

BIOENGINEERING DEPARTMENT
BS-MS PROGRAM IN BIOENGINEERING - CLASS OF 2021, 2022, 2023

Sample Only – Actual Curriculum Sequence May Deviate from Sample

| | FALL | SPRING | SUMMER 1 | SUMMER 2 |
|-----------------|---|---|--|--|
| Freshman Year 1 | MATH1341 Calculus 1 for Engrs. 4 CHEM1151 General Chem. for Engrs. 4 CHEM1153 Recitation for CHEM1151 0 GE 1501 Cornerstone of Eng'g. 1 4 GE 1000 Intro. to Eng'g. 1 ENGW1111 College Writing 4 | MATH1342 Calculus 2 for Engrs. 4 PHYS1171 Physics 1 for Engrs. 3 PHYS1172 Physics 1 Lab 1 PHYS1173 ILS for PHYS1151 1 GE 1502 Cornerstone of Eng'g. 2 4 Elective General Elective 4 | Vacation | Vacation |
| Year 2 (AA) | BIOE2365 BioE Meas. Exp. & Stats. 4 BIOE2366 Lab for BIOE2365 1 BIOL1115 Biology for Engineers 4 BIOL1116 Lab for BIOL1115 1 GE2361 Math. Methods for Engrs 4 PHYS1175 Physics 2 for BioE 3 PHYS1176 ILS for PHYS1175 1 PHYS1177 Lab for PHYS1175 1 | BIOE2000 Intro. To Eng'g. Co-op 1 BIOE2350 Biomechanics 4 BIOE2355 Quant. Physiology for BioE 4 CHEM2311 Org. Chem 1 4 CHEM2312 Lab for CHEM2311 1 CHEM2319 Recitation for CHEM2311 0 Elective General Elective 4 | Vacation | Co-op |
| Year 2 (BB) | BIOE2000 Intro to Eng'g. Co-op 1 BIOE2365 BioE Meas. Exp. & Stats. 4 BIOE2366 Lab for BIOE2365 1 BIOL1115 Biology for Engineers 4 BIOL1116 Lab for BIOL1115 1 GE2361 Math. Methods for Engrs 4 PHYS1175 Physics 2 for BioE 3 PHYS1176 Physics 2 Lab 1 PHYS1177 ILS for PHYS1175 1 | Co-op | Co-op | Vacation |
| Year 3 (AA) | Co-op | BIOE3210 Bioelectricity 4 BIOE3380 Biomol. Dynamics & Ctrl. 4 Elective BioE Elective 1 4 *ENGW3302 Adv. Writing for Prof. 4 | BIOE3310 Transport & Fluids 4 Elective General Elective 4 | Co-op |
| Year 3 (BB) | BIOE2350 Biomechanics 4 BIOE2355 Quant. Physiology for BioE 4 CHEM2311 Organic Chemistry 1 4 CHEM2312 Lab for CHEM2311 1 CHEM2319 Recitation for CHEM2311 0 Elective General Elective 4 | Co-op | Co-op | BIOE3310 Transport & Fluids 4 Elective General Elective 4 |
| Year 4 (YB) | Co-op | BIOE3000 Prof. Issues in Eng. 1 **Graduate Course 1 4 **Graduate Course 2 4 **Graduate Course 3 4 Elective General Elective 4 | BIOE4790 Capstone Design 1 4 Elective General Elective 4 | Vacation |
| Year 4 (ZC) | BIOE3000 Prof. Issues in Eng'g. 1 BIOE3210 Bioelectricity 4 BIOE3380 Biomol. Dynamics & Ctrl. 4 Elective BioE Elective 1 4 *ENGW3302 Adv. Writing for Prof. 4 | **Graduate Course 1 4 **Graduate Course 2 4 **Graduate Course 3 4 Elective General Elective 4 | Vacation | BIOE4790 Capstone Design 1 4 Elective General Elective 4 |
| Year 5 (YB) | **Graduate Course 4 4 BIOE6100 Medical Physiology 4 Graduate Course 6 4 Elective General Elective 4 | BIOE4792 Capstone Design 2 4 Graduate Course 7 4 Graduate Course 8 4 Elective General Elective 4 | | |
| Year 5 (ZC) | BIOE4792 Capstone Design 2 4 **Graduate Course 4 4 BIOE6100 Medical Physiology 4 Elective General Elective 4 | Graduate Course 6 4 Graduate Course 7 4 Graduate Course 8 4 Elective General Elective 4 | | |

Revised 12/14/18

Students will be required to meet with an undergraduate advisor to petition to enter the program.

Students are encouraged to meet with their financial aid counselor to review any financial questions.

4 semesters of coursework at Northeastern University must be completed with a minimum GPA of 3.2 to join the BS/MS program.

*ENGW3315 is an acceptable substitution. Students may take ENGW 3302 or ENGW 3315 to fulfill their Advanced Writing in the Technical Professions requirement.

** Graduate courses 1 through 4 fulfill the BS curriculum requirements as BioE Electives 2 through 5. No more than four BioE electives, 5000 level and above, can count towards both the BS and the MS.

NUpath requirements Interpreting Culture (IC), Societies and Institutions (SI), and Differences and Diversity (DD) are not explicitly satisfied by required engineering courses.

Students are responsible for satisfying these requirements, and if these are not fulfilled in engineering courses, should use General Electives to do so.

General Electives are academic, non-remedial, non-repetitive courses.

BIOE Concentrations: Bioimaging & Signal Processing, Cell & Tissue Engineering, Biomechanics, or Biomedical Devices.

BIOE Electives are used to fulfill the concentration. Total of 5 courses (3 required, 2 elective from approved list)

BIOE Graduate Electives: 8 required - Full program must be approved by a graduate advisor.

Please consult with your advisor: Eve Young - 220 Snell, 617-373-2154, e.young@neu.edu

The registrar's website provides a listing of degree requirements and the DARS system provides a degree audit utility for students.