ELECTRICAL ENGINEERING - Catalog Year 2026

Total Credits = 120-128

Freshman Year, Fall Semester

Course Code	Description	Cr	Grade
EGR 101	Intro. to Eng. Design and Innovation (A4)	2	
MTH 141 +	Calculus I (A1, B3)	4	
CHM 101	General Chemistry Lec I (A1)	3	
CHM 102	General Chemistry I Lab	1	
ECN 201	Principles of Microeconomics (A2)	3	
	General Education Outcome(s)1	3	
		16	

Freshman Year, Spring Semester

Course Code	Description	Cr	Grade
EGR 106	Matlab for Engineering Applications (A4)	2	
ELE 101	Intro to Electrical Engineering	1	
MTH 142 +	Calculus II (A1, B3)	4	
PHY 203	Elementary Physics I (A1)	3	
PHY 273	Elementary Physics Lab I (A1)	1	
CSC 200	Computer Problem Solving5	4	
		15	

Sophomore Year, Fall Semester

Course Code	Description	Cr	Grade
ELE 201	Digital Circuit Design	3	
ELE 202	Digital Circuit Design Lab	1	
MTH 215	Introduction to Linear Algebra	3	
MTH 244	Differential Equations	3	
PHY 204	Elementary Physics II (A1)	3	
PHY 274	Elementary Physics Lab II (A1)	1	
	General Education Outcome(s)1	3	
		17	

Sophomore Year, Spring Semester

Course Code	Description	Cr	Grade
ELE 205	Microprocessors5	3	
ELE 206	Microprocessors Lab5	1	
ELE 212 +	Linear Circuit Theory	4	
ELE 215	Linear Circuits Lab	1	
MTH 243 +	Calculus for Functions of Several Vars (A1, B3)	3	
PHY 205	Elementary Physics III Lec (A1, B3)	3	
PHY 275	Elementary Physics III Lab (A1, B3)	1	
		16	

Junior Year, Fall Semester

Course Code	Description	Cr	Grade
ELE 313 +	Linear Systems	3	
ELE 338 +	Electronics I	3	
ELE 339	Electronics I Lab	1	
MTH 451 **or** ISE 311	Intro to Probability and Statistics **or** Probability and Statistics for Engineers	3	
	Technical Writing Elective4	3	
	Technical Elective3	3 - 4	
		16 - 17	

Junior Year, Spring Semester

Course Code	Description	Cr	Grade
ELE 314	Linear Systems and Signals	3	
ELE 322	Electromagnetic Fields I	4	
ELE 343	Electronics II	3	
ELE 344	Electronics II Lab	1	
	Technical Elective3	3 - 4	
		14 - 15	

Senior Year, Fall Semester

Course Code	Description	Cr	Grade
ELE 400	Intro to Professional Practice	1	
ELE 480 +	Capstone Design I [capstone] (D1)	3	
	Technical Elective3	3 - 4	
	Professional Elective2	4	
	General Education Outcome(s)1	3	
		14 - 15	

Senior Year, Spring Semester

Course Code	Description	Cr	Grade
ELE 481 +	Capstone Design II [capstone]	3	
	Professional Elective2	3 - 4	
	Professional Elective2	3 - 4	
	General Education Outcome(s)1	3	
	General Education Outcome(s)1	3	
		15 - 17	

Notes:

+ Course pre-requsites include grade requirements in previous coursework, see catalog or eCampus course description for details.

1) General Education Outcomes (A1-D1): if all outcomes are satisfied in fewer spaces than provided, you must take a course(s) of your choice (Free Elective) to ensure you have earned at least 120 credits as required to earn a BS degree. A complete detailing of these requirements are listed in the college's curriculum requirements section of this catalog.

2) Professional Elective Requirements:Three courses from ELE 425, 435/436, 446, 447/448, 449, 456, 457, 458/459, of which at least one must include a lab component (ELE 435/436, 447/448, 449, 458/459). Minimum 10 credits required from this list.

3) Technical Elective: Three courses from ELE 301/302, 331, 405/406, 408/409, 437, 438, EGR 241, 441, 444, any course from the list of Professional Electives, any EGR 400-level course, or with prior approval of the ECE Department chairperson, any other 300-, or 400-level College of Engineering course not required by the ELE major. No course can be double counted for both Technical Elective and Professional Elective. Minimum 9 credits required from this list.

4) Technical Writing Elective: WRT 104, 106, 332, 334

5) CSC 211 and ELE 208/209 can be used to satisfy credits of CSC 200 and ELE 205/206, respectively, in case of ELE/CPE double major or change of major from CPE to ELE. ELE majors not majoring in CPE cannot enroll in ELE 208/209.

EGR101 is intended for and required of all first-year engineering students. Course substitution is considered only on an exception basis for transfer students with 24 or more earned credits, or for students with unique circumstances, and requires prior approval of the Assistant Dean for Undergraduate Affairs.