



Degree Map

CATALOG YEAR: 2024-2025

Degree: BSCmpE

MAJOR: Computer Engineering

CONCENTRATION: Hardware and System Security

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.
<b>FIRST YEAR</b>			
Semester: Fall Total Credit Hours: 17		Semester: Spring Total Credit Hours: 15	
ENGL 1010 English Composition I	3	ENGL 1020 Writing Composition II	3
MATH 1910 Calculus I	4	MATH 1920 Calculus II	4
CHEM 1110 General Chemistry I	4	CSC 1300 Intro to Problem Solving & Comp Prog	4
ECE 1000 Explorations in ECE	3	ECE 2140 Intro to Digital Systems	4
Humanities/Fine Arts Elective	3		
Course	Cr. Hrs.	Course	Cr. Hrs.
<b>SOPHOMORE YEAR</b>			
Semester: Fall Total Credit Hours: 17		Semester: Spring Total Credit Hours: 17	
ENGL 2130, 2235, or 2330 Literature	3	COMM 2025 or PC 2500 Communication	3
MATH 2120 Differential Equations	3	MATH 2610 Discrete Structures or CSC 2700 Discrete Structures for Comp Sci	3
MATH 2010 Intro to Linear Algebra	3	CSC 2400 Design of Algorithms	3
CSC 1310 Data Structures & Algorithms	4	ECE 3050 Circuits & Electronics II	4
ECE 2050 Circuits & Electronics I	4	PHYS 2110 Calculus-based Physics I	4
Course	Cr. Hrs.	Course	Cr. Hrs.
<b>JUNIOR YEAR</b>			
Semester: Fall Total Credit Hours: 15		Semester: Spring Total Credit Hours: 16	
ECE 3130 Microcomputer Systems	4	ECE 3920 Professional Issues in ECE	1
PHYS 2120 Calculus-based Physics II	4	MATH 3470 Intro to Prob and Statistics	3
ECE 3330 Signals & Systems	4	CSC 4200 Computer Networks	3
ECE 3140 Digital System Design	3	CSC 4575 Cryptography and Network Security	3
		ECE 3150 Intro to Hardware Security	3
		Humanities/Fine Arts Elective	3
Course	Cr. Hrs.	Course	Cr. Hrs.
<b>SENIOR YEAR</b>			
Semester: Fall Total Credit Hours: 15		Semester: Spring Total Credit Hours: 16	
ECE 4961 Capstone Design I	3	ECE 4971 Capstone Design II	3
ECE 4140 Embedded System Design	3	ECE 4120 Fundamentals of Computer Design	3
ECE 4150 Cyber-Physical Systems Hardware Security	3	ECE 4830 Applications of Machine Learning in ECE or CSC 4240 Artificial Intelligence	3
CmpE HSS Concentration Elective <sup>1</sup>	3	CmpE HSS Concentration Elective <sup>1</sup>	3
Social/Behavioral Science Elective	3	Social/Behavioral Science Elective	3
		Free Elective	1

Notes:

A detailed list of electives is available: <https://www.tntech.edu/engineering/programs/ece/undergraduate/electives-24.php>

1. CmpE HSS Concentration Electives: CSC 4100, CSC 4220, CSC 4580, CSC 4780, ECE 4130, MATH 4060.