### Chemical 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 Chemical 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.

#### Freshman Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECHM 100 - Intro to Chemical Engr or EBIO 100 - Intro to Biological Engr</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 171Q - Calculus I</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Univ Core Electives (IA, IH, IS or D)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>US or W Core course</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHMY 141 - College Chemistry I</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 172Q - Calculus II</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>US or W Core course</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Univ Core Electives (IA, IH, IS or D)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHMY 143 - College Chemistry II</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EGEN 102 - Intro to Engineer Comp Apps</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year Total:</td>
<td>16</td>
<td>17</td>
<td></td>
</tr>
</tbody>
</table>

#### Sophomore Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHMY 211 - Elements of Organic Chemistry</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 273Q - Multivariable Calculus</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHSX 220 - Physics I (w/ calculus)</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECHM 201 - Elementary Principles of Chemical and Biological Engineering</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECHM 321 - Chemical Engineering Fluid Mechanics Operations</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EMAT 251 - Materials Structures and Prop</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 274 - Introduction to Differential Equation</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHSX 222 - Physics II (w/ calculus)</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Univ Core Electives (IA, IH, IS or D)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year Total:</td>
<td>17</td>
<td>17</td>
<td></td>
</tr>
</tbody>
</table>

#### Junior Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECHM 307 - Chem Engin Thermodynamics I</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECHM 322 - Chemical Engineering Heat Transfer Operations</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EGEN 350 - Applied Engineering Data Analysis</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technical Elective at least one Technical Elective course must be in the CHMY or BCH rubric</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Univ Core Electives (IA, IH, IS or D)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EBIO 438 - Bioprocess Engin</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EGEN 310R - Multidisciplinary Engineering Design</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECHM 328 - Chemical Engineering Reactor Design</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technical Elective</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECHM 323 - Chemical Engineering Mass Transfer Operations</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year Total:</td>
<td>16</td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>

#### Senior Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECHM 411R - Chemical Engineering Design I</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECHM 442 - Chem Engin Laboratory I or EBIO 442 - Bioengineering Lab I</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECHM 407 - Chem Engin Thermodynamics II</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECHM 424 - Transport Analysis</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technical Electives</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECHM 412R - Chemical Engineering Design II</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECHM 451 - Chemical Engineering Process</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dynamics and Control</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHMY 373 - Physical Chemistry - Kinetics and Thermodynamics</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EGEN 488 - Fundamentals of Engineer Exam</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECHM 443 - Chem Engin Laboratory II</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technical Electives</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year Total:</td>
<td>15</td>
<td>15</td>
<td></td>
</tr>
</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.