College of Engineering
TENNESSEE TECH

Degree Map

CATALOG YEAR: 2022-2023 **Degree:** BSChE **MAJOR:** Chemical Engineering
CONCENTRATION: Energy and the Environment

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: 14		Semester: Spring	Total Credit Hours: 15
CHE 1010 Intro to Chemical Engineering	1		CHE 1020 CHE Processes, Products, & Ethics	1
ENGR 1120 Programming[1]	2		MATH 1920 Calculus II	4
MATH 1910 Calculus I	4		ESS 1110 Intro in Enviornmental Studies	3
CHEM 1110 General Chemistry I	4		CHEM 1120 General Chemistry II	4
ENGL 1010 Writing Composition I	3		ENGL 1020 Writing Composition II	3
Course	**Cr. Hrs.**		**Course**	**Cr. Hrs.**
SOPHOMORE YEAR				
Semester: Fall	Total Credit Hours: 16		Semester: Spring	Total Credit Hours: 17
CHE 2015 Intro to Chem/Bio An-Sci I	3		CHE 2020 Intro to Chem/Bio An-Sci II	3
CHE 3745 Innovation in Energy	3		CHE 3735 ChE Operation	2
MATH 2110 Calculus III	4		PHYS 2119 Physics II	3
PHYS 2109 Physics I	3		MATH 2120 Differential Equations	3
ENGL 2130, 2235, or 2330 Lit.	3		COMM 2025 or PC 2500 Communication	3
			Social/Behavioral Science Elective	3
Course	**Cr. Hrs.**		**Course**	**Cr. Hrs.**
JUNIOR YEAR[2]				
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 3510 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: 17
CHE 4050 TS3: Diff and Mass Transfer	3		CHE 4250 ChE Capstone Lab	2
CHE 4051 TS3: LAB	1		CHE 4420 Process Design II	3
CHE 4060 ChE Reaction Engineering	3		CHE 4540 Process Dynamics and Control	3
CHE 4061 Reacation LAB	1		CHE 4552 Energy and the Environment Sp Top	3
CHE 4410 Process Design I	3		ChE 4xxx ChE ENEV Elective[3]	3
CHEM 3510 Physical Chemistry I	4		Humanities/Fine Arts Elective	3

Notes:

1. ENGR 1120 must be MATLAB
2. Students must apply to the ChE Fast-Track MS program by the end of their second junior term.
3. Three hours of CHE ENEV Elective must be from the following courses:
   CHE 4552 Energy and the Environment Special Topics
   CHEM 4710/4720 Environmental Chemistry
   CHEM 4310 Nuclear Chemistry and Radiochemistry
   ME 4260 Energy Conservation
   Any College of Engineering course at the 3000 or 4000 level by advisor or chair approval