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

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<tr>
<td>CHMY 211 - Elements of Organic Chemistry</td>
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<tr>
<td>M 273Q - Multivariable Calculus</td>
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<tr>
<td>PHSX 220 - Physics I with Calculus</td>
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<tr>
<td>ECHM 201 - Elementary Principles of Chemical and Biological Engineering</td>
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<tr>
<td>ECHM 321 - Chemical Engineering Fluid Mechanics Operations</td>
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<td>EMAT 251 - Materials Structures and Prop</td>
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<tr>
<td>M 274 - Introduction to Differential Equation</td>
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<td>PHSX 222 - Physics II with Calculus</td>
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Junior Year

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<tr>
<td>ECHM 307 - Chem Engin Thermodynamics I</td>
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<tr>
<td>ECHM 322 - Chemical Engineering Heat Transfer Operations</td>
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<tr>
<td>EGEN 350 - Applied Engineering Data Analysis</td>
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<td>At least one Technical Elective course must be in the CHMY or BCH rubric</td>
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<td>Univ Core Electives (IA, IH, IS or D)</td>
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<td>EBIO 438 - Bioprocess Engin</td>
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<td>EGEN 310R - Multidisciplinary Engineering Design</td>
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<td>ECHM 328 - Chemical Engineering Reactor Design</td>
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<td>Technical Elective</td>
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<tr>
<td>ECHM 323 - Chemical Engineering Mass Transfer Operations</td>
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Senior Year

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<tbody>
<tr>
<td>ECHM 411R - Chemical Engineering Design I</td>
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<tr>
<td>ECHM 442 - Chem Engin Laboratory I or EBIO 442 - Bioengineering Lab I</td>
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<tr>
<td>ECHM 407 - Chem Engin Thermodynamics II</td>
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<td>ECHM 424 - Transport Analysis</td>
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<tr>
<td>ECHM 412R - Chemical Engineering Design II</td>
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<td>ECHM 451 - Chemical Engineering Process Dynamics and Control</td>
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<td>CHMY 373 - Physical Chemistry - Kinetics and Thermodynamics</td>
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<td>EGEN 488 - Fundamentals of Engineering Exam</td>
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<td>ECHM 443 - Chem Engin Laboratory II</td>
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A minimum of 128 credits is required for graduation; 42 of which must be in courses numbered 300 and above.