Western Engineering

Chemical: Biochemical and Environmental Engineering (Option B)

September 2019 (students who entered first year *in* September 2016)

Year 2:

Term A

AM 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
ES 2211F	Engineering Communications

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
CBE 2291b	Computational Methods for Engineering
SS 2143b	Applied Statistics and Data Analysis for Engineers

Year 3:

Term A

CBE 3330a	Bioreaction & Bioprocess Engineering
CBE 3315a	Reaction Engineering
CBE 3318a	Introduction to Chemical Process Simulation
CBE 3322a	Heat Transfer Operations
CBE 3325a	Particulate Operations
CBE 3396y	Biochemical Engineering Lab

Term B

CBE 3310b	Process Dynamics and Control
CBE 3319b	Introduction to Plant Design and Safety
CBE 3323b	Staged Operations
CBE 3324b	Mass Transfer Operations
CBE 3396y	Biochemical Engineering Lab
ECE 2208b	Electrical Measurement and Instrumentation
CBE4403b	Biochemical Separation Processes

Year 4:

Term A

Bus 2299E	Business for Engineers
CBE 4498	Biochemical Process and Plant Design

Two 0.5 Technical elective

0.5 Non-technical elective taken from approved list

Term B

Bus 2299E	Business for Engineers
CBE 4498	Biochemical Process and Plant Design

Two 0.5 Technical elective

ES 4498G	Engineering Ethics, Sustainable Development and the Law

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

NOTES:

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 4417a/b	Catalytic Processes
CBE 4418a/b	Industrial Multiphase Reactor Design
CBE 4420a/b	Computer Process Control
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 4407a/b	Solid Waste Treatment
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
CEE 4405a/b	Air Pollution
GPE 4484a/b	Green Fuels and Chemicals
MME 4429a/b	Nuclear Engineering