

Biology

BACHELOR OF SCIENCE (BSC) DEGREE, MAJOR AND MINOR

Why study biology?

Biology is the science with the most immediate impact on our lives.

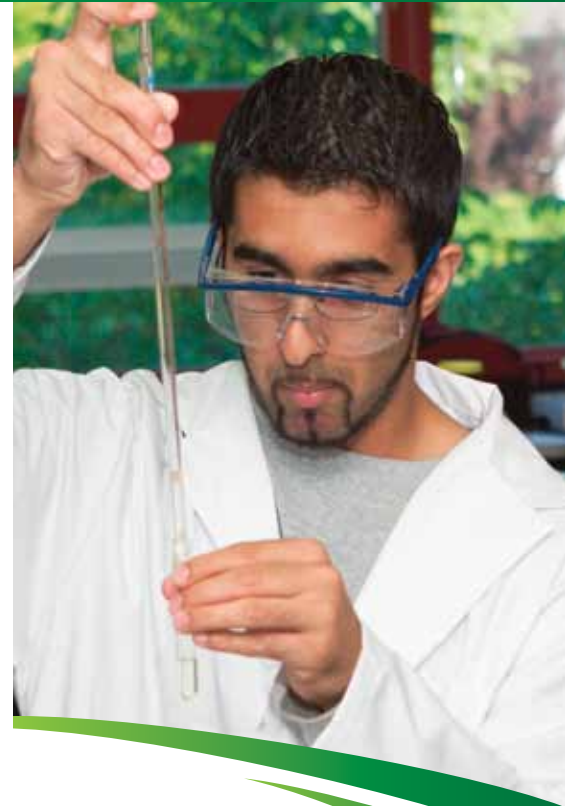
The tremendous development of biological knowledge and awareness in the past 50 years has changed the way we perceive our role in the world. We are beginning to realize that we are but one of millions of species, all sharing the same global ecosystem.

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Living things are unique in that they increase and maintain their levels of organization while the universe generally moves in a direction of less complexity or increasing disorder. This requires energy, and one of the fundamental concepts uniting the fantastic diversity of living forms is the need for a constant supply of usable energy. How organisms act and interact with themselves and their environment in procuring and using this energy is one of biology's major areas of study.

WHAT TYPE OF CAREER CAN I EXPECT?

That's up to you. Your studies in biology will open the door to a variety of career opportunities. Usually, studies in biology are required as prerequisites for entry into specialized fields of study, including medicine, dentistry, and veterinary medicine. Biology is also an academically satisfying subject in its own right. Many of our students have gone on to graduate studies in various fields of biology as varied as biotechnology, environmental toxicology, and neuroscience.



“As a UFV student, I enjoyed the individual attention given from faculty and the applicable skills I was able to gain from the variety of courses available.”

— ANDREA GIELENS,
Biology grad, 2005.

Biology



“With UFV’s small class size, students get a lot of 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. Even with concerns about continuing on to graduate studies next year, my professors have been more than willing to offer advice and lend support.”

— BRADY FISHBOOK, class of 2007, biology major, chemistry minor.

Once you earn a BSc, you are well placed to compete for entry-level positions such as lab technicians or managerial trainees in firms that require background knowledge in the sciences. The BSc program can prepare you for a variety of careers, depending on the focus you choose. Governmental agencies are primary employers of biologists. Career possibilities include:

- public sector research or management that might include work with land management, environmental protection, fish and wildlife service, food and drug sector, geographical survey, health agencies or agriculture
- private sector opportunities such as employment at zoos and aquariums, environmental consulting firms, museums, theme parks, or private foundations
- lab assistant
- teaching at the elementary or secondary level

WHY STUDY BIOLOGY AT UFV?

Our program will prepare you for a successful career in biology and for continued studies in graduate and professional schools. In addition, we offer pre-college biology for upgrading students, and first-year courses for non-majors, primarily for arts and education students. UFV is currently one of only three publicly funded post-secondary institutions in the Lower Mainland to offer a BSc in biology.

Teaching is our top priority at UFV. Our smaller classes ensure a lower student-to-instructor ratio that creates a personalized learning environment larger institutions simply cannot match. Students who earn a biology degree at UFV will get a richer lab-intensive experience than is possible at any other local university. Many of our graduates report that they value the close contact with faculty, ample hands-on experience in labs and in the field, and the sense of esprit de corps that is characteristic of the students and staff of the Biology department.

UFV offers a major and a minor in biology as part of its Bachelor of Science. Students can specialize in concentrations such as pre-medicine, ecology, molecular genetics and biology of organisms as well as prepare for a career in teaching. An extended minor in biology is also available in the Bachelor of Arts degree program offered by the Faculty of Arts.

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 \$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.

BIOLOGY MAJOR

This section specifies the biology major discipline requirements only. See the UFV calendar at www.ufv.ca/calendar for additional Bachelor of Science requirements and the new biology concentration options.

LOWER-LEVEL REQUIREMENTS

COURSE #	TITLE
BIO 111	Introductory Biology I
BIO 112	Introductory Biology II
BIO 201	Cell Biology I
BIO 202	Cell Biology II
BIO 210	Introductory Ecology
BIO 220	Introductory Genetics
CHEM 113	Principles of Chemistry I
CHEM 114	Principles of Chemistry II
PHYS 105	Non-Calculus Physics
or PHYS 111	Mechanics
and PHYS 112	Electricity and Magnetism
MATH 111	Calculus I
MATH 112	Calculus II
CHEM 213	Organic Chemistry I
CHEM 200+	2nd CHEM course numbered 200 or above
MATH 104	Introductory Statistics
or MATH 106	Statistics I
or MATH 270	Introduction to Probability & Statistics
or PSYC 110	Statistical Analysis in Psychology

UPPER-LEVEL REQUIREMENTS

COURSE #	TITLE
BIO 312	Developmental Biology
BIO 320	Biochemistry
BIO 401	Molecular Biology I
BIO 416	Evolution
Electives (14 credits)	Upper-level university level; any discipline
BIO 300+ (18 credits)	Upper-level BIO courses numbered 300 or above

Included in these 18 upper-level credits must be at least eight credits chosen from four-credit bio courses with labs.

Upper-level courses at other institutions may be counted as upper-level Biology transfer credit. See "Courses at other institutions" in the Bachelor of Science section of the online calendar for details.

BIOLOGY MINOR

This section specifies the biology minor discipline requirements only. See the UFV online calendar for additional Bachelor of Science requirements.

LOWER-LEVEL REQUIREMENTS

COURSE #	TITLE
BIO 111	Introductory Biology I
BIO 112	Introductory Biology II
BIO 201	Cell Biology I
BIO 202	Cell Biology II
BIO 210	Introductory Ecology
BIO 220	Introductory Genetics
CHEM 113	Principles of Chemistry I
CHEM 114	Principles of Chemistry II
CHEM 213	Organic Chemistry I
CHEM 200+	2nd CHEM course numbered 200 or above
MATH 106	Statistics I
or MATH 270	Introduction to Probability & Statistics
or PSYC 110	Statistical Analysis in Psychology

UPPER-LEVEL REQUIREMENTS

COURSE #	TITLE
BIO (14 credits)	Upper-level Biology courses

BIOLOGY EXTENDED MINOR (APPLIES TO THE BACHELOR OF ARTS DEGREE)

This section specifies the biology extended minor discipline requirements only. See the UFV online calendar for additional Bachelor of Arts requirements. In addition to the BA requirements, students must also complete the program requirements as follows:

LOWER-LEVEL REQUIREMENTS

COURSE #	TITLE
BIO 111	Introductory Biology I
BIO 112	Introductory Biology II
BIO 201	Cell Biology I
BIO 202	Cell Biology II
BIO 210	Introductory Ecology
BIO 220	Introductory Genetics
CHEM 113	Principles of Chemistry I
CHEM 114	Principles of Chemistry II
CHEM 213	Organic Chemistry I
CHEM 200+	2nd CHEM course numbered 200 or above
MATH 106	Statistics I
or MATH 270	Introduction to Probability & Statistics
or PSYC 110	Statistical Analysis in Psychology

UPPER-LEVEL REQUIREMENTS

COURSE #	TITLE
BIO (15 credits)	Upper-level Biology courses (no more than three credits may be in directed studies)

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/biology. Make sure you read the Biology department's 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 or transmit it through the Internet at www.pas.bc.ca.

IS THERE A CO-OP PROGRAM?

You can earn your BSc with work experience through the co-op option. The Biology department is currently developing closer ties to local biotechnology companies with the goal of facilitating more student co-op placements and summer jobs. We have been told that employers are selecting UFV Biology students because of specific courses that provide appropriate experience.

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.

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 Biology department directly at www.ufv.ca/biology or by calling the Biology department head or Science Advice Centre 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 Biology department head or the Science Advice Centre at 604-557-4028.



The information contained in this document is subject to change. Please refer to www.ufv.ca/biology 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.

