

From: **Langara College (LANG)**
Associate of Science Degree, Computer Science

To: **University of Northern BC (UNBC)**
Bachelor of Science (BSc Degree, Computer Science Major)

The following list of course equivalents will appear on the transfer credit summary for students who have successfully completed **Langara's Associate of Science Degree** and declare their **major in Computer Science at UNBC**.

Information in this handout is unofficial and should be used as a guide only. For questions regarding admission to UNBC or course selection please contact Student Recruitment & Advising at 250-960-6306 or advising@unbc.ca.

NOTE: As per UNBC Undergraduate Calendar Regulation number 14, "Students must complete a minimum of 30 credit hours of upper division UNBC course work to receive a UNBC degree."

Associate of Science Degree

Within the minimum 60 credits, students must complete:

1. 6 credits of MATH which shall include at least one course (3 credits) in Calculus;
2. a minimum of 36 credits of science, which shall include at least:
 - a. 3 credits in laboratory science;
 - b. A minimum of 18 credits in science at the second-year level taken in two or more subject areas;
3. 6 credits of first-year ENGL;
4. 6 credits of first or second year arts other than ENGL (excluding MATH and laboratory-based science courses);
5. a minimum of 6 credits of first or second year arts, science or other university-transfer courses. (Students may include university-transfer credit from career program and KINS and RECR course offerings); and
6. a minimum cumulative GPA of 2.0.

No course may be used to meet more than one of the specific requirements.

Applicable to Computer Science	LANG Course Name	UNBC Equivalence ¹	
Within the framework of the general requirements for the Associate of Science Degree (above), students must complete a minimum of 60 credits including:			
All of	CPSC 1050 CPSC 1150 CPSC 1160 CPSC 1181 CPSC 2150 MATH 2362	Introduction to Computer Science Program Design Algorithms and Data Structures I Object-oriented Computing Algorithms and Data Structures II Linear Algebra	CPSC 126-3 CPSC 100-4 CPSC 1XX-3 CPSC 1XX-3 (Waive CPSC 101-4) CPSC 281-3 MATH 220-3
Two of or	CPSC 1280 a 2nd year CPSC course ¹	Unix Tools and Scripting	CPSC 1XX-3
One of	MATH 1171 MATH 1173 and MATH 1183	Calculus I Calculus I with Computer Explorations Computer Explorations for Calculus I	MATH 100-3 MATH 100-3
One of	MATH 1271 MATH 1273 and MATH 1283	Calculus II Calculus II with Computer Explorations Computer Explorations for Calculus II	MATH 101-3 MATH 101-3
Two of or or	CMNS 1118, CMNS 2228, ENGL 1127 ENGL 1128, ENGL 1129 ENGL 1130		ENGL 1XX-3, HUMN 2XX-3, ENGL 170-3 ENGL 170-3, ENGL 100-3 ENGL 1XX-3
Two	University-transferable arts (6 credits, excluding ENGL, CMNS, and MATH)		
Two	Second-year science (6 credits)		
Four	University-transferable electives (12 credits), at least one of which is in a lab science.		

¹ Course equivalencies were determined through the articulation process and are listed on the BC Transfer Guide, www.bctransferguide.ca. Students will need to choose coursework appropriately so as not to receive duplicate Transfer Credit.

Note: Previous based on the Langara 2020 website.

Recommended Courses to take:

LANG Courses	LANG Course Name	UNBC Equivalence ¹
ENGL 1128	Short Prose Selections and Composition	ENGL 170-3 or ENGL 1XX-3
MATH 1271	Calculus	MATH 101-3 ²
PHYS 1125	Physics I with Calculus	PHYS 110-4
PHYS 1225	Physics II with Calculus	PHYS 111-4

¹ Course equivalencies were determined through the articulation process and are listed on the BC Transfer Guide, www.bctransferguide.ca
Student will need to choose coursework appropriately so as not to receive duplicate Transfer Credit.

¹ Must achieved a C- (60% at UNBC) or better for all Math transfer credit to use as a prerequisite for UNBC coursework

Sample of **UNBC Calendar** requirements for the Computer Science major and how LANG Associate of Science Degree in Computer Science coursework *may be* used towards completion of the degree at UNBC:

UNBC Calendar Information, Course Number & Course Name

LANG Equivalence¹

A major in Computer Science requires at least 20 Computer Science courses and at least 61 credit hours in Computer Science, at least 27 credit hours of which must be upper-division courses, and of those upper-division credits, at least 12 must be taken at the 400 level. MATH 335-3 and STAT 371-3 can count towards this requirement.

The following courses may not be used for credit towards a Computer Science major or joint major:

- MATH 150-3 Finite Mathematics for Business & Economics
- MATH 342-3 Biostatistics

The minimum requirement for completion of a Bachelor of Science with a major in Computer Science is 120 credit hours.

Program Requirements

*Note: Unless otherwise specified, students enrolling in any Computer Science or Mathematics course with prerequisites are required to have completed all prerequisite courses for that course with a “C-” or better, or have permission to enroll from the Program Chair.

Lower-Division Requirement

100 Level

- CPSC 100-4 Computer Programming I
- CPSC 101-4 Computer Programming II
- CPSC 141-3 Discrete Computational Mathematics
- ENGL 170-3 Writing and Communication Skills
- or ENGL 270-3 Expository Writing
- MATH 100-3 Calculus I
- or MATH 105-3 Enriched Calculus

*Note: MATH 101-3 Calculus II is strongly recommended

200 Level

- CPSC 200-3 Algorithm Analysis and Development
- CPSC 222-3 Introduction to Concurrent and Distributed Programming
- CPSC 230-4 Introduction to Logic Design
- CPSC 231-4 Computer Organization and Architecture
- CPSC 242-3 Mathematical Topics in Computer Science
- CPSC 260-3 Ethics in Computing
- CPSC 281-3 Data Structures I
- MATH 220-3 Linear Algebra

- ✓ Completed at LANG, CPSC 1150
- ✓ Completed at LANG, CPSC 1181
- ✓ Completed at LANG, CPSC 2190
- Can be completed at LANG, ENGL 1128

- Can be completed at LANG, MATH 1271

- ✓ Completed at LANG, CPSC 2150
- To be completed at UNBC
- ✓ Completed at LANG, MATH 2363

UNBC Computer Science major Calendar requirements continued:

General Science Requirement

Students must take two courses from the following list of science courses. It is recommended that computer science majors take PHYS 110-4 and PHYS 111-4. However, students may take any two courses from the following list, according to their interests, to fulfill the general science requirement:

PHYS 110-4	Introductory Physics I: Mechanics
PHYS 111-4	Introductory Physics II: Waves and Electricity
PHYS 100-4	Introduction to Physics I
PHYS 101-4	Introduction to Physics II
CHEM 100-3	General Chemistry I
CHEM 101-3	General Chemistry II
BIOL 103-3	Introductory Biology I
BIOL 104-3	Introductory Biology II
PSYC 101-3	Psychology as a Science
ENVS 101-3	Introduction to Environmental Citizenship
GEOG 204-3	Introduction to GIS for the Social Sciences
GEOG 205-3	Cartography and Geomatics
GEOG 210-3	Geomorphology

*Note: In some special cases other science courses approved by the Chair of Computer Science may be used to satisfy this requirement.

- Can be completed at LANG, PHYS 1125 & LANG, PHYS 1225

Upper-Division Requirement

Computer Science Breadth

CPSC 300-3	Software Engineering
CPSC 320-3	Programming Languages
CPSC 321-3	Operating Systems
CPSC 324-3	Introduction to Database Systems
CPSC 340-3	Theory of Computation
CPSC 344-3	Data Communication and Networking
or CPSC 444-3	Computer Networking

*Note: STAT 371-3 Probability and Statistics for Scientists and Engineers is strongly recommended.

□ To be completed at UNBC

400 Level

At least 12 credit hours of Computer Science courses must be taken at the 400 level, and at least nine of these credit hours must be outside the seminar course, project course, (other than CPSC 400-3), research course, or special topics course category.

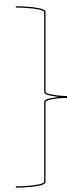
Alternate courses may be substituted for the above with the written permission of the Program Chair.

UNBC Computer Science major Calendar requirements continued:

Subject Requirement

Six additional credit hours chosen from the following:
Computer Science at any level

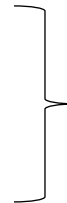
MATH 335-3	Numerical Analysis I
STAT 371-3	Probability and Statistics for Scientists and Engineers



To be completed at UNBC

Elective and Academic Breadth

Elective credit hours as necessary to ensure completion of a minimum of 120 credit hours including any additional credits necessary to meet the Academic Breadth requirement of the University (see Academic Regulation 15). A total of 45 credit hours in upper-division (300 and 400 level) courses from any discipline are required for graduation.



* Please discuss how to complete this requirement with your Student Advisor. Depending on course selection, students may be able to complete some or all of this requirement at Langara.

¹Based on the 2020/21 UNBC Academic Calendar year.

² Must have a C- or better at CNC to use as a prerequisite at UNBC.