

Quarter	Biomaterials and Tissue Engineering Track	Category (Credit)	
	Course		<i>Engrg credit</i>
1 st Year Fall	Hum 101, Eng Composition I		
	Physics, Physics 111, Physics I		
	Physics, Physics 111A, Physics Lab		
	Physics, Physics 111W, Physics Workshop		
	Chemistry, Chem 125, General Chemistry I		
	Math, Math 111, Calculus I		
	FED, Fundamentals of Eng Design		2.00
	Biomedical Engr, BME 105, Intro to Human Physiology		
1 st Year Spring	Hum 102, Eng Composition II		
	Physics, Phys 121, Physics II		
	Physics 121A Physics II Laboratory		
	Chemistry, Chem 124, Gen Chem Lab		
	Chemistry, Chem 126, Gen Chem II		
	Computer Science, CS 101, Computer Programming and Problems Solving		
	Math, Math 112, Calculus II		
	Biomedical Engineering, BME 106, Introduction to Human Physiology II		

2 nd Year, Fall			
	History, History 2xx – Communication, Cultural History		
	Biomedical Engineering, BME 301, Intro to BME I , Electrical Foundations		3.00
	Biomedical Engineering, BME 302, Intro to BME II, Mechanical Foundations		3.00
	Biomedical Engineering, BME 303, Biological and Chemical Found of Biomed Engr.		
	Math, Math 211, Calculus III		
	Math 225, Math 279 or Math 333 Probability and Statistics		
2 nd Year Spring	Humanities, Basic Social Science		
	Biomedical Engr, BME 310, Biomedical Computing		3.00
	Chemistry, Chem 243, Organic Chemistry		
	Math, Math 337, Linear Algebra		
	Math , Math 222, Differential Equations		
	Physical Education		
3 rd Year, Fall	Basic Social Science		
	Chemical Engineering, ChE 210, Chemical Process Calculations I		2.00
	Civil Engineering, Mech 320, Statics and Strength of Materials		3.00

3 rd Year, Spring	Material Science and Engineering, MTSE 301, Principles of Material Science and Engineering		3.00
	Chemistry, Chem 244, Organic Chemistry II		
	Physical Education		
	Open Elective in Humanities and Soc Sci		
	Biomedical Engineering, BME 382, Engineering Models of Physiology II		3.00
	Biomedical Engineering, BME 420, Biomaterials and Compatibility		3.00
	Chemical Engineering, ChE 230, Chemical Engineering Thermodynamics I		3.00
	BME 385 - Cell and Biomaterial Engineering Lab		3.00
4 th Year, Fall	Management, Mngmt 390, Principles of Management		
	Biomedical Engineering, BME 495, Capstone Design I		3.00
	Biomedical Engineering, BME 430, Fundamentals of Tissue Engineering		3.00
	Biomedical Engineering, BME 381, Engineering Models of Physiology I		3.00
	Biomaterials Engineering Track Elective		3.00
	Biomaterials Track Elective		
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4 th Year, Spring	Humanities/Social Science, Capstone Seminar		

Humanities, Literature, History, Philosophy STS, History		
Biomedical Engineering, BME 496, Capstone Design II		3.00
Biomedical Engineering, BME 422, Biomaterials Characterization		3.00
Biomedical Engineering, BME 427, Biotransport		3.00
	0.00	52.00

Biomaterials Approved Electives

Sci/Math Engrg

	Sci/Math	Engrg
Optical Science and Engineering, OPSE 301, Introduction to Optical Science & Engineering	3 credits	
Math 3xx or 4xx With approval ; No Math 371 or Math 346	3 credits	
Optical Science and Engineering, OPSE 410, Biophotonics		3 credits
Biomedical Engineering, BME 383, Engineering Physiology Lab		3 credits
Biomedical Engineering, BME 384, Experimental Procedures in Biomech		3 credits
Biomedical Engineering, BME 479, BioMicroElectroMechanical Systems		3 credits
Industrial Engineering, IE 355, Human Factors		3 credits
Industrial Engineering, IE 449, Industrial Robotics		3 credits
Biomedical Engineering, BME 351, Introduction to Biofluid Mechanics		3 credits
Biomedical Engineering, BME 451, Biomechanics I		3 credits
Biomedical Engineering, BME 452, Biomechanics II		3 credits

Biomedical Engineering, BME 478, Introduction to CAD for Biomechanics		3 credits
Biomedical Engineering, BME 491, BME Research and Independent Study I		3 credits
Biomedical Engineering, BME 492, BME Research and Independent Study II		3 credits

The following graduate courses are also accepted, with Approval. These courses can also be applied to the BS/MS program for qualified students

BME 667 - SYSTEMS STUDY IN BIOENGINEERING 3 credits

BME 669 - ENGINEERING PHYSIOLOGY 3 credits

BME 670 - INTRO TO BIOMECH ENGR 3 credits

BME 671 - BIOMECH OF HUM STR MOTN 3 credits

BME 672 - BIOMATERIALS 3 credits

BME 698 - ST:ADV CAD FOR ORTHOPEDIC DEVICE 3 credits

BME 698 - ST:ADV CHARACTERIZTN OF BIOMATER 3 credits

BME 698 - ST:CAD FOR BIOMECH & BIOMATERIAL 3 credits

BME 698 - ST:INSTRUMENTATION PHYSIO MEASUR 3 credits

BME 698 - ST:INTRO TO BIOMEMS & MICROFLUID 3 credits

BME 698 - ST:MEDICAL DEVICE DESIGN 3 credits

BME 698 - ST:MEDICAL IMAGING 3 credits

BME 698 - ST:NEUROMUSCULAR
ENGINEERING

3
credits

BME 651 - PRINCIPLES OF TISSUE
ENGINEERING

3
credits

BME 661 - NEURAL ENGINEERING

BME 687 - MEDICAL INSTRUMENTATION 3 credits

BME 698 - ST:BIOMEDICAL SIGNAL PROC & ACQ 3 credits

BME 698 - ST:BIOMEMS DESIGN & RESEARCH 3 credits

BME 698 - ST:BIOROBOTICS 3 credits

BME 698 - ST:CARDIOVASCULAR MECHANICS 3 credits

BME 698 - ST:CELL & MOLECULAR TISSUE ENGR 3 credits

BME 698 - ST:EXPERIMENTAL DESIGN 3 credits

BME 698 - ST:INTRO COMPUTATIONAL BIOMECH 3 credits

BME 698 - ST:INTRO TO CAD-ORTHOPEDIC DEVIC 3 credits

BME 698 - ST:MEDICAL IMAGE INST & PROCESS 3 credits

BME 698 - ST:MODELING PHYSIOLOGICAL SYSTEM 3 credits

BME 698 - ST:ORTHOPEDIC MEDICAL DEVICES 3 credits

BME 698 - ST:SEM NEUROMUSCULAR REHAB 3 credits

BME 698 - ST:VIRTUAL BIOMED INSTRUMENTS 3 credits