FIRST-YEAR UNIVERSITY TRANSFER ENGINEERING CERTIFICATE

Purpose

The First–year University Transfer Engineering Certificate is offered to provide students with the opportunity to explore options and demonstrate success at the first year level of university studies. Students will gain transfer credits to the second year of Engineering degree programs at SFU, UBC, UVic, UNBC and TRU. Students who have completed all program requirements must contact the Registrar's Office to apply for graduation. For 2nd year transfer agreements with other public, post-secondary colleges, institutes and universities, please see the BCCAT website (https://www.bctransferguide.ca/.html).

Students will:

- increase readiness for degree-level study
- gain advanced standing into specified university programs through signed articulation (transfer) agreements
- gain transfer credits to the 2nd year of Engineering degree programs at SFU, UBC, UVic, UNBC and TRU

Duration

This is a one year program. The maximum allowable time for students to complete the program is three years. Please note the time limit on completion is sixteen months for assured admission to SFU.

Learning Outcomes

Upon successful completion of this program, graduates will be able to:

1. Demonstrate an understanding of the scientific method and apply it to critically solve problems

2. Demonstrate proper laboratory techniques, including the use of appropriate equipment and instrumentation

3. Develop original designs to solve engineering problems

4. Collect, analyze, and interpret laboratory data, and draw sound conclusions

5. Effectively communicate ideas and project results

6. Demonstrate an ability to work well independently and in groups

7. Engage in informed debate on topics related to technology

8. Effectively apply scientific and engineering concepts towards subsequent coursework

Admission Requirements:

All students must meet the general college entrance requirements.

- Grade 12 graduation, or equivalent.
- Knowledge of English demonstrated by *one* of the following:
  - English 12 with a minimum 'C+' grade or equivalent, *or*
  - English Language Proficiency (https://www.vcc.ca/applying/registration-services/english-language-proficiency-requirements/) at an English 12 'C+' level.
- Knowledge of mathematics demonstrated by *one* of the following:
  - Precalculus 12 with a minimum 'B' grade or equivalent, *or*
  - VCC Math 0983/0993 with a minimum 'B' grade, *or*
  - VCC Math 1020 with a minimum 'C' grade, *or*
  - VCC Math Precalculus Test (MPT) with a minimum of 72%.
- Knowledge of physics demonstrated by *one* of the following:
  - Physics 12 with a minimum 'C+' grade or equivalent, *or*
  - VCC Physics 0983/0993 with a minimum 'C+' grade.
- Knowledge of chemistry demonstrated by *one* of the following:
  - Chemistry 12 with a minimum 'C+' grade or equivalent, *or*
  - VCC Chemistry 0983/0993 with a minimum 'C+' grade.

Program Requirements
Course Credits (Option A)

Successful completion of a minimum of 36 credits of university transfer articulated first year courses as per the British Columbia Council on Admission and Transfer Guide (BCCAT) is required for completion of the certificate. Credit distribution in the following courses is required:

Term One		Credits
MATH 1100	Calculus 1	3
PHYS 1100	Physics 1	4
CHEM 1121	Chemistry 1	4
CMPT 1010	Intro to Comp Programming 1	3
	Credits	**14**
Term Two		
MATH 1200	Calculus 2	3
PHYS 1200	Physics 2	4
CMPT 1020	Intro to Comp Programming 2	3
MATH 1221	Applied Linear Algebra	3
	Credits	**13**
Term Three		
SCIE 1100	Engineering, Tech & Society	3
SCIE 1110	Professional Communication	3
SCIE 1180	Intro to Engineering Analysis	3
	Credits	**9**
	Total Credits	**36**

Course Credits (Option B)

Successful completion of a minimum of 43 credits of university transfer articulated first year courses as per the British Columbia Council on Admission and Transfer Guide (BCCAT) is required for completion of the certificate. Credit distribution in the following courses is required:

Term One		Credits
MATH 1100	Calculus 1	3
PHYS 1100	Physics 1	4
CHEM 1121	Chemistry 1	4
CMPT 1010	Intro to Comp Programming 1	3
	Credits	**14**

Term Two

MATH 1200	Calculus 2	3
PHYS 1200	Physics 2	4
CHEM 1223	Chemistry 2	4
MATH 1221	Applied Linear Algebra	3
	Credits	**14**

Term Three

ENGL 1100	English 1	3
PHYS 1170	Mechanics 1	3
SCIE 1100	Engineering, Tech & Society	3
SCIE 1110	Professional Communication	3
SCIE 1151	Engineering Graphics & Design	3
	Credits	**15**
	Total Credits	**43**

Option A: (SFU Engineering Science Transfer)

Assured SFU Engineering Degree 2nd Year Admission Pathway

Assured admission under this pathway requires completion of the VCC Engineering Certificate. Students must have an overall average GPA of 2.75 on the courses required for the pathway which are listed below (calculated based on the best attempt for each course) and an overall average of 2.75 (again, calculated based on the best attempt for each course) on all work combined in order to be considered for the 'assured admission' pathway. Students who have been previously required to withdraw from another institution would be considered ineligible for the 'assured admission' pathway as would students who were formerly in a Computing, Engineering or Mechatronics program at SFU.

The assured admission pathway does not apply to international students. While the certificate is fully transferrable to SFU's Engineering Degree, international students' GPA requirements may vary at the time of transfer.

All credits must be obtained within sixteen months. In addition, for at least two of the terms at VCC students would need to meet a minimum course load of 12 credits. The following courses must be completed as part of this pathway and must be completed at VCC:

Code	Title	Credits
MATH 1100	Calculus 1	3
PHYS 1100	Physics 1	4
CHEM 1121	Chemistry 1	4
CMPT 1010	Intro to Comp Programming 1	3
MATH 1200	Calculus 2	3
PHYS 1200	Physics 2	4
CMPT 1020	Intro to Comp Programming 2	3
MATH 1221	Applied Linear Algebra	3
SCIE 1110	Professional Communication	3
SCIE 1100	Engineering, Tech & Society	3
SCIE 1180	Intro to Engineering Analysis	3
Total Credits		**36**

Competitive Engineering Degree 2nd Year Admission Pathway

VCC students who do not meet the assured admission pathway criteria will be considered for entry to the SFU engineering science program using the existing college transfer criteria for admission (presently 24 credits of transferable work plus meeting the GPA set for that term of admission).

Applicants from both pathways must meet the general SFU English language and quantitative admission requirements.

Option B: (Common First-Year Engineering Curriculum)

The Common First-Year Engineering Curriculum (CFYEC) is intended to prepare graduates for
transfer into second-year Engineering at any of: UBC (Vancouver), UBC (Okanagan), UNBC, UVic, or TRU. Admission is by competitive entry and students must apply to each institution separately. These institutions have agreed to accept the following as equivalent to their first-year engineering curriculum:

Code	Title	Credits
MATH 1100	Calculus 1	3
PHYS 1100	Physics 1	4
CHEM 1121	Chemistry 1	4
CMPT 1010	Intro to Comp Programming 1	3
MATH 1221	Applied Linear Algebra	3
MATH 1200	Calculus 2	3
PHYS 1200	Physics 2	4
CHEM 1223	Chemistry 2	4
ENGL 1100	English 1	3
PHYS 1170	Mechanics 1	3
SCIE 1100	Engineering, Tech & Society	3
SCIE 1110	Professional Communication	3
SCIE 1151	Engineering Graphics & Design	3
Total Credits		**43**

The required GPA for transfer to other institutions may vary based on transfer agreements with other institutions.

Evaluation of Student Learning

Evaluation of the courses is determined by the instructor and may include a combination of practical assignments, projects, theory exam and/or practical exams.

The required GPA for transfer may vary based on transfer agreements with other institutions. Please see our website: www.vcc.ca (http://www.vcc.ca).

Successful completion of a minimum of 36 credits (Option A) or 43 credits (Option B) of university transfer articulated first year courses as per the British Columbia Council on Admission and Transfer Guide (BCCAT) is required for completion of the certificate.

Prior Learning Assessment and Recognition (PLAR)

Prior learning assessment and recognition is not available for this program.

Transcript of Achievement

The evaluation of learning outcomes for each student is prepared by the instructor and reported to the Student Records Department at the completion of semesters.

The transcript typically shows a letter grade for each course. The grade point equivalent for a course is obtained from letter grades as follows:

Grading Standard

Grade	Percentage	Description	Grade Point Equivalency
A+	90-100		4.33
A	85-89		4.00
A-	80-84		3.67
B+	76-79		3.33
B	72-75		3.00
B-	68-71		2.67
C+	64-67		2.33
C	60-63		2.00
C-	55-59		1.67
D	50-54	Minimum Pass	1.00
F	0-49	Failing Grade	0.00
S	70 or greater	Satisfactory – student has met and mastered a clearly defined body of skills and performances to required standards	N/A
U		Unsatisfactory – student has not met and mastered a clearly defined body of skills and performances to required standards	N/A
I		Incomplete	N/A
IP		Course in Progress	N/A
W		Withdrawal	N/A
Course Standings			
R		Audit. No Credits	N/A
EX		Exempt. Credit Granted	N/A
TC		Transfer Credit	N/A

Grade Point Average (GPA)

1. The course grade points shall be calculated as the product of the course credit value and the grade value.

2. The GPA shall be calculated by dividing the total number of achieved course grade points by the total number of assigned course credit values. This cumulative GPA shall be determined and stated on the Transcript at the end of each Program level or semester.

3. Grades shall be assigned to repeated courses in the same manner as courses taken only once. For the purpose of GPA calculation of grades for repeated courses, they will be included in the calculation of the cumulative GPA.