

# Biomedical Engineering – Example Program Map

## Cellular Engineering (Pre-Medicine)

<b>Semester 1</b>	Chem I / Lab CHEM:1110	Engr Calc 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 Calc II MATH:1560	Engr Matrix Alg 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 Diff Equat MATH:2560	Statics ENGR:2110	Elec Circuits ENGR:2120	Organic Chem I CHEM:2210	BME Prof Seminar BME:2010
<b>Semester 4</b>	Fund Human Physiology HHP:2400 or Quantitative Physiology BME:2260	Biostatistics BIOS:4120 or STAT:3510	Bioimaging & Bioinformatics / Lab BME:2210	Cell Biology for Engr / Lab BME:2400	Organic Chem II CHEM:2220	
<b>Semester 5</b>	Systems, Instrum, & Data Acquisition / Lab BME:2200	Biomaterials & Biomechanics / Lab BME:2500	Organic Chem Lab CHEM:2410	Mech Def Bodies ENGR:2750	Cultural Perspectives, Values, and Society	
<b>Semester 6</b>	Thermodynamics ENGR:2130	Biochemistry BMB:3110	Physics II / Lab PHYS:1612	Any required focus area course from the other BME focus areas	Cell Material Interactions BME:5421	
<b>Semester 7</b>	BME Senior Design I BME:4910	Focus Area Elective #1 (Engr Topic)	Focus Area Elective #2 (Engr Topic)	Biotransport BME:5430	Be Creative	
<b>Semester 8</b>	BME Senior Design II BME:4920	Focus Area Elective #3	Approved GEC course	Approved GEC course	Approved GEC course	

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|--------------------------|------------------------------|-----------------------------|---------------------------|
| 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.**

**Pre-med students should meet with their pre-med advisor to discuss additional non-engineering coursework (such as PSY:1001 and SOC:1010) that may be required/recommended.**

**Last updated 01/27/25**