

# Chemical: Biochemical and Environmental Engineering (Option B)

September 2024 (students who entered first year in September 2018 or later)

# <u>Year 2:</u>

# Term A

NMM 2270a Applied Math for Engineering II

CBE 2206a Introductory Industrial Organic Chemistry

CBE 2214a Engineering Thermodynamics
CBE 2220a Chemical Process Calculations

CBE 2290a Fundamentals of Biochemical and Environmental

Engineering

Writing 2130f Building Better (Communication) Bridges: Rhetoric &

**Professional Communication for Engineers** 

#### Term B

NMM 2277b Applied Math Chemical and Civil Engineering III

CBE 2207b Applied Industrial Organic Chemistry

CBE 2221b Fluid Flow

CBE 2224b Chemical Eng. Thermodynamics

CBE 2291b Computational Methods for Engineering

SS 2143b Applied Statistics and Data Analysis for Engineers

# Year 3:

# Term A

CBE 3307a	Energy & Environment
CBE 3315a	Reaction Engineering

CBE 3318a Introduction to Chemical Process Simulation

CBE 3322a Heat Transfer Operations

CBE 3330a Bioreaction & Bioprocess Engineering

CBE 3396y Biochemical Engineering Lab

## **Term B**

CBE 3310b	Process I	Dynamics and Control
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CBE 3316b Sustainable Chemical Engineering & Life Cycle Analysis

CBE 3319b Introduction to Plant Design and Safety

CBE 3323b Staged Operations
CBE 3324b Mass Transfer Operations
CBE 3396y Biochemical Engineering Lab
CBE 4403b Biochemical Separation Process

# Year 4:

# Term A

CBE 4498 Biochemical Process and Plant Design

Two 0.5 Technical elective

Two 0.5 Non-technical elective taken from approved list

### Term B

CBE 4498 Biochemical Process and Plant Design

ELI 4110g Engineering Ethics, Sustainable Development and the Law

Two 0.5 Technical elective

0.5 Non-technical elective taken from approved list

Accelerated Masters students can take a graduate course with special permission from the Department Chair.

### **NOTES:**

#### Important:

Students are responsible for ensuring they have the correct courses required for their degree. If you are unsure which courses you still need or if you see courses listed on the progression sheet that are no longer offered or are not offered in the term you see listed here, please contact your Academic Counsellor.

## Non-technical Electives:

http://www.eng.uwo.ca/undergraduate/upper\_year/electives.html

### **Technical Elective List:**

Some technical electives may not be offered in a given academic year. Consult the Department for accurate listing.

General Chemical Engineering Courses		
CBE 4404a/b	Downstream Processing in Pharmaceutical	
	Manufacturing	
CBE 4413a/b	Selected Topics in Chemical Engineering	
CBE 4416a/b	Carbon Footprint Management	
CBE 4417a/b	Catalytic Processes	
CBE 4418a/b	Industrial Multiphase Reactor Design	
CBE 4420a/b	Computer Process Control	
CBE 4428a/b	Introduction to Nanoengineering	
CBE 4432a/b	Energy and Fuels Production Systems	
CBE 4485a/b	Energy and Society	
CBE 4493a/b	Polymer Engineering	
Biochemical and Environmental Engineering Courses		
CBE 4405a/b	Air Pollution	
CBE 4407a/b	Solid Waste Treatment	
CBE 4409a/b	Wastewater Treatment	
CBE 4411a/b	Engineering Coffee	
CBE 4425	Biochemical & Environmental Eng. Project	
CBE 4421a/b	Introduction to Biomaterials Engineering	
CBE 4422a/b	Nanobiotechnology	
CBE 4423a/b	Tissue Engineering	
CBE 4463a/b	Water Pollution Design	
CEE 3362a/b	Drinking Water Quality and Treatment	
CBE 4484a/b	Processes for Green Products	
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