BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING

CO-OPERATIVE EDUCATION OPTION #1

FALL SEMESTER YEAR 1	Credits
CHEM 1035 General Chemistry *Pre: None*	3
CHEM 1045 General Chemistry Lab *Co: CHEM 1035*	1
ENGL 1105 First-Year Writing *Pre: None*	3
MATH 1225 Calculus of a Single Variable *Pre: Math Ready*	4
ENGE 1215 Foundations of Engineering **(C-)** *Co: MATH 1225*	2
Elective (Pathway 2,3, or 7)	3
TOTAL	**16**

SPRING SEMESTER YEAR 1	Credits
CHEM 1036 General Chemistry *Pre: None*	3
CHEM 1046 General Chemistry Lab *Co: CHEM 1036*	1
ENGL 1106 First-Year Writing *Pre: ENGL 1105*	3
MATH 1226 Calculus of a Single Variable *Pre: MATH 1225*	4
PHYS 2305 Found of Physics I w/lab *Pre: MATH 1225; Co: MATH 1226*	4
ENGE 1216 Foundations of Engineering **(C-)** *Pre: ENGE 1215*	2
TOTAL	**17**

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

SPRING SEMESTER YEAR 2
Co-operative Education Term #1

FALL SEMESTER YEAR 3	Credits
CHEM 2536 Organic Chemistry *Pre: CHEM 2535 or 2565* **-OR-** CHEM 2566 Principles of Organic Chem *Pre: CHEM 2565*	3 [S, SII] or [S]
CHEM 2546 Organic Chemistry Lab *Pre: CHEM 2545 Co: CHEM 2536*	1 [S,SII]
CHEM 3615 Physical Chemistry *Pre: CHEM 1036, MATH 2204, PHYS 2306*	3 [F, SI]
MATH 2214 Intro to Differential Eqns Pre: MATH 1226, MATH 1114	3
CHE 2164 CHE Thermodynamics **(C-)** *Pre: 2114. Co: CHEM 3615*	3 [F,S]
Elective (Pathway 2,3, or 7)	3
TOTAL	**16**

SPRING SEMESTER YEAR 3
Co-operative Education Term #2

FALL SEMESTER YEAR 4	Credits
MATH 4564 Operational Methods Pre: MATH 2214	3
ENGL 3764 Technical Writing Junior Standing, Pre: ENGL 1106	3
CHE 3114 Fluid Transport **(C-)** *Pre: 2114, PHYS 2305, MATH 2204; Co: MATH 4564*	3 [F,S]
CHE 3134 Separation Processes **(C-)** *Pre: 2114; (2164 or CHEM 3615)*	3 [F,S]
CHE 3124 CHE Modeling **(C-)** *Pre: 2114, MATH 2214 Co: 3114 MATH 4564*	3 [F,S]
TOTAL	**15**

SPRING SEMESTER YEAR 4	Credits
CHE 2004 CHE Sophomore Seminar	1 [S]
CHEM 3625 Physical Chemistry Lab *Pre: CHEM 3615*	1 [F,S,SII
CHE 3015 Process Measure & Control **(C-)** *Pre: MATH 4564; Co: 3124, 3184, 3044*	3 [S]
CHE 3044 Heat Transfer **(C-)** *Pre: 2164, 3114, MATH 4564*	2 [S]
CHE 3144 Mass Transfer **(C-)** *Pre: 2164, 3114, MATH 4564*	3 [s]
CHE 3184 Chem Reactor Analysis & Des **(C-)** *Pre: 2164, MATH 2214; Co: 3144, 3044*	3 [s]
STAT 4604 Stats Methods for Engrs *Pre: MATH 1226* **- OR-** STAT 4705 Prob & Stat for Engrs *Pre: MATH 2204*	3
TOTAL	**16**

SUMMER TERM I OR II	Credits
CHE 4014 CHE LABORATORY **(C-)** *PRE: 3015, 3044, 3124, 3134, 3144, 3184, ENGL 3764*	5 [SI,SII]
TOTAL	**5**

FALL SEMESTER YEAR 5	Credits
CHE 4185 Process & Plant Design **(C-)** *Pre: 4014*	4[F]
CHE 4104 Process Materials **(C-)** *Pre: 2164, (CHEM 2535 or CHEM 2565)*	3[F]
Elective (Pathway 2,3, or 7)	3
Technical Elective	6
TOTAL	**16**

SPRING SEMESTER YEAR 5	Credits
CHE 4186 Process & Plant Design **(C-)** *Pre: 4185*	4[S]
Elective (Pathway 2,3, or 7)	3
Elective (Pathway 6)	3
Free Electives	3
TOTAL	**13**