

# Bachelor of Science, Majors, Minors and Transfer

## Bachelor of Science - Transfer

### PHYSICS

#### The Program

The primary reason for becoming a physicist is curiosity. Whether it is the strange world of sub-atomic particles, the operation of a laser, the motion of the planets, or even the formation of a rainbow, physicists want to understand how the universe really works.

A physics degree will provide even more than this. With training in quantitative thinking, problem solving, modeling, and experimental techniques, a physics background provides entry into a wide variety of fields. Indeed, physicists are at the forefront in many of the hottest science and technology fields such as superconductivity, nanotechnology, fuel cells, and medical imaging.

VIU offers the first two years of a four-year B.Sc. program in Physics. Students can transfer to the University of British Columbia (UBC) or the University of Victoria (UVic) after either first or second year. Students who wish to transfer to Physics programs offered at other universities need to check the program requirements of the receiving institution to determine the required courses. For further information, students should contact VIU's Physics department or the Advising Centre 250-740-6410.

#### UBC Transfer

YEAR 1	Credits
CHEM 121 (Chemistry Fundamentals I)	4
Degree English Requirement	6
MATH 100 (Calculus for Engineering and Physical Sciences I) MATH 101 (Calculus for Engineering and Physical Sciences II) <i>or</i> MATH 121 (Calculus I) MATH 122 (Calculus II) MATH 110 (Additional Calculus Topics)	6 <i>or</i> 7
PHYS 121 (Physics for the Physical Sciences I) PHYS 122 (Physics for the Physical Sciences II)	8
Electives (*a,*b)	9 <i>or</i> 10

(\*a) Computing Science 160 is recommended.

(\*b) Once course in Biology is required for the honours program.

YEAR 2	Credits
PHYS 211 (Mechanics) PHYS 212 (From Relativity to Quarks) PHYS 214 (Introduction to Electronics) PHYS 215 (Introductory Quantum Physics) PHYS 216 (Introductory Electricity and Magnetism)	15
MATH 200 (Calculus of Several Variables) MATH 241 (Linear Algebra) MATH 251 (Differential Equations)	9
Electives	6

## UVic Transfer

YEAR 1	Credits
PHYS 121 (Physics for the Physical Sciences I) PHYS 122 (Physics for the Physical Sciences II)	8
MATH 100 (Calculus for Engineering and Physical Sciences I) MATH 101 (Calculus for Engineering and Physical Sciences II) <i>or</i> MATH 121 (Calculus I) MATH 122 (Calculus II) MATH 110 (Additional Calculus Topics)	6 or 7
CHEM 111 (Chemistry Fundamentals I) CHEM 112 (Chemistry Fundamentals II) <i>or</i> CHEM 121 (Chemistry Fundamentals I) CHEM 122 (Chemistry Fundamentals II) <i>or</i> CHEM 111 (Chemistry Fundamentals I) CHEM 122 (Chemistry Fundamentals II)(*a)	0 to 8
CSCI 160 (Computing Science I)	4
Degree English Requirement, as required (*b)	0 to 6
Electives (*c)	0 to 15

YEAR 2	Credits
PHYS 211 (Mechanics) PHYS 212 (From Relativity to Quarks) PHYS 214 (Introduction to Electronics) PHYS 215 (Introductory Quantum Physics) PHYS 216 (Introductory Electricity and Magnetism)	15
MATH 200 (Calculus of Several Variables) MATH 241 (Linear Algebra)(*d) MATH 251 (Differential Equations)	6 or 9
Electives	6 or 9

(\*a) Required for Honours.

(\*b) First-year English courses are not required if UVic is satisfied that students are proficient in

English.

(\*c) Additional Computing Science courses may be helpful for entry into the Co-operative Education option.

(\*d) Required for Honours; recommended for Major.

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- Email: [info@viu.ca](mailto:info@viu.ca)
- Toll-free: 1-888-920-2221
  
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