

MAJOR IN ELECTRICAL ENGINEERING, ROBOTICS AND AUTOMATION CONCENTRATION

Major Completion Map

Distinctive Requirements for Degree Program:

TO PREPARE FOR FIRST SEMESTER: The curriculum for this major assumes students enter college prepared to take calculus.

In order to maintain professional standards required of practicing engineers, the Department of Electrical and Computer Engineering requires a cumulative grade point average of at least 2.000 in electrical engineering courses as a graduation requirement. It is the responsibility of any student who fails to maintain a 2.000 average to work with their advisor to correct grade point deficiencies. ECE courses required for the major at the 100, 200, and 300 level must be passed with a minimum grade of C (2.000); grades below a C will require the student to retake the course. ECE courses designated as an elective are exempt from the C or higher minimum grade requirement.

Freshman

Semester 1		Critical	Recommended	AUCC	Credits
CHEM 111	General Chemistry I (GT-SC2)		X	3A	4
CHEM 112	General Chemistry Lab I (GT-SC1)		X	3A	1
ENGR 111	Fundamentals of Engineering	X			3
MATH 160	Calculus for Physical Scientists I (GT-MA1)	X		1B	4
Course(s) from Group A, B, or C (See options in Program Requirements Tab)			X	3B	3
Total Credits					15

Semester 2		Critical	Recommended	AUCC	Credits
CO 150	College Composition (GT-CO2)		X	1A	3
ENGR 114	Engineering for Grand Challenges	X			3
MATH 161	Calculus for Physical Scientists II (GT-MA1)	X		1B	4
PH 141	Physics for Scientists and Engineers I (GT-SC1)	X		3A	5
Total Credits					15

Sophomore

Semester 3		Critical	Recommended	AUCC	Credits
ECE 205	Analog Circuits I	X			3
ECE 252	Introduction to Digital Circuits	X			3
MATH 261	Calculus for Physical Scientists III	X			4
Course(s) from Group A, B, or C (See options in Program Requirements Tab)		X			4
1C (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#aucc)			X	1C	3
Total Credits					17

Semester 4		Critical	Recommended	AUCC	Credits
ECE 206	Analog Circuits II	X			3
ECE 232	Introduction to Project Practices	X			1
ECE 253	Microcontrollers and C for Internet-of-Things	X			3
MATH 340	Intro to Ordinary Differential Equations	X			4
PH 142	Physics for Scientists and Engineers II (GT-SC1)	X		3A	5
Total Credits					16

Junior

Semester 5		Critical	Recommended	AUCC	Credits
ECE 303/ STAT 303	Introduction to Communications Principles	X			3
ECE 311	Linear System Analysis I	X			3
ECE 331	Electronics Principles I	X			4
ECE 341	Electromagnetic Fields and Devices I	X			3
Electives			X		3
Total Credits					16

Semester 6		Critical	Recommended	AUCC	Credits
ECE 312	Linear System Analysis II	X			3
ECE 332	Electronics Principles II	X		4A	4
ECE 342	Electromagnetic Fields and Devices II	X			3
JTC 300 or CO 301B	Strategic Writing and Communication (GT-CO3) Writing in the Disciplines: Sciences (GT-CO3)		X	2	3
Electives			X		4
Total Credits					17
Senior					
Semester 7		Critical	Recommended	AUCC	Credits
ECE 401	Senior Design Project I	X		4A,4B	3
ECE 411	Control Systems	X			3
Technical Electives (See List on Concentration Requirements Tab)		X			6
Arts and Humanities (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#arts-humanities)			X	3B	3
Total Credits					15
Semester 8		Critical	Recommended	AUCC	Credits
ECE 402	Senior Design Project II	X		4C	3
Technical Electives (See List on Concentration Requirements Tab)		X			6
Historical Perspectives (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#historical-perspectives)		X		3D	3
Social and Behavioral Sciences (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#social-behavioral-sciences)		X		3C	3
The benchmark courses for the 8th semester are the remaining courses in the entire program of study.		X			
Total Credits					15
Program Total Credits:					126