

BME UNDERGRADUATE CURRICULUM

Cellular & Tissue

| FRESHMAN | units | | units | | units |
|--|--------------|--|--------------|--|--------------|
| Fall | | Winter | | Spring | |
| MAT 21A Calculus | 4 | MAT 21B Calculus | 4 | MAT 21C Calculus | 4 |
| CHE 2A General Chemistry | 5 | CHE 2B General Chemistry | 5 | CHE 2C General Chemistry | 5 |
| BIM 1 Intro to BME | 2 | BIS 2A Intro to Biology | 5 | PHY 9A Classical Physics | 5 |
| Lower Division Composition | 4 | GE elective | | GE elective | |
| | | | | | |
| SOPHOMORE | | | | | |
| Fall | | Winter | | Spring | |
| MAT 21D Vector Analysis | 4 | MAT 22A Linear Algebra | 3 | MAT 22B Differential Equations | 3 |
| CHE 8A Organic Chemistry | 2 | CHE 8B Organic Chemistry | 4 | BIM 20 Fundamentals of Bioengineering | 4 |
| PHY 9B Classical Physics | 5 | PHY 9C Classical Physics | 5 | BIM 089C/20L* CAD for BME | 2 |
| ENG 6 MATLAB | 4 | EE: ENG 35 Statics | 4 | ENG 17 Circuits I | 4 |
| | | | | | |
| JUNIOR | | | | | |
| Fall | | Winter | | Spring | |
| BIM 105 Probability and Stats for BME | 4 | BIM 106 Biotransport | 4 | BIM 108 Biomedical Signals and Control | 4 |
| BIM 116 Physiology | 5 | ENG 100 Circuits II | 3 | BIM 109 Biomaterials | 4 |
| SE: BIM 102 or 161A(odd)** or BIS 102 Cellular Dynamics or Biomolecular Engineering or Biochemistry | | EE: BIM 141 Cell & Tissue Mechanics | 4 | EE: BIM 140 Protein Engineering | 4 |
| Upper Division Composition Course=4 units, Exam=0 units | 4/0 | GE elective GE elective | | GE elective | |
| | | | | | |
| SENIOR | | | | | |
| Fall | | Winter | | Spring | |
| BIM 110L BME Senior Design Lab | 2 | BIM 110A BME Senior Design | 3 | BIM 110B BME Senior Design | 3 |
| BIM 111 Biomedical Instrumentation Lab | 6 | ENG 105 Thermodynamics | 4 | ENG 190 Professional Responsibility Engineers | 3 |
| EE: BIM 173 Cell and Tissue Engineering or BIM 162 Biophysics Molecules/Cells | | EE: BIM 145 Immuno- engineering or BIM 120 Intro to Materials Science for BME | 4 | EE: BIM 163 Bioelectricity, Biomechanics and Signaling Systems or BIM 167 Biomedical Fluid Mechanics | 4 |
| SE: BIM 102 or 161A(odd)** or BIS 102 Cellular Dynamics or Biomolecular Engineering or Biochemistry | | GE elective | | GE elective | |

*BIM 089C/BIM 20L must be taken concurrently with BIM 20

**BIM 161A Biomolecular Engineering (odd years)

Other courses: EE - BIM Skills Modules – 174 Microcontrollers, 189C/175 Metalworking, 176 Microfluidics, 189C Neuroengineering, 189C Rapid Prototyping.

September 2019