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 151/2/3 and Hub elective.
- Students must complete 48 credits of upper-division program coursework (not including Hub or writing).
- See back for Hub Unit Legend

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

- 1. Philosophical Inquiry & Life’s Meanings (PLM)
- 2. Aesthetic Exploration (AEX)
- 3. Historical Consciousness (HCO)
- 4. Social Inquiry (SO1 or SO2)
- 5. Individual & Community (IIC)
- 6. First Global Citizenship & Intercultural Literacy (GCI)
- 7. Second Global Citizenship & Intercultural Literacy (GCI)
- 8. Ethical Reasoning (ETR)
- Total of at least 16 credits
REQUIREMENTS
Biomedical Engineering (BME) 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 requirements. Eighteen of these Hub requirements are incorporated into courses required for the BME BS degree. The remaining eight Hub requirements 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). Search for courses that fulfill specific combinations of Hub requirements at: https://www.bu.edu/phpbin/course-search/

CONTINUUM & FIELDS IN BIOMEDICAL SYSTEMS ELECTIVE
BME majors complete one Continua & Fields Elective (4 credits) 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
BME majors complete two Professional Electives (8 credits) from the following:
ENG ME 403, ENG ME 404, ENG EC 401, ENG BE 403
ENG EC 516 Digital Signal Processing
ENG EK 481 Nanomaterials & Nanotechnology

ENGINEERING ELECTIVES
BME majors complete one Engineering Elective course (4 credits) from the following list:
ENG BE 404 Advanced Controls
ENG BE 420 Intro to Solid Biomechanics
ENG BE 425 Intro to Biomedical Materials Science
ENG BE 435 Transport Phenomena in Living Systems
ENG BE 436 Fundamentals Fluid Mechanics
ENG BE 471 Quantitative Neuroscience
ENG BE 503 Comp Methods in Biomed
ENG BE 508 Quant Studies Resp & Card Sys
ENG BI 511 Biomedical Instrumentation
ENG BE 517 Optical Microscopy of Biological Mtrls
ENG BE 521 Continuum Mechanics BME
ENG BE 533 Biorheology
ENG BE 549 Struct & Function Extracell Matrix
ENG BE 552 Computational Synth Bio for Eng
ENG BE 553 Bioh代表团
ENG BE 556 Optical Spectroscopic Imaging
ENG BE 559 Foundations Biomed Data Sci & ML
ENG BE 567 Nonlinear Systems in BME
ENG BE 571 Intro to Neuroengineering
ENG BE 572 Neurotechnology Devices
ENG EC 317 Intro to Logic Design
ENG EC 320 Intro Software Engineering
ENG EC 410 Intro to Electronics
ENG EC 414 Intro to Machine Learning
ENG EC 471 Physics Semiconductor Devices
ENG EC 472 Intro to Learning from Data
ENG EC 473 Electromagnetic Systems I
ENG EC 478 The Business of Technology Innovation
ENG EC 516 Digital Signal Processing
ENG EC 522 Intro to Computational Imaging
ENG EC 526 Parallel Alg for High Perf Computing
ENG EC 541 Mechanical Vibrations
ENG EC 555 MEMS: Fabrication & Materials
ENG EC 571 Medical Robotics
ENG EC 572 Neurotechnology Devices
ENG EC 575 MEMS: Fabrication & Materials

BIOMEDICAL ENGINEERING ELECTIVES
BME majors complete two Biomedical Engineering Electives (8 credits) from the following:
ENG ME 403, ENG ME 404, ENG EC 401, ENG BE 403
ENG EC 516 Digital Signal Processing
ENG EK 481 Nanomaterials & Nanotechnology

BIOMEDICAL ENGINEERING DESIGN ELECTIVES
BME majors complete one Biomedical Engineering Design Elective (4 credits) from the following:
ENG BE 428 Device Diagnostics & Design
ENG BE 468 Clinical Applications of Biomedical Design

Hub Unit Legend:
- QR1 = Quantitative Reasoning 1
- QR2 = Quantitative Reasoning 2
- SI1 = Scientific Reasoning 1
- SI2 = Scientific Reasoning 2
- FWY = First-Year Writing Seminar
- WRI = Writing, Research & Inquiry
- OSC = Oral and/or Signed Communication
- DME = Digital/Multimedia Expression
- TWC = Teamwork/Collaboration
- CRT = Critical Thinking

Notes:
a) Any requirement satisfied via AP/IB earns a maximum of one Hub requirement and students may need to replace missing Hub requirements.
b) Any requirement satisfied via transfer earns zero Hub requirements and students may need to replace missing Hub requirements.
c) 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 ME 306, ENG BE 425
   (4) ENG EK 103, CAS MA 142, CAS MA 242
   (5) ENG BE 403, ENG EC 401
   (6) ENG EK 381, CAS MA 381, CAS MA 581