College of Engineering
TENNESSEE TECH

Degree Map

CATALOG YEAR: 2025-2026 **Degree:** BSChE **MAJOR:** Chemical Engineering
CONCENTRATION: Bio-Molecular Engineering(BMOL)

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: 16
CHE 1010 Intro to Chemical Engineering	1		CHE 1020 CHE Processes, Products,& Ethics	1
MATH 1910 Calculus I	4		MATH 1920 Calculus II	4
ENGR 1120 Programming[1]	2		BIOL 1113 General Biology I	4
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-Scl I	3		CHE 2020 Intro to Chem/Bio An-Scl II	3
MATH 2110 Calculus III	4		MATH 2120 Differential Equations	3
PHYS 2109 Cal based Physics I	3		PHYS 2119 Cal based Physics II	3
Humanities/Fine Arts Elective	3		CHE 3735 ChE Operations	2
Social/Behavioral Science Elective	3		ENGL 2130, 2235, or 2330 Lit.	3
			COMM 2025 or PC 2500 Communication	3
Course	**Cr. Hrs.**		**Course**	**Cr. Hrs.**
JUNIOR YEAR[2]				
Semester: Fall	Total Credit Hours: 19		Semester: Spring	Total Credit Hours: 16
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
BIOL 3200 or BIOL 3230 Gen/Health Micro	4		CHE 3551 TS2: Fluid Mechanics Lab	1
CHEM 3010 Organic Chemistry I	4		CHEM 3020 Organic Chemistry II	4
CHEM 3510 Physical Chemistry I	4		CHE 3140 Biotechnology & Bioprocess Eng	4
Course	**Cr. Hrs.**		**Course**	**Cr. Hrs.**
SENIOR YEAR				
Semester: Fall	Total Credit Hours: 14		Semester: Spring	Total Credit Hours: 17
CHE 4050 TS3: Diff and Mass Transfer	3		CHE 4250 ChE Capstone Lab	2
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		CHE 4661 Transport in Bio Processes	3
CHE 4410 Process Design I	3		Humanities/Fine Arts Elective	3
CHEM 4610 General Biochemistry	3		Social/Behavioral Science Elective	3

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

1. ENGR 1120 must be MATLAB
2. Students must apply to the ChE BS/MS Fast-Track program by the end of their second junior term.