



Degree Map

CATALOG YEAR: 2026-2027

Degree: Non-Degree

MAJOR: Basic 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. Students should consult with their academic advisors before making course schedules. Students are typically advised to enroll for 15-17 credit hours.

Course	Cr. Hrs.	Course	Cr. Hrs.
FIRST YEAR			
Semester: Fall		Semester: Spring	
Total Credit Hours: 15-17		Total Credit Hours: 15-17	
ENGR 1020 Connections to Engineering ¹	1		
ENGR 1210 Introduction to Engineering ¹	1		
MATH ²	3-5	MATH ²	3-5
CHEM 1110 General Chemistry I ³	4	CHEM 1120 General Chemistry II or PHYS 2110 General Physics I ³	4
ENGL 1010 English Composition I	3	English 1020 English Composition II	3
Humanities/Cultural Expression Elective or Communication Elective ⁴	3	Humanities/Cultural Expression Elective or Communication Elective ⁴	3
ENGR 1110 Engineering Graphics (2) OR CSC 1200 (3) ⁵	2-3	ENGR 1120 Programming for Engineers (2) OR CSC 1300 (4) ⁵	2-4

Notes:

- ENGR 1020 Connections to Engineering and Technology (1). This course is a first-year experience course that includes study skills. Optional, but recommended by many departments. ENGR 1210 Introduction to Engineering (1). This course is the key course for engineering students undecided about their major. See discussion below.
- Math courses are selected by appropriate placement (initial placement from ACT Math Subscore or previous college credit). Possible courses include:
 - MATH 1710 Precalculus: Algebra (3)
 - MATH 1720 Precalculus: Trigonometry (3)
 - MATH 1730 Precalculus (5)
 - MATH 1904 Extended Calculus IA (3)
 - MATH 1906 Extended Calculus IB (3)
 - MATH 1910 Calculus I (4)
 - MATH 1920 Calculus II (4)
 - MATH courses beyond MATH 1910 and 1920, such as MATH 2010, 2110, and 2120 if the student has previous college credit.
- Several degree programs require two semesters of chemistry (CHEM 1110 and CHEM 1120), while others require only CHEM 1110. All degree programs require PHYS 2110.
- Approved Humanities/Cultural Expression Elective or Communication elective (COMM 2025 or PC 2500)
- Several degree programs require ENGR 1110 Engineering Graphics (2), ENGR 1120 Programming for Engineers (2), CSC 1300 Introduction to Problem Solving and Computer Programming (4). CSC 1200 Principles of Computing (2) is an alternate prerequisite to CSC 1300 that some students many choose.

Discussion:

Students sign up for Basic Engineering because they are undecided about which engineering major to choose. For these students, it is important to take ENGR 1210 Introduction to Engineering. This one-credit hour course meets for two hours of lab each week to learn about different engineering disciplines and about fundamental engineering skills. While this course is not required by the degree granting engineering programs at Tech, taking it is the main reason to be in Basic Engineering.

Many students should also consider taking ENGR 1020 Connections to Engineering and Technology. This one-credit hour course meets for one-two hours each week to learn about Tech, engineering at Tech, useful student resources at Tech, study skills. This course is not required by the degree granting engineering programs at Tech, but most programs highly recommend it.