

Major Map

BULLETIN YEAR: 2021-2022 **Degree:** BSCmpE

MAJOR: Computer Engineering

The major map illustrates one path to completing your major, based on faculty members' advice on course sequence and a department's tentative plans for scheduling courses. This document provides general direction. For more specific advice and up to date schedules, it is expected that students will regularly discuss their plans of study with academic advisors and monitor the current class schedules as students are responsible for ensuring that all requirements for graduation have been met.

Course	Cr. Hrs.	Course	Cr. Hrs.
FIRST YEAR			
Semester: Fall Total Credit Hours: 13-16		Semester: Spring Total Credit Hours: 15	
MTH 132 Calculus I	4	MTH 133 Calculus II	4
EGR 120 Intro. to Engineering	3	PHY 145QR University Physics I	4
EGR 190 Digital Circuits	3	PHY 175 University Physics Laboratory I	1
ENG 101 Freshman Composition (if needed)	0-3	CPS 180 Principles of Computer Programming	3
U.P. Group 1-B/Oral English Comp. ²	3	ENG 201 Intermediate Composition	3
Course		Course	
Cr. Hrs.		Cr. Hrs.	
SOPHOMORE YEAR			
Semester: Fall Total Credit Hours: 16		Semester: Spring Total Credit Hours: 16	
MTH 232 Linear Algebra & Diff. Eqns.	3	MTH 233 Calculus III	4
MTH 175 Discrete Mathematics	3	CPS 181 Intro to Data Structures	3
EGR 290 Circuit Analysis I	3	EGR 292 Circuit Analysis II	3
PHY 146 University Physics II	4	EGR 393 Circuit Lab	3
U.P. Group 1-A ⁴	3	U.P. Group IV-A ⁴	3
Course		Course	
Cr. Hrs.		Cr. Hrs.	
JUNIOR YEAR			
Semester: Fall Total Credit Hours: 16		Semester: Spring Total Credit Hours: 18	
CHM 131 General Chemistry I ^{3,4}	4	EGR 390 Comp. Sys. Design HDL	3
EGR 298 Microelectronic Circuits I	3	EGR 392 Microeletronic Circuits II	3
EGR 391 Signal and System Theory	3	EGR 394 Computer Circuit Simulation	3
EGR 396 Microprocessor Fundamentals	3	EGR 398 Microelectronics & Comp. Lab	3
STA 392 Probability and Stat. for Eng.	3	CPS 340 Adv Data Struc & Algorithms	3
		U.P. Group II-A ⁴	3
Course		Course	
Cr. Hrs.		Cr. Hrs.	
SENIOR YEAR			
Semester: Fall Total Credit Hours: 18		Semester: Spring Total Credit Hours: 18	
EGR 480 Digital Int Circuit using FPGAs	3	EGR 481 Embedded System Design	3
EGR 487 Intro to VLSI Systems	3	EGR 482 Des & Org of Comp Hdwr Sys	3
EGR 489WI Senior Design I	3	EGR 484 Digital Signal Processing	3
Computer Engineering Elective ¹	3	EGR 499WI Senior Design II	3
U.P. Group III-B ⁴	3	U.P. Group IV-C ⁴	3
U.P. Group IV-B ⁴	3	U.P. Group III-A ⁴	3
Course		Course	
Cr. Hrs.		Cr. Hrs.	
FIFTH YEAR (IF NEEDED)			
Semester: Total Credit Hours:		Semester: Total Credit Hours:	

130 hours minimum required for graduation

40 hours 300 level or above required

¹ **Electives (3 hours):** Choose from: EGR 251, 371, 375, 388, 397, 492, 496, 497, 580, 585, 591, 597.

² TAI 170 completes the U.P. Group I-B and the Oral English Competency requirement, which must be fulfilled before 56 hours.

³CHM 131 completes the U.P. Group II-B.

⁴These courses can be taken in any semester.