

Physics

BACHELOR OF SCIENCE DEGREE, MAJOR, MINOR, HONOURS

Why earn a degree in physics?

The importance of physics in all of our lives cannot be over-emphasized. A thousand years from now, when one is asked to list the most important events of the 20th century, the discoveries of physics will top the list.

To not include a little physics in your intellectual diet may leave you mentally unprepared for the 21st century.

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There is a mystique about physics. Many of the questions we have about the world around us involve physics, but actually physics is a way to answer questions and solve problems. What is it? How does it work? Having a good sense of inquiry is important, as the world of physics is all about finding answers, making sense of what's around us, and asking questions.

WHY TAKE PHYSICS AT UFV?

UFV has a few features in its Physics department that make it top-notch. Along with a deep knowledge of the subject, our instructors are passionate and dedicated about teaching and their research. These instructors will take you through a curriculum that integrates classroom theory with hands-on lab experiments and research. Although they stay current in their field through scholarly activity, their main focus is to provide a stimulating learning experience for their students. Dedicated to teaching, they are also approachable and ready to help their students accomplish their educational goals.

Our lab facilities are modern and well-equipped. UFV also delivers a four-year physics curriculum that includes two nonlinear physics courses and a minor, major, or honours degree.



“At UFV it really is one-on-one contact with the instructors. You get the attention you need and there’s never a fear that you will fall behind.”

— NATHAN BECKER,
BSc '06, physics honours.

Physics



“I was first attracted to UFV’s Associate of Science degree. I thought two years would be a good test, but things fell into place and I never looked back, so I stayed for my entire bachelor’s degree. UFV gave me a very strong academic standing and prepared me well for graduate studies. I feel that because of my UFV background I was a much stronger grad student than others were.”

— HUGH DALGLEISH, BSc '99, physics.

WHAT TYPE OF CAREER CAN I EXPECT?

As a UFV physics grad, you will have many career options open to you. Along with the obvious options such as physicist, engineer, mathematician, or medical researcher, many physics grads go on to successful careers as doctors, pharmacists, dieticians, economists, financial consultants, industrial researchers, systems analysts/computer programmers, lawyers, biophysicists, optometrists, or veterinary scientists. Many of our grads continue with post-graduate studies in a number of disciplines.

WHAT ARE MY OPTIONS?

UFV provides a number of options for physics students. You can begin your post-secondary studies at UFV and after one or two years transfer your courses to another university or college. However, most of our physics students stay at UFV for the four-year Bachelor of Science degree (BSc). If you are thinking about going to grad school, our physics honours degree is designed especially for you. If you’re thinking about a career in industry, our physics major will be good preparation, especially when combined with a complementary minor such as computing science.

We also offer a physics minor which can be added to any BSc degree and will greatly enhance your chances of finding employment. You are also welcome to take physics courses to suit your general interest and career goals.

WHO WILL BE TEACHING ME?

Who knows about sciences better than the people actually doing research in the field? Not only do our faculty members have high academic qualifications, but they are also current, successful practitioners of the ideas and research they will be sharing with you. They are committed teachers who are passionate about communicating their knowledge about science and cultivating an enthusiasm in the students learning it.

WHEN SHOULD I APPLY?

Admission to UFV’s Physics program is on a competitive basis. Meeting the minimal requirements does not always guarantee your admission. Specific requirements are published on the UFV website at www.ufv.ca/calendar.

If you plan to start your studies in the fall semester, your application 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 DO I NEED TO GET IN?

There are two options for entering the Bachelor of Science 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 B 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:

1. A minimum GPA of 2.0 in all university-level courses attempted, and
2. 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 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.

WHAT SORT OF SUPPORT WILL I HAVE?

UFV's instructors are enthusiastic about the subjects they teach and are approachable and ready to help their students achieve their educational goals. In your second year of studies, you will be welcomed into the Physics Student Association. This is an active student-led association that not only plays together, but also keeps students in the program connected with each other, and provides plenty of peer support and assistance.

UFV provides a Math Centre on the Abbotsford and Chilliwack campuses where you can go for help or enrichment in math. In addition, there is a Science Centre where you can study and share ideas with other students.

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.

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/physics. Make sure you read the BSc and physics 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.

SOUNDS GOOD. WHAT DO I DO NOW?

Visit www.ufv.ca/advising/prospective/enroll for a step-by-step process to becoming a UFV student. Have specific questions? Contact the department head at 604-504-7441, local 4456, or the science advisor at 604-557-4028.

CAN I SPEAK WITH SOMEONE ABOUT MY OPTIONS?

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.

You can also call UFV any weekday to make an appointment to speak to a counsellor or advisor. For specific information about the physics program you can contact the department head at 604-504-7441, local 4456, the science advisor at 604-557-4028, or email scienceadvice@ufv.ca.



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

