# Suggested Course Plan for a UC Riverside Major in Chemical Engineering (Biochemical Engineering Option)

(Catalog Year 2009)

## Fall Quarter
- **CEE 010 (2)**: Intro to Engineering
- **CHEM 001A/01LA (5)**: General Chemistry
- **ENGL 001A (4)**: English Composition
- **MATH 009A (4)**: First Year Calculus

## Winter Quarter
- **CHEM 001B/01LB (5)**: General Chemistry
- **ENGL 001B (4)**: English Composition
- **MATH 009B (4)**: First Year Calculus
- **PHYS 040A (5)**: Physics (Mechanics)

## Spring Quarter
- **CHEM 001C/01LC (5)**: General Chemistry
- **ENGL 001C or 01SC* (4)**: English Composition
- **MATH 009C (4)**: First Year Calculus
- **PHYS 040B (5)**: Physics (Heat/Waves/Sound)

## Second Year
- **CHE 110A (3)**: Chemical Process Analysis
- **CHEM 112A (4)**: Organic Chemistry
- **MATH 046 (4)**: Differential Equations
- **PHYS 040C (5)**: Physics (Electricity/Magnetism)

## Third Year
- **BCH 110A (4)**: General Biochemistry
- **CHE 114 (4)**: Fluid Mechanics
- **ENGR 118 (5)**: Engineering Modeling & Analysis
- **BREADTH (4)**: Humanities/Social Sciences

## Fourth Year
- **BIOL 121 (4)**: Microbiology
- **CHE 117 (4)**: Separation Processes
- **CHE 160B (3)**: Chemical Engineering Lab

- **CEE 158 (3)**: Professional Development for Engr
- **CHE 118 (4)**: Process Dynamics and Control
- **CHE 124L (2)**: Biochemical Engineering Lab
- **CHE 160C (3)**: Chemical Engineering Lab

- **CHE 175A (4)**: Chemical Process Design I

## Notes
- Humanities/Social Sciences courses fulfill breadth requirements specific to the College of Engineering. A list of approved Breadth courses is available on the College of Engineering Student Academic Affairs website: [http://student.engr.ucr.edu/](http://student.engr.ucr.edu/).
- *Optional, but recommended.
- **Technical Electives are courses in Chemical Engineering which explore specific topics. A list of Technical Electives is available on the College of Engineering Student Academic Affairs website: [http://student.engr.ucr.edu/](http://student.engr.ucr.edu/), and the UCR College Catalog website: [www.catalog.ucr.edu/](http://www.catalog.ucr.edu/).
Chemical Engineering – Biochemical Option
Technical Electives

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>CEE 132</td>
<td>Green Engineering</td>
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<tr>
<td>CEE 135</td>
<td>Chemistry of Materials</td>
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<td>CHE 140</td>
<td>Cell Engineering</td>
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<td>CHE 150</td>
<td>Biosensors</td>
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<td>CHE 171</td>
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<td>ENVE 121</td>
<td>Biological Unit Processes</td>
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