# Chemical Engineering

## FIRST YEAR

<table>
<thead>
<tr>
<th>SEMESTER</th>
<th>COURSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>FALL</td>
<td>CHE 120, MATH 125, GEN ED</td>
</tr>
<tr>
<td>SPRING</td>
<td>ENGR 102, CHEM 105aL, WRIT 150</td>
</tr>
</tbody>
</table>

## SECOND YEAR

<table>
<thead>
<tr>
<th>SEMESTER</th>
<th>COURSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>FALL</td>
<td>CHE 305, CHEM 105bL, GEN ED</td>
</tr>
<tr>
<td>SPRING</td>
<td>CHE 330, CHEM 444aL, PHYS 151L</td>
</tr>
</tbody>
</table>

## THIRD YEAR

<table>
<thead>
<tr>
<th>SEMESTER</th>
<th>COURSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>FALL</td>
<td>CHE 443, CHE 350, CHE 444bL</td>
</tr>
<tr>
<td>SPRING</td>
<td>CHE 442, CHE 444cL, CHE 430, GEN ED</td>
</tr>
</tbody>
</table>

## FOURTH YEAR

<table>
<thead>
<tr>
<th>SEMESTER</th>
<th>COURSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>FALL</td>
<td>CHE 460L, CHE 480, GEN ED</td>
</tr>
<tr>
<td>SPRING</td>
<td>CHE 485, ENGR 102, CHEM 430, PHYS 152L</td>
</tr>
</tbody>
</table>

## Required Courses

### CHE (Chemical Engineering)
- CHE 120: Introduction to Chemical Engineering
- CHE 305: Numerical & Statistical Analysis for Chemical Engineers
- CHE 330: Chemical Engineering Thermodynamics
- CHE 350: Introduction to Separation Processes
- CHE 442: Chemical Reactor Design
- CHE 443: Viscous Flow
- CHE 444aL: Chemical Engineering Lab
- CHE 444bL: Chemical Engineering Lab
- CHE 444cL: Chemical Engineering Lab
- CHE 447: Heat & Mass Transfer in Chemical Engineering Processes
- CHE 460L: Chemical Process Dynamics & Control
- CHE 480: Chemical Process & Plant Design
- CHE 485: Computer-Aided Chemical Process Design
- ENGR 102: Engineering Freshman Academy

### MATH (Mathematics)
- MATH 125: Calculus I
- MATH 126: Calculus II
- MATH 226: Calculus III
- MATH 245: Mathematics of Phys. & Engr.

### SCIENCE
- BISC 220L: Cell Biology & Physiology
- BISC 320L: Molecular Biology
- CHEM 105aL: General Chemistry
- CHEM 322aL: Organic Chemistry
- CHEM 430: Physical Chemistry: Thermodynamics & Kinetics

### CHEMISTRY ELECTIVES
- Specialized upper division courses you choose for your major/specialization.

### PHYSICS
- PHYS 151L: Mechanics & Thermodynamics
- PHYS 152L: Electricity & Magnetism

### ENGR, & EMPHASIS ELECTIVES
- CHE, ENGR, & EMPHASIS ELECTIVES: Specialized upper division courses you choose for your major/specialization.

### GENERAL EDUCATION
- As a USC Viterbi student your General Education (Gen Ed) curriculum will include courses in the Arts, Humanistic Inquiry and Social Analysis.

### ELECTIVES
- Your optional electives are one way to build engineering+ into your curriculum by choosing classes of interest to you.

### WRITING
- WRIT 150: Writing & Critical Reasoning
- WRIT 340: Advanced Writing

---

This is a simplified version of a complex curriculum with options and choices made between advisor and student. Course choices can vary by semester and adjust to include relevant topics and materials. Although every attempt has been made to ensure accuracy, the program requirements listed in the USC Catalogue supersede any information which may be contained in this or any other publication of any school or department. The information found in this document is not intended for advising purposes. The University reserves the right to change its policies, rules, regulations, requirements and course offerings at any time.