

BME UNDERGRADUATE CURRICULUM

Medical Devices

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 Organic Chemistry	4	BIM 20 Fundamentals of Bioengineering	4
PHY 9B Classical Physics	5	PHY 9C Classical Physics	5	BIM 020L Graphics Design for BME	2
ENG 6 Eng. Problem Solving	4	GE elective		ENG 17/ENG 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: ECS 32A Intro to Programming	4	ENG 100 Electronic Circuits & Systems or EEC 100 Circuits II	3/5	EE: ENG 35 Statics	4
Upper Division Composition Course=4 units, Exam=0 units	4/0	SE: ECS 32B Intro to Data Structures	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	EE: ENG 102 Dynamics	4	EE: ENG 104 Mechanics of Materials	4
EE: BIM 171 Clinical Applications for Biomedical Device Design	4	EE: BIM 177 Intro to Rapid Prototyping	2	ENG 105 Thermodynamics	4
BIM 174 Microcontrollers or BIM 170 Aspects of Medical Device Design & Mfg	2	GE elective		ENG 190 Professional Responsibilities of Engineers	3
		GE elective		GE elective	

Other courses: BIM 155 Machine Learning for BME

EE - BIM Skills Modules – 172 Neuroengineering Lab, 174 Microcontrollers Lab,
BIM 177 Rapid Prototyping, BIM 189C Cell Culture Lab