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

**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)**: Humanities/Social Science

**Spring Quarter**
- **CS 014 (4)**: Data Structures
- **MATH 009C (4)**: First Year Calculus
- **MATH/CS 011 (4)**: Intro to Discrete Structures

**First Year**

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

**Third Year**
- **CS 141 (4)**: Algorithms
- **CS 150 (4)**: Theory of Auto & Formal Language
- **CS 153 (4)**: Operating Systems
- **TECHNICAL ELECTIVE (4)**
  - ****See List on Back
- **MATH ELECTIVE (4)**
  - ****See Catalog List

**Fourth Year**
- **STAT 155 (4)**: Probability/Statistics for Engr
- **CS 152 (4)**: Compilers
- **CS 179 (4)**: Project in Computer Science
- **TECHNICAL ELECTIVE (4)**
  - ****See List on Back
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- **BREADTH (4)**: Humanities/Social Science
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**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/).
- * Consult with your assigned Academic Advisor for course choices to fulfill the Engineering Elective.
- **Electives are courses in Computer Science which explore specific topics. A list of Technical Electives is available on the back of this Course Plan.
Computer Science
Technical Electives

You must complete 6 courses (at least 24 units) of Technical Electives chosen from:

CS 100: Software Construction
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 169: Mobile Wireless Networks
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 193: Design Project (4 units maximum)
EE 140: Computer Visualization
MATH 120: Optimization
MATH 135A: Numerical Analysis
MATH 135B: Numerical Analysis