FIRST TWO YEARS – ALL STUDENTS

Fresh Fall
- BME 101 Introduction to Biomedical Engineering
- MTH 161 Calculus I
- CHM 131 Chemistry I
- Primary Writing or Humanities/Social Science

Fresh Spring
- Primary Writing or Humanities/Social Science
- MTH 162 Calculus II
- CHM 132 Chemistry II
- PHY 121 Physics I Mechanics

Soph Fall
- BME 201 & 201L Biomechanics & MATLAB
- MTH 165 Multidimensional Calculus
- BIO 110 Biology
- PHY 122 Physics II Electricity & Magnetism

Soph Spring
- BME 210 Biomechanics & Circuits
- Multidimensional Calculus
- ME 226 Solid Mechanics
- PHY 122 Physics II Electricity & Magnetism

Junior Fall
- BME 230 Intro to Signals & Imaging
- Basic Science Elective (Free Elective for Cell & Tissue – see Fall Sr year)
- ME 123 Thermodynamics
- BME 228 Physiological Control Systems

Junior Spring
- BME 221/099 Lab Biomedical Computation & Statistics
- BME 245/099 Lab Biomaterials
- Basic Science Elective
- Basic Science Elective

Senior Fall
- BME295 Design Seminar
- BME 260 Quantitative Physiology
- ME 225 Fluid Dynamics
- Humanities/Social Science

Senior Spring
- BME296 Senior Design Project
- Humanities/Social Science
- Elective
- Elective

CONCENTRATIONS:

BIOMECHANICS
- MTH 164 Multidimensional Calculus
- Humanities/Social Science
- ME 226 Solid Mechanics

BIOSIGNALS & BIOSYSTEMS
- BME 230 Intro to Signals & Imaging
- BME 228 Physiological Control Systems
- ECE 230 Electromagnetic Waves
- ECE 246 Digital Signal Processing

CELL & TISSUE ENGR
- BME 222/099 Lab Biomedical Computation & Statistics
- BME 245/099 Lab Biomaterials
- Basic Science Elective
- Basic Science Elective

MEDICAL OPTICS
- BME 101 Introduction to Biomedical Engineering
- CHM 131 Chemistry I
- Primary Writing or Humanities/Social Science

Humanities/Social Science
- WRT 273* Prof Writing
- Humanities/Social Science
- Basic Science Elective
- Elective

Basic Science
- BME CORE
- Basic Science & Math
- Humanities/Social Science
- Basic Science Electives

Electives
- Concentration
- Electives

Color Code:
- BME
- CORE
- Basic Science
- Humanities/Social Science
- Writing
- Electives

† An alternative to the MTH 161 and 162 sequence is the MTH 141, 142, and 143 sequence. Careful attention
must be paid to the effects of this longer sequence, including the possible need to take a course in the
summer following the first year. MTH 171-4 series also fulfills the Math requirements.
†† MTH 164 may be taken before MTH 165 – both courses are taught Fall & Spring.

All students must complete at least three additional BASIC SCIENCE ELECTIVES (at least 12 credit hours)
beyond BIO 110, CHM 131 & 132, and PHY 121/141 & 122/142. Any biology, microbiology, neuroscience,
chemistry, or physics course with number greater than 109 may be used to fulfill this requirement (excluding
BIO 111, 112, 113). At least two courses must be life science courses (i.e., biology, microbiology,
neuroscience). BME/BIO 258 fulfills a life science with a lab. Independent study courses cannot be used
to satisfy this requirement. At least one Basic Science elective must have a lab component.

For list of Upper-Level BME’s for each concentration, see Curriculum Guide.

Three of the four required Humanities/Social Science courses must form a CLUSTER.
WRT 273 is required for Classes ≥ 2018.
All Pre-requisites for each course are provided with the course description on the Registrar’s website.