

The Chemistry Major is a modern and adaptable program. It provides students with the theoretical knowledge and applied laboratory skills necessary to be successful in industry, academia, or professional programs. The program provides a solid foundation in the five subdisciplines (analytical, inorganic, physical, organic, and biochemistry) and allows students to customize their program and select senior-level courses that satisfy their interests and meet their needs.

Students have the *option* of completing the requirements of the Association of the Chemical Profession of Alberta designation, Professional Chemist (P. Chem.). Please contact the Chemistry discipline advisor, Dr. Jorge Ilano at Llanoj@macewan.ca, to learn more about the sequence of courses that fulfills the P.Chem. requirements.

Overall Major Requirements

- 48-60 non-duplicative credits
- A minimum of 39 senior-level CHEM or BICM credits
- A minimum of 12 credits from 300-level CHEM or BICM
- A minimum of 9 credits of CHEM at the 400-level, including 3 credits of CHEM 497 or CHEM 498
- Students can use only two independent courses (CHEM 497 or CHEM 498) to fulfill the 400-level requirements

Required Junior-Level Courses

Chemistry majors are required to complete the following courses. These courses can be used to fulfill the breadth requirements of the Bachelor of Science program

- BIOL 107 Introduction to Cell Biology
- MATH 114 Elementary Calculus I
- MATH 115 Elementary Calculus II
- STAT 151 Introduction to Applied Statistics
- PHYS 124 Physics for Life Sciences I **OR** PHYS 144 Mechanics
- PHYS 126 Physics for Life Sciences II **OR** PHYS 146 Electromagnetism

Specific Major Requirements

30 Credits

- CHEM 101 Introductory University Chemistry I
- CHEM 102 Introductory University Chemistry II
- CHEM 211 Analytical Chemistry
- CHEM 232 Inorganic Chemistry
- CHEM 242 Fundamentals Physical Chemistry
- CHEM 261 Organic Chemistry I
- CHEM 263 Organic Chemistry II
- BICM 200 Introductory Biochemistry
- SCIE 201 Scientific Process: From Research Questions to Printed Manuscript
- Three credits from:
CHEM 497 Chemistry Internship **OR** CHEM 498 Advanced Independent Study

General Major Requirements	18 to 30 Credits												
<p>Students choose from senior-level CHEM, BICM, and PHSC</p> <table border="0"> <tr> <td><input type="checkbox"/> _____ (required 300-level)</td> <td><input type="checkbox"/> _____</td> </tr> <tr> <td><input type="checkbox"/> _____ (required 300-level)</td> <td><input type="checkbox"/> _____</td> </tr> <tr> <td><input type="checkbox"/> _____ (required 300-level)</td> <td><input type="checkbox"/> _____</td> </tr> <tr> <td><input type="checkbox"/> _____ (required 300-level)</td> <td><input type="checkbox"/> _____</td> </tr> <tr> <td><input type="checkbox"/> _____ (required 400-level)</td> <td></td> </tr> <tr> <td><input type="checkbox"/> _____ (required 400-level)</td> <td></td> </tr> </table>		<input type="checkbox"/> _____ (required 300-level)	<input type="checkbox"/> _____	<input type="checkbox"/> _____ (required 300-level)	<input type="checkbox"/> _____	<input type="checkbox"/> _____ (required 300-level)	<input type="checkbox"/> _____	<input type="checkbox"/> _____ (required 300-level)	<input type="checkbox"/> _____	<input type="checkbox"/> _____ (required 400-level)		<input type="checkbox"/> _____ (required 400-level)	
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Chemistry Major (48 to 60 credits)	Total Credits: _____												

Important Planning Notes
<ol style="list-style-type: none"> 1. Courses required for the major may be used to satisfy the breadth requirements in the Bachelor of Science degree. Please refer to the applicable degree planner for details. 2. Students are required to consult the MacEwan University academic calendar to ensure they meet prerequisites for all courses they enrol in. 3. All students pursuing the Chemistry Major should take careful note of the term in which courses are offered; many essential senior-level CHEM and BICM courses are offered only once a year. Some senior level courses are offered in alternate years. 4. CHEM 101 and CHME 103 are equivalent courses. Credit can be obtained in only one of the two courses. 5. CHEM 102 and CHME 105 are equivalent courses. Credit can be obtained in only one of the two courses. 6. Students may take CHEM 495 and CHEM 498 for credit a maximum of two times each, as long as the course topic is different each time they take either course.