

BME UNDERGRADUATE CURRICULUM
Cellular & Tissue

FRESHMAN	units		units		units
Fall		Winter		Spring	
MAT 21A Calculus	4	MAT 21B Calculus	4	MAT 21C Calculus	4
CHE 2A General Chemistry	5	CHE 2B General Chemistry	5	CHE 2C General Chemistry	5
BIM 1 Intro to BME	2	BIS 2A Intro to Biology	5	PHY 9A Classical Physics	5
Lower Division Composition	4	GE elective		GE elective	
SOPHOMORE					
Fall		Winter		Spring	
MAT 21D Vector Analysis	4	MAT 22A or MAT 27A Linear Algebra	3/4	MAT 22B or MAT 27B Differential Equations	3/4
CHE 8A or CHE 118A Organic Chemistry	2/4	CHE 8B or CHE 118B Organic Chemistry	4	BIM 20 Fundamentals of Bioengineering	4
PHY 9B Classical Physics	5	PHY 9C Classical Physics	5	BIM 20L Graphics Design for BME	2
ENG 6 Eng. Problem Solving	4	GE elective		ENG 17/17V Circuits I	4
JUNIOR					
Fall		Winter		Spring	
BIM 105 Probability & Data Science for BME	4	BIM 106 Biotransport Phenomena	4	BIM 108 Biomedical Signals & Control	4
BIM 116/NPB 101 Physiology	5	BIM 107 Mfg Processes for BME	2	BIM 109 Biomaterials	4
SE: BIM 161A(odd)** or BIS 102 Biomolecular Engineering or Biochemistry	4/3	ENG 100 Electronic Circuits & Systems or EEC 100 Circuits II	3/5	EE: BIM 140 Protein Engineering	4
Upper Division Composition Course=4 units, Exam=0 units	4/0	EE: ENG 35 Statics	4	GE elective	
SENIOR					
Fall		Winter		Spring	
BIM 110A BME Senior Design	3	BIM 110B BME Senior Design	3	BIM 110C BME Senior Design	3
BIM 111 Biomedical Instrumentation Lab	6	ENG 105 Thermodynamics	4	ENG 190 Professional Responsibilities of Engineers	3
EE: BIM 162 Intro to the Biophysics of Molecules & Cells	4	EE: BIM 141 Cell & Tissue Mechanics	4	EE: BIM 163 Bioelectricity, Biomechanics & Signaling Systems	4
SE: BIM 161A(odd)** or BIS 102 Biomolecular Engineering or Biochemistry	4/3	GE elective		GE elective GE elective	

**BIM 161A Biomolecular Engineering (odd years)

Other courses: EE - BIM Skills Modules – 172 Neuroengineering Lab, 174 Microcontrollers Lab,
177 Rapid Prototyping, BIM 178 Cell Culture Lab

June 2024