# Biomedical (Electrical)

## 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
- ITP 165

## Second Year
### Fall Semester
- BISC 220L (GE D)
- GE C
- MATH 226 or MATH 229
- PHYS 151L (GE E)
- OPTIONAL ELECTIVE

### Spring Semester
- EE 109L
- BME 210 (MATH 120)
- MATH 245
- PHYS 152L
- OPTIONAL ELECTIVE

## Third Year
### Fall Semester
- EE 209L (MATH 120)
- BME 423
- MATH 445
- BME 416
- WRIT 340

### Spring Semester
- FIRST TRACK COURSE: EE 338 OR 354L
- GE B
- MATH 445
- BME 416
- TECHNICAL ELECTIVE

## Fourth Year
### Fall Semester
- BISC 320L
- CHEM 322aL
- BME 413
- BME 402
- OPTIONAL ELECTIVE

### Spring Semester
- GE C
- CHEM 322aL
- SECOND TRACK COURSE: EE 348L OR 454L
- BME 402
- OPTIONAL ELECTIVE

## Mathematics (20 Units)
- MATH 125: Calculus I
- MATH 126 or 129: Calculus II
- MATH 226 or 229: Calculus III
- MATH 245: Mathematics of Phys. and Engr. I
- MATH 445: Mathematics of Phys. and Engr. II

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

## Chemistry (12 Units)
- CHEM 105aL: General Chemistry
- CHEM 105bL: General Chemistry
- CHEM 322aL: 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 (60 Units)
- BME 101: Intro to Biomedical Engineering
- BME 210: Biomed. Comp. Simulation Methods
- BME 403L: Physiological Systems
- BME 403L: Senior Projects Measurements & Instrumentation
- BME 413: Bioengineering Signals & Systems
- BME 416: Development and Regulation of Medical Products
- BME 433: Statistical Methods in BME
- BME 452: Basics of Biomedical Imaging
- EE 109L: Introduction to Embedded Systems
- EE 209: Foundations of Digital System Design
- EE 202L: Linear Circuits
- ITP 165: Introduction to C++ Programming
- DIGITAL TRACK: EE 354L: Introduction to Digital Circuits
- & EE 454: Introduction to System on Chip
- ENGR 102: Engineering Freshman Academy

## Technical Electives

### 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 academic advisor for detailed assistance.

- **OPTIONAL ELECTIVES:** Consult with your academic advisor to explore optional elective courses. These courses are not required.

- **TECHNICAL ELECTIVES:** At least 4 units of engineering coursework, including at least two units of upper-division coursework.