# CHEMICAL ENGINEERING

## FIRST YEAR
### FALL SEMESTER

<table>
<thead>
<tr>
<th>GE A</th>
<th>WRIT 150</th>
<th>MATH 125 (GE F)</th>
<th>CHEM 105aL (GE E)</th>
<th>ENGR 102</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
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<td>2</td>
</tr>
</tbody>
</table>

### SPRING SEMESTER

<table>
<thead>
<tr>
<th>CHE 120 (MATH 125, CHEM 105aL)</th>
<th>MATH 126 or MATH 129</th>
<th>CHEM 105bL</th>
<th>PHYS 151L (GE F)</th>
<th>OPTIONAL ELECTIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
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## SECOND YEAR
### FALL SEMESTER

<table>
<thead>
<tr>
<th>CHE 330</th>
<th>CHEM 300L</th>
<th>MATH 226 or MATH 229</th>
<th>PHYS 152L</th>
<th>CHE 205</th>
</tr>
</thead>
<tbody>
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<td>3</td>
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### SPRING SEMESTER

<table>
<thead>
<tr>
<th>GE B</th>
<th>CHEM 322aL</th>
<th>MATH 245</th>
<th>APPROVED ELECTIVE</th>
<th>CHE 350</th>
<th>CHEM 105bL</th>
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<tr>
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## THIRD YEAR
### FALL SEMESTER

<table>
<thead>
<tr>
<th>GE C</th>
<th>TECHNICAL ELECTIVE</th>
<th>CHEM 430</th>
<th>CHE 405</th>
<th>CHE 442</th>
<th>OPTIONAL ELECTIVE</th>
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</thead>
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### SPRING SEMESTER

<table>
<thead>
<tr>
<th>GE B</th>
<th>CHEM 444aL</th>
<th>APPROVED ELECTIVE</th>
<th>CHE 443</th>
<th>CHE 476</th>
<th>OPTIONAL ELECTIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
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<td>2-3</td>
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<td>1-2</td>
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## FOURTH YEAR
### FALL SEMESTER

<table>
<thead>
<tr>
<th>GE D</th>
<th>CHEM 444bL</th>
<th>CHEM 445</th>
<th>CHE 485</th>
<th>APPROVED ELECTIVE</th>
<th>WRIT 340</th>
</tr>
</thead>
<tbody>
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### SPRING SEMESTER

<table>
<thead>
<tr>
<th>GE C</th>
<th>CHEM 446</th>
<th>CHEM 460L</th>
<th>CHEM 480</th>
<th>APPROVED ELECTIVE</th>
<th>OPTIONAL ELECTIVE</th>
</tr>
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<tbody>
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</tbody>
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## MATHEMATICS (16 UNITS)

- MATH 125: Calculus I
- MATH 126 or MATH 129: Calculus II
- MATH 226 or MATH 229: Calculus III
- MATH 245: Mathematics of Phys. and Engr.

## PHYSICS (8 UNITS)

- PHYS 151L: Mechanics and Thermodynamics
- PHYS 152L: Electricity and Magnetism

## CHEMISTRY (24 UNITS)

- CHEM 105AL: General Chemistry
- CHEM 105BL: General Chemistry
- CHEM 300L: Analytical Chemistry
- CHEM 322AL: Organic Chemistry
- CHEM 430L: Physical Chemistry: Thermodynamics & Kinetics

## CHEMISTRY ELECTIVE: CHEM 322BL or 431

## GENERAL EDUCATION (32 UNITS)

- GE A: The Arts (1 Course)
- GE B: Humanistic Inquiry (2 Courses)
- GE C: Social Analysis (2 Courses)
- GE D: Life Sciences (1 Course)
- GE E: Physical Sciences (1 Course)
- GE F: Quantitative Reasoning (1 Course)
- GE G, H: Global Perspectives (2 Courses)*
- GESM: General Education Seminar (1 Course)*

## WRITING (7 UNITS)

- WRIT 150: Writing and Critical Reasoning
- WRIT 340: Advanced Writing

## ENGINEERING (54-57 UNITS)

- CHE 120: Intro. to Chemical Engineering
- CHE 205: Numerical Methods in Chemical Engineering
- CHE 330: Chemical Engr. Thermodynamics
- CHE 350: Intro. to Separation Processes
- CHE 405: Probability and Statistics for CHE
- CHE 442: Chemical Reactor Analysis
- CHE 443: Viscous Flow
- CHE 444AL: Chemical Engineering Lab
- CHE 444BL: Chemical Engineering Lab
- CHE 445: Heat Transfer in CHE Processes
- CHE 446: Mass Transfer in CHE Processes
- CHE 460L: Chem. Proc. Dynamics & Control
- CHE 476: Chemical Engineering Materials
- CHE 480: Chem. Process and Plant Design
- CHE 485: Computer Aided Process Design
- ENGR 102: Engineering Freshman Academy

## TECHNICAL ELECTIVE: Any upper-division CHE course that is not already required.

## APPROVED ELECTIVES: 8-9 units of approved electives including CE 205 (2), EE 438L (3), and ISE 460 (3) or BUAD 301 (3) or other courses with department approval.

## SPECIAL NOTES

Courses with this symbol may be satisfied with AP, IB or A-Level exams. See page 22 for more information.

GE: Engineering students are encouraged to satisfy GE G and GE H with a course that also satisfies a Core Literacy. GE H may be satisfied by exam. Additionally, your GESM course should be taken in categories A, B, C, or D only. See page 21 for more information and consult your advisor for detailed assistance.

OPTIONAL ELECTIVES: Consult with your academic advisor to explore optional elective courses. These courses are not required.

TECHNICAL ELECTIVE: Any upper-division CHE course that is not already required.

APPROVED ELECTIVES: 8-9 units of approved electives including CE 205 (2), EE 438L (3), and ISE 460 (3) or BUAD 301 (3) or other courses with department approval.