Bachelor of Science in Brain and Cognitive Sciences

**General Institute Requirements (GIRs)**
The General Institute Requirements include a Communication Requirement that is integrated into both the HASS Requirement and the requirements of each major; see details below.

<table>
<thead>
<tr>
<th>Summary of Subject Requirements</th>
<th>Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science Requirement</td>
<td>6</td>
</tr>
<tr>
<td>Humanities, Arts, and Social Sciences (HASS)</td>
<td>8</td>
</tr>
<tr>
<td>Requirement [two subjects can be satisfied by 9.00 and one other HASS subject in the Departmental Program]; at least two of these subjects must be designated as communication-intensive (CI-H) to fulfill the Communication Requirement.</td>
<td></td>
</tr>
<tr>
<td>Restricted Electives in Science and Technology (REST) Requirement [can be satisfied by 6.100A/6.100B and 9.01 in the Departmental Program]</td>
<td>2</td>
</tr>
<tr>
<td>Laboratory Requirement (12 units) [can be satisfied by a laboratory in the Departmental Program]</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total GIR Subjects Required for SB Degree</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

**Physical Education Requirement**
Swimming requirement, plus four physical education courses for eight points.

**Departmental Program**
Choose at least two subjects in the major that are designated as communication-intensive (CI-M) to fulfill the Communication Requirement.

<table>
<thead>
<tr>
<th>Required Subjects</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tier 1</strong></td>
<td></td>
</tr>
<tr>
<td>6.100A</td>
<td>6</td>
</tr>
<tr>
<td>Introduction to Computer Science Programming in Python</td>
<td></td>
</tr>
<tr>
<td>6.100B</td>
<td>6</td>
</tr>
<tr>
<td>Introduction to Computational Thinking and Data Science</td>
<td></td>
</tr>
<tr>
<td>9.00</td>
<td>12</td>
</tr>
<tr>
<td>Introduction to Psychological Science</td>
<td></td>
</tr>
<tr>
<td>9.01</td>
<td>12</td>
</tr>
<tr>
<td>Introduction to Neuroscience</td>
<td></td>
</tr>
<tr>
<td>9.40</td>
<td>12</td>
</tr>
<tr>
<td>Introduction to Neural Computation</td>
<td></td>
</tr>
<tr>
<td>9.07</td>
<td>12</td>
</tr>
<tr>
<td>Statistics for Brain and Cognitive Science</td>
<td></td>
</tr>
<tr>
<td><strong>Tier 2</strong></td>
<td></td>
</tr>
<tr>
<td>Select three of the following; up to seven may be taken:</td>
<td>36-84</td>
</tr>
<tr>
<td>9.09[J]</td>
<td>12</td>
</tr>
<tr>
<td>Cellular and Molecular Neurobiology</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tier 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select up to four of the following:</td>
</tr>
<tr>
<td>9.24</td>
</tr>
<tr>
<td>9.28</td>
</tr>
<tr>
<td>9.32</td>
</tr>
<tr>
<td>9.42</td>
</tr>
<tr>
<td>9.46</td>
</tr>
<tr>
<td>9.85</td>
</tr>
</tbody>
</table>

**Laboratory**
Select one of the following: 12

| 9.12 | Experimental Molecular Neurobiology (CI-M) |
| 9.17 | Systems Neuroscience Laboratory (CI-M) |
| 9.59[J] | Laboratory in Psycholinguistics (CI-M) |
| 9.60 | Machine-Motivated Human Vision (CI-M) |

**Research**
Select one of the following (Labotory cannot also count for Research): 12-18

<p>| 9.12 | Experimental Molecular Neurobiology (CI-M) |
| 9.17 | Systems Neuroscience Laboratory (CI-M) |
| 9.41 | Research and Communication in Neuroscience and Cognitive Science (CI-M) |
| 9.50 | Research in Brain and Cognitive Sciences |</p>
<table>
<thead>
<tr>
<th>9.59[J]</th>
<th>Laboratory in Psycholinguistics (CI-M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.60</td>
<td>Machine-Motivated Human Vision (CI-M)</td>
</tr>
<tr>
<td>9.UG</td>
<td>Undergraduate Research</td>
</tr>
</tbody>
</table>

**Restricted Electives**

Select zero to four subjects. 9.UG cannot count as a Restricted Elective

<table>
<thead>
<tr>
<th>Units in Major</th>
<th>168-174</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Units in Major That Also Satisfy the GIRs</th>
<th>(48-60)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Total Units Beyond the GIRs Required for SB Degree</th>
<th>180</th>
</tr>
</thead>
</table>

The units for any subject that counts as one of the 17 GIR subjects cannot also be counted as units required beyond the GIRs.

\[\text{These subjects can count toward either the Laboratory or the Research requirement, but not both.}\]

**Restricted Electives**

<table>
<thead>
<tr>
<th>2.003[J]</th>
<th>Dynamics and Control I</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.180[J]</td>
<td>Biomolecular Feedback Systems</td>
<td>12</td>
</tr>
<tr>
<td>2.184</td>
<td>Biomechanics and Neural Control of Movement</td>
<td>12</td>
</tr>
<tr>
<td>5.07[J]</td>
<td>Introduction to Biological Chemistry</td>
<td>12</td>
</tr>
<tr>
<td>5.12</td>
<td>Organic Chemistry I</td>
<td>12</td>
</tr>
<tr>
<td>5.13</td>
<td>Organic Chemistry II</td>
<td>12</td>
</tr>
<tr>
<td>6.1400[J]</td>
<td>Computability and Complexity Theory</td>
<td>12</td>
</tr>
<tr>
<td>6.3000</td>
<td>Signal Processing</td>
<td>12</td>
</tr>
<tr>
<td>6.3900</td>
<td>Introduction to Machine Learning</td>
<td>12</td>
</tr>
<tr>
<td>6.4100</td>
<td>Artificial Intelligence</td>
<td>12</td>
</tr>
<tr>
<td>6.8301</td>
<td>Advances in Computer Vision</td>
<td>15</td>
</tr>
<tr>
<td>6.8611</td>
<td>Quantitative Methods for Natural Language Processing</td>
<td>15</td>
</tr>
<tr>
<td>7.03</td>
<td>Genetics</td>
<td>12</td>
</tr>
<tr>
<td>9.72</td>
<td>Vision in Art and Neuroscience</td>
<td>12</td>
</tr>
<tr>
<td>18.03</td>
<td>Differential Equations</td>
<td>12</td>
</tr>
<tr>
<td>18.06</td>
<td>Linear Algebra</td>
<td>12</td>
</tr>
<tr>
<td>18.404</td>
<td>Theory of Computation</td>
<td>12</td>
</tr>
<tr>
<td>24.211</td>
<td>Theory of Knowledge</td>
<td>12</td>
</tr>
<tr>
<td>24.900</td>
<td>Introduction to Linguistics</td>
<td>12</td>
</tr>
<tr>
<td>24.901</td>
<td>Language and Its Structure I: Phonology</td>
<td>12</td>
</tr>
<tr>
<td>24.902</td>
<td>Language and Its Structure II: Syntax</td>
<td>12</td>
</tr>
</tbody>
</table>