Biological Engineering

The curriculum is 128 credits comprised of a Basic Program plus Electives which students select to meet both University Core requirements and requirements of the Biological Engineering degree.

**Student Performance and Retention Requirements:** Students are required by Board of Regents policy to achieve a C- or better grade in each class used to satisfy the Bachelor of Science degree requirements. Moreover, students must achieve a C- or better grade prior to taking follow-on courses.

### Basic Program

#### Freshman Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBIO 100 - Intro to Biological Engr or ECHM 100 - Intro to Chemical Engr</td>
<td>2</td>
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</tr>
<tr>
<td>CHMY 141 - College Chemistry I</td>
<td>4</td>
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<tr>
<td>Univ Core Electives (IA, IH, IS or D)</td>
<td>3</td>
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<tr>
<td>M 171Q - Calculus I</td>
<td>4</td>
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<td>US or W Core course</td>
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<td>US or W Core course</td>
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<td>Univ Core Electives (IA, IH, IS or D)</td>
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<tr>
<td>EGEN 102 - Intro to Engineer Comp Apps</td>
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<tr>
<td>CHMY 143 - College Chemistry II</td>
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<tr>
<td>M 172Q - Calculus II</td>
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#### Sophomore Year

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<tbody>
<tr>
<td>M 273Q - Multivariable Calculus</td>
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<tr>
<td>PHSX 220 - Physics I (w/ calculus)</td>
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<tr>
<td>CHMY 211 - Elements of Organic Chemistry</td>
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<tr>
<td>ECHM 201 - Elementary Principles of Chemical and Biological Engineering</td>
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<tr>
<td>EBIO 216 - Elem Princ of Bioengineering</td>
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<tr>
<td>ECHM 321 - Chemical Engineering Fluid Mechanics Operations</td>
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<tr>
<td>M 274 - Introduction to Differential Equation</td>
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<tr>
<td>BIOM 360 - General Microbiology</td>
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#### Junior Year

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<tbody>
<tr>
<td>BCH 380 - Biochemistry</td>
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<td>Univ Core Electives (IA, IH, IS or D)</td>
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<tr>
<td>EGEN 350 - Applied Engineering Data Analysis</td>
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<tr>
<td>EBIO 324 - Bioengineering Transport</td>
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<tr>
<td>EBIO 407 - Biological Engineering Thermodynamics</td>
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<td>BIOC 375 - General Genetics or BIOL 320 - Biomedical Genetics</td>
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<td>EBIO 438 - Bioprocess Engin</td>
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<td>EBIO 439 - Downstream Processing</td>
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<tr>
<td>EGEN 310R - Multidisciplinary Engineering Design</td>
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<tr>
<td>EMAT 251 - Materials Structures and Prop</td>
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#### Senior Year

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<th>Course</th>
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<tbody>
<tr>
<td>EBIO 442 - Bioengineering Lab I</td>
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<tr>
<td>EBIO 411R - Biological Engineer Design I</td>
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<td>Technical Elective</td>
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<tr>
<td>EMAT 464 - Biomedical Materials Engineering</td>
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<td>PHSX 222 - Physics II (w/ calculus)</td>
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<td>EBIO 412R - Biological Engineer Design II</td>
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<tr>
<td>EBIO 443 - Bioengineering Lab II</td>
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<tr>
<td>Technical Elective</td>
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<tr>
<td>ECHM 451 - Chemical Engineering Process Dynamics and Control</td>
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<tr>
<td>Univ Core Electives (IA, IH, IS or D)</td>
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<tr>
<td><strong>Year Total:</strong></td>
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<td><strong>16</strong></td>
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</tbody>
</table>

**Total Program Credits:** 128

A minimum of 128 credits is required for graduation; 42 of which must be in courses numbered 300 and above.
Font Notice

This document should contain certain fonts with restrictive licenses. For this draft, substitutions were made using less legally restrictive fonts. Specifically:

Times was used instead of Adobe Garamond Pro.

The editor may contact Leepfrog for a draft with the correct fonts in place.