## Requirements for the Bachelor of Science in Chemical Engineering/Master of Science

B.S. Portion of the Program Accredited by the Engineering Accreditation Commission of ABET, [http://www.abet.org](http://www.abet.org)

### College of Engineering

The University of Oklahoma

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### General Requirements

**Total Credit Hours**: 144

**Minimum Retention/Graduation Grade Point Averages**:
- Overall - Combined and OU: 3.25
- Major - Combined and OU: 3.25
- Curriculum - Combined and OU: 3.25

A minimum grade of C is required for each course in the curriculum.

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### OU encourages students to complete at least 32 hours of applicable coursework each year to have the opportunity to graduate in five years.

<table>
<thead>
<tr>
<th>Year</th>
<th>First Semester</th>
<th>Hours</th>
<th>Second Semester</th>
<th>Hours</th>
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<tbody>
<tr>
<td><strong>Freshman</strong></td>
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<tr>
<td>ENGL 1113, Prin. of English Composition (Core I)</td>
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<td>ENGL 1213, Prin. of English Composition (Core I), or</td>
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<tr>
<td>CHEM 1315, General Chemistry (Core II)</td>
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<td>CHEM 1415, General Chemistry</td>
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<tr>
<td>MATH 1823, Calculus &amp; Analytic Geometry I (Core I)</td>
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<td>MATH 2423, Calculus &amp; Analytic Geometry II</td>
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<tr>
<td>HIST 1493, U.S., 1865-Present (Core IV)</td>
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<td>PHYS 2514, General Physics for Engineering &amp; Science</td>
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<td>ENGR 1411, Freshman Engineering Experience</td>
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<td><strong>Total Credit Hours</strong></td>
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<td><strong>Sophomore</strong></td>
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<tr>
<td>ENGL 2433, Calculus &amp; Analytic Geometry III</td>
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<td>ENGR 2411, Calculus &amp; Analytic Geometry IV</td>
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<tr>
<td>PHYS 2524, General Physics for Engineering &amp; Science Majors</td>
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<td>MATH 3113, Introduction to Ordinary Differential Equations</td>
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<tr>
<td>CHEM 2033, Chemical Engineering Fundamentals</td>
<td>3</td>
<td>CHEM 3113, Organic Chemistry II; Biological Emphasis</td>
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<td>CHEM 3533, Organic Chemistry I: Biological Emphasis</td>
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<td>CHEM 3512, Organic Chemistry Lab: Biological Emphasis</td>
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<td><strong>Total Credit Hours</strong></td>
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<td><strong>Total Credit Hours</strong></td>
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<td><strong>Junior</strong></td>
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<tr>
<td>CHEM 3123, Momentum, Heat &amp; Mass Transfer II</td>
<td>3</td>
<td>CHEM 2313, Structure and Properties of Materials</td>
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<tr>
<td>CHEM 3473, Chemical Engineering Thermodynamics</td>
<td>3</td>
<td>CHEM 3333, Separation Processes</td>
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<td>CHEM 3723, Numerical Methods for Engineering Computation</td>
<td>3</td>
<td>CHEM 3432, Unit Operations Laboratory</td>
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<tr>
<td>CHEM 3423, Physical Chemistry I</td>
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<td>CHEM 4473, Kinetics</td>
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<td>CHEM 3421, Physical Chemistry Lab</td>
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<td>ENGL 3513, Technical Writing</td>
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<tr>
<td>†Approved Elective, Core III: Social Science</td>
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<td>†Approved Elective, Core IV: Artistic Forms</td>
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<td><strong>Total Credit Hours</strong></td>
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<td><strong>Senior</strong></td>
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<tr>
<td>ENGR 3313, Advanced Process Design (Capstone)</td>
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<td>CHEM 4273, Advanced Process Design (Capstone)</td>
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<td>CHEM 4153, Process Dynamics and Control</td>
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<td>†ENGR 4211, Applied Engineering Statics</td>
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<tr>
<td>CHEM 4253, Chemical Engineering Design I</td>
<td>3</td>
<td>†ENGR 4231, Electrical Circuits</td>
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<td>CHEM 4262, Chemical Engineering Design Lab</td>
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<td>†ENGR 4331, Electromechanical Systems</td>
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<td>$Technical Elective I</td>
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<td>$Technical Elective II</td>
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<td>†Approved Elective, Core IV: Western Civ. &amp; Culture</td>
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<td>#Advanced Chemistry Elective</td>
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<tr>
<td>†Approved Elective, Core IV: Western Civ. &amp; Culture</td>
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<td>†Approved Elective, Core IV: Non-Western Culture</td>
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<tr>
<td><strong>Total Credit Hours</strong></td>
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<td><strong>Total Credit Hours</strong></td>
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<td><strong>Fifth Year</strong></td>
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<td>CHEM 5183, Graduate Transport Phenomena</td>
<td>3</td>
<td>CHEM 5843, Adv. Chemical Engineering Thermodynamics</td>
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<td>CHEM 5980, Research for Master's Thesis</td>
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<td>CHEM 5980, Research for Master's Thesis</td>
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<td>CHEM 6723, Advanced Kinetics &amp; Reaction Engineering</td>
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<td><strong>Total Credit Hours</strong></td>
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<td><strong>Total Credit Hours</strong></td>
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</tbody>
</table>

### Notes

- Courses designated as Core I, II, III, IV or Capstone are part of the General Education curriculum. Students must complete a minimum of 40 hours of General Education courses, chosen from the approved list.
- Students must successfully complete prerequisite courses (with a minimum C grade) before proceeding to the next course.
- It is recommended that ENGR 2411, 2431, and 3432 be taken in the same semester. The courses are offered in sequential five-week blocks during the spring semester.
- Chemical engineering courses are sequential and usually offered only in the semester shown above. Note prerequisites on the back of this page.