

**BACHELOR OF SCIENCE IN BIOENGINEERING
CURRICULUM OUTLINE - CLASS OF 2021, 2022, 2023**

Sample Only – Actual Curriculum Sequence May Deviate from Sample

| | FALL | SPRING | SUMMER 1 | SUMMER 2 |
|-------------|---|--|--|--|
| 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 1 GE 1000 Intro. to Eng'g. 1 ENGW1111 College Writing 4 | MATH1342 Calculus 2 for Engrs. 4 PHYS1171 Physics 1 for BioE 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 | ENCP2000 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 Elective General Elective 4 | Vacation | Co-op |
| Year 2 (BB) | ENCP2000 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 Org. Chem 1 4 CHEM2312 Lab for CHEM2311 1 Elective General Elective 4 | Co-op | Co-op | BIOE3310 Transport & Fluids 4 Elective General Elective 4 |
| Year 4 (AA) | Co-op | ENCP3000 Prof. Issues in Eng. 1 Elective BioE Elective 2 4 Elective BioE Elective 3 4 Elective BioE Elective 4 4 Elective General Elective 4 | BIOE4790 Capstone Design 1 4 Elective General Elective 4 | Co-op |
| Year 4 (BB) | ENCP3000 Prof. Issues in Eng'g, 1 BIOE3210 Bioelectricity 4 BIOE3380 Bio. Dyn. & Ctrl. 4 Elective BioE Elective 1 4 *ENGW3302 Adv. Writing for Prof. 4 | Co-op | Co-op | BIOE4790 Capstone Design 1 4 Elective General elective 4 |
| Year 5 (AA) | Co-op | BIOE4792 Capstone Design 2 4 Elective BioE Elective 5 4 Elective General Elective 4 Elective General Elective 4 | | |
| Year 5 (BB) | BIOE4792 Capstone Design 2 4 Elective BioE Elective 2 4 Elective BioE Elective 3 4 Elective General Elective 4 | Elective BioE Elective 4 4 Elective BioE Elective 5 4 Elective General Elective 4 Elective General Elective 4 | | |

Revised 4/6/2020

* ENG3315 is an acceptable substitution. Students may take ENG3302 or ENG3315 to fulfill their Advanced Writing in the Technical Professions requirement.

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 electives from approved list)

[Please consult with your Academic Advisor, found here.](#)

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