## CHEMICAL ENGINEERING

### Suggested Course Plan for a UC Riverside Major in CHEMICAL ENGINEERING

**Fall Quarter** | **Units** | **Winter Quarter** | **Units** | **Spring Quarter** | **Units**
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**FIRST YEAR**
CEE 010 | 2 | CHEM 001B & CHEM 01LB | 5 | CHEM 001C & CHEM 01LC | 5
*Intro to Chem. & Envir. Engineering*
CHEM 001A & CHEM 01LA | 5 | ENGL 001B | 4 | ENGL 001C or Alternate* | 4
*General Chemistry & Lab*
ENGL 001A | 4 | MATH 009B | 4 | MATH 009C | 4
*Beginning Composition*
MATH 009A | 4 | PHYS 040A | 5 | PHYS 040B | 5
*First Year Calculus*

**SECOND YEAR**
CHE 110A | 3 | CHE 110B | 3 | CHE 122 | 4
*Chemical Process Analysis*
CHEM 112A | 4 | CHEM 112B | 4 | CHEM 112C | 4
*Organic Chemistry*
MATH 046 | 4 | MATH 010A | 4 | CS 010 | 4
*Differential Equations*
PHYS 040C | 5 | Breadth | 4 | MATH 010B | 4
*Physics (Electricity/Magnetism)*

**THIRD YEAR**
BIOL 005A & BIOL 05LA | 5 | CEE 125 | 4 | CHE 116 | 4
*Cell & Molecular Biology & Lab*
CHE 114 | 4 | CEE 158 | 3 | CHE/ENVE 130 | 4
*Applied Fluid Mechanics*
ENGR 118 | 5 | CHE 100 | 4 | CHE/ENVE 160A | 3
*Engineering Modeling & Analysis*
Breath | 4 | CHE 120 | 4 | Breadth | 4
*Humanities/Social Sciences*

**FOURTH YEAR**
CHE 117 | 4 | CHE 118 | 4 | CHE 175B | 4
*Separation Processes*
CHE 160B | 3 | CHE 160C | 3 | Technical Elective** | 4
*Chemical Engineering Lab*
Technical Elective** | 4 | CHE 175A | 4 | Breadth | 4
*Chemical Process Design*
Breath | 4 | Technical Elective** | 4 | Breadth | 4
*Humanities/Social Sciences*

**Total Units:** 192
**Maximum units:** 230

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**To earn a B.S., you must complete all College and University requirements. For a full list of requirements, go to www.catalog.ucr.edu.**

**ENGLISH COMPOSITION**
A C or better is required in all English Composition courses to satisfy the graduation requirement. Please consult with your Academic Advisor for ENGL 1C alternatives.

**BREADTH REQUIREMENTS**
For an approved list of Breadth courses, go to http://student.engr.ucr.edu/policies/requirements/breadth.html.

**Humanities:** (3 courses)
A. World History: ______
B. Fine Arts, Lit., Phil. or Rlst: ______
C. Human Persp. on Science: ______

**Social Sciences:** (3 courses)
A. Econ. or Posc.: ______
B. Anth., Psyc, or Soc.: ______
C. General Social Science: ______

**Ethnicity:** (1 course)
1. ______

**Upper Division Depth:** (2 courses)
1. ______
2. ______

**TECHNICAL ELECTIVES**
Please note that Technical Electives may be offered throughout the Academic Year. Consult with your Faculty Mentor about potential offerings. See approved technical electives on back.

Course Plan is subject to change.
## Chemical Engineering-Chemical Engineering Option Technical Electives

You must complete 12 units of Technical Elective coursework. Select from the list below:

<table>
<thead>
<tr>
<th>Course</th>
<th>Course Title (Units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEE 132</td>
<td>Green Engineering (4)</td>
</tr>
<tr>
<td>CEE 135</td>
<td>Chemistry of Materials (4)</td>
</tr>
<tr>
<td>CHE 102</td>
<td>Catalytic Reaction Engineering (4)</td>
</tr>
<tr>
<td>CHE 136</td>
<td>Advanced Topics in Heat Transfer (4)</td>
</tr>
<tr>
<td>CHE 171</td>
<td>Pollution Control for Chemical Engineers (4)</td>
</tr>
<tr>
<td>ENVE 120*</td>
<td>Unit Operations and Processes in Environmental Engineering (4)</td>
</tr>
<tr>
<td>ENVE 133</td>
<td>Fundamentals of Air Pollution Engineering (4)</td>
</tr>
<tr>
<td>ENVE 134*</td>
<td>Technology of Air Pollution Control (4)</td>
</tr>
<tr>
<td>ENVE 138*</td>
<td>Combustion Engineering (4)</td>
</tr>
</tbody>
</table>

*Course requires prerequisites not accounted for in curriculum. Please check with the undergraduate faculty advisor about the ability to take this course.