Hub Electives: must include all Hub areas below to fulfill degree requirements

- 1. One unit Philosophical Inquiry & Life’s Meanings (PLM)
- 2. One unit Aesthetic Exploration (AEX)
- 3. One unit Historical Consciousness (HCO)
- 4. One unit Social Inquiry (SO1 or SO2)
- 5. One unit Individual & Community (IIC)
- 6. First unit Global Citizenship & Intercultural Literacy (GCI)
- 7. Second unit Global Citizenship & Intercultural Literacy (GCI)
- 8. One unit Ethical Reasoning (ETR)

Total of at least 16 credits

Notes
- Grey box = either semester
- = prerequisite; = corequisite
- Students planning to study abroad sophomore 2 should take EK 301 in sophomore 1.
- Premed students take CAS CH203/4 sophomore year and defer WR 150 and Hub elective.
- Students must complete 48 credits of upper-division program coursework (not including Hub or writing).
- See back for Hub Unit Legend
**REQUIREMENTS**

Biomedical Engineering majors are required to complete a minimum of 133 credits as detailed on the Program Planning Sheet on the other side of this page. **Pre-Med Majors** should consult with the BU Pre-Professional Advising Office and their ENG Faculty Advisors.

**HUB ELECTIVES**

All students are required to complete a total of 26 Hub units. Eighteen of these Hub units are included in courses required for the BME BS degree. The remaining eight Hub units must be satisfied through four (or more) Hub Electives that incorporate the following seven Hub areas: Philosophical Inquiry; Aesthetic Exploration; Historical Consciousness; Social Inquiry; Individual in Community; Ethical Reasoning; Global Citizenship & Intercultural Literacy (2X). Lists of courses that fulfill combinations of these Hub units are at: [www.bu.edu/eng/current-students/ugrad/requirements/hub-electives/](http://www.bu.edu/eng/current-students/ugrad/requirements/hub-electives/)

**CONTINUUMS & FIELDS IN BIOMEDICAL SYSTEMS ELECTIVE**

Biomedical Engineering majors complete one Continuum & Field Elective from the following:

- ENG BE 420 Introduction to Solid Biomechanics
- ENG BE 435 Transport Phenomena in Living Systems
- ENG BE 436 Fundamentals of Fluid Mechanics

**PROFESSIONAL ELECTIVES**

Biomedical Engineering majors complete two Professional Electives (8 credits) from the following:

All ENG BE, EC, EK, and ME 300, 400, and 500 level courses are suitable as a professional elective (except all directed study & directed research, BE 500, and courses with material that overlaps with requirements – see Notes below); directed study and BE 500 may be acceptable by petition.

CAS CH 203, CAS CH 204 and all CAS CH 300, 400 and 500 level courses (except: CAS CH 391, 392, 401, 402, 491, 492).

All CAS PY 300, 400, and 500 level courses (except PY 355, 371, 401, 402, 482, 491, 492).

All CAS MA 300, 400, and 500 level courses (except CAS MA 381, 401, 402, 581).

CAS BI 206, CAS BI 216 and all CAS BI 300, 400 and 500 level courses (except BI 315, 371, 391, 392)

- ENG ME 357 Intro to CAD (2 cr)
- ENG ME 358 Design & Manufacture (2 cr)
- QST SI 480 The Business of Technology Innovation
- QST SI 482 Technology & Its Commercialization

**ENGINEERING ELECTIVES**

Biomedical Engineering majors complete one Engineering Elective course from the following list:

- ENG BE 400 Biomedical Special Topics
- ENG BE 404 Advanced Controls
- ENG BE 420 Intro to Solid Biomechanics
- ENG BE 435 Transport Phenomena in Living Tissues
- ENG BE 436 Fundamentals Fluid Mechanics
- ENG BE 503 Comp Methods in Biomed
- ENG BE 508 Quant Studies Resp & Card Sys
- ENG BE 511 Biomedical Instrumentation
- ENG BE 521 Continuum Mechanics BME
- ENG BE 404 Biomedical Special Topics
- ENG BE 533 Biomechology
- ENG ME 302 Engineering Mechanics II
- ENG ME 305 Mechanics of Materials
- ENG ME 306 Materials Science
- ENG ME 309 Structural Materials
- ENG ME 419 Heat Transfer
- ENG EC 410 Intro to Electronics
- ENG EC 455 Electromagnetic Systems I
- ENG EC 471 Physics Semiconductors Devices
- ENG EC 505 Stochastic Processes
- ENG EC 402 Intro to Logic Design
- ENG EC 455 Electromagnetic Systems I
- ENG EC 471 Physics Semiconductors Devices
- ENG EC 402 Intro to Logic Design
- ENG EC 455 Electromagnetic Systems I

**BIOMEDICAL ENGINEERING ELECTIVES**

Biomedical Engineering majors complete two Biomedical Engineering Electives (8 credits) from the following:

All ENG BE 400 and 500 level courses (except BE 451, BE 452 & BE 500); BE 451, BE 500, and BE 600-level & 700-level courses may be acceptable by petition.

**BIOMEDICAL ENGINEERING DESIGN ELECTIVES**

Biomedical Engineering majors complete one Biomedical Engineering Design Elective from the following:

- ENG BE 428 Device Diagnostics & Design
- ENG BE 468 Clinical Applications of Biomedical Design

**Hub Unit Legend:**

QR1 = Quantitative Reasoning 1  
WRI = Writing, Research & Inquiry  
RIL = Research and Information Literacy

QR2 = Quantitative Reasoning 2  
WIN = Writing-Intensive Course  
TWC = Teamwork/Collaboration

SI1 = Scientific Reasoning 1  
OSC = Oral and/or Signed Communication  
CRI = Creativity/Innovation

SI2 = Scientific Reasoning 2  
DME = Digital/Multimedia Expression  
CRT = Critical Thinking

FYW = First-Year Writing Seminar

**Notes:**

For each of the following sets of courses, only one course can be taken for credit in each set due to the overlap of material:

1. ENG ME 403, ENG ME 404, ENG EC 402, ENG BE 404  
2. ENG ME 303, ENG BE 436  
3. ENG EC 102*, ENG EC 103, CAS MA 142, CAS MA 242  
4. ENG BE 403, ENG EC 401  
5. ENG ME 366*, ENG EC 381*, ENG EC 381, CAS MA 381, CAS MA 581  
6. ENG ME 460, ENG ME 560  
7. ENG EC 156*, ENG ME 358  
8. ENG ME 357, ENG ME 359*

*indicates course no longer offered.