MINOR IN BIOMEDICAL ENGINEERING

The Biomedical Engineering Minor (BME) program requires a total of seven subjects selected from a series of categories as outlined below.

### Programming and Computational Modeling Core

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0001</td>
<td>Introduction to Computer Science</td>
<td>6</td>
</tr>
<tr>
<td>6.0002</td>
<td>Introduction to Computational</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Thinking and Data Science</td>
<td></td>
</tr>
</tbody>
</table>

### Mathematics Core

Select two of the following options:

1. **Option A**
   - 3.016 Computational Methods for Materials Scientists and Engineers
   - or 18.03 Differential Equations

2. **Option B**
   - 18.06 Linear Algebra

3. **Option C**
   - 1.010 Uncertainty in Engineering
   - 6.041A Introduction to Probability I
   - & 6.041B Introduction to Probability II
   - 9.07 Statistics for Brain and Cognitive Science

### Human Physiology Core

Select one of the following:

- 6.022[J] Quantitative Systems Physiology
- 7.20[J] Human Physiology
- 9.01 Introduction to Neuroscience

### Biomedical Engineering and Applications

Select three of the following:

- 2.184 Biomechanics and Neural Control of Movement
- 2.750[J] Medical Device Design
- 3.052 Nanomechanics of Materials and Biomaterials
- 3.054 Cellular Solids: Structure, Properties, Applications
- 3.055[J] Biomaterials Science and Engineering
- 6.021[J] Cellular Neurophysiology and Computing
- 6.811[J] Principles and Practice of Assistive Technology
- 7.37[J] Molecular and Engineering Aspects of Biotechnology

### Total Units

<table>
<thead>
<tr>
<th>Subject</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programming and Computational Modeling Core</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics Core</td>
<td>18-24</td>
</tr>
<tr>
<td>Human Physiology Core</td>
<td>12</td>
</tr>
<tr>
<td>Biomedical Engineering and Applications</td>
<td>30-36</td>
</tr>
<tr>
<td><strong>Total Units</strong></td>
<td>72-84</td>
</tr>
</tbody>
</table>

A minimum of four subjects taken for the biomedical engineering minor cannot also count toward a major or another minor.

1. Contact minor advisor for additional 6–12 unit subjects that satisfy requirement.
2. Subject has prerequisites that are outside of the program.
3. At least one of the subjects must be taken outside the student’s major. See the BME Minor website (https://be.mit.edu/academic-programs/current-undergraduate/minor-programs/minor-program-biomedical-engineering) for potential substitutions.
4. Approved biomedical engineering UROPs with sufficient medical focus, carried out by students with junior or senior standing with prior approval, may be substituted for up to 12 units.

Students should consult with their departmental BME minor advisor, preferably in sophomore year and no later than the end of the fall term of junior year, to choose a course of study, which must be approved in advance by the BME minor advisor. For the list of BME minor advisors and other information, please visit the Biological Engineering website (http://web.mit.edu/be) or contact the BE Academic Office, Room 56-651, 617-253-1712.