

From: **College of New Caledonia (CNC)**  
Associate of Science Degree, Biology Concentration

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

The following list of course equivalents will appear on the transfer credit summary for students who have successfully completed **CNC's Associate of Science Degree** and pursue a **Bachelor of Science Degree, major in Physics 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](mailto: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 Graduation Requirements – Specific

1. 6 credits in first year English; and
2. 6 credits in mathematics which shall include at least 3 credits in calculus; and Math
3. 36 credits in science, which shall include at least 3 credits in laboratory science; and
4. 6 credits in arts, other than English (excluding mathematics and laboratory science courses); and
5. 6 credits in arts, science or other areas.

**Note 1:** Students must have completed at least three semester credits in the semester the degree is awarded.

**Note 2:** Unassigned credits from other institutions for inclusion in the course work leading to the Associate of Sciences degree will be limited to 15 credits. The final decision for determining course area, level, and number of credit hours will be made by the Dean or senior academic administrator in the UT Science program area.

**Note 3:** Students are advised to consult with a CNC advisor in order to determine specific course requirements for entry to a particular university degree program.

**Note 4:** A laboratory science course is any course in the sciences list worth 3 credits or more and with a lab of at least 2 hours, but excluding any course in applied science (engineering) or computing science.

Biology Concentration	CNC Course Name	UNBC Equivalence <sup>1</sup>
<b>Biology Requirements:</b>		
BIO 107	Cellular and Organismal	} BIOL 103-3 & BIOL 104-3 & BIOL 123-1 & BIOL 124-1
BIO 120	Genetics, Evolution, and Ecology	
BIO 201	Cell Structure	BIOL 311-3
BIO 202	Introductory Biochemistry	CHEM 204-3 & CHEM 2XX-1
BIO 215	Microbiology	BIOL 203-3
BIO 220	Introductory Genetics	BIOL 210-3
One of:		
CHEM 111	Fundamentals of Chemistry I	CHEM 100-3 & CHEM 120-1 <sup>2</sup>
or CHEM 113	Introduction to Chemistry I	CHEM 100-3 & CHEM 120-1 <sup>2</sup>
One of:		
CHEM 112	Fundamentals of Chemistry II	CHEM 101-3 & CHEM 121-1 <sup>2</sup>
or CHEM 114	Introduction to Chemistry II	CHEM 101-3 & CHEM 121-1 <sup>2</sup>
CHEM 203	Organic Chemistry I	CHEM 201-3 & CHEM 250-1
CHEM 204	Organic Chemistry II	CHEM 203-3 & CHEM 251-1
MATH 101 <sup>4</sup>	Calculus I	MATH 100-3 <sup>3&amp;4</sup>
MATH 102 <sup>4</sup>	Calculus II	MATH 101-3 <sup>4</sup>
One of:		
PHYS 101	Introductory Physics I	PHYS 110-4
or PHYS 105	General Physics I	PHYS 100-4

## Biology Requirements Cont'd:

One of:

PHYS 102	Introductory Physics II	PHYS 111-4
or PHYS 106	General Physics II	PHYS 101-4

## English Requirement

ENGL 103	Composition and Style	ENGL 170-3
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3 additional credits 100-level UT (University Transfer) English\*\*

## Humanities & Social Science Requirement

6 credits in Humanities or Social Sciences, in addition to the 6 credits of required English courses\*\*

## Electives

6 additional UT credits in any area\*\*

**Note:** Students should speak with an Academic advisor to ensure their electives are eligible to count towards an Associate of Arts Degree.

<sup>1</sup> Course equivalencies were determined through the articulation process and are listed on the BC Transfer Guide, [www.bctransferguide.ca](http://www.bctransferguide.ca)

Student will need to choose coursework appropriately so as not to receive duplicate Transfer Credit.

<sup>2</sup> Students will need to complete CHEM 111 & CHEM 112 OR CHEM 113 & CHEM 114 to earn credit at UNBC.

<sup>3</sup> Students will be awarded credit for only one of UNBC MATH 100-3 or UNBC MATH 105-3 or UNBC MATH 152-3.

<sup>4</sup> Must achieved a C- (60% at UNBC) or better for all Math transfer credit to use as a prerequisite for UNBC coursework

**Note:** Above based on CNC 2018/19 Academic Calendar.

\*\*Students can take any course that transfers to UNBC in order to receive credits in this area. Check the BC Transfer Guide for these courses – [www.bctransferguide.ca](http://www.bctransferguide.ca). Please see **Recommended Courses to take** section below for suggested courses to take to fulfill these credits.

## Recommended Courses to take:

CNC Course	CNC Course Name	UNBC Equivalence <sup>1</sup>
CHEM 112 or CHEM 114	Fundamentals of Chemistry II	CHEM 101-3 and CHEM 121-1
CHEM 201	Physical Chemistry	CHEM 200-3 and CHEM 2XX-1
CSC 109	Intro to Computer Science I	CPSC 1XX-3 – Waive UNBC CPSC 100-4
MATH 201 <sup>2</sup> and MATH 202 <sup>2</sup>	Calculus III and IV	MATH 200-3 <sup>2</sup> and MATH 2XX-3
MATH 204 <sup>2</sup>	Linear Algebra	MATH 220-3 <sup>2</sup>
MATH 215 <sup>2</sup>	Differential Equations I	MATH 230-3 <sup>2</sup>
PHYS 101	Introductory Physics I	PHYS 110-4
PHYS 102	Introductory Physics II	PHYS 111-4
PHYS 211	Introduction to Thermophysics	PHYS 200-3

Students need to verify they are completing approved University Transfer Credit coursework as per the BC Transfer Guide. Courses in the Creative and Performing Arts as well as Career program and other courses considered for the Associate degree may not be eligible for transfer credit to UNBC.

<sup>2</sup> 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 Physics major and how CNC Associate of Science Degree Biology Concentration coursework *may be* used towards completion of the degree at UNBC<sup>1</sup>.

**UNBC Calendar Information, Course Number & Course Name**

**CNC Equivalence<sup>1</sup>**

A major in Physics requires students to complete 49 credit hours of Physics; 27 credit hours of these must be at the upper-division level.

PHYS 307-3 (Selected Topics in Environmental Physics) may not be used as Physics credit toward any Physics major, minor, or joint major.

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

**Program Requirements**

**Lower-Division Requirement - 100 Level**

CHEM 100-3	General Chemistry I	✓ Completed at CNC, CHEM 111 or CHEM 113
MATH 100-3 <sup>2</sup>	Calculus I	✓ Completed at CNC, MATH 101 <sup>2</sup>
MATH 101-3 <sup>2</sup>	Calculus II	✓ Completed at CNC, MATH 102 <sup>2</sup>
PHYS 110-4	Introductory Physics I: Mechanics	- Can be completed at CNC, PHYS 101
PHYS 111-4	Introductory Physics II: Waves and Electricity	- Can be completed at CNC, PHYS 102
CPSC 100-4 or CPSC 110-3	Computer Programming I Introduction to Computer Systems and Programming	} - Can be completed at CNC, CSC 109

**200 Level**

MATH 200-3 <sup>2</sup>	Calculus III	- Can be completed at CNC, MATH 201 <sup>2</sup> and Math 202 <sup>2</sup>
MATH 201-3 <sup>2</sup>	Introduction to Complex Analysis	☐ To be completed at UNBC
MATH 220-3 <sup>2</sup>	Linear Algebra	- Can be completed at CNC, MATH 204 <sup>2</sup>
MATH 230-3 <sup>2</sup>	Linear Differential Equations and Boundary Value Problems	- Can be completed at CNC, MATH 215 <sup>2</sup>
PHYS 200-3	Thermal Physics	- Can be completed at CNC, PHYS 211
PHYS 202-4	Electromagnetism and Optics	☐ To be completed at UNBC
PHYS 205-3	Modern Physics I	☐ To be completed at UNBC

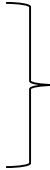
Four additional credit hours of Physics at the 200 level.

**Upper-Division Requirement - 300 Level**

MATH 336-3 <sup>2</sup>	Intermediate Differential Equations	} ☐ To be completed at UNBC
PHYS 300-3	Classical Mechanics	
PHYS 302-3	Quantum Mechanics I	
PHYS 310-3	Classic Electromagnetism I	

**400 Level**

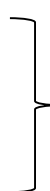
PHYS 400-3                    Quantum Mechanics II  
 PHYS 401-3                    Seminar on Contemporary Topics in  
    Physics  
 PHYS 407-3                    Statistical Mechanics  
 Nine additional credit hours of Physics at the 300 or 400 level.



To be completed at UNBC

**Elective and Academic Breadth Requirement**

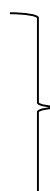
Elective credit hours as necessary to ensure completion of a minimum of 120 credit hours, including any additional credits necessary to meet the Academic Breadth requirement of the University (see Academic Regulation 15).



\* 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 CNC.

Recommended electives include:

CPSC 101-4                    Computer Programming II  
 CHEM 101-3                    General Chemistry II  
 CHEM 200-3                    Physical Chemistry I  
 MATH 335-3<sup>2</sup>                    Numerical Analysis I  
 STAT 371-3<sup>2</sup>                    Probability and Statistics for  
    Scientists and Engineers



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

<sup>1</sup> Based on the 2019/20 UNBC Academic Calendar year.

<sup>2</sup> Must achieved a C- (60% at UNBC) or better for all Math transfer credit to use as a prerequisite for UNBC coursework