Bachelor of Science in Physics (Flexible Option)

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.

Summary of Subject Requirements

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Units</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>Restricted Electives in Science and Technology (REST) Requirement</td>
<td>2</td>
</tr>
<tr>
<td>Laboratory Requirement (12 units) (satisfied by 8.13 or equivalent in the Departmental Program)</td>
<td>1</td>
</tr>
<tr>
<td>Total GIR Subjects Required for SB Degree</td>
<td>17</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.

Required Subjects

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.03 Differential Equations ¹</td>
<td>12</td>
</tr>
<tr>
<td>8.03  Physics III</td>
<td>12</td>
</tr>
<tr>
<td>8.04  Quantum Physics I</td>
<td>12</td>
</tr>
<tr>
<td>8.044 Statistical Physics I</td>
<td>12</td>
</tr>
<tr>
<td>8.21 Physics of Energy</td>
<td>6-12</td>
</tr>
<tr>
<td>or 8.223 Classical Mechanics II</td>
<td></td>
</tr>
<tr>
<td>Select one of the following:</td>
<td>9-12</td>
</tr>
<tr>
<td>8.05 Quantum Physics II</td>
<td></td>
</tr>
<tr>
<td>8.20 Introduction to Special Relativity</td>
<td></td>
</tr>
<tr>
<td>8.033 Relativity</td>
<td></td>
</tr>
<tr>
<td>Select one of the following experimental experiences, subject to the approval of the department:</td>
<td>18</td>
</tr>
<tr>
<td>8.13 Experimental Physics I (CI-M)</td>
<td></td>
</tr>
<tr>
<td>A laboratory subject of similar intensity in another department</td>
<td></td>
</tr>
<tr>
<td>An experimental research project or senior thesis ²</td>
<td></td>
</tr>
</tbody>
</table>

Restricted Electives

At least one subject in the Department of Physics in addition to those listed above ³

Three subjects forming one intellectually coherent unit in some area, not necessarily physics, subject to the approval of the department

Units in Major

<table>
<thead>
<tr>
<th>Units in Major</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GIRs Required for SB Degree</td>
<td>129-138</td>
</tr>
<tr>
<td>Unrestricted Electives</td>
<td>66-87</td>
</tr>
<tr>
<td>Units in Major That Also Satisfy the GIRs</td>
<td>(24-36)</td>
</tr>
<tr>
<td>Total Units Beyond the GIRs Required for SB Degree</td>
<td>180</td>
</tr>
</tbody>
</table>

An experimentally oriented summer externship

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

¹ 18.032 Differential Equations is also an acceptable option.
² Not more than 30 units of thesis credit may be included in the minimum units beyond the General Institute Requirements required for the SB degree.
³ Subject descriptions identify subjects that cannot be used for this purpose.

Communication-Intensive Subjects in the Major
To satisfy the requirement that students take two CI-M subjects, students must select two of the following:

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.06 Quantum Physics III</td>
<td>12</td>
</tr>
<tr>
<td>8.13 Experimental Physics I</td>
<td>18</td>
</tr>
<tr>
<td>8.14 Experimental Physics II</td>
<td>18</td>
</tr>
<tr>
<td>8.226 Forty-three Orders of Magnitude</td>
<td>12</td>
</tr>
<tr>
<td>12.410[J] Observational Techniques of Optical Astronomy</td>
<td>15</td>
</tr>
<tr>
<td>STS.042[J] Einstein, Oppenheimer, Feynman: Physics in the 20th Century</td>
<td>12</td>
</tr>
</tbody>
</table>