

# Electrical Engineering

First Year							
CSCI-1100	Computer Science I	4		ENGR-1200 OR ENGR-1400	Eng. Graphics & CAD <sup>1</sup> OR Eng. Communications <sup>1</sup>	1	
MATH-1010	Calculus I	4			Science Elective <sup>5</sup>	4	
ECSE-1010	Intro. to ECSE <sup>6</sup>	4		MATH-1020	Calculus II	4	
	Hum., Arts or Soc. Sci. Elective	4		PHYS-1100	Physics I	4	
					Hum., Arts or Soc. Sci. Elective	4	
Second Year							
ENGR-2050	Intro. to Eng. Design	4		ENGR-2350	Embedded Control	4	
MATH-2400	Intro. to Differential Eqns.	4		ECSE-2010	Electric Circuits	4	
PHYS-1200	Physics II	4		ECSE-2610	Cptr. Comp. & Operations	4	
	Hum., Arts or Soc. Sci. El.	4		MATH-2010	Multivariable Calc & Matrix Algebra	4	
SUMMER ARCH SEMESTER			Third Year		Fall or Spring		
ECSE-2050	Intro. to Electronics	4		ECSE-2900	ECSE Enrichment Seminar	1	
ECSE-2410	Signals & Systems	3		ECSE-2100	Fields & Waves I	4	
ECSE-2500	Engineering Probability	3		ECSE-2210	Microelectronics Tech.	3	
	Professional Development II <sup>3</sup>	2		ECSE-2110	Electrical Energy Systems	3	
	Free Elective <sup>2</sup>	3-4			Math/Science Elective	4	
Fourth Year							
ENGR-4010	Professional Development III <sup>1</sup>	1			Restricted Elective <sup>1,4,5</sup>	3	
ECSE-4900	Multidisc. Capstone Design <sup>1</sup>	3			Restricted Elective <sup>1,4,5</sup>	3	
	Lab Elective <sup>1,4</sup>	3-4			Free Elective <sup>1,2</sup>	3-4	
	Technical Elective <sup>1,4,5</sup>	3-4			Free Elective (if needed) <sup>2</sup>	3-4	
	Free Elective <sup>1,2</sup>	3-4			Hum., Arts or Soc. Sci. Elective	4	
	Hum., Arts or Soc. Sci. Elective	4					

1 May be taken either term.

2 The free electives must total to at least 12 credits.

3 This course will be fulfilled from a list published at the start of each semester.

4 It is recommended that students use electives to form a concentration. See the ECSE Web page for concentration listings.

5 No more than one Independent Study course may be used to when satisfying the combined Technical and Restricted Elective requirements.

6 May be replaced with ENGR-1100 Introduction to Engineering Analysis

## 128 credits minimum

### RESTRICTED ELECTIVE

Any 3 or 4 credit hour course with the designation ECSE-4xxx or ECSE-6xxx.

### TECHNICAL ELECTIVE

Any 3- or 4-credit-hour course in engineering, mathematics, or science at the 4000 level or higher.

### LAB ELECTIVES

ENGR-4710 Adv. Manufacturing Lab I  
 ECSE 4090 Mechatronics  
 ECSE-4130 Electric Power Eng. Lab  
 ECSE-4220 VLSI Design  
 ECSE-4760 Real-Time Cntrl & Comm.  
 ECSE-4770 Cptr H'ware Design  
 ECSE-4790 Microprocessor Systems

### SCIENCE ELECTIVE

CHEM-1100 Chemistry I  
 BIOL-1010 Introduction to Biology  
 BIOL-2120 Cell and Molecular Bio.