### General Education Electives Checklist

- 1. CAS WR 100
- 2. CAS WR 150
- 3. One Social Science course
- 4. One Humanities course
- 5. One Social Science or Humanities course
- 6. One General Education elective course
- 7. Total of at least 24 credits

### Notes

- 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.
- Grey box = either semester
- 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/.

CONTINUUMS & 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).

CAS BI 206, CAS BI 216 and all CAS BI 300, 400 and 500 level courses (except BI 315, 371, 372, 391, 392)

- ENG BF 527 Applications in Bioinformatics
- ENG BF 527 Application in Bioinformatics
- ENG BF 527 Application in Bioinformatics
- CAS CH 627 RNA Structure
- CAS CH 629 DNA Nanotechnology
- SAR HS 360 Muscle Biology in Health & Disease
- 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 521 Continuum Mechanics BME
- ENG EC 505 Stochastic Processes
- ENG BE 404 Advanced Controls
- ENG BE 533 Bioengineering
- ENG BE 481 Nanomaterials & Nanotechnology
- ENG BE 419 Principles of Continuum Mechanics
- ENG BE 567 Nonlinear Systems in BME
- ENG ME 302 Engineering Mechanics II
- ENG BE 420 Intro to Solid Biomechanics
- ENG EC 311 Intro to Logic Design
- ENG ME 305 Mechanics of Materials
- ENG BE 435 Transport Phenomena in Living Tissues
- ENG EC 327 Intro Software Engineering
- ENG ME 306 Materials Science
- ENG BE 436 Fundamentals Fluid Mechanics
- ENG EC 410 Intro to Electronics
- ENG ME 309 Structural Materials
- ENG BE 503 Comp Methods in Biomd
- ENG EC 416 Intro Digital Signal Processing
- ENG ME 419 Heat Transfer
- ENG BE 508 Quant Studies Resp & Card Sys
- ENG EC 455 Electromagnetic Systems I
- ENG ME 441 Mechanical Vibrations
- ENG BE 511 Biomedical Instrumentation
- ENG EC 471 Physics Semiconductor Devices
- 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.

ENG BF 527 Application in Bioinformatics

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 seven 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
2. ENG ME 303, ENG BE 436
3. ENG ME 501, ENG EC 501
4. ENG EI 102, ENG EI 103, ENG MA 142, ENG MA 242
5. ENG BE 401, ENG BE 403, ENG EC 401
6. ENG ME 366, ENG EC 381, ENG EI 481, ENG BE 200
7. ENG ME 460, ENG ME 560