

Chemical Engineering Curriculum - Fall 2023

Non-CEGEP Entry

1st Term (Fall)		18 credits	Prerequisites/Co-requisites
CHEM 110	General Chemistry	4	P - College level math and physics or instructor permission
MATH 133	Linear Algebra and Geometry	3	P - A course in functions
MATH 140	Calculus 1	3	P - High-school calculus
PHYS 131	Mechanics and Waves	4	C - Calculus course [MATH 140]
FACC 100	Intro to the Engineering Profession	1	-
CS	Complementary Studies Group B (HSSML) - 1	3	-
2nd Term (Winter)		18 credits	Prerequisites/Co-requisites
CHEM 120	General Chemistry 2	4	P - College level math and physics or instructor permission
MATH 141	Calculus 2	4	P - MATH 140
PHYS 142	Electromagnetism and Optics	4	P - PHYS 131 / C - MATH 141
CS	Complementary Studies Group A (Impact)	3	-
CS	Complementary Studies Group B (HSSML) - 2	3	-
3rd Term (Fall)		17 credits	Prerequisites/Co-requisites
CHEE 200	Chemical Engineering Principles 1	3	-
CHEE 291	Instrumentation and Measurement 1	4	C - CHEE231
CHEM 212	Introductory Organic Chemistry 1	4	P - CHEM 110 / C - CHEM 120
CHEE 231	Data Analysis and Design of Experiments	3	-
MATH 262	Intermediate Calculus	3	P - MATH 141, MATH 133
4th Term (Winter)		18 credits	Prerequisites/Co-requisites
CHEE 204	Chemical Engineering Principles 2	3	P - CHEE 200
CHEE 220	Chemical Engineering Thermodynamics	3	P - CHEE 200 / C - MATH 262
CHEM 234	Topics in Organic Chemistry	3	P - CHEM 212
COMP 208	Computers in Engineering	3	P - MATH 140, MATH 141 / C - MATH 133
MATH 263	Ordinary Differential Equations for Engineers	3	C - MATH 262
FACC 300	Engineering Economy	3	-
5th Term (Fall)		18 credits	Prerequisites/Co-requisites
CHEE 314	Fluid Mechanics	3	C - CHEE 204, MATH 264
CHEE 370	Elements of Biotechnology	3	-
CHEE 380	Materials Science	3	-
CHEE 390	Computational Methods in Chemical Engineering	3	P - CHEE 204, COMP 208, MATH 263 / C - MATH 264
MATH 264	Advanced Calculus for Engineers	3	P - MATH 262 / C - MATH 263
FACC 250	Responsibilities of the Professional Engineer	0	P - FACC 100 or BREE 250
CHEE xxx	Technical Complementary	3	-
6th Term (Winter)		18 credits	Prerequisites/Co-requisites
CHEE 310	Physical Chemistry for Engineers	3	C - CHEE 220
CHEE 315	Heat and Mass Transfer	3	P - CHEE 314
CHEE 351	Separation Processes	3	P - CHEE 220 / C - CHEE 204, CHEE 315
CHEE 474	Biochemical Engineering	3	P - CHEE 370/ C- CHEE 315
CHEE 484	Materials Engineering	3	P - CHEE 380
CHEE xxx	Technical Complementary	3	-
7th Term (Fall)		18.5 credits	Prerequisites/Co-requisites
CHEE 400	Principles of Energy Conversion	3	P - CHEE 315 / C- CHEE 390, CHEE 484
CHEE 423	Chemical Reaction Engineering	3	P - CHEE 310, CHEE 315
CHEE 453	Process Design	4	C - CHEE 315, CHEE 351
CHEE 456-D1	Design Project	4.5	C - CHEE 453, FACC 300
CHEE 455	Process Control	3	P - CHEE 291/ C- CHEE 423, CHEE 453
FACC 400	Engineering Professional Practice	1	P - FACC 100, FACC 250, and 60 program credits
8th Term (Winter)		17.5 credits	Prerequisites/Co-requisites
CHEE 401	Energy Systems Engineering	3	P - CHEE 400
CHEE 440	Process Modelling	3	P - CHEE 423, MATH 264
CHEE 456-D2	Design Project	4.5	P - CHEE 456D1
CHEE 491	Instrumentation and Measurement 2	4	P - CHEE 231, CHEE 455
CHEE xxx	Technical Complementary	3	-

Notes:

1) Technical Complementary courses are selected from an approved list given on the next page.

2) The Complementary Studies (CS) courses are Impact of Technology courses (Group A) and Humanities & Social Sciences, Management Studies and Law courses (Group B). Students must take one course (3 credits) from Group A and two courses (6 credits) from Group B. The curriculum above includes suggested terms during which these courses can be taken. These must be chosen from an approved list under "Complementary Studies", found in the Program Requirements in the Faculty of Engineering Undergraduate section of the Programs, Courses and University Regulations publication - www.mcgill.ca/study (Go to Browse by "Faculties & Schools" to see your program listing).

3) FACC 250 is not yet indicated as a prerequisite in the eCalendar course information (www.mcgill.ca/study) but it will be before FACC 400 is taken.

Students are responsible for satisfying pre-/co-requisites and verifying with their department that they are meeting the requirements of their program.

List A