

Biomedical Engineering – Program Map:

Biomechanics & Biomaterials (Musculoskeletal or Materials)

Semester	Course 1	Course 2	Course 3	Course 4	Course 5	Seminar
1	Principles Chem I / Lab CHEM:1110 <i>(Math & Science)</i>	Engr Calculus I MATH:1550 <i>(Math & Science)</i>	Intro Engineering Problem Solving ENGR:1100 <i>(Engineering Core)</i>	Rhetoric RHET:1030 <i>(Gen Ed)</i>	—	
2	Principles Chem II / Lab CHEM:1120 <i>(Math & Science)</i>	Engr Calculus II MATH:1560 <i>(Math & Science)</i>	Engr Matrix Algebra MATH:2550 <i>(Math & Science)</i>	Physics I / Lab PHYS:1611 <i>(Math & Science)</i>	Intro Engr Computing ENGR:1300 <i>(Engineering Core)</i>	BME Forum BME:1010
3	Foundations of Biology / Lab BIOL:1411 <i>(Math & Science)</i>	Engr Diff Equations MATH:2560 <i>(Math & Science)</i>	Statics ENGR:2110 <i>(Required Engineering)</i>	Electrical Circuits ENGR:2120 <i>(Required Engineering)</i>	Thermodynamics ENGR:2130 <i>(Required Engineering)</i>	BME Prof Seminar BME:2010
4	Fund Human Physiology HHP:2400 or BME:3260 Quantitative Physiology <i>(Math & Science)</i>	Biostatistics BIOS:4120 or STAT:3510 <i>(Math & Science)</i>	Systems, Instrum, & Data Acquisition / Lab BME:2200 <i>(Biomedical Core)</i>	Biomaterials & Biomechanics / Lab BME:2500 <i>(Biomedical Core)</i>	Dynamics ENGR:2710 <i>(Focus Area Required)</i>	
5	Cell & Tissue Engineering Fundamental / Lab BME:2400 <i>(Biomedical Core)</i>	Bioimaging & Bioinformatics / Lab BME:2210 <i>(Biomedical Core)</i>	Mech Def Bodies ENGR:2750 <i>(Focus Area Required)</i>	Materials Science ENGR:2720 <i>(Focus Area Required)</i>	Cultural Perspectives, Values, & Society <i>(Gen Ed)</i>	
6	Physics II / Lab PHYS:1612 <i>(Math & Science)</i>	Cell Material Interactions BME:5421 <i>(Focus Area Elective)</i>	Biotransport BME:5430 <i>(Focus Area Elective)</i>	Fluid Mechanics ENGR:2510 <i>(Focus Area Required)</i>	Be Creative <i>(Gen Ed)</i>	
7	BME Senior Design I BME:4910 <i>(BME Core)</i>	Numerical & Stat Methods for Bioengr BME:5441 or BME:5101 Biomats & Implant Design <i>(Focus Area Elective)</i>	Musculoskeletal Biomechanics BME:5610 <i>(Focus Area Elective)</i>	Engr Drawing, Design, & Solid Modeling BME:2710 <i>(Focus Area Elective)</i>	Approved Gen Ed course	
8	BME Senior Design II BME:4920 <i>(BME Core)</i>	Kinetics of Musculoskeletal Syst BME:5630 <i>(Focus Area Elective)</i>	Biomedical Micro Devices & Systems BME:5460 <i>(Focus Area Elective)</i>	Approved Gen Ed course	Approved Gen Ed course	

At least two Focus Area Electives must be from the list of Engineering Topics.