

**NORTHERN LIGHTS COLLEGE
REGISTRAR'S OFFICE
PROGRAM INFORMATION AND COMPLETION GUIDE**

Program Name: University Arts and Sciences
Credential/Certification: Certificate in Engineering Studies
Date Submitted: June 2020
Effective Date: September 2020

Program Contact: Program Chairs

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Program Description: The Certificate in Engineering Studies is an intense undergraduate credential that requires courses in the areas of chemistry, computer programming, communications, engineering design, math, and physics.

This credential meets the British Columbia Common First-Year Engineering Agreement, preparing students to apply for transfer into second-year engineering programs at designated receiving institutions across the province. Within BC, the terms and conditions of transfer into second year vary. For example, second-year admission to BC engineering schools may be guaranteed or competitive while program placement at second year is typically competitive.

NLC students are responsible for confirming transfer arrangements at their chosen degree-granting institutions.

Admission Requirements:

Official transcripts demonstrating high school graduation with the following:

1a. English requirement for applicants whose first language is English: English Studies 12 or ENGL 050 or equivalent with a minimum final grade of "B."

OR

1b. English requirement for applicants whose first language is not English: IELTS with an overall score of 6.5 and no band less than 6.0. Applicants with a Writing Band of 6.0 are required to complete ENGL 099 with a minimum final grade of "B."

AND

2. Chemistry requirement for all applicants: Chemistry 12 or CHEM 050 or equivalent with a minimum final grade of "C+." Outstanding applicants who are missing Chemistry 12 or the equivalent are encouraged to apply and will be reviewed on a case by case basis.

AND

3. Math requirement for all applicants: Pre-Calculus 12 or equivalent with a minimum final grade of "B."

AND

4. Physics requirement for all applicants: Physics 12 or PHYS 050 or equivalent with a minimum final grade of "C+." Outstanding applicants who are missing Physics 12 or the equivalent are encouraged to apply and will be reviewed on a case by case basis.

Note: Where available, Calculus 12 and Programming 12 are recommended.

Length of Program: (weeks and total hours) Most receiving institutions require all courses to be completed within 30 weeks (or two semesters) of full-time study in a single academic year. However, UVic will accept part-time study that is spread over two academic years. The Certificate in Engineering Studies consists of a minimum of 975 hours of class time.

Program Intake: (start/finish dates)

Start: September

Finish: April (for full-time study and transfer to most receiving institutions)

Available Seats: 16

Application Deadline: Last day for September course registration in a given year (i.e., early- to mid- September). International students should contact NLC's International Education Department for due-dates specific to their situation.

Career Prospects: The Certificate in Engineering Studies provides a post-secondary pathway to a career as an engineer by allowing for further study at engineering schools throughout British Columbia.

Affiliations/Partnerships: Signatories to the Common-First-Year Engineering Agreement include the University of British Columbia--Point Grey Campus, the

University of British Columbia--Okanagan Campus, the University of Victoria, the University of Northern British Columbia, and Thompson Rivers University.

Location: Fort St. John.

Additional Requirements/Supplies: (fees, supplies, materials)

-Laptop. See minimum NLC requirements.

-Engineering or scientific calculator.

Eligibility for Canada Student Loans: (Yes or No)

Yes (domestic students only).

Required Minimum Grade: (overall and/or minimum within a course)

Required overall or cumulative GPA for the Certificate in Engineering: 2.00. Required minimum grades within each course: "D" or 50%. Note, however, that program placement at second year tends to be highly competitive. Students are advised to pursue the highest possible cumulative and individual grades.

Residency Requirement: (percentage of courses which must be taken at NLC)

The NLC residency requirement is 25%. NLC requires a minimum final grade of "C" in any course considered for transfer credit. All first-year transfer credits accepted by NLC will be individually assessed by degree-granting institutions.

Required Courses: (list courses required to complete credential)

Semester 1

CHEM 103: Fundamentals of Chemistry I (105 hours/4 credits)

CPSC 123: Introduction to Object Oriented Programming C++ (90 hours/4 credits)

ENGL 110: Introduction to Workplace Communications (45 hours/3 credits)

ENGG 115: Engineering Design, Drafting, and Sustainable Practice 1 (60 hours/ 3 credits)

MATH 101: Calculus (60 hours/3 credits)

PHYS 103: Mechanics (Calculus) (105 hours/4 credits)

Semester 2

CHEM 104: Fundamentals of Chemistry II (105 hours/ 4 credits)

ENGL 100: Academic Writing (45 hours/3 credits)*

ENGG 120: Engineering Design, Ethics, and Sustainable Practice 2 (60 hours/ 3 credits)

ENGG 125: Engineering Mechanics and Thermodynamics (75 hours/3 credits)

MATH 102: Calculus II (60 hours/3 credits)

MATH 152: Introductory Linear Algebra (60 hours/3 credits)

PHYS 104: Electromagnetics and Waves (Calculus) (105 hours/4 credits)

*Note: ENGL 100 is not required for transfer to UNBC's Undergraduate Engineering Program. Students intending to transfer to UNBC are advised to speak with their program Chair.