

**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 CHEM1151 CHEM1153 GE 1501 GE 1000 ENGW1111	Calculus 1 for Engrs. General Chem. for Engrs. Recitation for CHEM1151 Cornerstone of Eng'g. 1 Intro. to Eng'g. College Writing	4 4 0 4 1 4	MATH1342 PHYS1171 PHYS1172 PHYS1173 GE 1502 Elective	Calculus 2 for Engrs. Physics 1 for BioE Physics 1 Lab ILS for PHYS1151 Cornerstone of Eng'g. 2 General Elective	4 3 1 1 4 4	Vacation Vacation		
Year 2 (AA)	BIOE2365 BIOE2366 BIOL1115 BIOL1116 GE2361 PHYS1175 PHYS1176 PHYS1177	BioE Meas. Exp. & Stats. Lab for BIOE2365 Biology for Engineers Lab for BIOL1115 Math. Methods for Engrs Physics 2 for BioE ILS for PHYS1175 Lab for PHYS1175	4 1 4 4 1 3 1 1	ENCP2000 BIOE2350 BIOE2355 CHEM2311 CHEM2312 Elective	Intro. To Eng'g. Co-op Biomechanics Quant. Physiology for BioE Org. Chem 1 Lab for CHEM2311 General Elective	1 4 4 4 1 4	Vacation Co-op		
Year 2 (BB)	ENCP2000 BIOE2365 BIOE2366 BIOL1115 BIOL1116 GE2361 PHYS1175 PHYS1176 PHYS1177	Intro to Eng'g. Co-op BioE Meas. Exp. & Stats. Lab for BIOE2365 Biology for Engineers Lab for BIOL1115 Math. Methods for Engrs Physics 2 for BioE Physics 2 Lab ILS for PHYS1175	1 4 1 4 1 4 3 1 1	Co-op	Co-op	Co-op	Vacation		
Year 3 (AA)	Co-op			BIOE3210 BIOE3380 Elective *ENGW3302	Bioelectricity Biomol. Dynamics & Ctrl. BioE Elective 1 Adv. Writing for Prof.	4 4 4 4	BIOE3310 Elective Transport & Fluids General Elective	4 4 4 4	Co-op
Year 3 (BB)	BIOE2350 BIOE2355 CHEM2311 CHEM2312 Elective	Biomechanics Quant. Physiology for BioE Org. Chem 1 Lab for CHEM2311 General Elective	4 4 4 1 4	Co-op	Co-op	Co-op	BIOE3310 Elective Transport & Fluids General Elective	4 4 4 4	4 4
Year 4 (AA)	Co-op			ENCP3000 Elective Elective Elective Elective	Prof. Issues in Eng. BioE Elective 2 BioE Elective 3 BioE Elective 4 General Elective	1 4 4 4 4	BIOE4790 Elective Capstone Design 1 General Elective	4 4 4 4	Co-op
Year 4 (BB)	ENCP3000 BIOE3210 BIOE3380 Elective *ENGW3302	Prof. Issues in Eng'g, Bioelectricity Bio. Dyn. & Ctrl. BioE Elective 1 Adv. Writing for Prof.	1 4 4 4 4	Co-op	Co-op	Co-op	BIOE4790 Elective Capstone Design 1 General elective	4 4 4 4	4 4
Year 5 (AA)	Co-op			BIOE4792 Elective Elective Elective	Capstone Design 2 BioE Elective 5 General Elective General Elective	4 4 4 4			
Year 5 (BB)	BIOE4792 Elective Elective Elective	Capstone Design 2 BioE Elective 2 BioE Elective 3 General Elective	4 4 4 4	Elective Elective Elective Elective	BioE Elective 4 BioE Elective 5 General Elective General Elective	4 4 4 4			

Revised 4/6/2020

\* ENGW3315 is an acceptable substitution. Students may take ENGW 3302 or ENGW 3315 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.