

Software Engineering Curriculum - Fall 2011

Non-CEGEP Entry

1st Semester (Fall)		15 credits	Prerequisites/Co-requisites
CHEM 110	General Chemistry 1	4	-
FACC 100	Introduction to the Engineering Profession	1	-
MATH 133	Linear Algebra and Geometry	3	-
MATH 140	Calculus 1	3	-
PHYS 131	Mechanics and Waves	4	C - MATH 140
2nd Semester (Winter)		18 credits	Prerequisites/Co-requisites
CHEM 120	General Chemistry 2	4	-
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) - 1	3	-
3rd Semester (Fall)		18 credits	Prerequisites/Co-requisites
CCOM 206	Communication in Engineering	3	-
COMP 202	Introduction to Computing 1	3	P - MATH 140, MATH 141
COMP 250	Introduction to Computer Science	3	P - MATH 140, MATH 141
ECSE 200	Electric Circuits 1	3	P - PHYS 142 or equivalent / C - MATH 263
MATH 262	Intermediate Calculus	3	P - MATH 141, MATH 133
MATH 263	Ordinary Differential Equations for Engineers	3	C - MATH 262
4th Semester (Winter)		18 credits	Prerequisites/Co-requisites
COMP 206	Introduction to Software Systems	3	P - COMP 202 or COMP 250
ECSE 210	Electric Circuits 2	3	P - ECSE 200
ECSE 221	Introduction to Computer Engineering	3	P - COMP 202
MATH 264	Advanced Calculus for Engineers	3	P - MATH 262 / C - MATH 263
MATH 270	Applied Linear Algebra	3	P - MATH 263
CS	Complementary Studies Group B (HSSML) - 2	3	-
5th Semester (Fall)		17 credits	Prerequisites/Co-requisites
COMP 251	Data Structures and Algorithms	3	P - COMP 250
ECSE 211	Design Principles and Methods	3	P - ECSE 200, COMP 202 / C - ECSE 291
ECSE 291	Electrical Measurements Laboratory	2	C - ECSE 210
ECSE 306	Fundamentals of Signals and Systems	3	P - ECSE 210, MATH 270
ECSE 321	Introduction to Software Engineering	3	P - COMP 202 or COMP 208
ECSE 322	Computer Engineering	3	P - ECSE 200 or MECH 383, ECSE 221
6th Semester (Winter)		18 credits	Prerequisites/Co-requisites
COMP 302	Programming Languages and Paradigms	3	P - COMP 250 or COMP 203
ECSE 305	Probability and Random Signals 1	3	P - ECSE 303 or ECSE 306
ECSE 330	Introduction to Electronics	3	P - ECSE 210
ECSE 427	Operating Systems	3	P - ECSE 322 or COMP 273
MATH 363	Discrete Mathematics	3	P - MATH 263, MATH 264
MIME 310	Engineering Economy	3	-
7th Semester (Fall)		16 credits	Prerequisites/Co-requisites
COMP 360	Algorithm Design Techniques	3	P - COMP 251, MATH 363
ECSE 420	Parallel Computing	3	P - ECSE 427
ECSE 429	Software Validation	3	P - ECSE 321 or COMP 303
ECSE 456	ECSE Design Project 1	3	P - CCOM 206, COMP 302, ECSE 211, ECSE 322, ECSE 306, ECSE 321 / CR - FACC 400
FACC 400	Engineering Professional Practice	1	P - FACC 100, 60 program credits
ECSE xxx	Technical Complementary	3	-
8th Semester (Winter)		15 credits	Prerequisites/Co-requisites
COMP 421	Database Systems	3	P - COMP 206, COMP 251, COMP 302
ECSE 428	Software Engineering Practice	3	P - ECSE 321 or COMP 335
ECSE 457	ECSE Design Project 2	3	P - ECSE 456
ECSE xxx	Technical Complementary	3	-
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Technical Complementary courses are selected from an approved list given on the next page.

The Complementary Studies (CS) courses are Impact of Technology courses (Group A) and Humanities & Social Sciences, Management Studies and Law courses (Group B). These must be chosen from an approved list of courses/departments, found in the program list under "Complementary Studies" in the Programs, Courses and University Regulations Calendar (www.mcgill.ca/study).

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

Technical Complementary Courses - Software Engineering

Technical Complementaries

Note: 500-level courses are restricted to students with a minimum CGPA of 3.0 and B+ or better in prerequisite courses.

9-12 credits (3 courses)

List A

6 -12 credits (2-3 courses) from the following:

	Credits
ECSE 323 Digital Systems Design	5
ECSE 404 Control Systems	3
ECSE 411 Communications Systems 1	3
ECSE 412 Discrete Time Signal Processing	3
ECSE 413 Communications Systems 2	3
ECSE 414 Introduction to Telecommunication Networks*	3
ECSE 421 Embedded Systems	3
ECSE 422 Fault Tolerant Computing	3
ECSE 424 Human-Computer Interaction	3
ECSE 425 Computer Organization and Architecture	3
ECSE 426 Microprocessor Systems	3
ECSE 530 Logic Synthesis	3

*Students choose either ECSE 414 or COMP 535

List B

0-4 credits from the following:

	Credits
COMP 330 Theoretical Aspects: Computer Science	3
COMP 350 Numerical Computing	3
COMP 409 Concurrent Programming	3
COMP 424 Artificial Intelligence	3
COMP 520 Compiler Design	4
COMP 535 Computer Networks 1*	3
or ECSE 532 Computer Graphics	3
COMP 557 Fundamentals of Computer Graphics	3
COMP 566 Discrete Optimization 1	3
COMP 575 Fundamentals of Distributed Algorithms	3
ECSE 504 Sampled Data Control	3
ECSE 529 Computer and Biological Vision	3

*Students choose either ECSE 414 or COMP 535