

Electrical Engineering

Student Planning Guide: Fall 2012

Degree of Bachelor of Science

	Fall	Winter	Spring
Freshman	Math 11 Calculus I	Math 12 Calculus II	Math 13 Calculus III
	Chem 11 Chemistry I	Phys 31 Physics for Engineers I	Phys 32 Physics for Engineers II
	Cultures and Ideas I	Cultures and Ideas II	ELEN 21 - Intro to Logic Design
	Critical Thinking and Writing I	Chem 12 (Note 1)	Critical Thinking and Writing II
	<i>Engr 1 Intro. To Engr (2 units)</i>		
Sophomore	Fall	Winter	Spring
	CENG 41 Mechanics I	ELEN 50 Circuits I	ELEN 100 Circuits II
	University Core (Note 1)	COEN 44 Applied Programming	ELEN 33 Dig. Syst. Architecture
	Math 14 - Calculus IV	AMTH 106 Differential Equations	COEN 12 Data Structures
	Phys 33 Physics for Engineers III	Phys 34 Physics for Engineers. IV	University Core
Junior	Fall	Winter	Spring
	ELEN 110 Linear Systems	ELEN 151 Semiconductor Devices	AMTH 108 Probability and Stat.
	ELEN 115 Electronic Circuits	MECH 121 Thermodynamics	Technical Elective 2 (Note 2)
	ELEN 104 Electromagnetics	Technical Elective 1 (Note 2)	Professional Development (Note 3)
	University Core	University Core	University Core
		<i>ELEN 192 Int. to Sr. Design (2 units)</i>	
Senior	Fall	Winter	Spring
	<i>ELEN 194 Design Proj. I (2 units)</i>	<i>ELEN 195 Design Proj. II (2 units)</i>	<i>ELEN 196 Design Proj. (1 units)</i>
	Technical Elective 3 (Note 2)	Technical Elective 4 (Note 2)	Elective
	Elective	Elective	Elective
	Elective	University Core	Elective
		<i>Engl 182 Eng. Comm. (1 unit)</i>	
	<i>Engl 181 Eng. Comm. (2 units)</i>		

Program Overview:

- **UNIVERSITY CORE:** 12 courses: Critical Thinking and writing (2), Cultures and Ideas (3), Religion, Theology and Culture (3), Ethics (1), Diversity (1), Advanced Writing (2), Additional courses may be needed for Core Pathway and Experiential Learning requirements
- **ELECTRICAL ENGINEERING PROGRAM:** required courses in engineering, science, mathematics, technical electives (4 courses), and professional development

Elective Emphasis Areas:

Communications, Wireless	Digital and Embedded Systems	Robotics, Mechatronics, Control
Energy Systems	Digital Signal Processing	Nanostructures, Semiconductors
Analog, Power Electronics	Digital Electronics	General Electrical Engineering

- **ELECTIVES** (as needed) to meet requirements for minimum units, university core, minor, graduate courses, or for personal interest

Courses are color coded to indicate engineering, mathematics and science, humanities, technical elective, and elective
 Many courses have a corequisite laboratory requiring separate enrollment
 One or two unit courses are indicated by italic type

Note 1: Science Elective may be CHEM 12 in the Freshman Year, or BIOL 21 in the Sophomore Year, or an upper division course selected from: PHYS 113, PHYS 121, MATH 105, MATH 123

Note 2: Four Technical Electives are required.

Note 3: Professional development is satisfied by one of the following: COOP, Study Abroad, Engr 110, Minor in engineering or science, Combined BS/MS program, 5th technical elective.

If a COOP experience is selected for spring, courses other than 192 may be moved to senior year elective slots.