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

To: **University of Northern BC (UNBC)**
Bachelor of Science (BSc Degree, Biology 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 Biology 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."*

LANG Requirement Applicable to Biology	**LANG Course Name**	**UNBC Equivalence[1]**
All:		
BIOL 1115	General Biology I	BIOL 103-3 & BIOL 123-1
BIOL 1215	General Biology II	BIOL 104-3 & BIOL 124-1
BIOL 2315	Biochemistry	CHEM 204-3 & BCMB 2XX-1[2]
BIOL 2330	Introduction to Genetics	BIOL 210-3
BIOL 2380	Introduction to Ecology	BIOL 201-3
BIOL 2415	Cell Biology	BIOL 2XX-3[2]
CHEM 1120[3]	General Chemistry I	CHEM 1XX-3[3]
CHEM 1220[3]	General Chemistry II	CHEM 1XX-3[3]
CHEM 2316	Organic Chemistry I	CHEM 201-3 & CHEM 250-1
CHEM 2416	Organic Chemistry II	CHEM 203-3 & CHEM 251-1
One of:		
ENGL 1127	Essay Writing and Short Prose Selections	ENGL 170-3 or ENGL 1XX-3
ENGL 1128	Short Prose Selections and Composition	ENGL 170-3 or ENGL 1XX-3
One of:		
ENGL 1129	Modern Novel, Poetry, and Drama	ENGL 100-3
ENGL 1130	Modern Novel, Poetry, and Film	ENGL 1XX-3
One of:[4]		
MATH 1171	Calculus I	MATH 100-3
MATH 1173 & MATH 1183	Calculus I with Computer Explorations Computer Explorations for Calculus I	MATH 100-3
MATH 1153	Introduction to Calculus I (Part I)	MATH 1XX-3
MATH 1253	Introduction to Calculus I (Part II)	MATH 1XX-3
MATH 1174	Calculus I - Economic and Business Applications	MATH 100-3
One of[4]*:*		
MATH 1271	Calculus II	MATH 101-3
MATH 1273 & MATH 1283	Calculus II with Computer Explorations Computer Explorations for Calculus II	MATH 101-3
MATH 1274	Calculus II with Economic and Business Applications	MATH 1XX-3
One of:		
PHYS 1101	Physics I for Life Sciences	PHYS 1XX-4
PHYS 1125	Physics I with Calculus	PHYS 110-4

Date of last update: **December 2018**

Two of:

BIOL 2260	Introduction to Plant & Animal Physiology	BIOL 2XX-3
BIOL 2340	Vascular Botany	BIOL 204-3
BIOL 2350[5]	Comparative Vertebrate Anatomy	BIOL 2XX-3[5]
BIOL 2370	Microbiology I	BIOL 205-3
BIOL 2430	Molecular Genetics	BIOL 2XX-3
BIOL 2440	Botany Nonvascular Plants & Fungi	BIOL 2XX-3
BIOL 2450	Invertebrate Biology	BIOL 202-3
BIOL 2470	Microbiology II	BIOL 2XX-3
BIOL 2480	Ecology II: Population Ecology	BIOL 2XX-3
CHEM 2222	Analytical Chemistry	CHEM 210-3
CHEM 2250	Physical Chemistry for the Life Sciences	CHEM 2XX-3
PHYS 1118	Introductory Physics	PHYS 115-4
PHYS 1225	Physics II with Calculus	PHYS 111-4

Two of:
First-or second-year arts other than ENGL (excluding MATH and laboratory-based science courses)

Associate of Science required LANG credit	**Specifics**	**UNBC Equivalence[6] Used towards this BSc Requirement**
6 credits	MATH which shall include at least one course (3 credits) in Calculus;	
a minimum of 36 credits	Science, which shall include at least: a) 3 credits in a laboratory science; b) a minimum of 18 credits in science at the second-year level taken in two or more subject areas;	
6 credits	First-year ENGL;	* 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. [7]
6 credits	First or second year arts other than ENGL (excluding MATH and laboratory-based science courses);	
a minimum of 6 credits	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);	
The last 50% of the courses used towards the associate degree at Langara College within the last five years; and all courses used towards the degree with a cumulative GPA of 2.0, including a minimum cumulative GPA of 2.0 in all Langara College courses used towards the degree;		
A minimum cumulative GPA of 2.0.		

[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.
[2] LANG BIOL 2315 & LANG BIOL 2415 = UNBC CHEM 204-3 & UNBC BCMB 2XX-1 & UNBC BIOL 311-3. Biology & BCMB Majors only
[3] LANG CHEM 1120 & LANG CHEM 1220 = UNBC CHEM 100-3 & CHEM 101-3 & CHEM 120-1 & CHEM 121-1. Students must take both classes as Langara to receive credit at UNBC.
[4] Must achieved a C- (60% at UNBC) or better for all Math transfer credit to use as a prerequisite for UNBC coursework
[5] Biology & NRM Wildlife-Fisheries majors will have one of UNBC BIOL 307 or UNBC BIOL 308 waived.
[6] Students need to choose coursework transferable to UNBC in order to receive credit in these areas.
[7] 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.
Note: Above based on the Langara 2018/19 Academic Calendar.

Recommended Courses to take:

LANG Courses	Specifics	UNBC Equivalence[1] Used towards this BSc Requirement
BIOL 2320	Conservation Biology	BIOL 411-3
BIOL 2330	Genetics	BIOL 210-3
BIOL 2340	Vascular Botany	BIOL 204-3
BIOL 2350[2]	Ichthyology and Herpetology	BIOL 307-3
BIOL 2350[2]	Ornithology and Mammalogy	BIOL 308-3
BIOL 2370	Microbiology	BIOL 203-3
BIOL 2380	Introduction to Ecology	BIOL 201-3
ENGL 1128	Short Prose Selections and Composition	ENGL 170-3
MATH 1171	Calculus I	MATH 100-3
MATH 1271	Calculus II	MATH 101-3
PHYS 1125	Physics I with Calculus	PHYS 110-4
PHYS 1225	Physics II with Calculus	PHYS 111-4
STAT 1123 *or* STAT 1124 *or* STAT 1181 *or* STAT 3222 *or* STAT 3223	Basic Statistics	STAT 240-3

[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.
[2] Biology & NRM Wildlife-Fisheries majors will have one of UNBC BIOL 307 or 308 waived

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Sample of **UNBC Calendar** requirements for the Biology major and how LANG Associate of Science Degree in Biology coursework *may be* used towards completion of the degree at UNBC[1]:

UNBC Calendar Information		LANG Equivalence
The minimum requirement for the completion of a Bachelor of Science with a major in Biology is 126 credit hours.		
Program Requirements - Lower-Division Requirements		
100 Level		
BIOL 103-3 BIOL 123-1	Introductory Biology I Introductory Biology I Laboratory	✓Completed at LANG, BIOL 1115
BIOL 104-3 BIOL 124-1	Introductory Biology II Introductory Biology II Laboratory	✓Completed at LANG, BIOL 1215
CHEM 100-3 CHEM 101-3 CHEM 120-1 CHEM 121-1	General Chemistry I General Chemistry II General Chemistry Lab I General Chemistry Lab II	✓Completed at LANG, CHEM 1120 & LANG, CHEM 1220
NRES 100-3 or ENGL 170-3	Communications in Natural Resources and Environmental Studies Writing and Communication Skills	- Can be completed at LANG, ENGL 1128
MATH 152-3 or MATH 100-3	Calculus for Non-majors Calculus I	- Can be completed at LANG, MATH 1171 & LANG, MATH 1271
PHYS 100-4 or PHYS 110-4	Introduction to Physics I Introductory Physics I: Mechanics	- Can be completed at LANG, PHYS 1125
PHYS 101-4 or PHYS 111-4	Introduction to Physics II Introductory Physics II: Waves & Electricity	- Can be completed at LANG, PHYS 1225
*Recommended: MATH 101-3 Calculus II		- Can be completed at LANG, MATH 1171 & LANG, MATH 1271
Students who are interested in pursuing professional programs should contact the program advisor regarding the correct course sequences required for individual programs.		
200 Level		
BIOL 201-3	Ecology	- Can be completed at LANG, BIOL 2380
BIOL 202-3	Invertebrate Zoology	- Can be completed at LANG, BIOL 2450
BIOL 203-3	Microbiology	- Can be completed at LANG, BIOL 2370 & LANG, BIOL 2470
BIOL 204-3	Plant Biology	- Can be completed at LANG, BIOL 2340
BIOL 210-3	Genetics	- Can be completed at LANG, BIOL 2330
CHEM 201-3	Organic Chemistry I	✓Completed at LANG, CHEM 2316
CHEM 203-3	Organic Chemistry II	✓Completed at LANG, CHEM 2416
CHEM 204-3	Introductory Biochemistry	✓Completed at LANG, BIOL 2315 & LANG, BIOL 2415
STAT 240-3	Basic Statistics	- Can be completed at LANG, STAT 1123 or STAT 1124 or STAT 1181 or STAT 3222 or STAT 3223

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UNBC Biology major Calendar requirements continued:

Students must also take 6 additional credit hours of courses at the 200 level or above. Students are encouraged to explore a diversity of courses during their undergraduate biology education. While biology content is not specifically required, biology students may find relevant courses among the following prefixes: ANTH, BCMB, CHEM, ENPL, ENSC, ENVS, FNST, FSTY, GEOG, HHSC, INTS, NOLS, NREM, NORS, ORTM, PHIL, PHYS, POLS, PSYC, and STAT. It is recommended that students consult with a Student Advisor In terms of their interests and the content of various courses.		* 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.
Upper-Division Requirement		
300 Level		
BIOL 311-3	Cell and Molecular Biology	
BIOL 323-3	Evolutionary Biology	
BIOL 325-3	Ecological Analyses	
One of:		□ To be completed at UNBC
BIOL 304-3	Plants, Society and the Environment	
BIOL 321-3	Animal Physiology	
Two of:		
BIOL 301-3	Systematic Botany	
BIOL 307-3	Ichthyology and Herpetology	- Can be completed at LANG, BIOL 2350[2]
BIOL 308-3	Ornithology and Mammalogy	
BIOL 318-3	Fungi and Lichens	□ To be completed at UNBC
400 Level		
BIOL 410-3	Population and Community Ecology	
BIOL 411-3	Conservation Biology	- Can be completed at LANG, BIOL 2320
One of:		
BIOL 404-3	Plant Ecology	□ To be completed at UNBC
BIOL 406-3	Fish Ecology	
BIOL 412-3	Wildlife Ecology	
Subject Requirements		
Fifteen additional credit hours chosen from the following, of which at least 6 credit hours must be at the 400 level:		* 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.
Any 300 or 400 level BIOL courses		
ENSC 406-3	Environmental Modelling	
FSTY 307-3	Disturbance Ecology and Forest Health	

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UNBC Biology major Calendar requirements continued:

Additional Requirement

At least one course with Social Sciences content must be taken from the following list:
BIOL 304, BIOL 350, BIOL 420, or BIOL 421 (these may also count as Subject Requirements);
or any course with one of the following prefixes:
ANTH, COMM, ECON, EDUC, ENPL, ENVS, FNST, INTS, NORS, ORTM, POLS, PSYC

Elective Requirement

Elective credit hours must be taken as necessary to ensure completion of a minimum of 126 credit hours.

* 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.

[1] Based on the 2018/19 UNBC Academic Calendar year.
[2] Biology & NRM Wildlife-Fisheries majors will have one of UNBC BIOL 307 or 308 waived