

Biomedical Engineering – Example Program Map

Biomechanics & Biomaterials (Prosthetics* or Implants/Devices)

Semester 1	Chem I / Lab CHEM:1110	Engr Math I MATH:1550	Intro Engr Prob Solving ENGR:1100	Rhetoric RHET:1030	Engr Success First Year ENGR:1000	
Semester 2	Chem II / Lab CHEM:1120	Engr Math II MATH:1560	Engr Math III MATH:2550	Physics I / Lab PHYS:1611	Intro Engr Computing ENGR:1300	BME Forum BME:1010
Semester 3	Foundations of Biology / Lab BIOL:1411	Engr Math IV MATH:2560	Statics ENGR:2110	Human Anatomy HHP:1100	Elec Circuits ENGR:2120	BME Prof Seminar BME:2010
Semester 4	*Human Physiology HHP:3500 or BME:2260 Quantitative Physiology	Biostatistics BIOS:4120 or STAT:3510	Systems, Instrum, & Data Acquisition / Lab BME:2200	Biomaterials & Biomechanics / Lab BME:2500	Dynamics ENGR:2710	
Semester 5	Bioimaging & Bioinformatics / Lab BME:2210	Cell Biology for Engr / Lab BME:2400	Mech Def Bodies ENGR:2750	Engr Drawing, Design, & Solid Modeling BME:2710	Cultural Perspectives, Values, and Society	
Semester 6	Thermodynamics ENGR:2130	Physics II / Lab PHYS:1612	Med Device Design Fundamentals BME:3710	Materials Science ENGR:2720	Approved GEC course (recommended: Elementary Psych PSY:1001)	
Semester 7	BME Senior Design I BME:4910	Biomaterials & Implant Design BME:5101	Med Device Design Studio BME:4710	Fluid Mechanics ENGR:2510	Be Creative	
Semester 8	BME Senior Design II BME:4920	Cell Material Interactions BME:5421 or Intro to Applied Biomed FE Modeling BME:5620	Advanced Med Device Design Studio BME:5715	Approved GEC course	Approved GEC course	

Math & Science Courses	Required Engineering Courses	Focus Area Required Courses	General Education Courses
Engineering Core Courses	Biomedical Core Courses	Focus Area Elective Courses	Seminars

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

*** Different focus area electives may be recommended for students pursuing a MS in Prosthetics & Orthotics**

Last updated 10/11/24