

PROJECTED STUDENT PATHWAY

YEAR 1: 31 CREDITS		YEAR 2: 31.5 CREDITS		YEAR 3: 31.5 CREDITS		YEAR 4: 26 CREDITS	
Fall Term	Winter Term	Fall Term	Winter Term	Fall Term	Winter Term	Fall Term	Winter Term
15.5 credits	15.5 credits	15 credits	16.5 credits	15 credits	16.5 credits	14 credits	12 credits
ENGR 213 Applied Ordinary Differential Equations (3) Pre/Co: MATH 204 Pre: MATH 205	ENCS 282 Technical Writing and Communication (3) Pre: EWT or ENCS 272	ENGR 202 Sustainable Development & Environmental Stewardship (1.5)	ENGR 245 Mechanical Analysis (3) Pre: PHYS 204 Pre/Co: ENGR 213	ENGR 371 Probability and Statistics in Engineering (3) Pre: ENGR 213, ENGR 233	ENGR 301 Engineering Management Principles & Economics (3)	CHME 316 Advanced data analysis and machine learning for chemical engineers (3.5) Pre: CHME 216, ENGR 371, ENGR 391	ENGR 392 Impact of Technology on Society (3) Pre: ENCS 282, ENGR 201, ENGR 202
MIAE 221 Materials Science (3)	ENGR 233 Applied Advanced Calculus (3) Pre: MATH 204, or MATH 205	ENGR 201 Professional Practice and Responsibility (1.5)	CHME 201 Innovative, Sustainable, and Safe Manufacturing in Chemical Industry (3) Pre: ENGR 251, CHME 220	CHME 300 Industrial and Engineering Chemistry (3) Pre: CHME 200	ENGR 391 Numerical Methods in Engineering (3) Pre: ENGR 213, ENGR 233, COMP 248 or COEN 243 or MECH 215 or MIAE 215 or BCEE 231	CHME 352 Energy Conversion and Storage (3) Pre: CHME 351	CHME 490 Capstone Chemical Process Design (3) Pre: CHME 390
CHME 200 Introduction to Chemical Process Engineering (3)	ENGR 251 Thermodynamics I (3) Pre: MATH 203	ENGR 311 Transform Calculus & Partial Differential Equations (3) Pre: ENGR 213, ENGR 233	CHME 240 Chemical Engineering Lab (1.5) Pre: CHME 200, CHME 351 Co: ENGR 361	CHME 321 Chemical and Materials Product Design (3) Pre: CHME 320	CHME 330 Chemical Process Dynamics and Control (3) Pre: ENGR 311, CHME 301, CHME 361	CHME 415 Computational Modelling for Chemical Engineers (3) Pre: CHEM 205, CHME 351, ENGR 391	General Education Elective Course (3)
CHME 214 Applied Linear Algebra For Chemical Engineers (3) Pre: MATH 204, and MATH 205	CHME 216 Advanced Programming for Chemical Engineers (3.5) Pre: CHME 215 or equivalent	ENGR 361 Fluid Mechanics I (3) Pre: ENGR 213, ENGR 233, ENGR 251	CHME 301 Chemical Reaction Engineering (3) Pre: CHME 200, CHME 351	CHME 361 Mass Transfer and Unit Operations (3) Pre: CHME 360	CHME 340 Chemical Engineering Lab II (1.5) Pre: CHME 240, CHME 301, CHME 361	CHME 440 Chemical Engineering Lab III (1.5) Pre: CHME 330, CHME 340, CHME 362	Technical Elective Course (3)
CHME 215 Programming for Chemical and Materials Engineers (3.5)	CHME 220 Material Properties and Chemical Characterization (3) Co: MIAE 221	CHEM 221 Organic Chemistry (3) Pre: CHEM 205, CHEM 206	CHME 320 Technical and Advanced Materials (3) Pre: CHME 220	CHME 470 Biochemical Engineering (3) Pre: CHME 301, CHME 362	CHME 362 Chemical Separations Engineering (3) Pre: CHME 361	CHME 490 Capstone Chemical Process Design (3) Pre: CHME 390	
CHME 351 Chemical Engineering Thermodynamics (3) Pre: ENGR 251 Co: ENGR 311		CHME 360 Heat Transfer (3) Pre: CHME 351, ENGR 311		CHME 390 Design Project (3) Pre: CHME 201, CHME 301, CHME 321 Co: ENGR 301, CHME 330, CHME 362			

COLOUR LEGEND & ABBREVIATIONS

Prerequisite (Pre):

A course that must be successfully completed before enrolling in another course.

Corequisite (Co):

A course that must be taken at the same time as another course unless it has already been completed.

CHME Core Courses 90 credits 30 courses	ENGR Core Courses 24 credits 9 courses	Technical Elective Course 3 credits 1 course	General Education Elective Course 3 credits 1 course	Course spanned over two terms 6 credits 1 course
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PROJECTED CO-OP STUDENT PATHWAY

Year	Summer	Fall	Winter
1		Study	Study
2	Study	Work 1	Study
3	Study	Study	Work 2
4	Work 3	Study (Capstone)	Study (Capstone)

TECHNICAL ELECTIVE TOPICS

SUSTAINABLE CHEMICAL ENGINEERING
 MATERIALS ENGINEERING
 DATA ANALYTICS FOR CHEMICAL ENGINEERS
 BIOCHEMICAL & FOOD ENGINEERING
 BIOMOLECULAR MODELLING & DRUG DESIGN
 ADVANCED PROCESS DESIGN & CONTROL
 ADVANCED TOPICS IN CHEMICAL ENGINEERING