



Degree Map

CATALOG YEAR: 2026-2027

Degree: BSChE

MAJOR: Chemical Engineering

CONCENTRATION: Energy and the Environment (ENEV)

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: 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	MATH 1920 Calculus II	4
CHEM 1110 General Chemistry I	4	ESS 1100 Intro to Environmental Studies	3
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.
SOPHOMORE YEAR			
Semester: Fall Total Credit Hours: 14		Semester: Spring Total Credit Hours: 17	
CHE 2050 Material & Energy Balances	4	FIN 2000 – Personal Finance	3
CHE 3745 Innovation in Energy	3	CHE 3735 ChE Operations	2
MATH 2110 Calculus III	4	MATH 2120 Differential Equations	3
PHYS 2109 Cal based Physics I	3	PHYS 2119 Cal based Physics II	3
		COMM 2025 or PC 2500 Communication	3
		ENGL 2130, 2235, or 2330 Lit.	3
Course	Cr. Hrs.	Course	Cr. Hrs.
JUNIOR YEAR¹			
Semester: Fall Total Credit Hours: 17		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
CHE 4550 Green Engineering	3	CHEM 3020 Organic Chemistry II	4
Humanities/Fine Arts Elective	3	CHE 4335 Fuel Cells	3
		Social/Behavioral Science Elective	3
Course	Cr. Hrs.	Course	Cr. Hrs.
SENIOR YEAR			
Semester: Fall Total Credit Hours: 15		Semester: Spring Total Credit Hours: 15	
CHE 4050 TS3: Diff and Mass Transfer	3	CHE 4255 ChE Capstone Lab	3
CHE 4051 TS3: Diff and Mass Transfer Lab	1	CHE 4420 Process Design II	3
CHE 4060 ChE Reaction Engineering	3	CHE 4540 Process Dynamics and Control	3
CHE 4061 ChE Reaction Engineering Lab	1	4xxx ENEV Elective ²	3
CHE 4410 Process Design I	3	4xxx ENEV Elective ²	3
CHEM 3510 Physical Chemistry I	4		

Notes: (Chemical Engineering (CHE) courses are 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.
- Six hours of CHE ENEV Elective must be from the following courses:
 CHE 3340 – Industry 4.0 | CEE 3413: Environmental Engineering (3) | CHE 4552: Energy/Environment Special Topics (3) | CHE 4340: Rheology (3) | CHE 4560: Agile Manufacturing (3) | CHE 4990: Intro to Research (3) | CHEM 4310: Nuclear Chemistry and Radiochemistry (3) | CHE 4400 - Engineering Safety (3) | CHEM 4710: Environmental Chemistry (3) | CHEM 4720: Advanced Environmental Chemistry (3) | ESS 3710: Chemistry and the Environment (3) | ME 4260: Energy Conservation (3) | MET 4650: Lean Six Sigma (3)