REQUIREMENTS

Students majoring in Biomedical Engineering are required to complete a minimum of 136 credits as detailed on the Program Planning Sheet on the other side of this form.

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

CONTINUUM AND FIELDS IN BIOMEDICAL SYSTEMS ELECTIVE (4 credits required)

ENG BE 419 Principles of Continuum Mechanics and 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 (8 credits required)

All ENG BE, EC, EK, and ME 300, 400, and 500 level courses are suitable as a professional elective. [Exceptions due to overlap of material*: BE 500, EC 381, EC 402, EK 500, ME 308, ME 403, ME 404, ME 501]

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 EK 156 Design & Manufacture  
ENG ME 302 Energy & Thermodynamics  
ENG ME 305 Mechanics of Materials  
ENG ME 306 Material Science

ENGINEERING ELECTIVES (4 credits required)

ENG EC 311 Intro to Logic Design  
ENG EC 327 Intro Software Engineering  
ENG EC 412 Analog Electronics  
ENG EC 415 Communications Systems  
ENG EC 416 Intro Digital Signal Processing  
ENG EC 450 Microprocessors  
ENG EC 455 Electromagnetic Systems I  
ENG EC 456 Electromagnetic Systems II

Fulfills Professional Elective: ENG EC 402 Analog Electronics  
ENG ME 305 Mechanics of Materials  
ENG ME 306 Material Science  
Fulfills Biomedical Elective: ENG ME 407** Computer-Aided Design & Manufacture

BIOMEDICAL ENGINEERING ELECTIVES (12 credits required)

All ENG BE 400 and 500 level courses (except BE 500); BE 700 level courses may be petitioned.

ENG EC 410 Introduction to Electronics  
ENG BF 527 Application in Bioinformatics

DESIGN ELECTIVES (4 credits required) One of the elective choices above (Prof, ENG or BME) must include one 4-credit or two 2-credit courses from the design electives list.

Fulfills Professional Elective:  
Fulfills Engineering Elective:  
Fulfills Biomedical Elective:

ENG EC 471 Physics Semiconductor Devices  
ENG ME 407** Computer-Aided Design & Manufacture

DEGREE ENHANCEMENTS

CONCENTRATIONS: Students may choose to add a Concentration in Energy Technologies, Nanotechnology or Technology Innovation. Students completing a Minor in Mechanical Engineering may choose to add a concentration in Aerospace Engineering. A concentration requires 4 courses which satisfy courses within the major. Hence, a concentration can usually be completed without additional coursework. More information on concentrations and the specific requirements for each can be found at http://www.bu.edu/eng/academics/programs/concentrations/. Students may also pursue minors in other Colleges at Boston University. For more information, please contact the College of the minor.

MINORS: Students may choose to add a minor in one of the other degree programs or divisions (Materials Science & Engineering or Systems Engineering) within the College of Engineering A minor consists of 5 courses, 2 of which may also be used to satisfy requirements for the major. Completing a Minor will add a minimum of 12 credits to the total credits for the degree. More information on minors and the specific requirements for each can at http://www.bu.edu/eng/academics/programs/minors/.

DOUBLE MAJORS: Students may earn two engineering BS degrees. Double majors require a minimum of 168 credits and students must fulfill the requirements for each of the degree programs. See http://www.bu.edu/eng/academics/special-programs/ for more details.

OTHER WAYS TO ENHANCE YOUR DEGREE

Students have several additional options available to them including study abroad, research, and co-op/internship opportunities. For more information on these programs, please visit the College of Engineering Undergraduate website: http://www.bu.edu/eng/academics/. Notes: For the following 9 sets of courses, only 1 course can be taken for credit in each set due to the overlap of material:

(1) ENG ME 305, ENG BE 420  
(2) ENG ME 404, ENG BE 402, ENG EC 402  
(3) ENG ME 303, ENG BE 436  
(4) ENG ME 441, ENG ME 515  
(5) ENG ME 501, ENG EC 501  
(6) ENG ME 102, CAS MA 142, CAS MA 242  
(7) ENG BE 401, ENG EC 401  
(8) ENG ME 366, ENG EC 381, ENG BE 200, ENG EK 500  
(9) ENG ME 359, ENG ME 407**  

** Summer only