



<p>1.0 Degree Title Please specify the two degrees for concurrent degree programs</p> <p><input type="text" value="B.Sc."/></p> <p>1.1 Major (Legacy= Subject)(30-char. max.)</p> <p><input type="text" value="Major in Chemistry with Measurement Option"/></p> <p>1.2 Concentration (Legacy = Concentration/Option) If applicable to Majors only (30 char. max.)</p> <p><input type="text"/></p> <p>1.3 Minor (with Concentration, if Applicable) (30 char. max.)</p> <p><input type="text"/></p>	<p>2.0 Administering Faculty/Unit</p> <p><input type="text" value="Science/Chemistry"/></p> <p>Offering Faculty/Department</p> <p><input type="text" value="Science/Chemistry"/></p> <p>3.0 Effective Term of Implementation (Ex. Sept. 2004 = 200409) Term</p> <p><input type="text" value="201509"/></p>
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4.0 Rationale and Admission Requirements for New Proposal

Although the Chemistry Department has several program options, none currently target students interested in physics or analytical chemistry, The proposed program is to fill this hole in our offerings. This new program has been formulated in response to student requests. Over the last decade, there has been a larger emphasis on synthesis in our other program offerings with a decreased emphasis on numerical and instrumental offerings. This new program offers an option for chemistry students who are more interested in non-synthetic aspects of chemistry.

5.0 Program Information
Please check appropriate box(es)

<p>5.1 Program Type</p> <p><input checked="" type="checkbox"/> Bachelor's Program</p> <p><input type="checkbox"/> Master's M.Sc. (Applied) Program Dual Degree/Concurrent Program Certificate Diploma Graduate Certificate Graduate Diploma Ph.D. Program Doctorate Program (Other than Ph.D.) Private Program Off-Campus Program Distance Education Program (By Correspondence) Other (Please specify)</p>	<p>5.2 Category</p> <p>Faculty Program (FP)</p> <p><input checked="" type="checkbox"/> Major Joint Major Major Concentration (CON) Minor Minor Concentration (CON) Honours (HON) Joint Honours Component (HC) Internship/Co-op Thesis (T) Non-Thesis (N) Other Please specify</p> <p><input type="text"/></p>	<p>5.3 Level</p> <p><input checked="" type="checkbox"/> Undergraduate Dentistry/Law/Medicine Continuing Studies (Non-Credit) Collegial Masters & Grad Dips & Certs Doctorate Post-Graduate Medicine/Dentistry Graduate Qualifying Postdoctoral Fellows</p> <p>5.4 FQRSC (Research) Indicator (for GPS) Yes No</p>
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<p>6.0 Total Credits</p> <p><input type="text" value="62"/></p>	<p>7.0 Consultation with Related Units Yes <input type="checkbox"/> No</p> <p>Financial Consult Yes No</p> <p>Attach list of consultations.</p>
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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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8.0 Program Description (Maximum 150 words)

This is a B.Sc. program in chemistry with an emphasis on additional background and advanced courses of interest to physical and analytical chemists.

9.0 List of proposed program for the New Program/Major or Minor/Concentration.

Proposed program (list courses as follows: Subj Code/Crse Num, Title, Credit weight under the headings of: Required Courses, Complementary Courses, Elective Courses)

Program Requirements

PRE-PROGRAM REQUIREMENTS:

Students entering from the Freshman program must have included CHEM 110 and CHEM 120 or CHEM 115, BIOL 111 or BIOL 112, MATH 133, MATH 140/MATH 141 or MATH 150/MATH 151, PHYS 131/PHYS 142, or their equivalents in their Freshman year. Quebec students must have completed the DEC with appropriate science and mathematics courses. Note that students who have successfully completed MATH 150 and MATH 151 do not have to take MATH 222.

Required Courses (59 credits)

The required courses in this program consist of 59 credits in chemistry, physics and mathematics, listed below. The courses marked with an asterisk (*) are omitted from the program of students who have successfully completed them at the CEGEP level. Students completing this program will not be eligible for admission to the Ordre des chimistes du Québec without additional chemistry electives. This program is not currently accredited by the Canadian Society for Chemistry. See <http://www.chemistry.mcgill.ca/advising/inside/advisors.php>.

Completion of Mathematics MATH 222 and MATH 315 during U1 is strongly recommended.

* Denotes courses with CEGEP equivalents.

** Students who have successfully completed MATH 150 and MATH 151 are not required to take MATH 222.

CHEM 212 Introductory Organic Chemistry 1 (4 credits) *
CHEM 222 Introductory Organic Chemistry 2 (4 credits) *
CHEM 223 Introductory Physical Chemistry 1 (2 credits)
CHEM 243 Introductory Physical Chemistry 2 (2 credits)
CHEM 283 Introductory Physical Chemistry Laboratory (2 credits)
CHEM 281 Inorganic Chemistry 1 (3 credits)
CHEM 287 Introductory Analytical Chemistry (2 credits)
CHEM 297 Introductory Analytical Chemistry Laboratory (1 credit)
CHEM 302 Introductory Organic Chemistry 3 (3 credits)
CHEM 345 Molecular Properties and Structure 1 (3 credits)
CHEM 355 Molecular Properties and Structure 2 (3 credits)
CHEM 365 Statistical Thermodynamics (2 credits)
CHEM 367 Instrumental Analysis 1 (3 credits)
CHEM 377 Instrumental Analysis 2 (3 credits)
CHEM 381 Inorganic Chemistry 2 (3 credits)
CHEM 493 Advanced Physical Chemistry Laboratory (2 credits)
CHEM 575 Chemical Kinetics (3 credits)
MATH 222 Calculus 3 (3 credits) **
MATH 223 Linear Algebra (3 credits)
MATH 315 Ordinary Differential Equations (3 credits)
COMP 208 Computers in Engineering (3 credits)
PHYS 241 Signal Processing (3 credits)
PHYS 242 Electricity and Magnetism (2 credits)

Complementary courses (3 credits)

Choose one of:

CHEM 514 Biophysical Chemistry (3 credits)
CHEM 516 Nuclear and Radiochemistry (3 credits)
CHEM 531 Chemistry of Inorganic Materials (3 credits)
CHEM 533 Small Molecule Crystallography (3 credits)
CHEM 534 Nanoscience and Nanotechnology (3 credits)
CHEM 547 Laboratory Automation (3 credits)
CHEM 555 NMR Spectroscopy (3 credits)
CHEM 556 Quantum Chemistry (3 credits)
CHEM 567 Chemometrics: Data Analysis (3 credits)
CHEM 577 Electrochemistry (3 credits)
CHEM 585 Colloid Chemistry (3 credits)
CHEM 593 Statistical Mechanics (3 credits)
CHEM 597 Spectroscopy (3 credits)

10.0 Approvals

Routing Sequence	Name	Signature	Date
Department	<input type="text"/>	<input type="text"/>	<input type="text"/>
Curric/Acad Committee	<input type="text"/>	<input type="text"/>	<input type="text"/>
Faculty 1	<input type="text"/>	<input type="text"/>	<input type="text"/>
Faculty 2	<input type="text"/>	<input type="text"/>	<input type="text"/>
Faculty 3	<input type="text"/>	<input type="text"/>	<input type="text"/>
CGPS	<input type="text"/>	<input type="text"/>	<input type="text"/>
SCTP	<input type="text"/>	<input type="text"/>	<input type="text"/>
APC	<input type="text"/>	<input type="text"/>	<input type="text"/>
Senate	<input type="text"/>	<input type="text"/>	<input type="text"/>

Submitted by

Name

Phone

Email

Submission Date

To be completed by ARR:

CIP Code