

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

Chemistry:	CHEM 205 & 206 (General Chemistry I & II)
Biology:	BIOL 201 (Introductory 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 and Magnetism & associated lab course), PHYS 206/226 (Waves and Modern Physics & associated lab course)

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) CHEM 312 (Intermediate Analytical Chemistry, offered Fall and even-year Summers) <i>Exemptions for 217 AND 218 PLUS THE LAB PORTION OF 312 possible for students entering from Dawson's Laboratory Technology – Analytical Chemistry program</i>
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 only) CHEM 325 (Organic Structure and Stereochemistry, offered Winter and odd-year Summers) <i>Exemptions for CHEM 221 and CHEM 222 possible for CEGEP students</i>
Physical Chemistry:	CHEM 234 (Thermodynamics, offered Fall and Winter) CHEM 235 (Kinetics of Chemical Reactions, offered Fall and Winter) CHEM 333 (Introduction to Quantum Theory, offered Winter only)
Inorganic Chemistry:	CHEM 241 (Introduction to Periodicity and Valence Theory, offered Fall and Winter) CHEM 242 (Chemistry of the Main Group Elements, offered Winter only) CHEM 341 (The Transition Metals, offered Fall only)
Biochemistry:	CHEM 271 (Biochemistry I, offered Fall, Winter and alternating Summers)
Spectroscopy:	CHEM 293 (Spectroscopy and Structure of Organic Compounds, offered every term)

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

Spectroscopy:	CHEM 495 (Advanced Molecular Characterization, offered Fall only)
Chemistry electives:	2 x 400-level courses (CHEM 4XX) chosen from advanced topics courses in chemistry
Research project:	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)

Course numbering system

First digit gives level	200 = introductory	300 = intermediate	400 = advanced
Middle digit denotes discipline	1 = analytical, 7 = biochemistry,	2 = organic, 9 = spectroscopy/spectrometry	3 = physical, 4 = inorganic, 5 = multidisciplinary,
Last digit gives sequence			

Typical Chemistry Specialization Sequence*

- entering with CHEM 221 from CEGEP

	Fall	Winter
Year 1	CHEM 217 CHEM 222 CHEM 234 CHEM 241 elective	CHEM 218 CHEM 293 CHEM 235 CHEM 242 elective
Year 2	CHEM 312 CHEM 324 CHEM 341 elective elective	CHEM 271 CHEM 325 CHEM 333 organic replacement elective
Year 3	CHEM 4XX CHEM 419** CHEM 495 elective elective	CHEM 4XX CHEM 419** elective elective elective

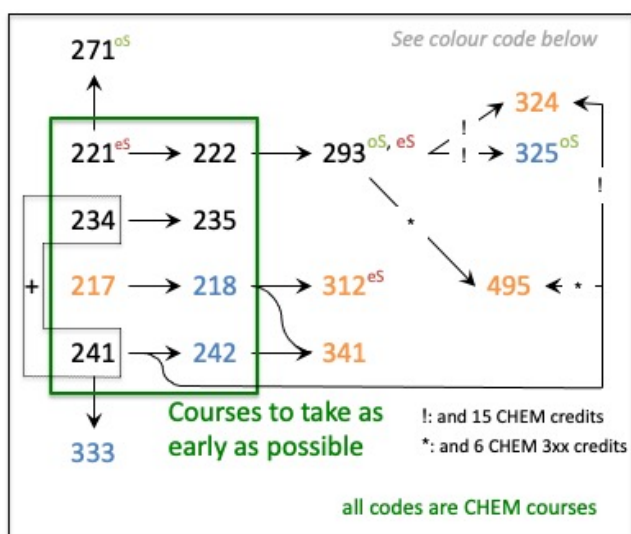
- entering from profile year

	Fall	Winter
Year 1	CHEM 217 CHEM 221 CHEM 234 CHEM 241 elective	CHEM 218 CHEM 222 CHEM 235 CHEM 242 elective
Year 2	CHEM 271 CHEM 312 CHEM 341 elective elective	CHEM 293 CHEM 325 CHEM 333 CHEM 271 elective
Year 3	CHEM 324 CHEM 419** CHEM 4XX CHEM 495 elective	CHEM 4XX CHEM 419** elective elective elective

* All courses are 3 credits except where noted. There are thirty (30) credits of electives (to be taken at any time) that must include six credits of general education courses and fifteen credits of out of program electives. The remainder may be freely chosen (chemistry, other science or non-science). Note: some courses can be taken in Summer or online.

** CHEM 419 (6 credits) can count as 3 credits in the Fall and 3 credits in the Winter when research is carried out on both terms. If taken in one term, it will count as 6 credits in that term. This course is open each term, including Summer.

Chemistry Specialization/Honours Course Flowchart



Legend: 221 $\xrightarrow{\text{is a prerequisite for}}$ 222

Additional courses:

- 4XX (2x) (Fall & Winter only)
- 419/450 (6 credits)
- Organic replacement(s) if exempt from 221 &/or 222
- 10 electives

Summer course offerings:

^{oS}	alternating with	^{eS}
ODD years		EVEN years
271		221
293		293
375		375
325	←-----→	312

Tentative Schedule

Terms when courses are traditionally offered:

- Fall & Winter
- Fall only
- Winter only
- and sometimes on:
 - ^{oS}: Summer ODD years
 - ^{eS}: Summer EVEN years