

BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING
CO-OPERATIVE EDUCATION OPTION #2

FALL SEMESTER YEAR 1	Credits	SPRING SEMESTER YEAR 1	Credits
CHEM 1035 General Chemistry <i>Pre: None</i>	3	CHEM 1036 General Chemistry <i>Pre: None</i>	3
CHEM 1045 General Chemistry Lab <i>Co: CHEM 1035</i>	1	CHEM 1046 General Chemistry Lab <i>Co: CHEM 1036</i>	1
ENGL 1105 First-Year Writing <i>Pre: None</i>	3	ENGL 1106 First-Year Writing <i>Pre: ENGL 1105</i>	3
MATH 1225 Calculus of a Single Variable <i>Pre: Math Ready</i>	4	MATH 1226 Calculus of a Single Variable <i>Pre: MATH 1225</i>	4
ENGE 1215 Foundations of Engineering (C-) <i>Co: MATH 1225</i>	2	PHYS 2305 Found of Physics I w/lab <i>Pre: MATH 1225; Co: MATH 1226</i>	4
CLE (Area 2, 3, or 7)	3	ENGE 1216 Foundations of Engineering (C-) <i>Pre: ENGE 1215</i>	2
TOTAL	16	TOTAL	17

FALL SEMESTER YEAR 2	Credits	SPRING SEMESTER YEAR 2
CHEM 2535 Organic Chemistry <i>Pre: CHEM 1036 -OR- CHEM 2565 Principles of Organic Chem Pre: CHEM 1036</i>	3 ^[F, SI] or [F]	Co-operative Education Term #1
CHEM 2545 Organic Chemistry Lab <i>Pre: CHEM 1046; Co: CHEM 2535</i>	1 ^[F, SI]	
MATH 2204 Intro to Multivariable Calculus <i>Pre: MATH 1226</i>	3	
CHE 2114 Mass & Energy Balances (C-) <i>Pre: MATH 1226, CHEM 1036</i>	3 ^[F, S]	
PHYS 2306 Foundations of Physics I & Lab <i>Pre: PHYS 2305</i>	4	
MATH 1114 Elementary Linear Algebra <i>Pre: MATH 1225 or 1226</i>	2	
TOTAL	16	

FALL SEMESTER YEAR 3	Credits	SPRING SEMESTER YEAR 3	Credits
CHEM 3615 Physical Chemistry <i>Pre: CHEM 1036, MATH 2204, PHYS 2306</i>	3 ^[F, SI]	CHE 2004 CHE Sophomore Seminar	1 ^[S]
MATH 2214 Intro to Differential Eqns <i>Pre: MATH 1226, MATH 1114</i>	3	CHE 2164 CHE Thermodynamics (C-) <i>Pre: 2114. Co: CHEM 3615</i>	3 ^[F, S]
ENGL 3764 Technical Writing	3	CHE 3114 Fluid Transport (C-) <i>Pre: 2114, PHYS 2305, MATH 2204; Co: MATH 4564</i>	3 ^[F, S]
STAT 4604 Stats Methods for Engrs <i>Pre: MATH 1226 - OR- STAT 4705 Prob & Stat for Engrs Pre: MATH 2204</i>	3	CHE 3134 Separation Processes (C-) <i>Pre: 2114; (2164 or CHEM 3615)</i>	3 ^[F, S]
ESM 2214 Statics & Mech of Materials <i>Co: MATH 2204</i>	3 ^[F]	MATH 4564 Operational Methods <i>Pre: MATH 2214</i>	3
CLE (Area 2, 3, or 7)	3	CHEM 2536 Organic Chemistry <i>Pre: CHEM 2535 or 2565</i>	3 ^[S, SII]
TOTAL	18	-OR- CHEM 2566 Principles of Organic Chem <i>Pre: CHEM 2565</i>	or [S]
		CHEM 2546 Organic Chemistry Lab <i>Pre: CHEM 2536</i>	1 ^[S, SII]
		TOTAL	17

FALL SEMESTER YEAR 4	Credits	SPRING SEMESTER YEAR 4	Credits
Co-operative Education Term #2		CHE 3015 Process Measure & Control (C-) <i>Pre: MATH 4564; Co: 3184, 3044, 2124</i>	3 ^[S]
		CHE 3044 Heat Transfer (C-) <i>Pre: 2164, 3114, MATH 4564</i>	2 ^[S]
		CHE 3144 Mass Transfer (C-) <i>Pre: 2164, 3114, MATH 4564</i>	3 ^[S]
		CHE 3184 Chem Reactor Analysis & Des (C-) <i>Pre: 2164, MATH 2214; Co: 3144, 3044</i>	3 ^[S]
		CHEM 3625 Physical Chemistry Lab <i>Pre: CHEM 3615</i>	1 ^[F, S, SII]
		CHE 2124 CHE Simulations (C-) <i>Pre: 2114, MATH 2204 Co: MATH 1114</i>	2 ^[S]
	TOTAL	14	

SUMMER TERM I OR II	Credits
CHE 4014 CHE LABORATORY (C-) <i>PRE: 3015, 3044, 3134, 3144, 3184, ENGL 3764</i>	5 ^[SI, SII]
TOTAL	5

FALL SEMESTER YEAR 5		Credits	SPRING SEMESTER YEAR 5		Credits
CHE 4185 Process & Plant Design (C-) <i>Pre: 4014</i>		4 ^[F]	CHE 4186 Process & Plant Design (C-) <i>Pre: 4185</i>		4 ^[S]
			CHE 4134 Chemical Process Modeling (C-) <i>Pre: 2124, 3114; Co: 3044, 3144, 3184</i>		2 ^[S]
CLE (Area 2, 3, or 7)		9	CLE (Area 6)		1
Technical Elective		3	Technical Elective		3
			Free Electives		6
		TOTAL 16			TOTAL 16