr>
<td>MUSC 0041</td>
<td>World Music Cultures (Middle East and Asia)</td>
</tr>
<tr>
<td>MUSC 1933</td>
<td>Music of India</td>
</tr>
<tr>
<td>PHIL 0090</td>
<td>Philosophy East and West</td>
</tr>
<tr>
<td>POLS 1280</td>
<td>Politics, Economy and Society in India</td>
</tr>
<tr>
<td>POLS 1821O</td>
<td>Politics of Economic Development in Asia</td>
</tr>
<tr>
<td>POLS 1380</td>
<td>Ethnic Politics and Conflict</td>
</tr>
<tr>
<td>POLS 1430</td>
<td>Roots of Radical Islam</td>
</tr>
<tr>
<td>PRSN 0100</td>
<td>Basic Persian</td>
</tr>
<tr>
<td>PRSN 0200</td>
<td>Basic Persian</td>
</tr>
<tr>
<td>PRSN 0300</td>
<td>Intermediate Persian Language and Culture</td>
</tr>
<tr>
<td>PRSN 0400</td>
<td>Intermediate Persian Language and Culture</td>
</tr>
<tr>
<td>PRSN 1200</td>
<td>Iranian Cinema: Before and After the Islamic Revolution</td>
</tr>
<tr>
<td>RELS 0040</td>
<td>Great Contemplative Traditions of Asia</td>
</tr>
<tr>
<td>RELS 0090B</td>
<td>Hindu and Christian Modes of Loving Devotion</td>
</tr>
<tr>
<td>RELS 0100</td>
<td>Introduction to Buddhism</td>
</tr>
<tr>
<td>RELS 0130</td>
<td>Religions of Classical India</td>
</tr>
<tr>
<td>RELS 0140</td>
<td>Religions of South Asia</td>
</tr>
<tr>
<td>RELS 0150</td>
<td>Islam Unveiled</td>
</tr>
<tr>
<td>RELS 0500</td>
<td>The Theory and Practice of Buddhist Meditation</td>
</tr>
<tr>
<td>RELS 0540</td>
<td>Buddhist Psychology</td>
</tr>
</tbody>
</table>

Sanskrit

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SANS 1080</td>
<td>The Critical Episodes of the Mahabharata</td>
</tr>
<tr>
<td>SANS 1100</td>
<td>Vedic Sanskrit</td>
</tr>
<tr>
<td>SANS 1400</td>
<td>The Sanskrit Grammatical Tradition</td>
</tr>
<tr>
<td>SANS 1800</td>
<td>Classical Schools of Indian Philosophy</td>
</tr>
<tr>
<td>SANS 1910</td>
<td>Advanced Sanskrit</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAPS 1270</td>
<td>Masking, Trancing, Performing, and Spectating in Non-Western and Circumpacific Performance</td>
</tr>
</tbody>
</table>

Total Credits 10

1 Two of which may be language courses in Hindi/Urdu or Sanskrit taken in conjunction with the language requirement. This list is not exhaustive, as any class which allows the concentrator to complete a substantial final project on South Asia may be counted towards the concentration requirements. If course rotations or the introduction of new courses warrant, substitutions within these categories may be made with approval of the faculty advisor.

**Language Requirements**

Proficiency in a South Asian language is required for the concentration. Students who are not native speakers of a South Asian language may prove proficiency by taking two years of Hindi/Urdu or Sanskrit at Brown, by successfully passing a course at the intermediate (4th semester) level at Brown or the approved equivalent at another institution, or by successfully passing a special examination administered by an approved faculty member. Two courses taken to fulfill the language requirement may be counted among the elective courses required for concentration.

**Study Abroad**

All South Asian Studies concentrators are encouraged to take Hindi/Urdu and to participate in Brown in India, a junior-year study abroad program at St. Stephen's College and Lady Sri Ram College in Delhi. Students can also opt to enroll in any other Brown approved study-abroad program in South Asia.

**Capstone Project**

All concentrators other than honors concentrators will designate an upper-level course in the area of their primary focus as their capstone course. The student will take this course during the senior year and will produce as part of the written work for the course a substantial paper or annotated translation displaying the unique focus of his or her concentration.

**Honors**

A South Asian Studies Concentration with Honors requires a high B or A average in courses taken for the concentration as well as an honors thesis in the department of the student’s main focus. Candidates for the honors program should apply to the South Asia Faculty Group through their advisor by the middle of their sixth semester.

For up-to-date course information please visit Courses@Brown.edu.
Theatre Arts and Performance Studies

The Department of Theatre Arts and Performance Studies (TAPS) is the intellectual and artistic center for the aesthetic, historical, literary, practical, and theoretical explorations of performance in global perspective – theatre, dance, speech, time-based art, and even performative “roles” in everyday life. The TAPS concentration offers three tracks with many points of overlap among them: Performance Studies, Theatre Arts, and Writing for Performance. Concentrators gain exposure to a broad spectrum of performance modes and methods – acting, directing, dance, and writing, and chose an avenue of focus among them. In addition, TAPS concentrators with an interest in socially engaged performance that tackles complex social issues may pursue the Engaged Scholars Program (https://www.brown.edu/academics/theatre-arts-performance-studies/undergraduate-program/engaged-scholars-program). Everyone graduates having studied craft, gained familiarity with history, and investigated the role of performance arts in culture.

Theatre Arts Track

This concentration combines the study of dramatic literature, theatre history, performance theory, and studio work in the various theatre arts. All concentrators in Theatre Arts will gain practical experience through the study of acting and directing as well as in the technical production of plays, preparing students in the practical study of a cross-section of the vital aspects of theatre craft, including one class in either dance or speech. An essential aim of the concentration track is the engagement of students in performance procedures (acting, dancing, directing, choreography, design, playwriting, dramaturgy, etc.) in order to experience the inter-relationships among social contexts, dramatic texts and theatrical enactments. Along with practical study in craft, concentrators will graduate having studied theatre history and performance theory in global perspective, including at least one course that exhibits geographic or topical breadth beyond what might loosely be called “mainstream” Euro-American tradition. The study of theatre history provides a Theatre Arts concentrator with the necessary background to understand a variety of dramatic and theatrical forms. The study of performance theory enhances a student’s ability to ask fundamental questions about the role of theatre in social, political, cultural and cross-cultural arenas.

Students wishing to enroll as concentrators in Theatre Arts and Performance Studies and take the Theatre Arts track should see the undergraduate Theatre Arts track advisor, in order to discuss options that will best serve their interests.

Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAPS 0230</td>
<td>Acting</td>
<td>1</td>
</tr>
<tr>
<td>TAPS 0250</td>
<td>Introduction to Technical Theatre and Production</td>
<td>1</td>
</tr>
<tr>
<td>TAPS 1230</td>
<td>Performance Theory and World Theatre History</td>
<td>1</td>
</tr>
<tr>
<td>TAPS 1240</td>
<td>Performance Historiography and Theatre History</td>
<td>1</td>
</tr>
<tr>
<td>TAPS 1250</td>
<td>Twentieth-Century Western Theatre and Performance</td>
<td>1</td>
</tr>
</tbody>
</table>

Select one of the following:

- TAPS 0220 Persuasive Communication 1
- Any dance history or practice course.
- Any design or theatre production course.
- Any playwriting course.

One elective to be selected from applied design, performance, or writing areas. This class must be approved by the concentration advisor. 1

Two electives to be selected from relevant theoretical and text-based studies in or cross-listed with the Department of Theatre Arts and Performance Studies, at least one of which must show geographical breadth. For example:

- TAPS 1230 Performance Theory and World Theatre History: Paleolithic to Medieval
- TAPS 1240 Performance Historiography and Theatre History

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 pursue theatre from dance, nor, historically, genres of religious or political ritual from genres of entertainment, play, or game. At least one of the ten required 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

Two of the following three courses: 2

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAPS 1230</td>
<td>Performance Theory and World Theatre History: Paleolithic to Medieval</td>
<td>1</td>
</tr>
<tr>
<td>TAPS 1240</td>
<td>Performance Historiography and Theatre History</td>
<td>1</td>
</tr>
<tr>
<td>TAPS 1250</td>
<td>Twentieth-Century Western Theatre and Performance</td>
<td>1</td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
Select three of the following (one of which must show geographical breadth) in consultation with the advisor.

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAPS 1230</td>
<td>Performance Theory and World Theatre History: Paleolithic to Medieval</td>
<td>3</td>
</tr>
<tr>
<td>TAPS 1240</td>
<td>Performance Historiography and Theatre History</td>
<td></td>
</tr>
<tr>
<td>TAPS 1250</td>
<td>Twentieth-Century Western Theatre and Performance</td>
<td></td>
</tr>
<tr>
<td>TAPS 1270</td>
<td>Masking, Trancing, Performing, and Spectating in Non-Western and Circumpacific Performance</td>
<td></td>
</tr>
<tr>
<td>TAPS 1280N</td>
<td>New Theories for a Baroque Stage</td>
<td></td>
</tr>
<tr>
<td>TAPS 1281O</td>
<td>Acting Outside the Box: Race, Class, Gender and Sexuality in Performance</td>
<td></td>
</tr>
<tr>
<td>TAPS 1330</td>
<td>Dance History: The 20th Century</td>
<td></td>
</tr>
<tr>
<td>TAPS 1380</td>
<td>Mise en Scene</td>
<td></td>
</tr>
<tr>
<td>TAPS 1390</td>
<td>Contemporary Mande Performance</td>
<td></td>
</tr>
<tr>
<td>TAPS 1430</td>
<td>Russian Theatre and Drama</td>
<td></td>
</tr>
<tr>
<td>TAPS 1610</td>
<td>Political Theatre of the Americas</td>
<td></td>
</tr>
<tr>
<td>TAPS 1630</td>
<td>Performativity and the Body: Staging Gender, Staging Race</td>
<td></td>
</tr>
<tr>
<td>TAPS 1650</td>
<td>21st Century American Drama</td>
<td></td>
</tr>
<tr>
<td>TAPS 1670</td>
<td>Latino/a Theatre and Performance</td>
<td></td>
</tr>
<tr>
<td>TAPS 1690</td>
<td>Performance, Art, and Everyday Life</td>
<td></td>
</tr>
<tr>
<td>TAPS 2120</td>
<td>Revolution as a Work of Art</td>
<td></td>
</tr>
<tr>
<td>AFRI 0990</td>
<td>Black Lavender: Black Gay/Lesbian Plays/Dramatic Constructions in the American Theatre</td>
<td></td>
</tr>
<tr>
<td>AFRI 1110</td>
<td>Voices Beneath the Veil</td>
<td></td>
</tr>
</tbody>
</table>

Two full credit courses based in performance craft in either Acting, Directing, Speech, Dance, Design, Literary Arts (with a performance emphasis), Visual Arts, or Music. These classes must be approved by the concentration 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 Number</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFRI 1070</td>
<td>RPM: Traditional and Contemporary Elements of Intertribal Indigenous Theater in America</td>
<td>3</td>
</tr>
<tr>
<td>AFRI 1120</td>
<td>African American Folk Traditions and Cultural Expression</td>
<td></td>
</tr>
<tr>
<td>ANTH 1212</td>
<td>The Anthropology of Play</td>
<td></td>
</tr>
<tr>
<td>CLAS 1930C</td>
<td>Parasites and Hypocrites</td>
<td></td>
</tr>
<tr>
<td>MCM 1502J</td>
<td>Race as Archive</td>
<td></td>
</tr>
<tr>
<td>MCM 1503W</td>
<td>Getting Emotional: Passionate Theories (ENGL 1560W)</td>
<td></td>
</tr>
<tr>
<td>MUSC 0040</td>
<td>World Music Cultures (Africa, America, Europe, Oceania)</td>
<td></td>
</tr>
<tr>
<td>RELS 0910</td>
<td>Music, Drama and Religion in India</td>
<td></td>
</tr>
<tr>
<td>RELS 1610</td>
<td>Sacrifice and Society</td>
<td></td>
</tr>
<tr>
<td>TAPS 1520</td>
<td>Seminar in Theatre Arts</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits 10

Writing for Performance Track

Concentrators explore the craft and sensibility of writing for live performance in the broad context of art in a changing society. Moving through a graduated series of skill-based writing classes, students additionally encounter theatre history in core courses and focused seminars, engage with the practical aspects of production, and relate theatre to other disciplines. Writing is viewed neither as an alienated cause nor a terminal outpost, but as a co-equal aspect of a creative ecology, sharing space with orature, scenography, ethics, and all fields that focus attention, invoke fascination, and alert the will to the possibilities of transformation.

Students wishing to enroll as concentrators in Theatre Arts and Performance Studies on the Writing for Performance track should see the undergraduate Writing for Performance track advisor in order to discuss options that will best serve their interests.

**Required Courses**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAPS 0100</td>
<td>Playwriting I (or other equivalent Introductory level Playwriting course, to be approved by the advisor)</td>
<td>1</td>
</tr>
</tbody>
</table>

Select one of the following:

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFRI 1050A</td>
<td>Advanced RPM Playwriting</td>
<td></td>
</tr>
<tr>
<td>AFRI 1050D</td>
<td>Intermediate RPM Playwriting</td>
<td></td>
</tr>
<tr>
<td>AFRI 1050E</td>
<td>RPM Playwriting</td>
<td></td>
</tr>
<tr>
<td>LITR 0610A</td>
<td>Unpublishable Writing</td>
<td></td>
</tr>
<tr>
<td>LITR 1150Q</td>
<td>Reading, Writing and Thinking for the Stage</td>
<td></td>
</tr>
<tr>
<td>LITR 1010C</td>
<td>Advanced Playwriting</td>
<td></td>
</tr>
<tr>
<td>LITR 1150S</td>
<td>What Moves at the Margins</td>
<td></td>
</tr>
<tr>
<td>TAPS 0200</td>
<td>Playwriting II</td>
<td></td>
</tr>
</tbody>
</table>

A course from the TAPS 1500 series (A-Z)

A writing or composition class in a discipline outside of playwriting (e.g., literature, screenwriting, digital media), to be approved by advisor. For example:

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAPS 1210</td>
<td>Solo Performance</td>
<td></td>
</tr>
<tr>
<td>TAPS 1280S</td>
<td>Libretto Workshop for Musical Theatre</td>
<td></td>
</tr>
<tr>
<td>TAPS 1500I</td>
<td>Screenwriting</td>
<td></td>
</tr>
<tr>
<td>TAPS 1500J</td>
<td>Script Adaptation</td>
<td></td>
</tr>
<tr>
<td>ENVS 0520</td>
<td>Wild Literature in the Urban Landscape</td>
<td></td>
</tr>
<tr>
<td>ETHN 0300</td>
<td>Ethnic Writing</td>
<td></td>
</tr>
<tr>
<td>LITR 0110A</td>
<td>Fiction I</td>
<td></td>
</tr>
<tr>
<td>LITR 0110B</td>
<td>Poetry I</td>
<td></td>
</tr>
<tr>
<td>LITR 0210A</td>
<td>Fiction Writing II</td>
<td></td>
</tr>
<tr>
<td>LITR 0210B</td>
<td>Poetry Writing II</td>
<td></td>
</tr>
<tr>
<td>LITR 0210D</td>
<td>Digital Language Art II</td>
<td></td>
</tr>
<tr>
<td>LITR 1010G</td>
<td>Writing3D</td>
<td></td>
</tr>
<tr>
<td>LITR 1150E</td>
<td>Strange Attractors: Adaptations/Translations</td>
<td></td>
</tr>
<tr>
<td>LITR 1150M</td>
<td>Short Fiction Experiments</td>
<td></td>
</tr>
<tr>
<td>TAPS 1500L</td>
<td>Acting Together on the World Stage: Writing and Political Performance</td>
<td></td>
</tr>
</tbody>
</table>

TAPS 0250 Introduction to Technical Theatre and Production 1

Two of the following three courses:

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAPS 1230</td>
<td>Performance Theory and World Theatre History: Paleolithic to Medieval</td>
<td>2</td>
</tr>
<tr>
<td>TAPS 1240</td>
<td>Performance Historiography and Theatre History</td>
<td></td>
</tr>
<tr>
<td>TAPS 1250</td>
<td>Twentieth-Century Western Theatre and Performance</td>
<td></td>
</tr>
</tbody>
</table>

One performance-based class. Options include Acting, Directing, Speech, Dance, Visual Arts, Music, or Sign Language.

Select two additional Theatre/Performance History/Theory classes in or cross-listed with the Department of Theatre Arts and Performance Studies. For example:

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAPS 1230</td>
<td>Performance Theory and World Theatre History: Paleolithic to Medieval</td>
<td>2</td>
</tr>
<tr>
<td>TAPS 1240</td>
<td>Performance Historiography and Theatre History</td>
<td></td>
</tr>
<tr>
<td>TAPS 1250</td>
<td>Twentieth-Century Western Theatre and Performance</td>
<td></td>
</tr>
<tr>
<td>TAPS 1270</td>
<td>Masking, Trancing, Performing, and Spectating in Non-Western and Circumpacific Performance</td>
<td></td>
</tr>
<tr>
<td>TAPS 1280N</td>
<td>New Theories for a Baroque Stage</td>
<td></td>
</tr>
<tr>
<td>TAPS 1281O</td>
<td>Acting Outside the Box: Race, Class, Gender and Sexuality in Performance</td>
<td></td>
</tr>
<tr>
<td>TAPS 1330</td>
<td>Dance History: The 20th Century</td>
<td></td>
</tr>
<tr>
<td>TAPS 1380</td>
<td>Mise en Scene</td>
<td></td>
</tr>
<tr>
<td>TAPS 1390</td>
<td>Contemporary Mande Performance</td>
<td></td>
</tr>
<tr>
<td>TAPS 1430</td>
<td>Russian Theatre and Drama</td>
<td></td>
</tr>
<tr>
<td>TAPS 1610</td>
<td>Political Theatre of the Americas</td>
<td></td>
</tr>
</tbody>
</table>

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
For all concentrators, regardless of track:

In cases where dual concentrations are declared, the Department allows two courses to be counted toward both concentrations.

Capstone

The Capstone is a culminating project/experience designed by the student that fulfills the concentration track. TAPS capstones can take a variety of forms, such as a solo performance or dance piece, the writing of a play, an honor’s thesis or a design project, or directing a production. Students begin working on their capstone in the required senior seminar course, which is offered in the fall term. Capstone projects may be completed in either the fall with the termination of the Seminar, or in the subsequent spring term.

Honors

The standard pattern above, plus an honors thesis course taken in Semester VII (TAPS 980), 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):**

- **POL 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

**ECON 1620** Introduction to Econometrics

**EDUC 1110** Introductory Statistics for Education Research and Policy Analysis

**POL 1600** Political Research Methods

**SOC 1020** Methods of Social Research

**SOC 1100** Introductory Statistics for Social Research

**URBN 1500** Understanding the City through Data

**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
- **ENGL 1760K** Reading New York
- **ENVS 1400** Sustainable Design in the Built Environment
- **ENVS 1580** Environmental Stewardship and Resilience in Urban Systems
- **GEOG 1320** Introduction to Geographic Information Systems for Environmental Applications
- **HIAA 0074** Nineteenth-Century Architecture
- **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 1550** American Urban History, 1600-1870
- **HIST 1551** American Urban History, 1870-1965 (HIST 1550: American Urban History to 1870)
- **JUDS 1620** Jerusalem Since 1850: Religion, Politics, Cultural Heritage
- **POL 0220** City Politics
- **POL 1320** Urban Politics and Urban Public Policy
- **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
- **URBN 1240** In Search of the Global Black Metropolis

**Seminar courses (choose three)**

- **AMST 1903E** City of the American Century: The Culture and Politics of Urbanism in Postwar New York City

For up-to-date course information please visit Courses@Brown.edu (https://cab.brown.edu).
EDUC 1650 Policy Implementation in Education
ENGL 1760F City, Culture, and Literature in the Early Twentieth Century
HIAA 1850H Berlin: Architecture, Politics and Memory
HIAA 1910A Providence Architecture
HMAN 1971A City Spaces, City Memories
PLCY 1700J GIS and Public Policy
POLS 1822S Politics of Urban Transformation
POLS 2220 Urban Politics
SOC 1870Q World Cities
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
URBN 1870J The Politics of Community Organizing
URBN 1870M Urban Regimes in the American Republic
URBN 1870N The Cultural and Social Life of the Built Environment
URBN 1870P Representing the Twentieth-Century City
URBN 1870Q Cities in Mind: Modern Urban Thought and Theory
URBN 1870R Bottom-up Urbanism
URBN 1870S The City, the River, and the Sea: Social and Environmental Change at the Water’s Edge
URBN 1870T Transportation: An Urban Planning Perspective
URBN 1870U Critical Urban Theory
URBN 1900 Land Use Planning: The Future of the I-195 Parcels
URBN 1910 Drawing and Creating in 2D, 3D and CAD for Architecture and Urban Design
URBN 1920 Introduction to Urban Design and Planning: The City as System
URBN 1930 Brown in Providence

Complementary Curriculum (Total of 2 courses required): 2

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 1611A Making America: Twentieth-Century U.S. Immigrant/Ethnic Literature
AMST 1903G Oral History and Community Memory
AMST 1904M Charles Chaplin and the Urban Public Health Movement
ANTH 0450 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 Challenges
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
ENGN 1930S Land Use and Built Environment: An Entrepreneurial View
ENVS 0520 Wild Literature in the Urban Landscape
ENVS 1410 Environmental Law and Policy
ENVS 1555 Urban Agriculture: The Importance of Localized Food Systems
ENVS 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 1660B 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 0770 Architecture and Urbanism of the African Diaspora
HIAA 1560C Renaissance Venice and the Veneto
HIAA 1850G Contemporary American Urbanism: City Design and Planning, 1945-2000
HIAA 1910D Water and Architecture
HIAA 1910F City Senses: Urbanism Beyond Visual Spectacle
HIST 1140 Samurai and Merchants, Prostitutes and Priests: Japanese Urban Culture in the Early Modern Period
HIST 1310 History of Brazil
HIST 1741 Capitalism, Land and Water: A World History: 1848 to the present
HIST 1961B Cities and Urban Culture in China
HIST 1970R Colonial Modernities: Europe & the Middle East
HMAN 1971B Paris Archive: The Capital of the Nineteenth Century, 1848-1871
JAPN 0910B Japanese Cities: Tokyo and Kyoto
JUDS 1718 Modernity, Jews, and Urban Identities in Central Europe
PLCY 1200 Policy Analysis and Program Evaluation
PLCY 1700Q Urban Policy Challenges
PLCY 1700R Urban Revitalization: Lessons from the Providence Plan
PLCY 1910 Social Entrepreneurship
POLS 1310 African American Politics
POLS 1760 Infrastructure Policy
POLS 1824D Power and Prosperity in Urban America

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

3. RISD courses approved by the Urban Studies Program each semester as applicable to the Urban Studies concentration.
4. Any course taken at another university in the US or abroad and approved by the Urban Studies Program each semester (2 maximum)

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 adviser (URBN 1970 in their adviser’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

Concentration Requirements:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>VISA 0100</td>
<td>Studio Foundation</td>
<td>1</td>
</tr>
<tr>
<td>or VISA 0110</td>
<td>Advanced Studio Foundation</td>
<td></td>
</tr>
<tr>
<td>VISA 1110</td>
<td>Drawing I</td>
<td></td>
</tr>
<tr>
<td>or VISA 1120</td>
<td>Drawing II</td>
<td>1</td>
</tr>
<tr>
<td>VISA 0120</td>
<td>Foundation Media: Sound and Image</td>
<td>1</td>
</tr>
<tr>
<td>HIAA 0010</td>
<td>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)</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

One HIAA course covering Modern or Contemporary Art History. Consult with your Concentration Advisor to take a course other than the 3 listed here:
HIAA 0801  Art After '68
or HIAA 0810 20th Century Sculpture
or HIAA 0870 20th Century British Art: Edwardian to Contemporary

One upper-level History of Art and Architecture course.

Senior Thesis Exhibition: which does not carry academic credit, is required for graduation (usually presented during the seventh or eighth semester).

Total Credits: 11

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.

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