

NOTE: Students who were admitted before 2013/2014 calendar term. Important to follow the term you were admitted in.



Combined Honours B.Sc. Chemistry and Physics

The Chemistry and Physics program is aimed at students who are interested in both fields as well as their combination. It gives a strong background in both subjects including a wide range of theoretical and applied physics and physical, organic and inorganic chemistry. This program may lead into graduate studies in either department. Students may apply to the Co-Operative Education Option in this program. Typically each year, you will take 5.0 credits (10 "half-courses"), and shown below are the courses that are normally taken in a given year, designed to satisfy the prerequisite structure. Not specified are possible elective courses, as there is some flexibility starting in year two.

Your First Year

Physics: PHYS 1001 and 1002 (recommended) or 1003 and 1004 or 1007 and 1008 (with an average grade of B- or higher)
Chemistry: CHEM 1001 and 1002
Mathematics: MATH 1004, 1005 and 1104
Computer Science: COMP 1005 or ECOR 1606
Electives: NSCI 1000 or 0.5 credit approved arts or social science

In first year university, much of your schedule will be required courses, which are prerequisites to upper year courses. These will give you the basics that you need in order to continue on in the program as well as some breadth of study into subjects other than your major.

Your Second Year

Physics: PHYS 2202 and 2604
Chemistry: CHEM 2103, 2203 and 2501; and
Mathematics: MATH 2004 and 3705
Engineering: ECOR 2606 or MATH 3806

In second year, you will be taking courses in optics and modern physics as well as physical and organic chemistry. An Engineering (or Math) course in numerical/computational analysis is also required and useful for laboratory analysis in various courses.

Your third year Chemistry courses will include both inorganic and organic chemistry while your Physics courses will cover electromagnetism, quantum mechanics, a second modern physics and an applied laboratory course, which has no lecture component.

In your fourth year, you will perform an independent research project under the supervision of a professor at the university. Projects may be in Chemistry or Physics depending on your interests.

Your Third Year

Physics: PHYS 3007, 3308, 3606, 3701, 3802 & 3807
Chemistry: CHEM 3100, 3102, 3503, and *2204 or 2206* and 3106 or 3107
Mathematics: STAT 3502
*If you choose CHEM 2204 or 2206, these courses are taken in your 2nd yr.

Note: In addition to the above required courses, you must take 1.5 elective credits in approved Arts or Social Sciences and 1.0 credit in free electives as outlined in the Undergraduate Calendar.

Your Fourth Year

Physics: PHYS 4707 and 1.0 credit in PHYS at the 4000-level
Chemistry: CHEM 4102 (not offered) and 0.5 credit in CHEM at the 4000-level and CHEM 3106 or 3107
Project: PHYS 4909 (full year) or CHEM 4908 (full year) or PHYS 4907 (fall) or 4908 (winter) and 0.5 credit in PHYS at the 4000-level

Questions?

Please feel free to contact the department: **Loc:** 3302 Herzberg **Tel:** (613) 520-4320
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