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 (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 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). Search for courses that fulfill specific combinations of Hub units at: https://www.bu.edu/phpbin/course-search/

CONTINUUMS & FIELDS IN BIO MEDICAL SYSTEMS ELECTIVE
BME majors complete one Continuum & Fields Elective (4 credits) from the following:

- ENG BE 436 Fundamentals of Fluid Mechanics
- ENG BE 425 Intro to Biomedical Materials Science
- ENG BE 521 Continuum Mechanics BME
- ENG BE 517 Optical Microscopy of Biological Materials
- ENG BE 503 Comp Methods in Biomed
- ENG BE 520 Intro to Biomedical Optics
- ENG BE 533 Fluid Mechanics

PROFESSIONAL ELECTIVES
BME majors complete two Professional Electives (8 credits) from the following:

- ENG BE 403, ENG ME 404, ENG EC 402, ENG BE 404
- ENG ME 419 Heat Transfer
- ENG ME 401 Intro to Electronics
- ENG ME 404 Kinetic Processes in Materials
- ENG EC 455 Electromagnetic Systems
- ENG EC 492 MEMS: Fabrication & Materials
- ENG BE 549 Struct & Function Extracellular Matrix
- ENG EC 505 Stochastic Processes

ENGINEERING ELECTIVES
BME majors complete one Engineering Elective course (4 credits) from the following list:

- ENG BE 404 Advanced Controls
- ENG BE 425 Intro to Solid Biomechanics
- ENG BE 435 Transport Phenomena in Living Systems
- ENG BE 436 Fundamentals of Fluid Mechanics
- ENG BE 471 Quantitative Neuroscience
- ENG BE 503 Comp Methods in Biomed
- ENG BE 508 Quant Studies Resp & Card Sys
- ENG BE 511 Medical Instrumentation
- ENG BE 517 Optical Microscopy of Biological Materials
- ENG BE 521 Continuum Mechanics BME
- ENG BE 533 Biochemistry
- ENG BE 549 Struct & Function Extracellular Matrix
- ENG BE 420 Introduction to Solid Biomechanics
- ENG BE 455 MEMS: Fabrication & Materials
- ENG BE 471 Quantitative Neuroscience
- ENG BE 506 Nonlinear Systems in BME
- ENG BE 511 Medical Instrumentation
- ENG ME 441 Mechanical Vibrations
- ENG ME 549 Struct & Function Extracellular Matrix
- ENG ME 555 MEMS: Fabrication & Materials

BIOMEDICAL ENGINEERING ELECTIVES
BME majors complete two Biomedical Engineering Electives (8 credits) from the following:

- ENG BE 404 Advanced Controls
- ENG BE 425 Intro to Solid Biomechanics
- ENG BE 435 Transport Phenomena in Living Systems
- ENG BE 436 Fundamentals of Fluid Mechanics
- ENG BE 471 Quantitative Neuroscience
- ENG BE 503 Comp Methods in Biomed
- ENG BE 508 Quant Studies Resp & Card Sys
- ENG BE 511 Medical Instrumentation
- ENG BE 517 Optical Microscopy of Biological Materials
- ENG BE 521 Continuum Mechanics BME
- ENG BE 533 Biochemistry
- ENG BE 549 Struct & Function Extracellular Matrix
- ENG BE 420 Introduction to Solid Biomechanics
- ENG BE 455 MEMS: Fabrication & Materials
- ENG BE 471 Quantitative Neuroscience
- ENG BE 506 Nonlinear Systems in BME
- ENG BE 511 Medical Instrumentation
- ENG BE 517 Optical Microscopy of Biological Materials
- ENG BE 521 Continuum Mechanics BME
- ENG BE 533 Biochemistry
- ENG BE 549 Struct & Function Extracellular Matrix
- ENG BE 420 Introduction to Solid Biomechanics
- ENG BE 455 MEMS: Fabrication & Materials
- ENG BE 471 Quantitative Neuroscience
- ENG BE 506 Nonlinear Systems in BME
- ENG BE 511 Medical Instrumentation
- ENG ME 441 Mechanical Vibrations
- ENG ME 549 Struct & Function Extracellular Matrix
- ENG ME 555 MEMS: Fabrication & Materials

Hub Unit Legend:
- Q1 = Quantitative Reasoning 1
- Q2 = Quantitative Reasoning 2
- S1 = Scientific Reasoning 1
- S2 = Scientific Reasoning 2
- FYW = First-Year Writing Seminar
- WRI = Writing, Research & Inquiry
- WIN = Writing-Intensive Course
- OSC = Oral and/or Signed Communication
- CRT = Critical Thinking
- RIL = Research and Information Literacy
- TWC = Teamwork/Collaboration
- CRI = Creativity/Innovation

Notes:
a) Any requirement satisfied via AP/IB can earn a maximum of one Hub unit and may require students to replace the Hub units missed.
b) Any requirement satisfied via transfer earns zero Hub units and may require students to replace the Hub units missed.
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

5/30/2023