Natural Resources Conservation

Degree Requirements

First Year

Required Courses	Credits	Done	Notes
APBI 200 Introduction to Soil Science	3	☐	
BIOL 121[1] Genetics, Evolution and Ecology	3	☐	
CONS 101 Introduction to Conservation or FRST 110[2] Land One: First-year Integrative Seminar	3	☐	
ECON 101 Principles of Microeconomics or FRST 101[2] Principles of Microeconomics for Forestry and Land and Food Systems	3	☐	
ECON 102 Principles of Macroeconomics	3	☐	
Choose two of: FRST 150, NRES 150[3], WRDS 150B, ENGL 110, ENGL 111, and WOOD 225[4] or *Land One students take*: FRST 150 *plus one of* ENGL 110, ENGL 111, or WOOD 225[4]	6	☐	
GEOS 103 Our Changing Environment: Water and Landscapes	3	☐	
MATH 100 Differential Calculus with Applications or 110 Differential Calculus or 180 Differential Calculus with Physical Applications or 190[5] Calculus Survey	3/4/6	☐	
Electives	6	☐	
Total Credits	33/34/36	☐	

[1] Students without Biology 11 or 12 should take BIOL 111 as one of their first year electives in order to take BIOL 121, a required course for all 1st year BSCN students.

[2] Only Land One students are eligible to take FRST 101 and FRST 110.

[3] NRES courses will be available beginning the Winter 2024 academic year

[4] Students who want to take WOOD 225 need to take either ENGL 110, ENGL 111, FRST 150 or WRDS 150B first.

[5] Students may take MATH 180 or 190 (4 credits) or MATH 110 (6 credits) instead of MATH 100 (3 credits), but the credit difference cannot be applied towards program elective requirements. All students must choose one of these listed Math courses. MATH 190 is strongly encouraged for all students with or without Calculus 12 (or a previous calculus course). Please refer to “First Year Calculus Choices” on https://www.math.ubc.ca/undergraduate/advising-and-resources/first-year-calculus-options for more information.

Second Year

Required Courses	Credits	Done	Notes
CONS 200 Foundations of Conservation	3	☐	
CONS 210 Visualizing Climate Change	3	☐	
FRST 200 or NRES 200 Forest Plant Biology I	3	☐	
FRST 201 or NRES 201 Forest Ecology	3	☐	
FRST 210 or NRES 210 Forest Plant Biology II	3	☐	
FRST 211 or NRES 211 Forest Classification and Silvics	3	☐	
FRST 231/NRES 231 Introduction to Biometrics or BIOL 300 Fundamentals of Biostatistics or STAT 200 Elementary Statistics for Applications	3	☐	
FRST 232/NRES 232 Computer Applications in Forestry or CPSC 110 Computation, Programs, and Programming	3	☐	
SOCI 101 or SOCI 102	3	☐	
Elective	3	☐	
Total Credits	30	☐	

Declaring your Major

During the summer before your third year, you must choose between the Science and Management Major or the Global Perspectives Major.

The Science and Management degree requirements are outlined on page 3 while the Global Perspectives degree requirements are outlined on page 4.

Science and Management Major

Third Year

Required Courses	Credits	Done	Notes
CONS 330 Conservation Science and Sustainability	3	☐	
One of CONS 340, NRES 340, NRES 241 Introduction to Geographic Information Systems for Forestry and Conservation	3	☐	
CONS 440 Conservation Decision Making and Policy	3	☐	
CONS 481 Conservation Planning in Practice	3	☐	
FRST 318 Forest and Conservation Economics or ECON 371 Economics of the Environment or ECON 374 Land Economics	3	☐	
FRST 385 Watershed Hydrology or GEOS 305 Introduction to Hydrology	3	☐	
FRST 386 Aquatic Ecosystems & Fish in Forested Watersheds	3	☐	
FRST 395 Forest Wildlife Ecology and Management	3	☐	
One of SOCI 360 Sociology and Natural Resources or GEOG 310 Environment and Sustainability or an Elective	3	☐	
Elective (300/400 level)[6]	3	☐	
Total Credits	30	☐	

Fourth Year

Required Courses	Credits	Done	Notes
CONS 451[7] Integrated Field School	15	☐	
One of FRST 443 Remote Sensing for Ecosystem Management or NRES 443 or NRES 341	3	☐	
FRST 495 Biological Diversity & Forest Management	3	☐	
CONS 486 Fish Conservation and Management	3	☐	
One of SOCI 360 Sociology and Natural Resources or GEOG 310 Environment and Sustainability or an Elective[8]	3	☐	
CONS 498 Thesis or Special Project or Elective (300/400 level)[6]	3	☐	
Total Credits	30	☐	

[6] Must be a course numbered 300 or higher.

[7] An integrated course taught in Term 1. Registration is restricted to this course only during Term 1 and only to students in fourth year of NRC program.

[8] Elective is permitted only if SOCI 360 or GEOG 310 was completed in third year.

Global Perspectives Major

Third and Fourth Year

Required Courses	Credits	Done	Notes
One of FRST 443 Remote Sensing for Ecosystem Management or NRES 443 or NRES 341	3	☐	Commonly taken in 4th yr T2
CONS 330 Conservation Science & Sustainability	3	☐	Commonly taken in 3rd yr T2
One of CONS 340 Introduction to Geographic Information Systems for Forestry and Conservation or NRES 340 or NRES 241 or GEOS 270 Geographic Information Science	3	☐	
CONS 452[9] Global Perspectives Capstone	12	☐	Taken in 4th yr T2
Core Areas (see below)[10]	15	☐	
Resource Systems Courses (see below)[11]	9	☐	
Electives[12]	15	☐	
Cultural Experience[13]	0	☐	Pre-requisite for CONS 452
Total Credits	60	☐	

[9] Students are required to have completed the International Experience prior to taking CONS 452 and completed a Geographic Information Systems course (e.g., CONS 340)

[10] One 3-credit course for each of the following topic areas: (i) resources and economics; (ii) resources and society; (iii) international policy/governance and resources; (iv) indigenous perspectives; and (v) globalization. Acceptable courses are listed on the Major's website

[11] One 3-credit course in three out of the following four topic areas: (i) oceanography/fisheries/water systems; (ii) aquaculture/food systems; (iii) forestry systems; and (iv) energy/mineral systems Acceptable courses are listed on the Major's website.

[12] 3 credits of electives must be selected from the Resources Systems list. 6 credits of electives may be general, of which at least 9 credits must be at the 300/400 level. An undergraduate thesis (CONS 498) may be taken in place of 3 credits of general electives

[13] The cultural experience requirement may be met by a: minimum of one term study abroad or one term cultural exchange, a two-four-week international field school, an international Co-op placement, an international internship, or cultural-based volunteer experience. It is determined in consultation with Forestry Student Services.

Core Courses - choose one course from each category (**bolded** courses are recommended but the others are acceptable)

Category	Course Choices
Resources and Economics	**BEST 401**, ECON 335, ECON 371, ECON 374, ECON 472, FRE 374, **FRST 318** or GEOG 361
Resources and Society	GEOG 310, GEOG 410, HGSE 358 or SOCI 360B
International Policy / Governance and Resources	**CONS 440**, FRST 370 or FRST 415
Indigenous Perspectives	ANTH 220, ANTH 304A, **CONS 370**, FNIS 210, FNIS 220, HGSE 352 or HGSE 371
Globalization	ECON 255, GEOG 121, GEOG 122, GEOG 211, or **WOOD 461**

Resource Systems Courses - choose one course in three out of the following four categories (**bolded** courses are recommended but all are acceptable; Resource Systems Electives are selected from this list of courses)

Category	Course Choices
Oceanography / Fisheries / Water Systems	EOSC 314, EOSC 315, EOSC 478, **FRST 385**, **FRST 386,** GEOS 305 or HGSE 356
Agriculture / Food /Range Systems	APBI 260, APBI 265, APBI 319, APBI 360, APBI 401, APBI 402, APBI 418, FRE 306, FNH 200, FNH 355, FRE 340, or **FRST 444**
Forestry Systems	FRST 305, FRST 351, **FRST 439**, HGSE 353, HGSE 354 or HGSE 355
Energy / Mineral Systems	BEST 202, BEST 301, **CONS 425**, or EOSC 311

Co-op Option:

The co-operative education (co-op) option within Natural Resources Conservation is a highly competitive program which increases your chances of working in your chosen field. As a co-op student you gain up to 20 months of paid, relevant and invaluable work experience.

Co-op students will extend their degree by one year, completing eight academic terms and five work terms over a five-year period. Below is the standard Natural Resources Conservation program map for those in co-op:

	Term 1 **Sep – Dec**	**Term 2** **Jan – Apr**	**Summer** **May – Aug**
Year 1	Basic Sciences, English, Math, Soil Science, and Sociology		Summer
Year 2	Forest biology and ecology, Intro to Conservation, Intro to Biometrics and Computer Applications.		**Co-op 1** (Junior)
Year 3	Resource economics, conservation of water, wildlife, fish and recreation, and planning		**Co-op 2** (Intermediate)
Year 4	Integrated Field Course	**Co-op 3** (Intermediate)	**Co-op 4** (Intermediate)
Year 5	**Co-op 5** (Senior)	Conservation policy, remote sensing and fisheries management	

Good to know:

- Undergraduate students must apply to co-op in September of their second year
- You should acquire a driver's license if you do not already have one
- Work in British Columbia, across Canada and around the world
- Be supported by our Co-op Coordinators every step of the way

To learn more about the Co-op Program and how you can apply, contact the Natural Resources Conservation Co-op Coordinator:

Nazlyn Pirani
Co-op Coordinator
604-827-5196
nazlyn.pirani@ubc.ca
FSC 2615

How to successfully complete first year:

1. You must follow your program closely – take the appropriate classes outlined for your degree. The most up-to-date program requirements are always listed on the UBC Calendar at www.students.ubc.ca/calendar (click on 'Faculties, Colleges, and Schools' and then on 'Forestry').

2. You must pass at least 60% of the total number of credits attempted in both Terms 1 and 2 (summer classes are not included).

3. You must also obtain an average grade of at least 60% in both Terms 1 and 2, including any failed courses (summer classes are not included). If your average for Terms 1 and 2 is at least 55%, but less than 60%, you will be placed on academic probation and will be sent a letter outlining additional steps you must take in order to remain in your program. If you do not meet the criteria noted above, you will be asked to leave UBC for at least one year. Following this probationary period, you may re-apply to UBC but you must complete at least 12 credits at a college during your time away.

Professional Designations

Courses toward Registration as a BC Professional Forester

Students who wish to work towards membership in the Associations of BC Forest Professionals (ABCFP) are advised to contact Forestry Student Services. The information is also available on the ABCFP website at www.abcfp.ca. There are also information sessions held throughout the academic year in the Faculty of Forestry – please contact Forestry Student Services for this schedule.

Courses toward Registration as a BC Professional Biologist

Students who wish to work toward registration as a Registered Professional Biologist during their program should contact the College of Applied Biology of BC for course and other membership requirements at their website, www.cab-bc.org. There are also information sessions held throughout the academic year in the Faculty of Forestry – please contact Forestry Student Services for this schedule.

Contacts:

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The UBC Calendar is always the most up-to-date resource for degree requirements, http://www.calendar.ubc.ca/vancouver/index.cfm?tree=12,203,0,0.