

UNIVERSITY TRANSFER SCIENCE CERTIFICATE

Purpose

The University Transfer Science Certificate is offered to provide students with the opportunity to explore options and demonstrate success at the first year level of university transfer study. It will prepare them for university or other post-secondary programs of their choice.

Students will:

- increase readiness for degree-level study
- gain transfer credits to degree programs
- gain admission to 2nd year science programs at SFU via either assured or competitive transfer pathways

Duration

The expected length of the program is 12 months, spread over three full semesters. There is also the option of part-time studies, which would result in a longer time frame for completion of the credential. The maximum allowable time for students to complete the program is three years.

For the assured pathways to SFU, the maximum time for completion is 16 months. For the competitive admission to SFU, the maximum time for completion is 3 years.

Learning Outcomes

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

1. Solve a wide range of problems related to mathematics and science at the 1st year level
2. Produce high quality oral presentations and written materials
3. Apply theoretical knowledge and technical skills in solving problems
4. Complete projects both independently and in teams
5. Use their scientific educational experiences as a solid foundation for academic readiness in 2nd year science

Admission 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 at a minimum English 12 'C+' level
- Pre-calculus 12 with a minimum 'B' grade, or equivalent

Notes

- Students are required to have successfully completed prerequisite course(s) or equivalents leading to courses in the Certificate (for example: prerequisite course Chemistry 12, or equivalent, needs to

be successfully completed in order to take CHEM 1121 Chemistry 1). Please see the requirements for each course.

- Specific post-secondary level courses may be used to substitute for high school courses

Program Requirements

Specific Requirements for the Science Certificate

- A. 3 credits in first-year English; and
- B. 6 credits of Calculus; and
- C. 15 credits in Science; and
- D. 6 additional credits of courses in Arts or Science

Courses

Students do not have to declare their intention of completing the University Transfer Science Certificate credential before beginning to take courses. Courses are open to any student who meets the general and specific requirements for the course.

Students will need to meet the admission requirements to the program before courses can be used to complete the University Transfer Science Certificate.

No course will be used to meet more than one of the specific requirements (for example, MATH 1120 as both a Science requirement and as an additional Arts and Science requirement).

Students must complete:

A. English Requirement (3 credits)

Code	Title	Credits
ENGL 1100	English 1	3
or ENGL 1101	English	

B. Math Requirements (6 credits)

Students must take:

Code	Title	Credits
MATH 1100	Calculus 1	3
MATH 1200	Calculus 2	3

C. Science Requirements (minimum of 15 credits)

Any course such as, but not limited to, the following:

Code	Title	Credits
BIOL 1100	Biology 1	4
BIOL 1200	Biology 2	4
BIOL 1120	Human Anatomy and Physiology 1	4
BIOL 1220	Human Anatomy and Physiology 2	4
CHEM 1121	Chemistry 1	4
CHEM 1223	Chemistry 2	4
CMPT 1010	Intro to Comp Programming 1	3
CMPT 1020	Intro to Comp Programming 2	3
GEOG 1110	Earth Systems	3

MATH 1020	Precalculus	3
MATH 1120	Discrete Mathematics 1	3
MATH 1111	Introduction to Statistics	3
MATH 1190	Mathematics for Teachers	3
MATH 1221	Applied Linear Algebra	3
MATH 1210	Mathematics for the Arts	3
MATH 2251	Calculus 3	3
MATH 2310	Ordinary Differential Equation	3
MATH 2700	Probab & Stats for Scie & Eng	3
PHYS 1100	Physics 1	4
PHYS 1200	Physics 2	4
PHYS 1110	Introduction to Astronomy	3
PHYS 1170	Mechanics 1	3
SCIE 1100	Engineering, Tech & Society	3
SCIE 1151	Engineering Graphics & Design	3
SCIE 1180	Intro to Engineering Analysis	3

Institutions have the discretion to not accept MATH 1020 for transfer. Check with receiving institution to ensure transferability.

D. Additional Arts and Science courses (minimum 6 credits)

Any courses from those in list C above or from (but not limited to) the following:

Code	Title	Credits
BIOL 2104	Introduction to Ecology	3
ECON 1100	Microeconomics	3
ECON 1200	Macroeconomics	3
ENGL 1200	English 2	3
ENGL 1102	English	3
GEOG 1100	Introducing Human Geography	3
GEOG 2241	Social Geography	3
INDG 1100	First Nations & Indigenous Stu	3
PSYC 1100	Psychology 1	3
PSYC 1200	Psychology 2	3
SOCI 1100	Sociology 1: Introductory Sociology	3
SOCI 1200	Sociology 2: Canadian Society	3
SCIE 1110	Professional Communication	3

Admission Pathways

Two transfer pathways will be available to students from the VCC University Transfer Science Certificate (UTSC) program into 9 eligible Faculty of Science (FSci) programs at SFU: Assured Admission and Competitive Admission. The required courses for FSci program transfer are outlined below in options A to I.

Assured Admission Pathway

Assured admission from VCC's UTSC to the a FSci major is based on a CGPA of 2.60 (calculated based on the best attempt for each required course within the certificate program), and an overall GPA of 2.00 on any transferable coursework from all post-secondary institutions attended.

Students who were required to withdraw, or were not in good academic standing upon leaving a former post-secondary institution are not eligible for consideration under the Assured Admission pathway.

All certificate courses must be completed at VCC within 16 months of commencing the UTSC. Any courses in the certificate taken at post-secondary institutions other than VCC may be transferred to VCC and used towards completion of the VCC/SFU pathway certificate, providing those courses transfer independently to SFU and receive the same credit at SFU as does the VCC pathway course.

In addition, students must meet a minimum course load of 12 credits for at least two terms while enrolled in the UTSC program at VCC.

International student eligibility for the assured admission pathway is dependent on the availability of international student seats at SFU within the destination program.

Competitive Admission Pathway

VCC UTSC students who do not meet the Assured Admission pathway criteria may be eligible to enter FSci programs based on the existing college transfer criteria for SFU admission (24 credits of transferable coursework and meeting the competitive admission GPA requirement for the Faculty of Science set for the specific term of admission), plus program-specific requirements (<http://www.sfu.ca/students/admission-requirements/canadian-transfer/college-university.html>).

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

Option A: Bachelor of Science – Biological Sciences second-year transfer to SFU

Students must complete:

ENGL 1100 - University Transfer English 1 (3 credits)

or

ENGL 1101 - English 1101 (3 credits)

MATH 1100 - Calculus 1 (3 credits)

MATH 1200 - Calculus 2 (3 credits)

BIOL 1100 - Biology 1 (4 credits)

BIOL 1200 - Biology 2 (4 credits)

CHEM 1121- Chemistry 1 (4 credits)

CHEM 1223- Chemistry 2 (4 credits)

PHYS 1100 - Physics 1 (4 credits)

PHYS 1200 - Physics 2 (4 credits)

Option B: Bachelor of Science – Chemistry second-year transfer to SFU

Students must complete:

ENGL 1100 - University Transfer English 1 (3 credits)

or

ENGL 1101 - English 1101 (3 credits)

MATH 1100 - Calculus 1 (3 credits)

MATH 1200 - Calculus 2 (3 credits)

CHEM 1121- Chemistry 1 (4 credits)

CHEM 1223- Chemistry 2 (4 credits)

PHYS 1100 - Physics 1 (4 credits)

PHYS 1200 - Physics 2 (4 credits)

Two of:

ECON 1100 - Microeconomics (3 credits)

ECON 1200 - Macroeconomics (3 credits)

PSYC 1100 - Psychology 1 (3 credits)

PSYC 1200 - Psychology 2 (3 credits)

SOCI 1100 - Introductory Sociology (3 credits)

SOCI 1200 - Canadian Society (3 credits)

Option C: Bachelor of Science – Applied Mathematics second-year transfer to SFU

Students must complete:

ENGL 1100 - University Transfer English 1 (3 credits)

or

ENGL 1101 - English 1101 (3 credits)

MATH 1100 - Calculus 1 (3 credits)

MATH 1200 - Calculus 2 (3 credits)

MATH 1120 - Discrete Mathematics (3 credits)

MATH 1221* – Applied Linear Algebra (3 credits)

MATH 2700 - Probability and Statistics for Science and Engineering (3 credits)

CMPT 1010 – Introduction to Computer Programming 1 (3 credits)

CMPT 1020 - Introduction to Computer Programming 2 (3 credits)

PHYS 1100 - Physics 1 (4 credits)

PHYS 1200 - Physics 2 (4 credits)

*For assured admission to SFU a minimum B grade is required

Option D: Bachelor of Science – Mathematics second-year transfer to SFU

Students must complete:

ENGL 1100 - University Transfer English 1 (3 credits)

or

ENGL 1101 - English 1101 (3 credits)

MATH 1100 - Calculus 1 (3 credits)

MATH 1200 - Calculus 2 (3 credits)

MATH 1120 - Discrete Mathematics (3 credits)

MATH 1221* – Applied Linear Algebra (3 credits)

MATH 2700 - Probability and Statistics for Science and Engineering (3 credits)

CMPT 1010 – Introduction to Computer Programming 1 (3 credits)

CMPT 1020 - Introduction to Computer Programming 2 (3 credits)

Two of:

ECON 1100 - Microeconomics (3 credits)

ECON 1200 - Macroeconomics (3 credits)

PSYC 1100 - Psychology 1 (3 credits)

PSYC 1200 - Psychology 2 (3 credits)

SOCI 1100 - Introductory Sociology (3 credits)

SOCI 1200 - Canadian Society (3 credits)

*For assured admission to SFU a minimum B grade is required

Option E: Bachelor of Science – Molecular Biology and Biochemistry second-year transfer to SFU

Students must complete:

ENGL 1100 - University Transfer English 1 (3 credits)

or

ENGL 1101 - English 1101 (3 credits)

MATH 1100 - Calculus 1 (3 credits)

MATH 1200 - Calculus 2 (3 credits)

BIOL 1100 - Biology 1 (4 credits)

BIOL 1200 - Biology 2 (4 credits)

CHEM 1121- Chemistry 1 (4 credits)

CHEM 1223- Chemistry 2 (4 credits)

PHYS 1100 - Physics 1 (4 credits)

PHYS 1200 - Physics 2 (4 credits)

Option F: Bachelor of Science – Physics second-year transfer to SFU

Students must complete:

ENGL 1100 - University Transfer English 1 (3 credits)

or

ENGL 1101 - English 1101 (3 credits)

MATH 1100 - Calculus 1 (3 credits)

MATH 1200 - Calculus 2 (3 credits)

MATH 1221 – Applied Linear Algebra (3 credits)

CHEM 1121- Chemistry 1 (4 credits)

CHEM 1223- Chemistry 2 (4 credits)

CMPT 1010 – Introduction to Computer Programming 1 (3 credits)

CMPT 1020 - Introduction to Computer Programming 2 (3 credits)

PHYS 1100 - Physics 1 (4 credits)

PHYS 1200 - Physics 2 (4 credits)

Option G: Bachelor of Science – Applied Physics second-year transfer to SFU

Students must complete:

ENGL 1100 - University Transfer English 1 (3 credits)

or

ENGL 1101 - English 1101 (3 credits)

MATH 1100 - Calculus 1 (3 credits)

MATH 1200 - Calculus 2 (3 credits)

MATH 1221 – Applied Linear Algebra (3 credits)

CHEM 1121- Chemistry 1 (4 credits)

CHEM 1223- Chemistry 2 (4 credits)

CMPT 1010 – Introduction to Computer Programming 1 (3 credits)

CMPT 1020 - Introduction to Computer Programming 2 (3 credits)

PHYS 1100 - Physics 1 (4 credits)

PHYS 1200 - Physics 2 (4 credits)

Option H: Bachelor of Science – Biological Physics second-year transfer to SFU

Students must complete:

ENGL 1100 - University Transfer English 1 (3 credits)

or

ENGL 1101 - English 1101 (3 credits)

MATH 1100 - Calculus 1 (3 credits)

MATH 1200 - Calculus 2 (3 credits)

BIOL 1100 - Biology 1 (4 credits)

BIOL 1200 - Biology 2 (4 credits)

CHEM 1121- Chemistry 1 (4 credits)

CHEM 1223- Chemistry 2 (4 credits)

PHYS 1100 - Physics 1 (4 credits)

PHYS 1200 - Physics 2 (4 credits)

Option I: Bachelor of Science – Statistics second-year transfer to SFU

Students must complete:

ENGL 1100 - University Transfer English 1 (3 credits)

or

ENGL 1101 - English 1101 (3 credits)

MATH 1100 - Calculus 1 (3 credits)

MATH 1200 - Calculus 2 (3 credits)

MATH 2700 - Probability and Statistics for Science and Engineering (3 credits)

MATH 1221 – Applied Linear Algebra (3 credits)

MATH 2251 - Calculus III (3 credits)

CMPT 1010 – Introduction to Computer Programming 1 (3 credits)

CMPT 1020 - Introduction to Computer Programming 2 (3 credits)

Two of:

ECON 1100 - Microeconomics (3 credits)

ECON 1200 - Macroeconomics (3 credits)

PSYC 1100 - Psychology 1 (3 credits)

PSYC 1200 - Psychology 2 (3 credits)

SOCI 1100 - Introductory Sociology (3 credits)

SOCI 1200 - Canadian Society (3 credits)

MATH 1120 - Discrete Mathematics (3 credits)

CHEM 1121- Chemistry 1 (4 credits)

CHEM 1223- Chemistry 2 (4 credits)

PHYS 1100 - Physics 1 (4 credits)

PHYS 1200 - Physics 2 (4 credits)

Evaluation of Student Learning

Evaluation of the courses is determined by the instructor and may include a combination of assignments, tests, projects, theory, exams and/or practical exams. A minimum overall GPA of 2.0 (C average) is required, with a minimum passing grade (D or better) in each course counting towards the University Transfer Science Certificate.

Upon successful completion of this program, the student will receive a Certificate in University Transfer Science.

Prior Learning Assessment and Recognition (PLAR)

For students attempting the assured pathway to Simon Fraser University, PLAR is not allowed, as per the agreement with SFU.

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:

grades for repeated courses, they will be included in the calculation of the cumulative GPA.

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