

## **Chemical: Biochemical and Environmental Engineering (Option B)**

September 2021 (students who entered first year in September 2017)

Year 2:		
Term A		NOTES:
AM 2270a	Applied Math for Engineering II	1.5.20
CBE 2206a	Introductory Industrial Organic Chemistry	
CBE 2214a	Engineering Thermodynamics	
CBE 2220a	Chemical Process Calculations	
CBE 2290a	Fundamentals of Biochemical and Environmental Engineering	
Writing	Building Better (Communication) Bridges: Rhetoric &	
2130f	Professional Communication for Engineers	
Term B		
AM 2277b	Applied Math Chemical and Civil Engineering III	
CBE 2207b	Applied Industrial Organic Chemistry	
CBE 2221b	Fluid Flow	
CBE 2224b	Chemical Eng. Thermodynamics	at the second
CBE 2291b	Computational Methods for Engineering	Non-technical Electives:
SS 2143b	Applied Statistics and Data Analysis for Engineers	Please choose a maximum of 1.0 credits (one 1.0 credit course or two 0.5 credit courses) from the 1000 level and a minimum of one 0.5
Year 3:		credit from the 2000 (or higher) level.
Term A		http://www.eng.uwo.ca/undergraduate/upper_year/electives.html
CBE 3330a	Bioreaction & Bioprocess Engineering	
CBE 3315a	Reaction Engineering	
CBE 3324a	Mass Transfer Operations	
CBE 3322a	Heat Transfer Operations	
CBE 3325a	Particulate Operations	
CBE 3396y	Biochemical Engineering Lab	Technical Elective List:
Term B		Some technical electives may not be offered in a given academic
CBE 3310b	Process Dynamics and Control	year. Consult the Department for accurate listing.
CBE 3319b	Introduction to Plant Design and Safety	
CBE 3318b	Introduction to Chemical Process Simulation	General Chemical Engineering Courses
		Downstream Processing in Pharmaceutical

## Year 4:

CBE 3396y ECE2208b

CBE 4403b

## Term A

CBE 4498 Biochemical Process and Plant Design

Two 0.5 Technical elective

CBE 3323b Staged Operations

Two 0.5 Non-technical elective taken from approved list

Biochemical Engineering Lab

**Biochemical Separation Process** 

## Term B

CBE 4498 Biochemical Process and Plant Design

ES 4498G Engineering Ethics, Sustainable Development and the Law

**Electrical Measurement and Instrumentation** 

Two 0.5 Technical elective

0.5 Non-technical elective taken from approved list

Students must take a minimum of 1.0 technical elective credits from the Biochemical and Environmental Engineering Course List.

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

General Chemical Engineering Courses			
CBE 4404a/b	Downstream Processing in Pharmaceutical		
CBE 4404a/D	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 4424a/b	Biosensor Principles and Applications		
CBE 4463a/b	Water Pollution Design		
CEE 3362a/b	Drinking Water Quality and Treatment		
GPE 4484a/b	Green Fuels and Chemicals		
MME 4429a/b	Nuclear Engineering		