

Electrical and Computer Engineering

The minimum number of credit hours for the Bachelor of Science in Electrical and Computer Engineering is 129

Freshman (First Year)

First Semester			Second Semester		
AIU 100	The AIU Experience (EX)	1	AIU 111/112	Wellness (WL)	1
EGR 100	Design in Engineering	3	CHM 110	General Chemistry I	3
ENG 101	College Writing (EC)	3	CHM 111	General Chemistry I Laboratory	1
MAT 121	Calculus I	4	CSC 101	Computer Essentials (CS)	3
PHY 120	Physics I (NS)	3	MAT 122	Calculus II	4
PHY 121	Physics I Laboratory (NS)	1	PHY 122	Physics II (NS)	3
Total Credit Hours		15	PHY 123	Physics II Laboratory (NS)	1
			Total Credit Hours		16

Sophomore (Second Year)

First Semester			Second Semester		
CSC 102	Intro to Programming	3	ECE 260	Digital Logic Design	3
ECE 200	Electrical Circuits I	3	ECE 261	Digital Logics Design Laboratory	1
ECE 201	Electrical Circuits I Laboratory	1	ECE 300	Electrical Circuits II	3
EGR 150	Probability & Statistics in Engineering (MA)	3	ECE 301	Electrical Circuits II Laboratory	1
MAT 221	Calculus III	4	ECO 201	Principles of Microeconomics (SS)	3
PHL 112	Professional Ethics (AH)	3	ENG 301	Technical Writing (EC)	3
Total Credit Hours		17	MAT 230	Differential Equations and Matrix Algebra	4
			Total Credit Hours		18

Junior (Third Year)

First Semester			Second Semester		
ECE 263	Microcomputers	3			
ECE 264	Microcomputers Laboratory	1	AIU 300	Internship & Career Preparation (EX)	1
ECE 320	Electronics I	3	ECE 350	Electronics II	3
ECE 330	Linear Systems and Signals	3	ECE 351	Electronics II laboratory	1
ECE 361	Electromagnetics	3	ECE 447	Control Systems	3
ECE 395	Electrical Engineering Seminar	1	ENG 302	Technical Presentations (OC)	3
EGR 250	Numerical Methods with MATLAB	3	Engineering Technical Elective		3
Total Credit Hours		17	MAT 200	Discrete Mathematics	3
			Total Credit Hours		17
			Summer Semester - EGR 490 Internship		1

Senior (Fourth Year)

First Semester			Second Semester		
ECE 410	Power Systems	3	ECE 400	Communication Theory	3
ECE 420	Digital Signal Processing	3	ECE 496	Senior Project II	3
ECE 495	Senior Project I	1	GenEd SS Course		3
GenEd AH Course		3	Specialization Course 2		3
Specialization Course 1		3	Specialization Course 3		3
Total Credit Hours		13	Total Credit Hours		15

This is a recommended plan of study for the Bachelor of Science in Electrical and Computer Engineering. Please see the 2025-2026 Undergraduate Catalog for a complete explanation of degree requirements.

