

Electrical Engineering Student Planning Guide: Fall 2009

Degree of Bachelor of Science

FRESHMAN

Fall	Winter	Spring
<ul style="list-style-type: none"> • Calculus I (MATH 11) • Chemistry I (CHEM 11) • Intro. To Engineering (ENGR 1) • Cultures and Ideas I • Critical Thinking and Writing 1 	<ul style="list-style-type: none"> • Calculus II (MATH 12) • Chemistry II (Chem 12) (or Biology 21) • Physics for Engineers I (PHYS 31) • Cultures and Ideas 2 	<ul style="list-style-type: none"> • Calculus III (MATH 13) • Intro. To Logic Design (ELEN 21) • Physics for Engineers II (PHYS 32) • Critical Thinking and Writing 2

SOPHOMORE

Fall	Winter	Spring
<ul style="list-style-type: none"> • Calculus IV (MATH 14) • Physics for Engineers III (PHYS 33) • Mechanics I: Statics (CIVIL 41) • ** OPEN 	<ul style="list-style-type: none"> • Differential Equations (AMTH 106) • Physics for Engineers IV (PHYS 34) • Applied Programming (COEN 44) • Electric Circuits I (ELEN 50) 	<ul style="list-style-type: none"> • Intro. To Dig. Sys. Arch. (ELEN 33) • Data Structures (COEN 12) • Electric Circuits II (ELEN 100) • ** OPEN

JUNIOR

Fall	Winter	Spring
<ul style="list-style-type: none"> • Linear Systems (ELEN 110) • Electronic Circuits I (ELEN 115) • Electromagnetics I (ELEN 104) • ** OPEN 	<ul style="list-style-type: none"> • Probability and Statistics (AMTH 108) • Semiconductor Devices (ELEN 151) • Thermodynamics (MECH 121) • ** OPEN 	<ul style="list-style-type: none"> • ** OPEN • Intro to Senior Design Project 192 (2) • ** OPEN • ** OPEN

SENIOR

Fall	Winter	Spring
<ul style="list-style-type: none"> • Design Project I (ELEN 194) • Engin. Communications (ENGL 181)(2) • ** OPEN • ** OPEN 	<ul style="list-style-type: none"> • Design Project II (ELEN 195) • ** OPEN • ** OPEN • ** OPEN 	<ul style="list-style-type: none"> • Design Project III (ELEN 196) • Engin. Communications (ENGL 182)(1) • ** OPEN • ** OPEN

*** OPEN" slots are used for university core courses, technical electives or free electives

Minimum of 41 units to satisfy university core requirements.

4 Technical Electives* are needed to satisfy the additional courses beyond the university core requirements

* Technical Electives are designed to ensure that Santa Clara students acquire different skills for the successful engineer: advanced mathematics, design experience, teamwork, and computer skills.

Technical Electrical Engineering Elective Groupings ¹ at least 1 course must be selected from each of the 3 emphasis groups listed below.		
Group A: Advanced Mathematics	Group B: Design Experience & Teamwork	Group C: Computer Hardware or Software
112 Modern Network Synthesis	105 Electromagnetics II	118 Fundamentals of Comp-Aided Circuit Simulation (A)
118 Fundamentals of Comp-Aided Circuit Simulation ©	116 Electronics II	127 Adv. Logic Design (B)
130 System Control & Design	117 Electronics III	133 DSP (A)
133 DSP (C)	123 Mechatronics	134 Applications of DSP (A)
134 Applications of DSP ©	127 Adv. Logic Design (C)	141 Communication (A)
141 Communication System (C)	143 Intro. to Wireless Communication (C)	143 Intro. to Wireless Communication (B)
144 Electrical Components and Devices	152 Electron Devices and Technology	162 Bioelectric Signals
160 Chaos Theory	153 Digital Integrated Circuit Design	
	156 Intro. To Nanotechnology	
	161 Biosensors and Bioinstrumentation	
	164 Intro. to Power Electronics	

2 Free Electives: Note: If additional courses beyond the 41 units are needed to satisfy university core requirements they may be substituted for free electives.

1 Additional Course satisfying "Professional Development" Co-Op, Study Abroad, ENGR 110, Minor in Engineering, math or Science, combination BS/MSEE, or additional electives.