

Biomedical Engineering – Example Program Map

Computational Bioengineering (Pre-Medicine)

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|-------------------|--|--|--|--|---|---------------------------------|
| Semester 1 | 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 | |
| Semester 2 | 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 |
| Semester 3 | 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 |
| Semester 4 | 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 | |
| Semester 5 | Systems, Instrum, & Data Acquisition / Lab BME:2200 | Biomaterials & Biomechanics / Lab BME:2500 | Organic Chem Lab CHEM:2410 | Computational Biochemistry BME:4310 | Intro to AI & Mach Learning ENGR:3110 | |
| Semester 6 | Focus Area Elective #1 (Engr Topic) | Biochemistry BMB:3110 | Comp in Engr ENGR:2730 | Physics II / Lab PHYS:1612 | Computational Bioinformatics BME:5335 | |
| Semester 7 | BME Senior Design I BME:4910 | Intro to Software Design ECE:3330 | Focus Area Elective #2 (Engr Topic) | Cultural Perspectives, Values, and Society | Approved GEC course | |
| Semester 8 | BME Senior Design II BME:4920 | Focus Area Elective #3 | Approved GEC course | Be Creative | 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