Science Profile (120 extended credit programs, i.e. non-CEGEP entry, only)

Chemistry:	CHEM 205 & 206 (General Chemistry I & II)
Biology:	BIOL 201 (General Biology)
Math:	MATH 201 (Elementary Functions), MATH 202 (College Algebra, <i>required for Mature Students only</i>), MATH 203 (Calculus I), MATH 205 (Calculus II)
Physics:	PHYS 204/224 (Mechanics and associated lab course), PHYS 205/225 (Electricity & Magnetism and associated lab course), PHYS 206/226 (Waves and Modern Physics & associated lab course)

Biochemistry Core Program (45 credits = 15 courses)

Analytical Chemistry:	CHEM 217 (Introductory Analytical Chemistry I, offered Fall only) CHEM 218 (Introductory Analytical Chemistry II, offered Winter only) Exemptions for both courses possible for students entering from Dawson's Laboratory Technology – Analytical Chemistry program
Organic Chemistry:	CHEM 221 (Introductory Organic Chemistry I, offered Fall, Winter and alternating Summers) CHEM 222 (Introductory Organic Chemistry II, offered Fall and Winter) CHEM 324 (Organic Reactions, offered Fall and Winter) Exemptions for CHEM 221 and CHEM 222 possible for CEGEP students
Physical Chemistry:	CHEM 234 (thermodynamics, offered Fall and Winter) CHEM 235 (kinetics, offered Fall and Winter)
Inorganic Chemistry:	CHEM 241 (Introduction to Periodicity and Valence Theory, offered Fall and Winter)
Biochemistry:	CHEM 271 (Biochemistry I, offered Fall, Winter and alternating Summers) CHEM 375 (Biochemistry II, offered Fall, Winter and Summer)
Spectroscopy:	CHEM 293 (Organic Spectroscopy, offered Winter and Summer)
Biology:	BIOL 261 (Molecular and General genetics), BIOL 266 (Cell Biology), BIOL 364 (Cell Physiology), BIOL 368 (Genetics and Cell Biology Lab); all offered Fall and Winter

Biochemistry Specialization = core (above) PLUS additional credits at the advanced level

Analytical Chemistry:	CHEM 312 (Intermediate Analytical Chemistry, Fall and alternating Summers) Lab exemption possible for students entering from Dawson's Laboratory Technology – Analytical Chemistry program
Organic Chemistry:	CHEM 325 (Organic Structure and Stereochemistry, Winter and alternating Summers)
Physical Chemistry:	CHEM 335 (Biophysical Chemistry, offered Winter only)
Biology:	BIOL 367 (Molecular Biology, offered Fall and Winter)
Advanced Labs:	CHEM 477 (Advanced Laboratory in Biochemistry, offered Fall only) BIOL 466 (Advanced Techniques in Molecular Biology, offered Winter only)
Biochemistry electives:	2 x 400-level courses (CHEM 4XX) chosen form advanced topics courses in biochemistry
Research project:	optional CHEM 419 (6 credits, Independent Study in an active research lab of one of our faculty members, 1 or 2 terms, all terms available, presented as a conference-style poster). If taken, replaces one advanced lab course (CHEM 477 or BIOL 466) and one elective.

Course numbering system

First digit gives level	200 = introductory	300 = intermediate		400 = advanc	ced
Middle digit denotes discipline	1 = analytical, 7 = biochemistry,	2 = organic, 9 = spectrosco	1, ,	0,	5 = multidisciplinary,

Last digit gives sequence

Typical Biochemistry Specialization Sequence (entering with CHEM 221 from CEGEP)* – entering with CHEM 221 from CEGEP – entering from profile year

ſ		Fall	Winter			Fall	Winter
		CHEM 217	CHEM 218	1		CHEM 217	CHEM 218
	Year 1	CHEM 222	CHEM 235 or 241		Year 1	CHEM 221	CHEM 222
		CHEM 234	CHEM 293			CHEM 234	CHEM 235 or 241
		BIOL 261 or CHEM 271	CHEM 271 or BIOL 261			BIOL 261 or CHEM 271	CHEM 271 or BIOL 261
		elective	elective			elective	elective
		CHEM 312	CHEM 324			CHEM 312	CHEM 293
	Year 2	CHEM 235 or 241	CHEM 325 or 335		Year 2	CHEM 235 or 241	CHEM 375
		BIOL 266	CHEM 375			BIOL 266	CHEM 4XX
		BIOL 367	CHEM 4XX			BIOL 367	BIOL 364 or 368
		elective	elective			elective	elective
		CHEM 477	CHEM 325 or 335			CHEM 324	CHEM 325
	Year 3	CHEM 4XX	BIOL 364 or 368		Year 3	CHEM 4XX	CHEM 335
		organic repl.	CHEM 419**			CHEM 477	CHEM 419**
		BIOL 364 or 368	elective			BIOL 364 or 368	elective
		elective				elective	

* All courses are 3 credits except where noted. There are eighteen (18) credits of electives that must include six (6) credits of general education courses and twelve (12) credits of out of program electives. All electives must be out of program (non CHEM). Some courses can be taken in Summer or online.

** CHEM 419 is a 6-credit course. It replaces (BIOL 466 + 1 elective) or (CHEM 477 + 1 elective). CHEM 419 can also be taken over Fall and Winter when research is carried out on both terms, in which case it can count as 3 credits in the Fall and 3 credits in the Winter. This course is offered every term, including Summer.

Biochemistry Specialization Course Flowchart

