# Suggested Course Plan for a UC Riverside Major in Computer Science

(Catalog Year 2009)

## Fall Quarter
- **CS 010 (4)**
  - C++ Programming I
- **ENGL 001A (4)**
  - English Composition
- **MATH 009A (4)**
  - First Year Calculus
- **ENGR 001I (1)**
  - Professional Dev & Mentoring

## Winter Quarter
- **CS 012 (4)**
  - C++ Programming II
- **ENGL 001B (4)**
  - English Composition
- **MATH 009B (4)**
  - First Year Calculus
- **BREADTH (4)**
  - Biological Science

## Spring Quarter
- **CS 014 (4)**
  - Data Structures
- **ENGL 01SC (4)**
  - English Composition for Engr
- **MATH 009C (4)**
  - First Year Calculus
- **BREADTH (4)**
  - Humanities/Social Science

## Second Year
- **CS 061 (4)**
  - Assembly Language Programming
- **CS 100 (4)**
  - Software Construction
- **MATH/CS 011 (4)**
  - Intro to Discrete Structures
- **PHYS 040A (5)**
  - Physics (Mechanics)
- **EE/CS 120A (5)**
  - Logic Design
- **MATH/CS 111 (4)**
  - Discrete Structures
- **PHYS 040B (5)**
  - Physics (Heat/Waves/Sound)
- **BREADTH (4)**
  - Humanities/Social Science

## Third Year
- **CS 141 (4)**
  - Algorithms
- **CS 161/161L (6)**
  - Computer Architecture w/Lab
- **MATH 010A (4)**
  - Multivariable Calculus
- **ENGR 101I (1)**
  - Professional Dev & Mentoring
- **CS 150 (4)**
  - Theory of Auto & Formal Language
- **CS 153 (4)**
  - Operating Systems
- **TECHNICAL ELECTIVE (4)**
  - **See Catalog List**
- **MATH ELECTIVE (4)**
  - **See Catalog List**
- **ENGINEERING ELECTIVE (4)**
  - **See Catalog List**

## Fourth Year
- **STAT 155 (4)**
  - Probability/Statistics for Engr
- **TECHNICAL ELECTIVE (4)**
  - **See Catalog List**
- **TECHNICAL ELECTIVE (4)**
  - **See Catalog List**
- **BREADTH (4)**
  - Humanities/Social Science
- **CS 152 (4)**
  - Compilers
- **MATH ELECTIVE (4)**
  - **See Catalog List**
- **TECHNICAL ELECTIVE (4)**
  - **See Catalog List**
- **BREADTH (4)**
  - Humanities/Social Science
- **CS 179 (4)**
  - Project in Computer Science
- **TECHNICAL ELECTIVE (4)**
  - **See Catalog List**
- **BREADTH (4)**
  - Humanities/Social Science
- **BREADTH (4)**
  - Humanities/Social Science

## 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/).
- Electives are courses in Computer Science which explore specific topics. A list of 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/).
Computer Science
Technical Electives

CS 100: Software Construction
CS 121: Rapid Prototyping of Digital Systems
CS 122A: Intermediate Embedded & Real-Time Systems
CS 122B: Advanced Embedded & Real-Time Systems
CS 130: Computer Graphics
CS 133: Computational Geometry
CS 134: Video Game Creation & Design
CS 145: Combinatorial Optimization Algorithms
CS 151: Introduction to Theory of Computation
CS 160: Concurrent Programming & Parallel Systems
CS 162: Computer Architecture
CS 164: Computer Networks
CS 165: Computer Security
CS 166: Database Management Systems
CS 168: Introduction to Very Large Scale Integration VLSI Design
CS 170: Introduction to Artificial Intelligence
CS 177: Modeling & Simulation
CS 179 E-Z: Project in Computer Science (4 units maximum)
CS 180: Introduction to Software Engineering
CS 181: Principles of Programming Languages
CS 183: UNIX System Administration
CS 185: Commercial Software Development
CS 193: Design Project (4 units maximum)
EE 140: Computer Visualization
MATH 120: Optimization
MATH 135A: Numerical Analysis
MATH 135B: Numerical Analysis