Chemistry Information Session

Programs in Chemistry

2017-2018
B.Sc. (Honours) Chemistry:

Specialisation: CHEM-P-BSH  90 of 120 course units specified

Major: CHEM-M-BSH   72 of 120 course units specified

B.Sc. Chemistry General/Minor (Science): CHEM-G-BSC, CHEM-Z
48 of 90 units specified

B.A. Chemistry General/Minor (Arts): CHEM-G-BA, CHEM-Y
30 course units in CHEM + 6 supporting units

B.Sc.(Honours) Environmental Chemistry:
ECHM-P-BSH 102 of 120 course units specified
Enrolment targets:

B.Sc. (Hons) Majors & Subject of specialization   63

B.Sc./B.A. Minor   20

B.Sc./B.A. General   15
Chemistry Information Session

Admission to 2nd year CHEM programs

CHEM 112/6.0

MATH 121/6.0 (or equiv.)
PHYS 106/6.0 (or 104 or 117)
MATH 112/3.0 (or equiv.) - can be taken in 2nd year

Cumulative GPA thresholds (see next slide)
# Progression Thresholds in Chemistry
*(cumulative GPA & minimum grade in CHEM 112)*

<table>
<thead>
<tr>
<th>Program</th>
<th>Plan</th>
<th>Acceptance List</th>
<th>Pending List</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>GPA</td>
<td>Chem 112</td>
</tr>
<tr>
<td>BSc(Hons)</td>
<td>CHEM Major</td>
<td>2.7</td>
<td>C+</td>
</tr>
<tr>
<td>BSc(Hons)</td>
<td>CHEM SSP</td>
<td>2.7</td>
<td>C+</td>
</tr>
<tr>
<td>BSc</td>
<td>CHEM General</td>
<td>2.1</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>CHEM Minor</td>
<td>2.1</td>
<td>C</td>
</tr>
<tr>
<td>BA</td>
<td>CHEM General</td>
<td>2.1</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>CHEM Minor</td>
<td>2.1</td>
<td>C</td>
</tr>
</tbody>
</table>
### Time-line for plan selection

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 16-27</td>
<td>Plan Selection period for Arts and Science and Concurrent Education students entering 2\textsuperscript{nd} year [acceptance list students get in automatically]</td>
</tr>
<tr>
<td>May 30 – June 10</td>
<td>Departments make decisions on students on their pending lists</td>
</tr>
<tr>
<td>June 20</td>
<td>Course timetable available on SOLUS</td>
</tr>
<tr>
<td>July 4</td>
<td>Students can access Student Centre to view enrollment appointment times and start loading classes into their shopping cart on SOLUS</td>
</tr>
</tbody>
</table>
Year 1 – **Basic Science courses**
Course specific lab program

Year 2 – **Core Chemistry courses**
Course specific lab programs

Year 3 – **Strengthening and Broadening**
Integrated lab program

Year 4 – **Expand Your Interests: CHEM electives**
Independent research project
Core courses in 2nd year Chemistry

Fall Term

CHEM 211/3.0 Main Group Chemistry
CHEM 212/3.0 Principles of Chemical Reactivity
CHEM 213/3.0 Introduction to Chemical Analysis

Winter Term

CHEM 221/3.0 Materials, Solutions and Interfaces
CHEM 222/3.0 Methods of Structure Determination
CHEM 223/3.0 Organic Reactions
2nd year courses for Chemistry and Biochemistry

Chemistry

Fall Term  CHEM 211/3.0, 212/3.0, 213/3.0
Winter Term CHEM 221/3.0, 222/3.0, 223/3.0

Biochemistry

Fall Term  CHEM 211/3.0, 212/3.0  213/3.0 (elective)
Winter Term CHEM 222/3.0, 223/3.0  221/3.0 (elective)
Chemistry Information Session

Life Science and Biology programs

Organic Chemistry Courses for Students in Life Science & Biology Programs

**Fall Term**
CHEM 281/3.0 General Organic Chemistry I

**Winter Term**
CHEM 282/3.0 General Organic Chemistry II

These courses *should not* be taken by students in Chemistry or Biochemistry degree plans.
Chemistry Information Session

Core courses in 3rd year Chemistry

**Fall Term**
- CHEM 311/3.0 Mechanistic Organic Chemistry
- CHEM 312/3.0 Transition Metal Chemistry
- CHEM 313/3.0 Quantum Mechanics

**Winter Term**
- CHEM 321/3.0 Instrumental Chemical Analysis
- CHEM 322/3.0 The Chemical Bond: Computation & Spectroscopy
- CHEM 323/3.0 Biological Chemistry

**Fall/Winter Terms**
- CHEM 397/6.0 Integrated Lab
Chemistry Information Session

4th Year Chemistry courses

In addition to a number of 4th year option courses, students get the opportunity to do an Honours Research Project (CHEM 497) working in state-of-the-art research labs in the Chemistry Department
interested in teaching?

Chemistry as a teachable subject:

**1st teachable subject:**
1st year Chemistry + 24.0 Chemistry units (8 one-term courses)

**2nd teachable subject:**
1st year Chemistry + 18.0 Chemistry units (6 one-term courses)
Chemistry as a Teachable subject

18.0 units of CHEM beyond 1st year: take all of the 2nd year Chemistry courses: 211, 212, 213, 221, 222, and 223,
or take a selection of 2nd year Chemistry courses and some 3rd year Chemistry courses, for which you would have the 2nd year Chemistry prerequisites (this requires some advance planning)

Register in a CHEM MIN (Arts or Science): in order to pre-register in 2nd year CHEM courses (courses are only available to students in a CHEM or BCHM degree program during course registration in July)
A new program in the Faculty of Arts and Science is the combination of any major (or SSP) with an Internship (12 or 16 month duration) between 3rd and 4th year.

- paid internship, arranged through Career Services
- remain a registered student (so repayment of OSAP doesn’t kick in)
- usually start May (16 months) or September (12 months) after 3rd year and then student returns following September for regular 4th year of program
- register in Internship program in fall term of 3rd year (Career Services workshops) and in INTN 301-303 Professional Internship I-III (total 6.0 units)
What do our graduates of Chemistry programs do with their degrees?
Where could I go after graduation?

Agricultural Sciences  
Biomedical Engineering  
Botany  
Business Administration  
Complementary Medicine  
Conservation  
Dentistry  
Ecology  
Education  
Epidemiology and Community Health  
Environmental research  
Food Science and Technology  
Forensic Science  
Genetics  
Industrial Processes  
Journalism  

*some careers may require additional training

Management (business and health administration)  
Manufacturing  
Marketing  
Medical Laboratories  
Medicine  
Pharmacy  
Nutrition and Dietetics  
Patent Law  
Pharmaceuticals  
Physiology  
Public Health  
Public or Private Research  
Teaching  
Technician  
Toxicology  
Veterinary medicine  
Zoology
Chemistry Information Session

For more information, contact:

Anne Petitjean
Chair of Undergraduate Studies
(Chemistry)

ugchair@chem.queensu.ca

613-533-6587
Chemistry Information Session

Questions?