

Student ID Number / Name:	
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This guide is for program planning purposes only. Students are responsible for checking the [Capilano University Calendar](#) & meeting program requirements. Students are strongly encouraged to check the pre-requisite of courses in advance.

- **Note:** Students may need to take one or more of CHEM 101, MATH 105, PHYS 104 before enrolling into CHEM 110; MATH 108/116; PHYS 112/113/114.

Program Requirements			
Course	Course Title	Course Credits	Grades
ENGL 100	University Writing Strategies	3.00	
	Select one of the options from the following list: o CMNS 250: Introduction to Technical Writing o English at 100-level or higher	3.00	
	6 credits of Humanities or Social Science at 100-level or higher <small>[Note: May not include courses used to satisfy the English Requirement.]</small>	3.00	
		3.00	
INTS 110	Making Change: Regional Research and Action	3.00	
COMP 115	Learn to Code <small>[Note: One of Pre-calculus 11 or Foundations of Mathematics 11 or Workplace Mathematics 11 or Computer Science 11 or BMTH 044 or BMTH 048 or Math Placement Test (Precalculus MPT) or COMP 101 (B-).]</small>	4.00	
	Select one of the options from the following list: o MATH 108: Calculus I for Business, Social Sciences and Life Sciences (3.00) <small>[Note: Math Placement Test (MPT); or Pre-calculus 12 with a minimum B grade; or MATH 105 with a minimum C- grade; or BMTH 054 with a minimum C+ grade.]</small> <small>[Note: MATH 108 is equivalent to MATH 116. Duplicate credit will not be granted for this course and MATH 116.]</small> o MATH 116: Calculus I - The Mathematics of Change (4.00) <small>[Note: Math Placement Test (MPT); or Pre-calculus 12 with a minimum A grade; or Pre-calculus 12 and Calculus 12 with a minimum B grade in each; or MATH 105 with a minimum C- grade; or BMTH 054 with a minimum B grade.]</small> <small>[Note: MATH 116 is equivalent to MATH 108. Duplicate credit will not be granted for this course and MATH 108.]</small>	3.00	
	Select one of the options from the following list: <small>[Note: STAT 101 or STAT 205 is recommended.]</small> o BADM 210: Business Statistics (3.00) o PSYC 213: Statistical Methods in Psychology (3.00) <small>[Note: PSYC 100 and PSYC 101; and MATH 097 (C) or MATH 123 (C) or MATH 091 (C+) or BMTH 043 (C+) or MATH 096 (C-) or BMTH 044 (C-) or BMTH 048 (C) or Pre-calculus 11 (C) or Principles of Math 11 (C) or Foundations of Math 11 (C) or Applications of Math 11 (C) or Applications of Math 12 (pass).]</small> o STAT 101: Introduction to Statistics (3.00) <small>[Note: Math Placement Test (MPT); or MATH 097; or MATH 091 or BMTH 043 with a minimum C+ grade; or MATH 096 or BMTH 044 with a minimum C- grade; or MATH 123 or BMTH 048 or Pre-calculus 11 or Principles of Math 11 or Foundations of Math 11 or Applications of Math 11 with a minimum C grade.]</small> <small>[Note: STAT 101 is equivalent to MATH 101 and MATH 204. Duplicate credit will not be granted for this course and MATH 101 or MATH 204.]</small> o STAT 205: Introduction to Probability and Statistics (3.00) <small>[Note: MATH 109 or MATH 126 as a prerequisite or corequisite.]</small> <small>[Note: STAT 205 is equivalent to MATH 205. Duplicate credit will not be granted for this course and MATH 205.]</small>	3.00	

Course	Course Title	Course Credits	Grades
	Select one of the options from the following list: o BIOL 106: Introductory Biology I (1.50) and o BIOL 107: Introductory Biology II (4.00) <i>[Note: BIOL 106 and BIOL 107 together are equivalent to BIOL 109 and BIOL 110. Duplicate credit will not be granted for BIOL 106/107 and BIOL 109 or BIOL 110.]</i> o BIOL 109: Introductory Biology (5.50) <i>[Note: BIOL 109 is equivalent to BIOL 110 and BIOL 106/107. Duplicate credit will not be granted for this course and BIOL 110 or BIOL 106/107.]</i> o BIOL 110: General Biology I (4.00) <i>[Note: Chemistry 11 (C+) or CHEM 130 (C+) or BCHM 044 (C+) or Chemistry 12 (C+) or CHEM 101 (C+) or BCHM 054 (C+).]</i> <i>[Note: BIOL 110 is equivalent to BIOL 106 and BIOL 107 together, and BIOL 109. Duplicate credit will not be granted for this course and BIOL 106/107 or BIOL 109.]</i>	4.00	
BIOL 111	General Biology II <i>[Note: BIOL 106 and 107; or BIOL 109; or BIOL 110.]</i>	4.00	
CHEM 110	Bonding and Structure <i>[Note: Chemistry 12 (C+) or CHEM 101 (C+) or BCHM 054 (C+); and Precalculus 12 (C+) or BMTH 054 (C-) or MATH 105 (C-) or Calculus MPT.]</i>	4.00	
CHEM 111	Chemical Dynamics and Energetics <i>[Note: CHEM 110 (C-); and Precalculus 12 (B) or BMTH 054 (C+) or MATH 105 (C-) or Calculus MPT.]</i>	4.00	
	Select one of the options from the following list: o PHYS 112: Introductory Physics for the Life Sciences I (4.00) <i>[Note: Physics 12 or BPHY 053/054 or PHYS 104; and Pre-calculus 12 or BMTH 054 or MATH 105.]</i> <i>[Note: PHYS 112 is equivalent to PHYS 110 and PHYS 114. Duplicate credit will not be granted for this course and PHYS 110 or PHYS 114.]</i> o PHYS 113: Introductory Physics for the Life Sciences II (4.00) <i>[Note: Physics 12 or BPHY 053/054 or PHYS 104; and Pre-calculus 12 or BMTH 054 or MATH 105.]</i> <i>[Note: PHYS 113 is equivalent to PHYS 111 and PHYS 115. Duplicate credit will not be granted for this course and PHYS 111 or PHYS 115.]</i> o PHYS 114: Fundamental Physics I (4.00) <i>[Note: Physics 12 (B) or BPHY 054 (B) or PHYS 104 (C-); and MATH 116 as a prerequisite or corequisite.]</i> <i>[Note: PHYS 114 is equivalent to PHYS 110 and PHYS 112. Duplicate credit will not be granted for this course and PHYS 110 or PHYS 112.]</i>	4.00	
BIOL 208	Ecology <i>[Note: BIOL 111 (C-).]</i>	4.00	
CHEM 211	Organic Chemistry for the Life Sciences <i>[Note: CHEM 111 (C-).]</i> <i>[Note: CHEM 200 and 201 can be used instead of CHEM 204 and 211.]</i>	4.00	
CHEM 204	Structure, Energetics and Spectroscopy <i>[Note: CHEM 111 (C-); and MATH 116 or MATH 108 as a prerequisite or corequisite.]</i> <i>[Note: CHEM 200 and 201 can be used instead of CHEM 204 and 211.]</i>	3.00	
	Science at 200-level or higher <i>[Note: Only courses designated as Science from the Faculty of Arts & Sciences.]</i> <i>[Note: Students must choose courses that support their choice of concentration & Upper Level Science electives.]</i> <i>Science subject areas: APSC; ASTR; BIOL; CHEM; COMP; GEOG-Physical (GEOG 212, 214, 221, 225, 355, 435); MATH; PHYS; PSYC-Science (PSYC 212, 213, 225); STAT.</i>	3.00	
Electives Requirement			
		3.00	
		3.00	
		3.00	
		3.00	
	27 credits of Electives <i>[Note: At least 12 credits must be outside of Science (100-level or higher).]</i> <i>[Note: At least 15 credits must be 300-level or higher (Science or non-Science).]</i> <i>[Note: Students must choose courses that support their choice of concentration & Upper Level Science electives.]</i>	3.00	
		3.00	
		3.00	
		3.00	
		3.00	

Course	Course Title	Course Credits	Grades
Upper Level Science Requirements			
	15 credits of Science at 300- or 400-level <i>[Note: Only courses designated as Science from the Faculty of Arts & Sciences.]</i> <i>Science subject areas: ASTR; BIOL; CHEM; COMP; GEOG-Physical (GEOG 355, 435); MATH; PHYS; STAT.</i>	3.00	
		3.00	
		3.00	
		3.00	
		3.00	
Environmental Science Concentration			
<i>[Note: Each concentration must include at least one Laboratory Science course or a course with a computer lab.]</i>			
	Select one of the options from the following list: o BIOL 408: Ecosystem Restoration (4.00) <i>[Note: BIOL 208 (C-).]</i> o CHEM 311: Applications of Spectroscopy (4.00) <i>[Note: CHEM 201 (C-); or CHEM 211 (C-) and CHEM 204 (C-).]</i> o PHYS 310: Environmental Physics Lab (4.00) <i>[Note: PHYS 210 or PHYS 211; OR STAT 205 and one of: CHEM 200, CHEM 201, CHEM 206, CHEM 211, BIOL 203, BIOL 208, BIOL 214, or BIOL 215.]</i>	4.00	
	Select one of the options from the following list: o STAT 310: Predictive Modelling and Analysis of Experimental Data (3.00) <i>[Note: 45 credits 100-level or higher coursework including one of STAT 101, STAT 205, LBST 201, BADM 210, PSYC 213, TOUR 350 or KINE 302.]</i> o MATH 330: Mathematical Modelling (3.00) <i>[Note: 45 credits of 100-level or higher coursework including: MATH 109 or MATH 126; and MATH 200 or MATH 252.]</i>	3.00	
	Select two courses from the approved list of Environmental Sciences below: o BIOL 308: Conservation Biology (3.00) <i>[Note: BIOL 208 (C-).]</i> o BIOL 408: Ecosystem Restoration (4.00) <i>[Note: BIOL 208 (C-).]</i> o CHEM 304: Environmental Chemistry (3.00) <i>[Note: CHEM 201 (C-); or CHEM 211 (C-) and CHEM 204 (C-).]</i> o CHEM 311: Applications of Spectroscopy (4.00) <i>[Note: CHEM 201 (C-); or CHEM 211 (C-) and CHEM 204 (C-).]</i> o CHEM 404: Green Chemistry (4.00) <i>[Note: CHEM 201 (C-); or CHEM 211 (C-) and CHEM 204 (C-).]</i> o PHYS 300: Environmental Thermodynamics (3.00) <i>[Note: MATH 230 and PHYS 203.]</i> o PHYS 310: Environmental Physics Lab (4.00) <i>[Note: PHYS 210 or PHYS 211; OR STAT 205 and one of: CHEM 200, CHEM 201, CHEM 206, CHEM 211, BIOL 203, BIOL 208, BIOL 214, or BIOL 215.]</i>	3.00	
	o CHEM 311: Applications of Spectroscopy (4.00) <i>[Note: CHEM 201 (C-); or CHEM 211 (C-) and CHEM 204 (C-).]</i> o CHEM 404: Green Chemistry (4.00) <i>[Note: CHEM 201 (C-); or CHEM 211 (C-) and CHEM 204 (C-).]</i> o PHYS 300: Environmental Thermodynamics (3.00) <i>[Note: MATH 230 and PHYS 203.]</i> o PHYS 310: Environmental Physics Lab (4.00) <i>[Note: PHYS 210 or PHYS 211; OR STAT 205 and one of: CHEM 200, CHEM 201, CHEM 206, CHEM 211, BIOL 203, BIOL 208, BIOL 214, or BIOL 215.]</i>	3.00	
Experiential Requirement			
SCI 400	Research Project <i>[Note: 12 credits of 300-level or higher coursework in designated Science courses from the Faculty of Arts and Sciences.]</i>	3.00	
Capstone Requirement			
CAPS 499	Degree Portfolio <i>[Note: 90 credits of 100-level or higher coursework including at least one Cap Core Experiential course.]</i>	3.00	
Total Degree program credits:		120.00	

Comments:

- Students starting this program from September 2022 onwards are able to use this program planner. You may refer to [Capilano University Academic Calendar](#) for your program profile requirements.
- **Note:** Students must obtain a concentration in Biomedical Science, Computational Science, or Environmental Science by completing 12.00 credits of approved courses for the chosen concentration. Students should ensure they have the appropriate pre-requisites.
- **Note:** Please note that Upper Level courses in the concentrations are offered on a rotating basis factoring in demand for particular courses and will not necessarily be available every year.
- **Quantitative/Analytical Requirement:** A Quantitative/Analytical course is a requirement of all University baccalaureate degrees.

Quantitative/Analytical Elective Course:	<input type="checkbox"/>
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- **Residency Requirement:** Students transferring to Capilano University must complete a minimum of 50% of their program course credits at Capilano University, the majority of which will normally fulfill the requirements of their final years of study.
- **Graduation Requirement:** A *minimum CGPA of 2.00* (calculated on all program required courses) must be achieved to graduate from all Capilano University credentials. Programs may have additional graduation requirements as approved by the University Senate.
 - Check your cumulative Grade Point Average (cGPA) yourself using the [GPA Calculator](#) on CapU website.
- **Timeframe for Completion of the program and Graduation:** Students in a four-year program would be given ten years to complete their program.

- **Cap Core Requirement:** Students starting in their baccalaureate degree on or after Fall 2018 and graduating on or after June 2022 must meet Cap Core graduation requirements in addition to their program requirements.

Foundation (6 credits)	
Foundation - Literacy	<input type="checkbox"/> ENGL 100 (3.00)
Foundation - Numeracy	<input type="checkbox"/>
Integration (18 credits)	
Integration - Culture and Creative Expression	<input type="checkbox"/>
Integration - Science and Technology	<input type="checkbox"/> COMP 115 (4.00)
Integration - Self and Society	<input type="checkbox"/> INTS 110 (3.00)
Integration Elective: o Culture and Creative Expression o Science and Technology o Self and Society	<input type="checkbox"/> BIOL 111 (4.00)
Integration Elective: o Culture and Creative Expression o Science and Technology o Self and Society	<input type="checkbox"/> CHEM 110 (4.00)
Integration Elective: o Culture and Creative Expression o Science and Technology o Self and Society	<input type="checkbox"/> BIOL 208 (4.00)
Professional Practice (6 credits)	
Professional Practice - Capstone	<input type="checkbox"/> CAPS 499 (3.00)
Professional Practice - Experiential	<input type="checkbox"/> SCI 400 (3.00)