# Suggested Course Plan for a UC Riverside Major in Bioengineering

## (Catalog Year 2008)

### Fall Quarter

- **First Year**
  - BIEN 010 (2)
    - Overview of Bioengineering
  - CHEM 001A/01LA (5)
    - General Chemistry
  - ENGL 001A (4)
    - English Composition
  - MATH 009A (4)
    - First Year Calculus

- **Second Year**
  - CHEM 112A (4)
    - Organic Chemistry
  - CS 010 (4)
    - C++ Programming
  - MATH 046 (4)
    - Differential Equations
  - PHYS 040A (5)
    - Physics (Mechanics)

- **Third Year**
  - BCH 100 (4)
    - Biochemistry
  - BIEN 105 (4)
    - Circulation Physiology
  - STAT 155 (4)
    - Probability, Statistics for Engr
  - BREADTH (4)
    - Humanities/Social Sciences

- **Fourth Year**
  - BIEN 135 (4)
    - Biophysics & Biothermodynamics
  - BIEN 155 (4)
    - Dynamics of Biological Systems
  - BREADTH (4)
    - Humanities/Social Sciences

### Winter Quarter

- **First Year**
  - BIOL 005A/05LA (5)
    - Cell Biology
  - CHEM 001B/01LB (5)
    - General Chemistry
  - ENGL 001B (4)
    - English Composition
  - MATH 009B (4)
    - First Year Calculus

- **Second Year**
  - CHEM 112B (4)
    - Organic Chemistry
  - MATH 010A (4)
    - Multivariable Calculus
  - PHYS 040B (5)
    - Physics (Heat/Waves/Sound)
  - BREADTH (4)
    - Humanities/Social Sciences

- **Third Year**
  - BCH 102 (4)
    - Intro Biochemistry Lab
  - BIEN 110 (4)
    - Biomechanics of Human Body
  - BIEN 120 (4)
    - Biosystems & Signals
  - BIEN 125 (4)
    - Biotechnology

- **Fourth Year**
  - BIEN 175A (4)
    - Senior Design
  - TECHNICAL ELECTIVE (4)
    - **See Department List
  - TECHNICAL ELECTIVE (4)
    - **See Department List
  - BREADTH (4)
    - Humanities/Social Sciences

### Spring Quarter

- **First Year**
  - BIOL 005B (4)
    - Organism Biology
  - CHEM 001C/01LC (5)
    - General Chemistry
  - ENGL 001C (4)
    - English Composition
  - MATH 009C (4)
    - First Year Calculus

- **Second Year**
  - CHEM 112C (4)
    - Organic Chemistry
  - EE 001A (3), 01LA (1)
    - Engineering Circuit Analysis I
  - MATH 010B
    - Multivariable Calculus
  - PHYS 040C (5)
    - Physics (Electricity/Magnetism)

- **Third Year**
  - BIEN 130 (4)
    - Bioinstrumentation
  - BIEN 130L (2)
    - Bioinstrumentation Lab
  - BIEN 140A (4)
    - Biomaterials
  - BIOL 171 (4)
    - Human Anatomy & Physiology

- **Fourth Year**
  - BIEN 175B (4)
    - Senior Design
  - TECHNICAL ELECTIVE (4)
    - **See Department List
  - TECHNICAL ELECTIVE (4)
    - **See Department List
  - BREADTH (4)
    - Humanities/Social Sciences

### 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: [www.engr.ucr.edu/studentaffairs](http://www.engr.ucr.edu/studentaffairs). **Technical Electives are courses which explore specific topics. A list of Technical Electives is available on the College of Engineering Student Academic Affairs website: [www.engr.ucr.edu/studentaffairs](http://www.engr.ucr.edu/studentaffairs), and in the Bioengineering Department office (Bourns Hall A220).