

Biomedical Engineering- First and Second Year Curriculum
Catalog Year 2024-2025

Semester One	Semester Two
CHEM 1127Q: General Chemistry I (4 credits)	CHEM 1128Q: General Chemistry II (4 credits)
MATH 1131Q: Calculus I (4 credits)	MATH 1132Q: Calculus II (4 credits)
CSE 1010: Intro to Computing for Engineers (3 credits)	ENGR 1166: Foundations of Engineering (3 credits)
ENGL 1007: Writing and Composition (4 credits)	BIO 1107: Principles of Biology I (4 credits)
15 credits	15 credits

Semester Three	Semester Four
PHYS 1501Q: Physics for Engineers I (4 credits)	PHYS 1502Q: Physics for Engineers II (4 credits)
MATH 2110Q: Multivariable Calculus (4 credits)	MATH 2410Q: Elem. Differential Equations (3 credits)
CE 2110: Applied Mechanics I (3 credits)	ECE 2001: Electrical Circuits (4 credits)
PNB 2264: Human Physiology & Anatomy (4 credits)	MATH 2210Q-: Applied Linear Algebra (3 credits)
STAT 3025Q: Statistical Methods (3 credits)*	MSE 2101: Materials Science & Engineering I (3 credits)
	BME 3120- LabVIEW Basics for Engineers (1 credit)
18 credits	18 credits

**note: ENGR 3400 may be substituted for STAT 3025Q for Biomechanics and Biomaterials concentrations*

BME Concentrations – Recommended Fifth Semester Courses:

BME students select their Concentration the summer before their 5th semester. View concentration requirements in the University Catalog.

Biomechanics & Mechanobiology	Systems, Imaging, and Instrumentation	Computational & Systems Biology	Biomaterials & Tissue Engineering
BME 3600: Biomechanics (4 credits)	BME 3500: Biomedical Engineering Measurements (4 credits)	CSE 2050: Data Structures & Object-Oriented Design (3 credits)	BME 3500: Biomedical Engineering Measurements (4 credits)
BME Elective (3 credits)	BME 3400: Biosystems Analysis or ECE 3101: Signals & Systems (3 credits)	BME 3400: Biosystem Analysis or ECE 3101: Signals & Systems (3 credits)	BME 3600: Biomechanics (4 credits)
CE 2120: Applied Mechanics II (3 credits)	ECE 3201: Electronic Circuit Design & Analysis or CSE 2301: Principles and Practice of Digital Logic Design (4 credits)	MCB 2210: Cell Biology (3 credits)	BME 3400: Biosystem Analysis or ECE 3101: Signals & Systems (3 credits)
CE 3110: Mechanics of Materials (3 credits)	STAT 3965 or MATH 3170: Elementary Stochastic Processes (3 credits)	MCB 2400: Human Genetics or MCB 2410: Genetics (3 credits)	PHIL 1104: Philosophy & Social Ethics (CA 1) (3 credits)
Gen Ed (3 credits)	Gen Ed (3 credits)	STAT 3965 or MATH 3170: Elementary Stochastic Processes (3 credits)	Gen Ed (3 credits)
		Gen Ed (3 credits)	
16 credits	17 credits	18 credits	17 credits

PLEASE NOTE: Courses/credits listed on this sheet may not include all credits on your transcript; only courses that meet graduation requirements are indicated. It is the student's responsibility to ensure they are fulfilling all graduation requirements, including total # of credits to graduate.