BIOENGINEERING MINOR

Banner Code: BIOE

The minor in Bioengineering is available to both engineering and non-engineering majors. It provides considerable opportunities in a highly cross-disciplinary field involving the application of engineering concepts and tools to solve problems in biomedicine. The minor in Bioengineering prepares students to gain and reinforce their knowledge of biology and engineering fundamentals, and develop and apply skills to clinically-relevant challenges.

Admissions & Policies

Admissions

Students must have completed MATH 114 (Calculus II) with a grade of B- or better to be admitted to the minor.

Policies

For policies governing all minors, see AP.5.3.4 Minors.

Requirements

Total credits: 19-21

Minor Requirements

Required Courses:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BENG 101</td>
<td>Introduction to Bioengineering</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 213</td>
<td>Cell Structure and Function (Mason Core)</td>
<td>4</td>
</tr>
<tr>
<td>BENG 313</td>
<td>Physiology for Engineers</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Total Credits</td>
<td>10</td>
</tr>
</tbody>
</table>

Technical Electives:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Select at least nine credits from the following list:</td>
<td>9-11</td>
</tr>
</tbody>
</table>

- Computational Modeling and Biomechanics
- BENG 304 Modeling and Control of Physiological Systems
- BENG 406 Introduction to Biomechanics
- BENG 420 Bioinformatics for Engineers
- Biomedical Imaging & Devices
- BENG 301 Bioengineering Measurements
- BENG 302 and Bioengineering Measurements Lab
- BENG 437 Medical Image Processing
- Nanomedicine & Biomaterials
- BENG 421 Introduction to Tissue Engineering
- BENG 441 Nanotechnology in Health
- Neuroengineering
- BENG 327 Cellular, Neurophysiological, and Pharmacological Neuroscience
- Neuroscience
- BENG 429 Mason-Inova Applied Technologies

Total Credits 9-11