



Degree Map

CATALOG YEAR: 2026-2027

Degree: BSChE

MAJOR: Chemical Engineering

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: 16		Semester: Spring Total Credit Hours: 16	
CHE 1015 Intro to Chemical Engineering	2	CHE 1025 CHE Prof., Ethics, & Skills	2
MATH 1910 Calculus I	4	Humanities/Fine Arts Elective	3
CHEM 1110 General Chemistry I	4	MATH 1920 Calculus II	4
ENGL 1010 Writing Composition I	3	CHEM 1120 General Chemistry II	4
Social/Behavioral Science Elective	3	ENGL 1020 Writing Composition II	3
Course	Cr. Hrs.	Course	Cr. Hrs.
<b>SOPHOMORE YEAR</b>			
Semester: Fall Total Credit Hours: 15		Semester: Spring Total Credit Hours: 15	
CHE 2050 Material & Energy Balances	4	FIN 2000 – Personal Finance	3
MATH 2110 Calculus III	4	MATH 2120 Differential Equations	3
PHYS 2110 Cal based Physics I w/ Lab	4	PHYS 2120 Cal based Physics II w/ Lab	4
ENGL 2130, 2235, or 2330 Lit.	3	CHE 3735 ChE Operations	2
		COMM 2025 or PC 2500 Communication	3
Course	Cr. Hrs.	Course	Cr. Hrs.
<b>JUNIOR YEAR<sup>1</sup></b>			
Semester: Fall Total Credit Hours: 14		Semester: Spring Total Credit Hours: 18	
CHE 3010 Thermo of ChE Processes	3	CHE 3510 Sep and Sol Thermo	3
CHE 3050 TS1: Cond, Radiation, Diff	3	CHE 3511 Sep and Sol Thermo Lab	1
CHE 3051 TS1: Cond, Radiation, Diff Lab	1	CHE 3550 TS2: Fluid Mechanics	3
CHEM 3010 Organic Chemistry I	4	CHE 3551 TS2: Fluid Mechanics Lab	1
XXX xxxx Tech Elective <sup>2</sup>	3	CHEM 3020 Organic Chemistry II	4
		XXX xxxx Tech Elective <sup>2</sup>	3
		Social/Behavioral Science Elective	3
Course	Cr. Hrs.	Course	Cr. Hrs.
<b>SENIOR YEAR</b>			
Semester: Fall Total Credit Hours: 15		Semester: Spring Total Credit Hours: 19	
CHE 4050 TS3: Diff and Mass Transfer	3	CHE 4255 ChE Capstone Lab	3
CHE 4051 TS3: Diff and Mass Transfer Lab	1	CHE 4540 Process Dynamics and Control	3
CHE 4060 ChE Reaction Engineering	3	CHE xxxx ChE Tech Elective <sup>3</sup>	3
CHE 4061 ChE Reaction Engineering Lab	1	CHE xxxx ChE Tech Elective <sup>3</sup>	3
CHE 4410 Process Design I	3	CHE 4420 Process Design II	3
CHEM 3510 Physical Chemistry I	4	CHEM 3520 Physical Chemistry II	4

Notes: (Chemical Engineering (CHE) courses generally only offered in the semester listed above)

- Students must apply to the ChE BS/MS Fast-Track program by the end of their second junior term.
- Tech Electives can be from any of the following courses:
  - Any College of Engineering course at 3000 or 4000 level
  - Any BIOL/CHEM/MATH/PHYS/ESS course at 3000 or 4000 level
  - Any course with the prior approval of the CHE Undergraduate Program Coordinator
- CHE Tech Elective must be from the following courses: CHE 3340 – Industry 4.0 (3) | CHE 3745 Innovation in Energy (3) | CHE 4400 - Engineering Safety (3) | CHE 4245 – Clinical Immersion (3) | CHE 4330 – Polymer Engineering (3) | CHE 4335 – Fuel Cells (3) | CHE 4340 – Introduction to Rheology (3) | CHE 4440 – Protein Engineering (3) | CHE 4550 – Green Engineering (3) | CHE 4650 – Agile Manufacturing (3) | CHE 4661 – Transport in Biochemical and Biological Processes (3) | CHE 4973 – Special Topics (3) | CHE 4990 – Undergraduate Research (Credit 1 to 3 per semester.)