

COMPUTER ENGINEERING

<i>Fall Quarter</i>	<i>Units</i>	<i>Winter Quarter</i>	<i>Units</i>	<i>Spring Quarter</i>	<i>Units</i>
FIRST YEAR					
CS 010 <i>C++ Programming I</i>	4	CS 012 or CS 13 <i>C++ Programming II</i>	4	CS 014 <i>Intro to Data Structures & Algorithms</i>	4
ENGL 001A <i>Beginning Composition</i>	4	ENGL 001B <i>Intermediate Composition</i>	4	MATH 009C <i>First Year Calculus</i>	4
ENGR 001G <i>Professional Dev. & Mentoring</i>	1	MATH 009B <i>First Year Calculus</i>	4	MATH/CS 011 <i>Intro to Discrete Structures</i>	4
MATH 009A <i>First Year Calculus</i>	4	PHYS 040A <i>Physics (Mechanics)</i>	5	PHYS 040B <i>Physics (Heat/Waves/Sound)</i>	5
SECOND YEAR					
CS 061 <i>Machine Org. & Assembly Lang. Prog.</i>	4	EE 001B <i>Engineering Circuit Analysis II and Lab</i>	4	CS 100 <i>Software Construction</i>	4
EE 001A and EE 01LA <i>Engineering Circuit Analysis I and Lab</i>	4	EE/CS 120A <i>Logic Design</i>	5	CS/EE 120B <i>Embedded Systems</i>	4
MATH 046 <i>Differential Equations</i>	4	MATH 010A <i>Multivariable Calculus</i>	4	EE 020 <i>Linear Methods for Engr. Analysis</i>	4
PHYS 040C <i>Physics (Electricity/Magnetism)</i>	5	CS 111 <i>Discrete Structures</i>	4	CHEM 001A/LA or ME 010 <i>Gen. Chemistry or Statics</i>	4
THIRD YEAR					
CS 141 <i>Interm. Data Structures & Algorithms</i>	4	CS 161 & CS 161L <i>Design & Arch. of Comp. Sys. and Lab</i>	6	CS 153 <i>Design of Operating Systems</i>	4
ENGR 180W* <i>Technical Communications</i>	4	EE/CS 168 <i>VLSI Design</i>	4	EE 111 <i>Digital and Analog Signals and Systems</i>	4
ENGR 101G <i>Professional Dev. & Mentoring</i>	1	Breadth _____ <i>Biological Sciences</i>	4	Technical Elective** _____	4
EE 100A <i>Electronic Circuits</i>	4	Breadth _____ <i>Humanities/Social Sciences</i>	4	Breadth _____ <i>Humanities/Social Sciences</i>	4
FOURTH YEAR					
CS 122A or EE 128 <i>Micro Design or Instrumentation</i>	5	Technical Elective** _____	4	Technical Elective** _____	4
Technical Elective** _____	4	Technical Elective** _____	4	Technical Elective** _____	4
EE 114 or STAT 155 <i>Processes or STAT</i>	4	Breadth _____ <i>Humanities/Social Sciences</i>	4	Breadth _____ <i>Humanities/Social Sciences</i>	4
Breadth _____ <i>Humanities/Social Sciences</i>	4	Breadth _____ <i>Humanities/Social Sciences</i>	4		

To earn a B.S., you must complete all College and University requirements. For a complete list: www.catalog.ucr.edu.

ENGLISH COMPOSITION*

A C or better is required in three quarters of English Composition courses to satisfy the graduation requirement. ENGR 180W fulfills the third quarter of English Composition.

BREADTH REQUIREMENTS

For an approved list of Breadth courses: <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: _____

Biological Science _____

Ethnicity: (1 course)

1. _____

Upper Division: (2 courses)

1. _____

2. _____

TECHNICAL ELECTIVES **

Please note that Technical Electives may be offered throughout the Academic Year. Consult with your Academic Advisor about potential offerings.

Course Plan is subject to change.

Computer Engineering Technical Electives

You must complete six courses (at least 24 units) as technical electives from the following set of Computer Science and Engineering and Electrical Engineering upper-division courses. The technical electives selected must include either CS 179 (E-Z) or EE 175A, EE 175B and EE 175C. The remaining technical electives must include at least one coherent sequence of two classes from either Computer Science and Engineering or Electrical Engineering. The technical electives must be distinct from those used to satisfy major requirements. Units are listed in ().

CS 122A	Intermediate Embedded & Real-Time Systems (5)	EE 100B	Electronic Circuits (4)
CS 122B	Advanced Embedded & Real-Time Systems (5)	EE 105	Model & Simulation of Dynamic Systems (4)
CS 130	Computer Graphics (4)	EE 115	Introduction to Communication Systems (4)
CS 150	Theory of Automata and Formal Languages (4)	EE 123	Power Electronics (4)
CS 152	Compiler Design (4)	EE 128	Data Acquis., Instrum., & Process Control (4)
CS 160	Concurrent Programming & Parallel Systems (4)	EE 132	Automatic Control (4)
CS 162	Computer Architecture (4)	EE 133	Solid-State Electronics (4)
CS 164	Computer Networks (4)	EE 134	Digital Integrated Circuit Layout & Design (4)
CS 165	Computer Security (4)	EE 135	Analog integrated Circuit Layout & Design (4)
CS 166	Database Management Systems (4)	EE 140	Computer Visualization (4)
CS 169	Mobile Wireless Networks (4)	EE 141	Digital Signal Processing (4)
CS 170	Introduction to Artificial Intelligence (4)	EE 144	Introduction to Robotics (4)
CS 171	Intro to Machine Learning & Data Mining (4)	EE 146	Computer Vision (4)
CS 172	Introduction to Information Retrieval (4)	EE 150	Digital Communication (4)
CS 177	Modeling & Simulation (4)	EE 151	Introduction to Digital Control (4)
CS 179 E-Z	Project in Computer Science (4 units maximum)	EE 152	Image Processing (4)
CS 180	Introduction to Software Engineering (4)	EE 165	Reliability: Integrated Circuit & Systems (4)
CS 181	Principles of Programming Languages (4)	EE 175A	Senior Design Project (3)
CS 183	UNIX System Administration (4)	EE 175B	Senior Design Project (4)
CS 193	Design Project (4 units maximum)		
		ENGR 160	Intro to Engin Optimization Tech (4)