

# Science

## BACHELOR OF SCIENCE (BSC) DEGREE

### Why earn a Bachelor of Science degree?

A Bachelor of Science degree can open many doors and create plenty of opportunities. Where your science degree takes you will depend on your interests and goals.

UFV offers a Bachelor of Science degree with majors in biology, chemistry, mathematics, physics, and physics honours. In the four-year BSc program, you'll either complete a major in biology, chemistry, physical geography, mathematics, or physics, or you will complete two minors choosing from the above disciplines as well as computing science and math/statistics. You also have the option of earning an honours degree in physics, which is excellent preparation for graduate school.

Any BSc major can be combined with an arts, kinesiology, or business administration minor.

At UFV our goal is to produce graduates who are scientifically literate, can think critically, and use their scientific skills in work settings.

#### WHAT TYPE OF CAREER CAN I EXPECT?

UFV's BSc program will prepare you for a variety of careers, depending on where you want to go. Your options can include research or management with science-related organizations in government or the private sector, work as a lab assistant, or teaching at the elementary or secondary level. As a science major, you will graduate with a broad, high-quality foundation in your chosen field. Once you earn your BSc, you're ready to compete for entry-level positions such as lab technicians or managerial trainees with companies that require solid background knowledge in the sciences.

Usually, studies in the sciences are required as prerequisites for entry into specialized fields of study, including medicine, dentistry, and veterinary medicine.



*“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,  
PhD, biology professor.

# Science



*“I loved the small class environment, where I could learn from instructors who were passionate about teaching and willing to do more than just help me memorize facts. It was great to get the hands-on experience so early in my studies.”*

— MIKE HILDEBRAND, BSc '01 now pursuing PhD at UBC.

## WHY STUDY AT UFV?

A major advantage of studying science at UFV is the low instructor-to-student ratio, which creates a personalized learning environment. We feature small classes and labs, giving you plenty of opportunity for hands-on lab experience, as well as the chance to get to know your instructors and fellow students.

Our lab facilities are modern and well-equipped. We also have a Math Centre and a Writing Centre where you can go for help or enrichment in those subjects. In addition, there is a Science Centre where you can study and share ideas with other students. Our instructors are dedicated primarily to teaching. Although they stay current in their field through scholarly activity, their main focus is to provide a stimulating learning experience for their students.

## IS THERE A CO-OP PROGRAM?

You add work experience to your BSc program through the co-operative education option. UFV is currently developing closer ties to local biotechnology companies with the goal of facilitating more student co-op placements and summer jobs.

## HOW IS THE PROGRAM STRUCTURED?

As a BSc student, you must complete the requirements for your major and/or minor(s), along with the following:

- A minimum of 120 university-level credits, of which at least 30 must be completed at UFV with a GPA of 2.0.
- A minimum of 44 upper-level credits.
- At least one computing course; COMP 125 or COMP 150 or above.
- Any two courses selected from:
  - » any English course numbered 105 or above
  - » Communications 155
  - » any Communications course numbered 235 or above
- Discipline requirements for either a major, a major with honours, two minors, or a major and a minor, including a minimum GPA of 2.0 in the upper-level courses in each major or minor subject.

## WHAT DO I NEED TO GET IN?

There are two options for entering the BSc program:

### OPTION ONE: DIRECT ENTRY FROM HIGH SCHOOL

- B.C. Secondary school graduation or equivalent.
- 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.

- 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.
- 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.

## HOW WILL THE BSC PREPARE ME FOR GRADUATE STUDIES?

If you plan to pursue an advanced degree or certificate after completing your bachelor's degree or continue at a professional school, UFV's BSc will provide a solid foundation to help you qualify for these programs. For example:

- A physics major is acceptable preparation for some Engineering schools.
- A math major together with a business minor is excellent preparation for management opportunities.
- A chemistry major is a good choice for students interested in becoming laboratory technicians.
- Many of our graduates have entered teacher-training programs and are now teaching in B.C. secondary schools.
- You might also choose to work towards meeting the entrance requirements for medical or other health-related professional schools (medicine, chiropractic, dentistry, veterinary medicine, physiotherapy, etc.) while you're also completing graduation requirements for a BSc with a biology major.

## I'M THINKING OF SWITCHING TO UFV. CAN I TRANSFER MY UNIVERSITY CREDITS?

Absolutely! Transfer students are welcome at UFV. If you have completed university-level courses at other post-secondary institutions you can apply for the BSc at UFV.

A maximum of 90 transfer credits may be transferred to UFV for the science program. However, not all of your courses may be applicable and it's best to check with the UFV science advisor or a UFV educational advisor.

If you have significantly more than 90 credits, you might consider completing your studies at your original institution. Most of the lower-level courses (100- and 200-level) offered as part of the BSc program are transferable to all B.C. universities. You should consult the online B.C. transfer guide at [www.bctransferguide.ca](http://www.bctransferguide.ca).

If you're enrolling in UFV upper-level courses with the intention of completing a degree at another institution, you should consult that institution for possible transfer credit of these courses.

## WHAT IF I DON'T QUALIFY FOR ENTRY INTO THE BACHELOR OF SCIENCE PROGRAM?

You can enter the Science Studies program path — an introductory year of science designed to prepare students for eventual entry into the Bachelor of Science program. Once you complete 28 credits with a minimum 2.0 GPA (C Average) and 16 of those 28 credits are in specific core science courses with a 2.33 GPA (C+ Average) you can apply for entry into the Bachelor of Science program. First year course options are available under Option Two: university intake.

## I PLAN TO STUDY FOR TWO YEARS. CAN I STILL EARN A DEGREE?

Yes. While in the Bachelor of Science program, you can complete the requirements for the Associate of Science (ASc) degree, which is a two-year credential designed to help students transfer to another university. If your plans change, the ASc ladders directly into UFV's BSc program.

## WHAT TYPE OF COURSES WILL I TAKE IN THE SCIENCE STUDIES PROGRAM PATH?

The Science Studies program path gives you the opportunity to take the courses you are most interested in provided you meet the prerequisites of each individual course.

However, as a student in the Science Studies category you are expected to pursue studies in math or science. We suggest you consult with the science advisor so you can customize your course selection to best suit your needs.

When preparing for first-year sciences, you should note each course's pre- and/or corequisite requirements. Prerequisites must be taken before you register in your desired course. Corequisites must be taken at the same time or before your desired course.

Here is a list of typical first-year science classes, along with their prerequisites and corequisites:

MATH 111/112: CALCULUS I AND II

Prerequisites: Math 12 with a B or better. (All current Bachelor of Science programs at UFV require Math 111.) Math 111 is also a pre- or corequisite for Physics 111\* Without a B in Math 12, students can take Math 110 or take the Math Placement Test to see where they can begin.

BIO 111/112: INTRODUCTORY BIOLOGY I AND II

Prerequisites: Biology 12 and Chemistry 11.

CHEM 113/114: PRINCIPLES OF CHEMISTRY I AND II

Prerequisites: Chemistry 11, Chemistry 12 and Math 12.

PHYS 111/112: MECHANICS/ELECTRICITY AND MAGNETISM

Prerequisites: Physics 11 is required and Physics 12 is recommended. B grade or better in Math 12 is also required because Math 111 is a pre- or corequisite of Physics 111.

PHYS 101/105: INTRODUCTORY GENERAL PHYSICS — MECHANICS AND FLUIDS/NON-CALCULUS PHYSICS

Prerequisites: Physics 11 and Math 12

## 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](http://www.ufv.ca/plar) or contact Susan Brown, Assessment Services Coordinator, PLAR at 604.851.6342 or [susan.brown@ufv.ca](mailto:susan.brown@ufv.ca).

## HOW MUCH WILL IT COST?

Consult the UFV calendar at [www.ufv.ca/calendar](http://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 \$80 to \$100 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](http://www.ufv.ca/fineaid/budget).

## SOUNDS GREAT. WHEN SHOULD I APPLY?

If you are planning to start your studies in September, we encourage you to submit your applications beginning October 1 of the previous year. Once that process is successful, you will be notified about when to register for specific courses.

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

Check out our online calendar at [www.ufv.ca/calendar](http://www.ufv.ca/calendar) or our website at [www.ufv.ca/Faculty\\_of\\_Science](http://www.ufv.ca/Faculty_of_Science). Make sure you read the BSc information 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 on or transmit it through the internet at [www.pas.bc.ca](http://www.pas.bc.ca).

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.

## SOUNDS GOOD. WHAT DO I DO NOW?

Apply right away. Visit [www.ufv.ca/advising/prospective/enroll](http://www.ufv.ca/advising/prospective/enroll) for a step-by-step process to becoming a UFV student. Have specific questions? Contact the Science Advice Centre at 1-888-504-7441, local 4028, or 604-557-4028, or email [scienceadvice@ufv.ca](mailto:scienceadvice@ufv.ca).



The information contained in this document is subject to change. Please refer to [www.ufv.ca/Faculty\\_of\\_Science](http://www.ufv.ca/Faculty_of_Science) 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](http://www.ufv.ca).

