## Bachelor of Science in Chemical Engineering

Graduation Checklist

Graduating Class of 2009 (co-op students graduating 2010)

A total of 134 semester credits are required for graduation

### FRESHMAN YEAR

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1035</td>
<td>General Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1045</td>
<td>General Chemistry Lab</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 1036</td>
<td>General Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1046</td>
<td>General Chemistry Lab</td>
<td>1</td>
</tr>
<tr>
<td>ENGE 1024†, ENGE 1114† or ENGE 1104†</td>
<td>Engr. Explorations, Exploration Engr. Design or Digital Future</td>
<td>2</td>
</tr>
<tr>
<td>ENGL 1105†, 1106†</td>
<td>Freshman English</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1205, 1206</td>
<td>Calculus</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1114, 1224</td>
<td>Linear Algebra, Vector Geometry</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 2305</td>
<td>Foundations of Physics I</td>
<td>4</td>
</tr>
<tr>
<td>Electives*</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

### SOPHOMORE YEAR

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE 2114</td>
<td>Mass &amp; Energy Balances</td>
<td>3</td>
</tr>
<tr>
<td>CHE 2124</td>
<td>ChE Simulations</td>
<td>2</td>
</tr>
<tr>
<td>CHE 2164</td>
<td>ChE Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 2535, 2536 (or 2565, 2566)</td>
<td>Organic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 2545†, 2546†</td>
<td>Organic Chemistry Lab</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 3615</td>
<td>Physical Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 3625</td>
<td>Physical Chemistry Lab</td>
<td>1</td>
</tr>
<tr>
<td>MATH 2224</td>
<td>Calculus</td>
<td>3</td>
</tr>
<tr>
<td>MATH 2214</td>
<td>Intro to Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 2306</td>
<td>Foundations of Physics II</td>
<td>4</td>
</tr>
<tr>
<td>Electives*</td>
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### JUNIOR YEAR

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CHE 3015</td>
<td>Process Measurements &amp; Control</td>
<td>3</td>
</tr>
<tr>
<td>CHE 3114</td>
<td>Fluid Transport</td>
<td>3</td>
</tr>
<tr>
<td>CHE 3134</td>
<td>Separation Processes</td>
<td>3</td>
</tr>
<tr>
<td>CHE 3144</td>
<td>Mass Transfer</td>
<td>3</td>
</tr>
<tr>
<td>CHE 3044</td>
<td>Heat Transfer</td>
<td>2</td>
</tr>
<tr>
<td>CHE 3184†</td>
<td>Chemical Reactor Analysis &amp; Design</td>
<td>3</td>
</tr>
<tr>
<td>CHE 4134†</td>
<td>Chemical Process Modeling</td>
<td>2</td>
</tr>
<tr>
<td>ENGL 3764†</td>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4564</td>
<td>Operational Methods</td>
<td>3</td>
</tr>
<tr>
<td>STAT 4604</td>
<td>Statistical Methods for Engrs</td>
<td>3</td>
</tr>
<tr>
<td>Electives*</td>
<td></td>
<td>3</td>
</tr>
</tbody>
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### SUMMER (Must precede senior year)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE 4014†</td>
<td>ChE Laboratory</td>
<td>5</td>
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</tbody>
</table>

### SENIOR YEAR

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE 4104</td>
<td>Process Materials</td>
<td>3</td>
</tr>
<tr>
<td>CHE 4185†, 4186†</td>
<td>Process &amp; Plant Design (WI, WI)</td>
<td>4</td>
</tr>
<tr>
<td>ESM 2214</td>
<td>Statics &amp; Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>Electives*</td>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>

### CORE CURRICULUM:

<table>
<thead>
<tr>
<th>Area 2:</th>
<th>*6 hrs.</th>
<th>Area 6:</th>
<th>*1 hr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area 3:</td>
<td>*6 hrs</td>
<td>Area 7:</td>
<td>*3 hrs.</td>
</tr>
</tbody>
</table>

### ELECTIVES:

<table>
<thead>
<tr>
<th>Technical Electives:</th>
<th>*3 hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Free Electives:</td>
<td>6 hrs.</td>
</tr>
</tbody>
</table>

*Choose from approved lists.

† Courses for the approved Visual Expression, Written and Spoken (ViEWS) Requirement for Chemical Engineering

**Foreign Language requirement** - students who did not complete 2 units of a foreign language in high school must earn 6 credit hours of a college-level foreign language, such credits to be in addition to those normally required for graduation. As part of progress toward a degree, a student must achieve a grade of C- or better in all ChE-prefix courses and maintain a GPA of 2.0 or above in all ChE prefix courses. If in-major GPA drops below 2.0 at any time, the student will be placed on departmental probation. The student cannot remain on departmental probation for more than two consecutive semesters. In the case that a student has not achieved an in-major 2.0 or better after two semesters, the student is prohibited from registering for any ChE courses for at least one semester and after only with permission of ChE department head. All ChE credits are used to calculate in-major GPA. Each student must complete 134 credit hours with a minimum overall GPA of 2.0 and a minimum in-major GPA of 2.0. There are no hidden prerequisites in this program of study.