### Fall Year 1 (16 hrs)
- **MATH 221 (4)** Calculus I
- **ENG 100 (0)** Engineering Lecture
- **BIOE 199/100 (1)** Undergraduate Seminar
- **RHET 105 (4)** Principles of Composition
- **CHEM 102 (3)** General Chemistry I
- **CHEM 103 (1)** General Chem Lab I
- **SS/Hum (3)**
- **Fall Year 4 (14/17 hrs)**
  - **BIOE 435 (2)** Sr. Design I
  - **BIOE 436 (2)** Sr. Design II

### Spring Year 1 (16 hrs)
- **MATH 231 (3)** Calculus II
- **PHYS 211 (4)** Univ Physics, Mechanics
- **BIOE 120 (1)** Introduction to Bioengineering
- **MCB 150 (4)** Molec&Cellular Basis of Life
- **CHEM 104 (3)** General Chemistry II
- **CHEM 105 (1)** General Chem Lab II
- **SS/Hum (3)**

### Fall Year 2 (17 hrs)
- **MATH 241 (4)** Calculus III
- **PHYS 212 (4)** Univ Physics, Elec & Mag
- **CS 101 (3)** Intro to Comp
- **BIOE 201 (3)** Conservation Princ Bioeng
- **BIOE 206 (3)** Cellular Bioengineering
- **BIOE 200 (1)** BIOE Career Immersion
- **BIOE 198 (2)** Biomedical Data Analysis
- **BIOE 298 AMS (1)** Career Ecosystems

### Spring Year 2 (18 hrs)
- **MATH 285 (3)** Intro Diff Eq
- **BIOE 205 (3)** Systems in Bioengineering
- **BIOE 210 (3)** Linear Algebra for Biomedical Data Science
- **CHEM 232 (4)** Organic Chemistry I
- **BIOE 298 AMS (1)** Career Ecosystems
- **SS/Hum (3)**

### Fall Year 3 (17 hrs)
- **MATH 285 (3)** Intro Diff Eq
- **BIOE 476 (3)** Tissue Engineering
- **BIOE 202 (2)** Cell & Tissue Engineering Lab
- **CHEM 232 (4)** Organic Chemistry I
- **BIOE 303 (2)** Quant Human Physiology Lab
- **Track Elec (3)**
- **SS/Hum (3)**

### Spring Year 3 (14 hrs)
- **BIOE 476 (3)** Tissue Engineering
- **BIOE 202 (2)** Cell & Tissue Engineering Lab
- **CHEM 232 (4)** Organic Chemistry I
- **BIOE 303 (2)** Quant Human Physiology Lab
- **Track Elec (3)**
- **SS/Hum (3)**

### Fall Year 4 (14/17 hrs)
- **BIOE 310 (3)** Comp Tools for Bio Data
- **BIOE 360 (3)** Transport & Flow in Bioengineering
- **BIOE 414 (3)** Biomedical Instrumentation
- **BIOE 435 (2)** Sr. Design I
- **BIOE 436 (2)** Sr. Design II
- **Free Elec (3)**
- **Track Elec (3)**
- **SS/Hum (3)**

**Cell & Tissue Track Electives:**
- **BIOE 306 – Biofabrication Lab (3 hr)
- **BIOE 416 – Biosensors (3 hr)
- **BIOE 424 – Systems Bioengineering (3 hr)
- **BIOE 430 – Intro to Synthetic Biology (3 hr)
- **BIOE 460 – Gene Editing Lab (3 hr)
- **BIOE 461 – Cellular Biomechanics (4 hr)
- **BIOE 487 – Stem Cell Bioengineering (3 hr)
- **BIOE 498 JI – Finite Element Mthds in Biomed (3 hr)
- **MSE 404 – LabStudies in MatSE (Biomaterials) (1.5 hr each)
- **MSE 470 – Design and Use of Biomaterial (3 hr)
- **MSE 474 – Biomaterials and Nanomedicine (3 hr)

**Courses with dashed line borders are not currently required as part of the Core BIOE Curriculum; updated 10/2018

**Note:** These classes have prerequisites. Please make sure you have met all before taking the course.**

**Note – not taking courses as advised may result in a delayed graduation date. Students are responsible for any impact resulting from not following departmental advising.**

**If outlined in RED then the BIOE course is offered both Fall & Spring Semesters**

**BIOE 498 WD counts only if taken in FA 2017.**