# A Suggested Course Plan for: Biomedical Engineering

## First Year

### Fall Semester
- **BME 101 or GE B**
- **WRIT 150**
- **MATH 125 (GE F)**
- **CHEM 105aL (GE E)**
- **ENGR 102**

### Spring Semester
- **BME 101 or GE B**
- **GE A**
- **MATH 126 or MATH 129**
- **CHEM 105bL**
- **OPTIONAL ELECTIVE**

## Second Year

### Fall Semester
- **GE B**
- **GE C**
- **MATH 226 or MATH 229**
- **PHYS 151L (GE E)**
- **OPTIONAL ELECTIVE**

### Spring Semester
- **BISC 220L (GE D)**
- **BME 210**
- **MATH 245**
- **PHYS 152L**
- **OPTIONAL ELECTIVE**

## Third Year

### Fall Semester
- **WRIT 340**
- **EE 202L**
- **BME 423**
- **CHEM 322aL**
- **OPTIONAL ELECTIVE**

### Spring Semester
- **BME 302L**
- **GE C**
- **CHEM 322bL**
- **OPTIONAL ELECTIVE**

## Fourth Year

### Fall Semester
- **BME 402**
- **BME 403**
- **BME 425**
- **EE 301L**
- **OPTIONAL ELECTIVE**

### Spring Semester
- **BME 405L**
- **BME 410**
- **OPTIONAL ELECTIVE**

## Mathematics (16 Units)
- **MATH 125:** Calculus I
- **MATH 126 or 129:** Calculus II
- **MATH 226 or 229:** Calculus III
- **MATH 245:** Mathematics of Physics and Engr.

## Physics (8 Units)
- **PHYS 151L:** Mechanics and Thermodynamics
- **PHYS 152L:** Electricity and Magnetism

## Chemistry (16 Units)
- **CHEM 105AL:** General Chemistry
- **CHEM 105BL:** General Chemistry
- **CHEM 322AL:** Organic Chemistry
- **CHEM 322BL:** Organic Chemistry

## Biology (8 Units)
- **BISC 220L:** Cell Biology & Physiology
- **BISC 320L:** Molecular Biology

## General Education (32 Units)
- **GE A:** The Arts (1 Course)
- **GE B:** Humanistic Inquiry (2 Courses)
- **GE C:** Social Analysis (2 Courses)
- **GE D:** Life Sciences (1 Course)
- **GE E:** Physical Sciences (1 Course)
- **GE F:** Quantitative Reasoning (1 Course)
- **GE G, H:** Global Perspectives (2 Courses)*
- **GESM:** General Education Seminar (1 Course)*

## Writing (7 Units)
- **WRIT 150:** Writing and Critical Reasoning
- **WRIT 340:** Advanced Writing

## Engineering (55 Units)
- **BME 101:** Intro. to Biomedical Engineering
- **BME 210:** Biomed. Comp. Simulation Methods
- **BME 302L:** Medical Electronics
- **BME 402:** Control & Comm. in Nerv. System
- **BME 403:** Physiological Systems
- **BME 405L:** Senior Projects: Meas. and Inst.
- **BME 410:** Intro. to Biomaterials & Tissue Engr.
- **BME 423:** Statistical Methods in BME
- **BME 425:** Intro. to Biomedical Imaging
- **EE 202L:** Linear Circuits
- **EE 301L:** Linear Systems

## Special Notes
- Courses with this symbol may be satisfied with AP, IB or A-Level exams. See page 17 for more information.
- GE: Engineering students are encouraged to satisfy GE G and GE H with a course that also satisfies a Core Literacy. GE H may be satisfied by exam. Additionally, your GESM course should be taken in categories A, B, C, or D only. See pp. 16-17 for more information and consult your advisor for detailed assistance.

## Optional Electives
- Consult with your academic advisor to explore optional elective courses. These courses are not required.

## Technical Electives
- All 10 units should be taken from ONE of the following four areas of specialization:
  - Bioelectronics/Computers: (BME 201, BME 416, BME 430, BME 451, BME 452, BME 453, CSCI 445, EE 105L, EE 209, EE 338, EE 348L, EE 352L, EE 354L, EE 454L, EE 483, ENGR 345 or 1TP 308) or Biomechanics: (AME 311, AME 324, AME 331, AME 392, AME 398 or 1TP 308, AME 308, BME 201, BME 404, BME 412, BME 414, BME 416, BME 453 or MASC 310) Biochemical Engineering: (BME 201, BME 412, BME 414, BME 430, BME 453, CHE 330, CHE 350, CHE 460L, CHE 489, ENGR 305, 1TP 308, or MASC 310)