



Suggested Course Plan for a UC Riverside Major in

Electrical Engineering

(Catalog Year 2010)

Fall Quarter

EE 010 (2)
Intro to Electrical Engineering
ENGL 001A (4)
English Composition
MATH 009A (4)
First Year Calculus
BREADTH (4)
Humanities/Social Sciences

Winter Quarter

CS 010 (4)
C++ Programming
ENGL 001B (4)
English Composition
MATH 009B (4)
First Year Calculus
PHYS 040A (5)
Physics (Mechanics)

Spring Quarter

CS 013 (4)
Introductory CS for Engineers
EE 020 (4)
Linear Methods
MATH 009C (4)
First Year Calculus
PHYS 040B (5)
Physics (Heat/Waves/Sound)

First Year

Second Year

CS 061 (4)
Machine Organization
EE 001A/01LA (4)
Engineering Circuit Analysis
MATH 046 (4)
Differential Equations
PHYS 040C (5)
Physics (Electricity/Magnetism)

EE 001B (4)
Engineering Circuit Analysis II
MATH 010A (4)
Multivariable Calculus
EE/CS 120A (5)
Logic Design
BREADTH (4)
Humanities/Social Sciences

CS/EE 120B (5)
Embedded Systems
MATH 010B (4)
Multivariable Calculus
BREADTH (4)
Humanities/Social Sciences

Third Year

EE 100A (4)
Electronic Circuits
EE 110A (4)
Signals & Systems
ENGR 180W (4)
Technical Communications
CHEM 001A/01LA (5)
General Chemistry

EE 100B (4)
Electronic Circuits
EE 105 (4)
Simulation of Dynamic Systems
EE 110B (4)
Signals & Systems
BREADTH (4)
BIOL 002 or 003 or 005A/LA

EE 114 (4)
Probability, Random Variables & Processes
EE 116 (4)
Electromagnetics
EE 132 (4)
Automatic Control
BREADTH (4)
Humanities/Social Sciences

Fourth Year

EE 115 (4)
Analog Communications
EE 141 (4)
Digital Signal Processing
TECHNICAL ELECTIVE (4)
***See List on Back*
TECHNICAL ELECTIVE (4)
***See List on Back*

EE 175A (4)
Senior Design Project
TECHNICAL ELECTIVE (4)
***See List on Back*
TECHNICAL ELECTIVE (4)
***See List on Back*
BREADTH (4)
Humanities/Social Sciences

EE 175B (4)
Senior Design Project
TECHNICAL ELECTIVE (4)
***See List on Back*
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: <http://student.engr.ucr.edu/>.

**Technical Electives are courses in Electrical Engineering which explore specific topics. A list of Technical Electives is available on the back of this Course Plan.

Electrical Engineering Technical Electives & Focus Areas

You must complete 5 courses (at least 20 units) of Technical Elective coursework chosen from the list below. It is recommended that at least 3 courses are chosen from one Focus Area. Courses marked with * are required course for a focus area.

Intelligent Systems (IS)

| | |
|---------|---|
| *EE 146 | <i>Computer Vision</i> |
| EE 128 | Data Acquisition and Process Control |
| EE 140 | Computer Visualization |
| EE 144 | Introduction to Robotics |
| EE 152 | Image Processing |
| CS 112A | Intermediate Embedded and Real-time Systems |
| CS 130 | Computer Graphics |

Nanotechnology, Advanced Materials, and Devices (NMDC)

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|---------|---|
| *EE 133 | <i>Solid-State Electronics</i> |
| EE 117 | Electromagnetics II |
| EE 134 | Digital Integrated Circuit Layout and Design |
| EE 135 | Analog Integrated Circuit Layout and Design |
| EE 136 | Semiconductor Device Processing Lab |
| EE 137 | Intro to Semiconductor Optoelectronic Devices |
| EE 138 | Electronic Properties of Materials |
| EE 139 | Magnetic Materials |
| EE 160 | Fiber Optic Communication Systems |
| EE 162 | Introduction to Nanoelectronics |

Communications, Signal Processing and Networking (CSP)

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|---------|---|
| *EE 150 | <i>Digital Communications</i> |
| EE 117 | Electromagnetics II |
| EE 128 | Data Acquisition and Process Control |
| EE 152 | Image Processing |
| EE 160 | Fiber Optic Communication Systems |
| CS 122A | Intermediate Embedded and Real-time Systems |
| CS 161 | Design and Architecture of Computer Systems |

Control and Robotics (CR)

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|---------|---|
| *EE 151 | <i>Introduction to Digital Control</i> |
| EE 128 | Data Acquisition and Process Control |
| EE 144 | Introduction to Robotics |
| EE 146 | Computer Vision |
| EE 152 | Image Processing |
| CS 122A | Intermediate Embedded and Real-time Systems |

VLSI Design and Systems (VLSI)

| | |
|---------|---|
| *EE 134 | <i>Digital Integrated Circuit Layout and Design</i> |
| EE 128 | Data Acquisition and Process Control |
| EE 133 | Solid-State Electronics |
| EE 135 | Analog Integrated Circuit Layout and Design |
| EE 136 | Semiconductor Device Processing Lab |
| CS 161 | Design and Architecture of Computer Systems |
| CS 168 | Introduction to VLSI Design |

Computer Engineering (CE)

* Refer to the Computer Engineering major course plan and catalog listing

*Required course for the Focus Area