

Chemistry

BACHELOR OF SCIENCE (BSC) DEGREE, MAJOR, MINOR

Why study chemistry?

Chemistry is sometimes known as the central science, because in order to fully understand how the world works, you need some knowledge of this particular science.

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WHY TAKE CHEMISTRY AT UFV?

In your chemistry courses at UFV, you will study the fundamental principles of the discipline and will also learn how these principles are used to solve problems and develop new products for today's consumer-oriented society. For example, chemists are currently employed in seeking solutions to environmental problems such as acid rain, the greenhouse effect, and the depletion of the ozone layer; other chemists are involved in developing new drugs to combat diseases such as cancer and AIDS; while yet others work to produce new consumer products ranging from gasoline additives to mouthwash, from pesticides to perfumes, from "crazy glue" to biodegradable diapers.

UFV offers a major and minor in chemistry as part of its Bachelor of Science degree program. Some students take lower-level chemistry courses as part of a science degree or as preparation for another program.

WHAT TYPE OF CAREER CAN I EXPECT?

UFV chemistry graduates have gone on to enjoy rewarding careers in many areas including employment with hi-tech industries and government laboratories, or as chemistry teachers at the secondary-school level. A background in chemistry is also useful if you're intending to pursue post-graduate studies in areas such as chemistry, medicine, pharmacy, veterinary science, or engineering.



"A UFV science degree helps develop critical thinking and analytical skills that enable our students to excel in their field and lead with innovation."

— ALLAN ARNDT,
UFV science instructor.

Chemistry



“With UFV’s small class size, there is a lot more individual attention from professors. All teachers and staff have a genuine concern for not only my desire to continue learning, but also to succeed in the process. The laboratory work provides information relevant to lecture material as well as experience that is practical in a working environment.”

— **BRADY FISHBOOK**, graduated spring 2007, with a Bachelor of Science degree with a biology major and chemistry minor.

WHAT DO I NEED TO GET IN?

There are two options for entering the Bachelor of Science program.

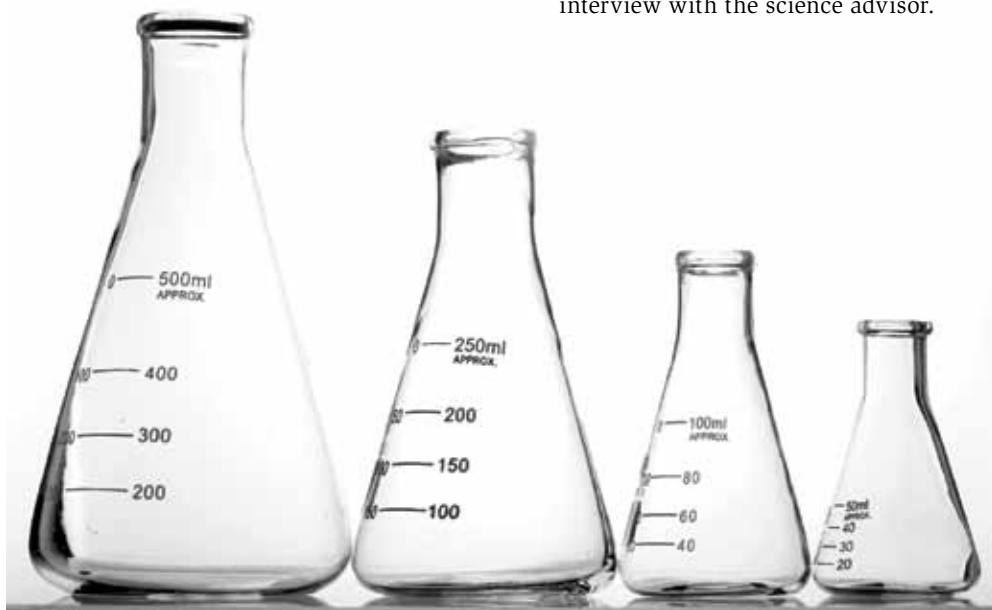
OPTION ONE: DIRECT ENTRY FROM HIGH SCHOOL

1. B.C. Secondary school graduation or equivalent
2. Minimum of two (three preferred) Grade 12 sciences with a grade of C+ or better. The subjects classified as Grade 12 sciences are Biology 12, Chemistry 12, Geography 12, and Physics 12.
3. Completion of the prerequisite for Math 111 (Principles of Math 12, with a grade of B or equivalent). See Math 111 course listing for other prerequisite options.
4. Attendance of a Bachelor of Science information session or personal interview with the science advisor.

OPTION TWO: UNIVERSITY INTAKE

28 university-level credits with:

- A minimum GPA of 2.0 in all university-level courses attempted, and
- A minimum GPA of 2.33 in four of the following courses or their equivalents:
 - » Biology 111
 - » Biology 112
 - » Chemistry 113
 - » Chemistry 114
 - » Computing Science 150
 - » Computing Science 152
 - » Computing Science 155
 - » Mathematics 111
 - » Mathematics 112
 - » Physics 111
 - » Physics 112
 - » Any course numbered 200 or above in biology, chemistry, mathematics, or physics, or any course numbered 175 or higher in computing science.



LOWER-LEVEL REQUIREMENTS FOR A CHEMISTRY MAJOR

COURSE #	TITLE
CHEM 113	Principles of Chemistry I
CHEM 114	Principles of Chemistry II
CHEM 213	Organic Chemistry I
CHEM 214	Organic Chemistry II
CHEM 221	Inorganic Chemistry
CHEM 224	Atoms, Molecules, Spectra
CHEM 241	Analytical Chemistry
MATH 111	Calculus I
MATH 112	Calculus II
MATH 211	Calculus III
COMP 150 or COMP 152	Computer Programming Introduction to Structured Programming
PHYS 111	Mechanics
PHYS 112	Electricity and Magnetism
Plus one course selected from the following:	
MATH 106	Statistics I
MATH 270	Introduction to Probability and Statistics
MATH 302	Analysis of Observational and Experimental Data

UPPER-LEVEL REQUIREMENTS FOR A CHEMISTRY MAJOR

COURSE #	TITLE
CHEM 311 or CHEM 312	Intermediate Organic Chemistry Intermediate Organic Chemistry I
CHEM 321	Intermediate Inorganic Chemistry
CHEM 324	Chemical Kinetics and Thermodynamics
CHEM 341	Instrumental Analysis/Applied Spectroscopy
Plus 14 credits selected from other Chemistry courses numbered 300 and above	

LOWER-LEVEL REQUIREMENTS FOR A CHEMISTRY MINOR

COURSE #	TITLE
CHEM 113	Principles of Chemistry I
CHEM 114	Principles of Chemistry II
CHEM 213	Organic Chemistry I
CHEM 214	Organic Chemistry II
CHEM 221	Inorganic Chemistry
MATH 111	Calculus I
MATH 112	Calculus II
PHYS 105 or PHYS 111	Non-Calculus physics Mechanics
Plus one course selected from the following:	
MATH 104	Introductory Statistics
MATH 106	Statistics I
MATH 270	Introduction to Probability and Statistics
MATH 302	Analysis of Observational and Experimental Data

UPPER-LEVEL REQUIREMENTS FOR A CHEMISTRY MINOR

COURSE #	TITLE
CHEM 321	Intermediate Inorganic Chemistry
CHEM 324	Chemical Kinetics and Thermodynamics
CHEM 300 or 400 level	Elective
CHEM 300 or 400 level	Elective

HOW MUCH WILL IT COST?

Consult the UFV calendar at www.ufv.ca/calendar for a complete list of fees, keeping in mind that new fees are usually set in May. In addition to tuition fees, you should be prepared to cover additional costs of \$100 to \$120 per course for books and other supplies. It's worth a visit to the UFV Financial Aid and Awards office, which facilitates the disbursement each year of about \$12 million in federal and provincial student loans, grants, bursaries, scholarships, and awards to UFV students. A helpful budget planning worksheet is available online at www.ufv.ca/fineaid/budget.

CAN I GET ACADEMIC CREDIT FOR THE SKILLS AND KNOWLEDGE THAT I HAVE GAINED IN MY LIFE SO FAR?

Yes. UFV offers Prior Learning Assessment and Recognition (PLAR), a flexible assessment process that evaluates your experiential learning (what you already know and can do) for post-secondary credit. Experiential learning includes independent study, volunteer activities, non-credit courses, workplace learning, and military service. To find out more, check out the PLAR website at www.ufv.ca/plar or contact Susan Brown, Assessment Services Coordinator, PLAR at 604.851.6342 or susan.brown@ufv.ca.

I'M INTERESTED. WHAT'S THE NEXT STEP?

Check out our online calendar at www.ufv.ca/calendar or our website at www.ufv.ca/chemistry. Make sure you read the Chemistry section carefully. Visit the download centre and download the appropriate application forms. You can then either mail your complete application, along with the documents listed in the calendar and the \$45 processing fee, to any UFV campus or centre, or transmit it through the internet at www.pas.bc.ca.

WHEN SHOULD I APPLY?

Admission is on a competitive basis. Meeting the minimal requirements does not guarantee admission. Specific requirements will be published on the UFV website. Applications for the fall semester should be received by January 31 of the same year. Applications received after this deadline will be considered if space is still available in the program.

WHAT SORT OF SUPPORT WILL I GET?

For more information about support and student services at UFV, visit www.ufv.ca/student-services and learn about the broad range of services designed to help you learn about and adjust to the university environment.

SOUNDS GOOD. WHAT DO I DO NOW?

Apply right away. Visit www.ufv.ca/advising/prospective/enroll for a step-by-step process to becoming a UFV student. Have specific questions? Contact the Chemistry department directly at 604-851-6345, or visit www.ufv.ca/chemistry, or you can call the science advisor at 604-557-4028.

CAN I SPEAK WITH SOMEONE ABOUT MY OPTIONS?

Absolutely. We want to hear from you. If you're unsure of your direction, contact Student Services at 1-888-504-7441 to connect with an educational advisor, or arrange for career counselling.

Also, feel free to contact the Chemistry department directly at 604-851-6345, or go the website at www.ufv.ca/chemistry, or by calling the science advisor at 604-557-4028.



The information contained in this document is subject to change. Please refer to www.ufv.ca/chemistry for up-to-date information. UFV reserves the right to cancel courses and programs.



About UFV

Nestled in the beautiful Fraser Valley just east of Vancouver, in B.C., UFV is a fully accredited, public university that enrolls more than 11,000 students each year. UFV has campuses in Abbotsford, Chilliwack, and Mission and regional centres in Hope and Agassiz, and a growing presence in Chandigarh, India.

UFV is committed to exceptional post-secondary instruction and a nurturing learning environment. We are large enough to offer variety, yet small enough to offer the personal attention that our students need to thrive. Our small class sizes and focus on teaching allow our students to get to know their instructors and learn in a hands-on setting.

We offer more than 80 programs, including 13 bachelor's degrees, a master's degree, and more than a dozen trades and technology programs. We believe that anyone who wants to go to university should be given the chance, so our admission policies are flexible, and we provide university prep courses and high school completion options. There are many options for learning: full-time, in class, online, as part of a structured program or one tailored specifically to your interests.

Many of our programs "ladder" into one another, allowing students to keep their options open. Our international programming makes for a culturally diverse student body and great opportunities to study abroad, while our continuing studies offerings make learning a lifelong experience.

UFV is recognized nationally for student success, an excellent learning environment, creative integration of programming, and our work with our local communities.

Get to know us better at www.ufv.ca.

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