General Education Electives Checklist

- CAS WR 100
- CAS WR 150
- One Social Science course
- One Humanities course
- One Social Science or Humanities course
- One General Education elective course
- Total of at least 24 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 social science/humanities or writing).
REQUIREMENTS

Biomedical Engineering majors are required to complete a minimum of 134 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.

GENERAL EDUCATION

For a list of specific courses that satisfy the Social Science, Humanities and General Education Elective, please go to the College of Engineering Undergraduate Requirements website at: http://www.bu.edu/eng/current-students/ugrad/requirements/.

CONTINUUM & FIELDS IN BIOMEDICAL SYSTEMS ELECTIVE

Biomedical Engineering majors complete one Continua & Fields Elective from the following:

- ENG BE 419 Principles of Continuum Mechanics & Transport*
- 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 BE 500, and courses with material that overlaps with requirements – see Notes below)

- 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 371, 401, 402, 482, 491, 492).
- All CAS MA 300, 400, and 500 level courses (except CAS MA 381, 401, 402).
- ENG BI 206, CAS BI 216 and all CAS BI 300, 400 and 500 level courses (except BI 315, 371, 372, 391, 392)

- ENG EK 156 Design & Manufacture*
- QST SI 480 The Business of Technology Innovation
- SAR HS 360 Muscle Biology in Health & Disease
- 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 419 Principles of Continuum Mechanics*
- 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 EC 410 Intro Software Engineering
- ENG EC 411 Intro to Logic Design
- ENG EC 416 Intro Digital Signal Processing*
- ENG EC 455 Electromagnetic Systems I
- ENG EC 471 Physics Semiconductor Devices
- ENG EC 505 Stochastic Processes
- ENG EK 481 Nanomaterials & Nanotechnology
- ENG ME 302 Engineering Mechanics II
- ENG ME 306 Materials Science
- ENG ME 309 Structural Materials
- ENG ME 419 Heat Transfer
- ENG ME 441 Mechanical Vibrations
- ENG ME 555 MEMS: Fabrication & Materials

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 500); BE 700 level courses may be petitioned.

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

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 BE 402*, ENG EC 402, ENG BE 404
2. ENG ME 303, ENG BE 436
3. ENG EK 102*, ENG EK 103, CAS MA 142, CAS MA 242
4. ENG BE 401*, ENG BE 403, ENG EC 401
5. ENG ME 366, ENG EC 381*, ENG EK 381, ENG BE 200*
6. ENG ME 460, ENG ME 560
7. ENG EK 156*, ENG ME 358
8. ENG ME 357, ENG ME 359*

*indicates course no longer offered.