### BIOENGINEERING DEPARTMENT

**BS-MS PROGRAM IN BIOENGINEERING & ENGINEERING MANAGEMENT- CLASS OF 2021, 2022**

*Sample Only – Actual Curriculum Sequence May Deviate from Sample*

#### FALL  |  SPRING  |  SUMMER 1  |  SUMMER 2
---|---|---|---
**Freshman Year 1**
MATH1341 Calculus 1 for Engrs. | 4 | MATH1342 Calculus 2 for Engrs. | Co-op
CHEM1151 General Chem. for Engrs. | 4 | PHYS1171 Physics 1 for Engrs. | 3
CHEM1153 Recitation for CHEM1151 | 0 | PHYS1172 Physics 1 Lab | 1
GE 1500 Intro. to Eng'g. | 1 | PHYS1173 ILS for PHYS1151 | 1
ENGW1111 College Writing | 4 | GE 1502 Cornerstone of Eng'g. 2 | 4
**Year 2 (AA)**
BIOE2365 BIOE Meas. Exp. & Stats. | 1 | BIOE2000 Intro. To Eng'g. Co-op | 1
BIOE2366 Lab for BIOE2365 | 4 | BIOE2350 Biomechanics | 4
BIOE1115 Biology for Engineers | 4 | BIOE2355 Quant. Physiology for BioE | 4
BIOE1116 Lab for BIOE1115 | 1 | CHEM2311 Org. Chem 1 | 4
GE2361 Math. Methods for Engrs | 4 | CHEM2312 Lab for CHEM2311 | 1
PHYS1175 Physics 2 for BioE | 3 | CHEM2319 Recitation for CHEM2311 | 0
PHYS1176 ILS for PHYS1175 | 1 | | |
PHYS1177 Lab for PHYS1175 | 1 | | |
**Year 2 (BB)**
BIOE2365 Intro to Eng'g. Co-op | 1 | BIOE2310 Bioelectricity | 4
BIOE2366 BioE Meas. Exp. & Stats. | 4 | BIOE3380 Biomol. Dynamics & Ctrl. | 4
BIOE2367 Lab for BIOE2365 | 1 | Elective BioE Elective 1 | 4
BIOE1115 Biology for Engineers | 4 | *ENGW3302 Adv. Writing for Prof. | 4
BIOE1116 Lab for BIOE1115 | 1 | | |
GE2361 Math. Methods for Engrs | 4 | Co-op | |
PHYS1175 Physics 2 for BioE | 3 | Co-op | |
PHYS1176 Physics 2 Lab | 1 | Co-op | |
PHYS1177 ILS for PHYS1175 | 1 | Co-op | |
**Year 3 (AA)**
BIOE2350 Biomechanics | 4 | BIOE3310 Transport & Fluids | 4
BIOE2355 Quant. Physiology for BioE | 4 | Elective General Elective | 4
CHEM2311 Organic Chemistry 1 | 4 | Co-op | |
CHEM2312 Lab for CHEM2311 | 1 | Elective | 4
CHEM2319 Recitation for CHEM2311 | 0 | BIOE3310 Transport & Fluids | 4
Elective General Elective | 4 | Elective | 4
**Year 3 (BB)**
BIOE2350 Biomechanics | 4 | BIOE3380 Biomol. Dynamics & Ctrl. | 4
BIOE2355 Quant. Physiology for BioE | 4 | Elective BioE Elective 1 | 4
CHEM2311 Organic Chemistry 1 | 4 | *ENGW3302 Adv. Writing for Prof. | 4
CHEM2312 Lab for CHEM2311 | 1 | | |
CHEM2319 Recitation for CHEM2311 | 0 | | |
Elective General Elective | 4 | | |
**Year 4 (YB)**
BIOE3000 Prof. Issues in Eng'g. | 1 | BIOE4790 Capstone Design 1 | 4
BIOE3310 Eng’g Prob & Statistics | 4 | Elective EM Graduate Elective | 4
BIOE3320 Engineering Project Mgmt | 4 | | |
Elective BioE Elective 2 | 4 | | |
Elective BioE Elective 3 | 4 | | |
**Year 4 (ZC)**
BIOE3310 Eng’g Prob & Statistics | 4 | BIOE4790 Capstone Design 1 | 4
BIOE3320 Engineering Project Mgmt | 4 | Elective EM Graduate Elective | 4
Elective BioE Elective 2 | 4 | | |
Elective BioE Elective 3 | 4 | | |
**Year 5 (YB)**
BIOE3295 Deterministic Op. Rsrch. | 4 | BIOE4792 Capstone Design 2 | 4
Elective EM Graduate Elective | 4 | Elective EM Graduate Elective | 4
Elective EM Graduate Elective | 4 | Elective EM Graduate Elective | 4
**Year 5 (ZC)**
BIOE3295 Deterministic Op. Rsrch. | 4 | BIOE4792 Capstone Design 2 | 4
Elective EM Graduate Elective | 4 | Elective EM Graduate Elective | 4
Elective EM Graduate Elective | 4 | Elective EM Graduate Elective | 4
Elective BioE Elective 4 | 4 | Elective BioE Elective 5 | 4

*ENGW3315 is an acceptable substitution for engineering majors.*

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, they should use General Electives to do so.

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

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

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

**4 semesters of coursework at Northeastern University must be completed with a minimum GPA of 3.2 to join the BS/MS program. Students will be required to meet with an undergraduate advisor and a graduate advisor to petition to enter the program. Students are encouraged to meet with their financial aid counselor to review any financial questions.**

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