TRINITY COLLEGE DEGRE

TRINITY COLLEGE DEGREE REQUIREMENTS FOR B.S. IN ENGINEERING	- 2025/2026	Updated March 2025							
CORE REQUIREMENTS									
Basic Math and Science (8 courses, 9.5-9.75 credits) Sem Course MATH 131 Calculus I (1.25 credits) MATH 132 Calculus II (1.25 credits) MATH 132 Calculus II (1.25 credits) MATH 231 Calculus III (1.25 credits) CHEM 112L Intro. Chemistry II CHEM 112L Intro. Chemistry II	Engineering (5 courses, 4.75 credits) Sem Course ENGR 200 Meas., Instr., & Analysis ENGR 212L Linear Circuit Theory ENGR 225 Mechanics I ENGR 2425 Mechanics I	Additional Degree Requirements 1. Demonstration of computer programming proficiency by course (C- or better) or exam.• 2. Completion of at least eight course credits in the arts, humanities, or social sciences. To							
MATH 234 Diff. Equations PHYS 232L Optics & Mod. Phys. PHYS 141L Mechanics PHYS 300 Mathematical Methods PHYS 231L Elec., Mag., & Waves MATH 229 Applied Linear Algebra CHEM 111L Intro. Chemistry I MATH 305 Probability other* *(science or mathematics course appoved in advance by department chair)	ENGR 232 Engineering Materials ENGR 312 Automatic Control Systems	ensure depth of study, at least two courses must be taken in the same subject area. ENGR 341 and ENGR 342 count as art. 3. No more than one engineering or concentration elective course with a grade lower than C							
Senior Capstone Design Project (2 courses, 2 credits) Sem Course ENGR 483 Capstone Design I	Sem Course ENGR 484 Capstone Design II								
CONCENTRATION ELECTIVES									
Electrical & Computer Engineering (6 courses, 7.25-7.5	5 credits) Mechani	Mechanical (7 courses, 7.75-8.25 credits)							
	nal Processing & Applications OR	Course ENGR 226 Mechanics II ENGR 325L Mechanics of Materials ENGR 337 Thermodynamics ENGR 362L Fluid Mechanics ENGR 372L Heat Transfer							
Two Elective Courses ENGR 301L Signal Processing & Applications ENGR 303L Analog & Digital Communication ENGR 306 Intro to Machine Learning CPSC 215L Data Structures & Algorithms CPSC 275L Intro to Computer System	At least on	e from: ENGR 353 Biomechanics ENGR 431L Experimental Design & Methods dditional Engineering elective approved in advance							
Program totals: 23 courses, 23.5-24 credits	Program to	tal 22 courses, 24-24.75 credits							
Biomedical (9 courses, 9.75-10.5 credits)	Without	Concentration (6 to 7 courses, 7 credits)							
Sem Course BIOL 182L Evolution of Life BIOL 183L Cellular Basis of Life*	Sem	ourse credits chosen from the following: Course ENGR 110• Engr. Computation & Analysis OR ENGR 116 Intro. to Biomedical Engineering OR							

Sem	Course				At least 7	course credit	s chosen from the following:
Jem	BIOL 182L	Evolution of Life			Sem	Course	s chosen nom the following.
	BIOL 183L	Cellular Basis of Life*				ENGR 110•	Engr. Computation & Analysis OR
						ENGR 116	Intro. to Biomedical Engineering OR
	BIOL 319L	Animal Physiology OR				ENGR 120	Introduction to Engineering Design
	ENGR 357•	Physiological Modeling					
						ENGR 221L	Digital Circuits & Systems
	ENGR 116	Introduction to Biomedical Engineering				ENGR 226	Mechanics II
	ENGR 353	Biomechanics				ENGR 301L•	Signal Processing & Applications
	ENGR 301L•	Signal Processing & Applications				ENGR 302	Image Processing/Biomed Applic.
	ENGR 311	Electrophysiology				ENGR 303L	Analog & Digital Communication
						ENGR 305L	Microelectronic Circuits
Three engineering courses from the Bioelectrical focus or three courses from the Biomechanical focus:					ENGR 306	Intro to Machine Learning	
						ENGR 311	Electrophysiology
	Bioelectrica	l Focus:	Biomech	nanical Focus:		ENGR 316	Neural Engineering
						ENGR 320	Introd Robot Manipulation
Sem	Course		Sem	Course		ENGR 323L•	Embedded System Design
	ENGR 316	Neural Engineering OR		ENGR 226 Mechanics II		ENGR 325L	Mechanics of Materials
	ENGR 346L	Computational Neuroscience		ENGR 325L Mechanics of Materials		ENGR 337	Thermodynamics
				ENGR 362L Fluid Mechanics		ENGR 346L	Computational Neuroscience
	ENGR 221L	Digital Circuits & Systems				ENGR 353	Biomechanics
	ENGR 323L•	Embedded System Design				ENGR 357	Physiological Modeling
						ENGR 362L	Fluid Mechanics
						ENGR 372L	Heat Transfer
						ENGR 431L	Experimental Design & Methods
* BIOL 183L will satisfy the Basic Math and Science elective for BME.				(additional courses approved in advance by dept. chair)			
Program	totals:	24 courses, 26-27 credits			Program	totals:	21-22 courses, 23.25-24 credits

NOTE: Courses with laboratories (denoted by suffix 'L') count as 1.25 course credits; courses without labs count as 1.0 course credit, except where noted. Program totals do not include course/credit counts from "Additional Degree Requirements".

The maximum number of engineering transfer courses shall be three (refer to minutes of 11-30-2011 and 4-20-2012)

• - Satisfies computer programming proficiency requirement.

• -The requirements for ECE will apply to students who matriculate Fall 2025