

Archived: August 9, 2018

## Science and Technology Programs

# Fundamentals of Engineering Certificate Program

**Location Offered:**

Nanaimo

**Credential:**

Certificate

**Program Length:**

8 Months

## The Program

The Engineering Certificate program prepares students to transfer into the University of British Columbia - Vancouver Campus (UBC-V), the University of Victoria (UVic), or Simon Fraser University - Burnaby Campus (SFU-B) engineering in their second year. This program contains the first-year core courses required from each of these institutions including physics, chemistry, engineering design, computer programming, mathematics, and communication skills. Upon successful completion, graduates who complete the entire Fundamentals of Engineering Certificate program curriculum are:

- Guaranteed admittance into 2nd year Engineering at UBC-V if program completed within 8-months and with a minimum required GPA.
- Guaranteed admittance into 2nd year Engineering at UVic with a minimum required GPA and grade in each curriculum course.
- Guaranteed admittance into 2nd year Engineering at SFU-B if program completed within 16-months and with a minimum required GPA.
- Placed in a common pool with all students (regardless of first-year institution), for competitive entry into their 2nd year engineering program choice at UBC-V, UVic, or SFU-B. Average GPA for entry into a specific engineering program at UBC-V, UVic, or SFU-B changes each year depending on the number of students applying and the number of seats available.

## Program Outline

<b>Year 1</b>	<b>Credits</b>
<b>Fall Semester</b>	
CHEM 150 - (Engineering Chemistry)	4
CSCI 160 - (Computing Science I)	4
ENGL 115 - (University Writing and Research)	3
ENGR 112 - (Engineering Design I)	3
MATH 100* - (Calculus for Engineering and Physical Sciences I)	3
PHYS 121 - (Physics for the Physical Sciences I)	4
<b>Spring Semester</b>	
ENGL 204** - (Business and Technical Writing)	3
ENGR 110*** - (Additional Engineering Topics)	2
ENGM 141**** - (Engineering Mechanics)	3
ENGR 121 - (Engineering Design II)	3
MATH 101* - (Calculus for Engineering and Physical Sciences II)	3
MATH 141 - (Matrix Algebra for Engineers)	3
PHYS 122 - (Physics for the Physical Sciences II)	4
<b>Total Credits</b>	<b>40</b>

\* *MATH 121, MATH 122, and MATH 110 may be taken in lieu of MATH 100 and MATH 101.*

\*\* *ENGL 125, ENGL 135, or an approved elective may be taken in lieu of ENGL 204. Note: ENGL 204 is a required course for students transferring to the University of Victoria Engineering program. ENGL 125 or ENGL 135 should be taken by students transferring to Applied Science at the University of British Columbia if they have not obtained a minimum of a "B" in English 12.*

\*\*\* *ENGR 110 is required for those students transferring to SFU-B.*

\*\*\*\* *ENGM 141 is not required for those students transferring to SFU-B.*

## Completion Requirements

Grades for individual courses are awarded as described in the Grading Scale section of this Calendar.

## Admission Requirements

- English 12 with a minimum grade of "C+"
- Principles of Physics 12 with a minimum grade of "C+"
- Principles of Chemistry 12 with a minimum grade of "C+"
- Principles of Mathematics 12 or Pre-Calculus 12 with a minimum grade of "B"

### Notes on Admission

- Admission is based on GPA rankings.
- Students who meet or exceed the minimum admission requirements may not necessarily be admitted to the program.

### Transfer from other Institutions

Please see advisor.

## **Program Regulations**

Students must achieve a minimum GPA requirement to be eligible for UBC's guaranteed admission program, and complete the Engineering Certificate within one year.

Students must achieve a minimum of a "C" in all their courses within the Fundamentals of Engineering Certificate to allow them to transfer to either UBC or UVic.

All students admitted to the Fundamentals of Engineering Certificate program must maintain good standing and finish all program requirements within two terms. Students who do not fulfill this requirement will need to complete the requirements under the Bachelor of Science degree and will lose priority access to classes.

## **Career Opportunities**

Demand for engineering graduates both locally and internationally is high. Students completing engineering can expect relatively high employment rates, and a considerable salary premium compared to those who completed only high school. Most engineering disciplines are represented through UBC and UVic. UVic provides electrical, software, computer, civil, biomedical, and mechanical engineering, while UBC provides electrical, computer, mechanical, civil, engineering physics, chemical, etc. Students are encouraged to examine each institution's websites for current offerings.

## **Start Date and Application Deadline**

The program starts in September and applications for admission are accepted anytime between the first business day in October, and March 31. Applications received after March 31 are considered late and will be processed as space permits. For further information check the Program Availability List.

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