**NUCLEAR SCIENCE AND ENGINEERING (COURSE 22)**

Department of Nuclear Science and Engineering (http://catalog.mit.edu/schools/engineering/nuclear-science-engineering/#undergraduatetext)

**Bachelor of Science in Nuclear Science and Engineering**

**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) Requirement</td>
<td>8</td>
</tr>
<tr>
<td>[can be satisfied by 22.04[J] in the Departmental Program]</td>
<td></td>
</tr>
<tr>
<td>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 8.03 and 22.071 in the Departmental Program]</td>
<td>2</td>
</tr>
<tr>
<td>Laboratory Requirement (12 units) [can be satisfied by 22.09 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.

<table>
<thead>
<tr>
<th>Basic Requirements</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.005 Thermal-Fluids Engineering I</td>
<td>12</td>
</tr>
<tr>
<td>8.03 Physics III</td>
<td>12</td>
</tr>
<tr>
<td>18.03 Differential Equations</td>
<td>12</td>
</tr>
<tr>
<td>22.01 Introduction to Nuclear Engineering and Ionizing Radiation</td>
<td>12</td>
</tr>
<tr>
<td>22.071 Electronics, Signals, and Measurement</td>
<td>12</td>
</tr>
</tbody>
</table>

Select one of the following: 12

- 6.041A & 6.041B Introduction to Probability I and Introduction to Probability II
- 18.04 Complex Variables with Applications
- 18.05 Introduction to Probability and Statistics
- 18.0751 Methods for Scientists and Engineers
- 18.600 Probability and Random Variables

**Restricted Electives in NSE**
In consultation with advisor, select two subjects in NSE

<table>
<thead>
<tr>
<th>Mathematics Elective</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select one of the following:</td>
<td>12</td>
</tr>
<tr>
<td>6.041A &amp; 6.041B Introduction to Probability I and Introduction to Probability II</td>
<td></td>
</tr>
<tr>
<td>18.04 Complex Variables with Applications</td>
<td></td>
</tr>
<tr>
<td>18.05 Introduction to Probability and Statistics</td>
<td></td>
</tr>
<tr>
<td>18.0751 Methods for Scientists and Engineers</td>
<td></td>
</tr>
<tr>
<td>18.600 Probability and Random Variables</td>
<td></td>
</tr>
</tbody>
</table>

**Units in Major**

195

**Unrestricted Electives**

48

**Units in Major That Also Satisfy the GIRs**

(48)

Total Units Beyond the GIRs Required for SB Degree

195

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. Unit totals shown are the minimum requirements.