



Degree Map

CATALOG YEAR: 2021-2022

Degree: BSEE

MAJOR: Electrical Engineering

CONCENTRATION: Mechatronics

The major map illustrates one path to completing your major, based on faculty members' advice on course sequence and course schedule. This document provides general direction.

Course	Cr. Hrs.	Course	Cr. Hrs.
FIRST YEAR			
Semester: Fall Total Credit Hours: 15		Semester: Spring Total Credit Hours: 16	
ECE 1020 Connections to ECE	1	ENGR 1110 Engineering Graphics	2
MATH 1910 Calculus I	4	CSC 1300 Intro to PS & Comp Programs	4
CHEM 1110 General Chemistry I	4	MATH 2010 Intro to Linear Algebra	3
ENGL 1010 Writing Composition I	3	MATH 1920 Calculus II	4
Social/Behavioral Science Elective	3	ENGL 1020 Writing Composition II	3
Course	Cr. Hrs.	Course	Cr. Hrs.
SOPHOMORE YEAR			
Semester: Fall Total Credit Hours: 17		Semester: Spring Total Credit Hours: 18	
ECE 2010 Electrical Circuits I	3	ECE 2001 Computer Aided Eng in ECE	1
ECE 2011 Electrical Engineering Lab I	1	ECE 2020 Electrical Circuits II	3
MATH 2120 Differential Equations	3	ECE 2110 Intro to Digital Systems	3
PHYS 2110 Cal Based Physics I	4	CEE 2110 Statics	3
COMM 2025 or PC 2500 Communication	3	MATH 2110 Calculus III	4
ENGL 2130, 2235, or 2330 Lit.	3	PHYS 2120 Calculus Based Physics II	4
Course	Cr. Hrs.	Course	Cr. Hrs.
JUNIOR YEAR			
Semester: Fall Total Credit Hours: 18		Semester: Spring Total Credit Hours: 18	
ECE 3010 Signals and Systems	3	ECE 3020 Dis-Time Signals & Systems	3
ECE 3060 Electrical Engineering Lab II	1	ECE 3210 Control System Analysis	3
ECE 3130 Microcomputer Systems	4	ECE 3260 Control System Lab	1
ECE 3160 Digital Systems Lab	1	ECE 3270 Prog. Logic Controller Lab	1
ECE 3300 Electronics I	3	ECE 3610 Intro to Power Systems	3
ECE 3510 Electromagnetic Fields I	3	ECE 3920 Professional Issues in ECE	1
ME 2330 Dynamics	3	ECE 4140 Embedded System Design	3
		ME 3610 Dynamics of Machinery	3
Course	Cr. Hrs.	Course	Cr. Hrs.
SENIOR YEAR			
Semester: Fall Total Credit Hours: 15		Semester: Spring Total Credit Hours: 12	
ECE 4210 Control Systems Design I	3	ECE 4971 Capstone Design II	3
ECE 4961 Capstone Design I	3	EE Senior Elective ²	3
ME 4140 Intro to Robotics & Int Mach Egr	3	Humanities/Fine Arts Elective	3
MATH 3470 Intro. Prob & Statistics	3	Social/Behavioral Science Elective	3
Humanities/Fine Arts Elective	3		

Notes:

- EE Breadth Electives: ECE 3210, ECE 3310, ECE 3540, ECE 3610, or ECE 3710
- EE Senior Electives: All ECE 4000 level course
- EE Electives: All courses on EE Breadth Electives and EE Senior Electives
- EE Laboratory Electives: ECE 3160, ECE 3260, ECE 3270, ECE 3360, ECE 3560, ECE 3660, or ECE 3760
- EE Depth Electives: ECE 4020, ECE 4110, ECE 4120, ECE 4130, ECE 4140, ECE 4210, ECE 4240, ECE 4370, ECE 4510, ECE 4520, ECE 4610, ECE 4620, ECE 4630, ECE 4710, or ECE 4720
- Career Electives can be chosen from any of the following:
 - Any CHE/CEE/ECE/ME/CSC/MATH 3000 or 4000 level course- exceptions to this are: CEE 3100, CSC 3310, CSC 3410, CSC 4320, ECE 3810, ECE 3860, ME 3110, ME 4370, ME 4810, MATH 3670, and MATH 4610
 - Any CHE/CSC 2000 level course, CEE 2110, CSC 1310, ENGR 4510, or ME 2330

- c. ASTR 1010, ASTR 1020, BIOL 1113, BIOL 1123, BIOL 2010, BIOL 2020, BIOL 2310, CHEM 1120, CHEM 2010, CHEM 3010, CHEM 3410, CHEM 3500, CHEM 3510, PHYS 1100, PHYS 2420, or PHYS 2920
- d. ACCT 2110, ACCT 2120, BMGT 3510, BMGT 3600, BMGT 3630, DS 3520, ECON 2010, ECON 2020, ECON 3810, ECON 3820, ECON 3830, FIN 3210, FIN 3610, FIN 4230, FIN 4800, LAW 3810, LAW 4720, MKT 3400, MKT 3900, MKT 4100, or MKT 4550
- e. FREN 1010, FREN 1020, FREN 2010, FREN 2020, GERM 1010, GERM 1020, GERM 2010, GERM 2020, SPAN 1010, SPAN 1020, SPAN 2010, or SPAN 2020
- f. Language courses other than FREN, GERM, and SPAN will be considered provided that foreign language is used in the course
- g. Only one of CHE 3010 and ME 3210 may be taken, if you take ME 3710 or ME 3720 then CHE 3110 may not be taken, only one of CSC 3020 and MATH 4210 may be taken