MAJOR IN ELECTRICAL ENGINEERING, LASERS AND OPTICAL ENGINEERING CONCENTRATION

Major Completion Map

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**
CO 150	College Composition (GT-CO2)		X	1A	3
ECE 102 or 103	Digital Circuit Logic DC Circuit Analysis	X			3-4
MATH 160	Calculus for Physical Scientists I (GT-MA1)	X		1B	4
First course from Group A, B, or C (See options in Program Requirements Tab)		X		3B	3
	Total Credits				**13**
Semester 2		**Critical**	**Recommended**	**AUCC**	**Credits**
ECE 103 or 102	DC Circuit Analysis Digital Circuit Logic	X			3-4
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
Remaining course(s) from Group A, B, or C (See options in Program Requirements Tab)		X			4
	Total Credits				**17**

Sophomore

Semester 3		**Critical**	**Recommended**	**AUCC**	**Credits**
CHEM 111	General Chemistry I (GT-SC2)		X	3A	4
MATH 261	Calculus for Physical Scientists III	X			4
PH 142	Physics for Scientists and Engineers II (GT-SC1)	X		3A	5
Diversity, Equity, and Inclusion (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#diversity-equity-inclusion)			X	1C	3
	Total Credits				**16**
Semester 4		**Critical**	**Recommended**	**AUCC**	**Credits**
ECE 202	Circuit Theory Applications	X			4
ECE 232	Introduction to Project Practices	X			1
ECE 303/ STAT 303	Introduction to Communications Principles	X			3
MATH 340	Intro to Ordinary Differential Equations	X			4
PH 314	Introduction to Modern Physics	X			4
	Total Credits				**16**

Junior

Semester 5		**Critical**	**Recommended**	**AUCC**	**Credits**
ECE 311	Linear System Analysis I	X			3
ECE 331	Electronics Principles I	X			4
ECE 341	Electromagnetic Fields and Devices I	X			3
PH 353	Optics and Waves	X			4

Arts and Humanities (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#arts-humanities)			X	3B	3
	Total Credits				**17**
Semester 6		**Critical**	**Recommended**	**AUCC**	**Credits**
ECE 332	Electronics Principles II	X		4A	4
ECE 342	Electromagnetic Fields and Devices II	X			3
Select one course from the following:					3
CO 301B	Writing in the Disciplines: Sciences (GT-CO3)		X	2	
JTC 300	Strategic Writing and Communication (GT-CO3)		X	2	
ECON 202	Principles of Microeconomics (GT-SS1)			3C	3
Science/Math/Engineering Electives (See List on Program Requirements Tab)			X		2
	Total Credits				**15**
Senior					
Semester 7		**Critical**	**Recommended**	**AUCC**	**Credits**
ECE 401	Senior Design Project I	X		4A,4B	3
ECE 404	Experiments in Optical Electronics	X			2
ECE 441	Optical Electronics	X			3
PH 451	Introductory Quantum Mechanics I	X			3
Technical Electives (See List on Program Requirements Tab)			X		6
	Total Credits				**17**
Semester 8		**Critical**	**Recommended**	**AUCC**	**Credits**
ECE 402	Senior Design Project II	X		4C	3
ECE 457	Fourier Optics	X			3
Technical Electives (See List on Program Requirements Tab)		X			6
Historical Perspectives (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#historical-perspectives)		X		3D	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**