

# Biomedical Engineering – Example Program Map

## Cellular Engineering (Mechanobiology)

<b>Semester 1</b>	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	
<b>Semester 2</b>	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
<b>Semester 3</b>	Foundations of Biology / Lab BIOL:1411	Engr Math IV MATH:2560	Statics ENGR:2110	Elec Circuits ENGR:2120	Thermodynamics ENGR:2130	BME Prof Seminar BME:2010
<b>Semester 4</b>	Human Physiology HHP:3500 or BME:2260 Quantitative Physiology	Biostatistics BIOS:4120 or STAT:3510	Bioimaging & Bioinformatics / Lab BME:2210	Cell Biology for Engr / Lab BME:2400	Mech Def Bodies ENGR:2750	
<b>Semester 5</b>	Systems, Instrum, & Data Acquisition / Lab BME:2200	Biomaterials & Biomechanics / Lab BME:2500	Materials Science ENGR:2720	Dynamics ENGR:2710	Cultural Perspectives, Values, and Society	
<b>Semester 6</b>	Biofabrication for Tissue Engr BME:5431	Fluid Mechanics ENGR:2510	Cell Material Interactions BME:5421	Any required focus area course from the other BME focus areas	Be Creative	
<b>Semester 7</b>	BME Senior Design I BME:4910	Stem Cells in Regenerative Engr BME:5445	Biomedical Micro Devices & Systems BME:5460	Biotransport BME:5430	Approved GEC course	
<b>Semester 8</b>	BME Senior Design II BME:4920	Research Methods in Cellular Engr BME:5451	Physics II / Lab PHYS:1612	Approved GEC course	Approved GEC course	

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| <span style="color: green;">■</span> Math & Science Courses    | <span style="color: cyan;">■</span> Required Engineering Courses | <span style="color: blue;">■</span> Focus Area Required Courses | <span style="color: orange;">■</span> General Education Courses |
| <span style="color: purple;">■</span> Engineering Core Courses | <span style="color: yellow;">■</span> Biomedical Core Courses    | <span style="color: pink;">■</span> Focus Area Elective Courses | <span style="border: 1px solid black;">□</span> Seminars        |

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

**Last updated 10/11/24**