

Engineering

Department Overview

Langara offers two Engineering programs. The [Engineering Transfer Certificate](#) is a BCCAT-articulated program that offers courses to match the first year of engineering study at the University of British Columbia. Those courses satisfy UBC's Faculty of Applied Science requirements for engineering transfer classification when completed in the regular, two-semester academic year. The two-year [Applied Science for Engineering Diploma](#) includes upgrading and preparatory courses and is aimed at students who are interested in Engineering but do not (or only minimally) meet the Engineering Transfer prerequisites.

Self-Study

Engineering launched its program review in academic year 2019/20 with a Self-Study. Csilla Tamas, the Engineering Coordinator, was the primary Self-Study writer. Additional support was provided by:

- Robin Macqueen (Division Chair, Applied Science)
- Gerda Krause (Dean, Faculty of Science)
- Sunita Wiebe (Director, Office of Academic Quality Assurance)
- Institutional Research analysts

Data sources for the Self-Study included:

- Institutional Research-compiled student administrative data (*e.g.*, headcounts, retention, satisfaction)
- Student survey
- Alumni survey
- Faculty survey

The Self-Study was completed in March 2020.

External Review

Engineering's External Review took place on April 22, 2020. The External Review Team consisted of:

- Brian Dick, PhD, Physics, Engineering and Astronomy, Vancouver Island University (External Review Chair)
- Atousa Hajshirmohammadi, Engineering Science, Simon Fraser University
- Kathryn Nairne, Applied Planning, Langara

Action Plan Goals

In response to the Self-Study and External Review, Engineering created an Action Plan with these goals:

- Goal 1: Enhance student pathways (transfers/articulation) and curriculum.
- Goal 2: Establish and enhance external connections.
- Goal 3: Enhancing the student recruiting process and student engagement/experience.
- Goal 4: Creating community and identity within the engineering cohort and its instructors.

Examples of Post-Review Successes

2021/22

CPSC 1091: Engineering Design and Drafting, and CPSC 1491: Control Systems and Sustainable Engineering Design have been articulated to the universities. The Engineering Transfer Certificate courses are now aligned

with the Common First-Year Engineering curriculum.

Engineering Career talks take place on a semi-annual basis with diverse speakers. Tri-mentoring pilot programs for female engineering students have been run successfully.

2022/23

Common First-Year Engineering Curriculum (CFYEC) was signed off in February 2020. Courses are adapted to match CFYEC CLOs. Two new engineering design courses, CPSC 1091 and CPSC 1491 were introduced to match the CFYEC ENGR I/II curriculum, replacing CPSC 1090 and CPSC 1490.

A Facebook page was created for the 2020-2021 Engineering Transfer cohort in July 2020. This facilitated communication with and between the students before the semester started.

Engineering students are regularly invited to 49Women events. Practicing female engineers speak to the students during the APSC 1000/1100 seminars, and at the Engineering Panels organized by the Co-op and Career Centre. Female students have the opportunity for mentoring through the Engineering Tri-Mentoring program. By talking to students, it is clear that their course workload does not permit them to independently run a Women in Engineering club in addition to the above activities.

2023/24

A closer relation with EGBC was established (e.g. the EGBC student program, the Vancouver branch).

The department worked with the Langara College Foundation and the 49 Women Circle on financial incentives for female students to improve recruitment and retention of female students.

The department worked with the Registrar's Office to schedule classes that require the use of computers (e.g. CPSC 1155, MATH 1252) into convertible classrooms.