

Forest Operations

Degree Requirements (High School Grads)

The Forest Operations Major is divided into two main specialization options:

- Harvest Planning and Engineering – See below
- Commerce (Minor in Commerce) – See pages 3, 4 and 5

Harvest Planning and Engineering (HP&E)

The Harvest Planning and Engineering Option offers specialized courses in geotechnical engineering, forest road design and location, planning of forest operations at the stand and landscape levels, engineering and economic analysis of logging systems, and forest transportation systems. In addition, graduates of this specialty have the unique skills that are needed to analyze, plan, and implement a wide range of silviculture, logging, and transportation systems which are key elements in forest management. Some graduates of this specialty choose to take additional courses in mathematics and applied science to obtain eligibility for registration as a professional engineer (P.Eng.) in addition to a professional forester (R.P.F.).

First Year - HP&E

Required Courses	Credits	Done	Notes
APBI 200	3	<input type="checkbox"/>	
ENGL 110, 111, 112 ¹ or FRST 150 ²	3	<input type="checkbox"/>	
BIOL 111 and 121 ³	6	<input type="checkbox"/>	
ECON 101 or FRST 101 ²	3	<input type="checkbox"/>	
MATH 100, 102, 104, 110, 180 or 184 ⁴	3/4/6	<input type="checkbox"/>	
MATH 101, 103, 105 or elective ⁵	3	<input type="checkbox"/>	
FRST 100 or FRST 110 ²	3	<input type="checkbox"/>	
FRST 231	3	<input type="checkbox"/>	
FRST 232	3	<input type="checkbox"/>	
PHYS 170	3	<input type="checkbox"/>	
Total Credits	33/34/36	<input type="checkbox"/>	

¹ ENGL 112 is recommended.

² Only Land One students are eligible to take FRST 150, FRST 101 and FRST 110.

³ Students with Biology 12 are exempt from BIOL 111. Substitute PHYS 100 if needed (exempt with PHYS 12) or CHEM 111 (exempt with CHEM 12). If none of these courses are needed, an elective may be substituted. Students with no high school biology are strongly recommended to take BIOL 111 in Term 1 and BIOL 121 in Term 2.

⁴ Students may take MATH 180 (4 credits) or MATH 110 (6 credits) instead of MATH 100 (3 credits), but the credit difference cannot be applied towards program elective requirements. Students planning to obtain a P.Eng. after graduating require MATH 100 and 101.

⁵ Although recommended, MATH 101/105 is not a prerequisite for other courses listed in this option. Note: Some elective or specialization courses may carry credits in addition to the above table.

Second Year - HP&E

Required Courses	Credits	Done	Notes
FRST 200	3	<input type="checkbox"/>	
FRST 201	3	<input type="checkbox"/>	
FRST 210	3	<input type="checkbox"/>	
FRST 211	3	<input type="checkbox"/>	
FRST 239	3	<input type="checkbox"/>	
FOPR 264	4	<input type="checkbox"/>	
FOPR 388	3	<input type="checkbox"/>	
CONS 200 or 370	3	<input type="checkbox"/>	
Electives	6	<input type="checkbox"/>	
Total Credits	31	<input type="checkbox"/>	

FRST 351 immediately preceding third year	2	<input type="checkbox"/>	
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Third Year - HP&E

Required Courses	Credits	Done	Notes
FRST 305	3	<input type="checkbox"/>	
FRST 307	3	<input type="checkbox"/>	
FRST 318	3	<input type="checkbox"/>	
FRST 320	3	<input type="checkbox"/>	
FRST 339	3	<input type="checkbox"/>	
FRST 395	3	<input type="checkbox"/>	
FOPR 362	3	<input type="checkbox"/>	
CIVL 210	3	<input type="checkbox"/>	
WOOD 276	3	<input type="checkbox"/>	
Restricted Elective ⁶	3	<input type="checkbox"/>	
Total Credits	30	<input type="checkbox"/>	

⁶ Restricted electives are courses within the Faculty of Applied Sciences. See your Program Director for a current list of accepted courses.

FRST 452 immediately following third year	2	<input type="checkbox"/>	
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Fourth Year - HP&E

Required Courses	Credits	Done	Notes
FRST 415	3	<input type="checkbox"/>	
FRST 424	10	<input type="checkbox"/>	
FRST 497	2	<input type="checkbox"/>	
WOOD 465	3	<input type="checkbox"/>	
WOOD 492	3	<input type="checkbox"/>	
FOPR 459	3	<input type="checkbox"/>	
FOPR 464	3	<input type="checkbox"/>	
Restricted Elective ^{6, 7}	6	<input type="checkbox"/>	
Total Credits	33	<input type="checkbox"/>	

⁶ Restricted electives are courses within the Faculty of Applied Sciences. See your Program Director for a current list of accepted courses.

⁷ Students who have completed WOOD 474 will receive 3 credits towards the Restrictive Electives.

Minor in Commerce

Students who desire a stronger foundation in business may consider the Minor in Commerce. Upon successful completion of this minor program, the notation "Minor in Commerce" will be placed on the student's transcript.

Enrolment in this program is limited. Please see the program director. To be considered, the student must be eligible for at least third-year standing in the Forest Operations Major with a cumulative average of at least 68% in the previous two years. Completion of ECON 101 (or ECON 310) and ECON 102 (or ECON 311) is required. Meeting the stated minimum requirement does not guarantee admission into the Minor.

Students may require an additional term to complete the Minor in Commerce.

The Commerce Minor is intended to be completed over two years.

See next page for degree requirements.

First Year - Commerce

Required Courses	Credits	Done	Notes
APBI 200	3	<input type="checkbox"/>	
ENGL 110, 111, 112 ¹ or FRST 150 ²	3	<input type="checkbox"/>	
BIOL 111 and 121 ³	6	<input type="checkbox"/>	
ECON 101 or FRST 101 ²	3	<input type="checkbox"/>	
ECON 102	3	<input type="checkbox"/>	
MATH 100, 102, 104, 110, 180 or 184 ⁴	3/4/6	<input type="checkbox"/>	
MATH 101, 103, 105 or elective ⁵	3	<input type="checkbox"/>	
FRST 100	3	<input type="checkbox"/>	
FRST 231	3	<input type="checkbox"/>	
FRST 232	3	<input type="checkbox"/>	
Total Credits	33/34/36	<input type="checkbox"/>	

¹ ENGL 112 is recommended.

² Only Land One students are eligible to take FRST 150 and FRST 101.

³ Students with Biology 12 are exempt from BIOL 111. Substitute PHYS 100 if needed (exempt with PHYS 12) or CHEM 111 (exempt with CHEM 12). If none of these courses are needed, an elective may be substituted. Students with no high school biology are strongly recommended to take BIOL 111 in Term 1 and BIOL 121 in Term 2.

⁴ Students may take MATH 180 (4 credits) or MATH 110 (6 credits) instead of MATH 100 (3 credits), but the credit difference cannot be applied towards program elective requirements. Students planning to obtain a P.Eng. after graduating require MATH 100 and 101.

⁵ Although recommended, MATH 101/105 is not a prerequisite for other courses listed in this option. Note: Some elective or specialization courses may carry credits in addition to the above table.

Second Year - Commerce

Required Courses	Credits	Done	Notes
FRST 200	3	<input type="checkbox"/>	
FRST 201	3	<input type="checkbox"/>	
FRST 210	3	<input type="checkbox"/>	
FRST 211	3	<input type="checkbox"/>	
FRST 239	3	<input type="checkbox"/>	
FRST 318	3	<input type="checkbox"/>	
FOPR 264	4	<input type="checkbox"/>	
FOPR 388	3	<input type="checkbox"/>	
CONS 200 or 370	3	<input type="checkbox"/>	
Elective	3	<input type="checkbox"/>	
Total Credits	31	<input type="checkbox"/>	

FRST 351 immediately preceding third year	2	<input type="checkbox"/>
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Third Year - Commerce

Required Courses	Credits	Done	Notes
FRST 305	3	<input type="checkbox"/>	
FRST 307	3	<input type="checkbox"/>	
FRST 320	3	<input type="checkbox"/>	
FRST 339	3	<input type="checkbox"/>	
FRST 395	3	<input type="checkbox"/>	
FOPR 362	3	<input type="checkbox"/>	
COMM 457	3	<input type="checkbox"/>	
COMM 329	3	<input type="checkbox"/>	
COMM 465	3	<input type="checkbox"/>	
COMM 398 or 458	3	<input type="checkbox"/>	
Total Credits	30	<input type="checkbox"/>	

FRST 452 immediately following third year	2	<input type="checkbox"/>
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Fourth Year - Commerce

Required Courses	Credits	Done	Notes
FRST 415	3	<input type="checkbox"/>	
FRST 424	10	<input type="checkbox"/>	
FRST 497	2	<input type="checkbox"/>	
WOOD 465	3	<input type="checkbox"/>	
WOOD 492	3	<input type="checkbox"/>	
FOPR 459	3	<input type="checkbox"/>	
COMM 473	3	<input type="checkbox"/>	
COMM 493	3	<input type="checkbox"/>	
Restricted Elective ^{6, 7}	2 or 3	<input type="checkbox"/>	
Total Credits	32/33	<input type="checkbox"/>	

⁶ Restricted electives are courses within the Faculty of Applied Sciences. See your Program Director for a current list of accepted courses.

⁷ Students who have completed WOOD 474 will receive 3 credits towards the Restrictive Electives.

Co-op Option:

As a co-op student you gain up to 20 months of paid, relevant and invaluable work experience while earning an average of \$64,000 by the time you graduate.

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 Forest Operations program map for those in co-op:

*The Field Schools are one week in duration. They are scheduled immediately before or after regular classes.

	Term 1 Sept - Dec	Term 2 Jan - Apr	Summer May - Aug	
Year 1	Basic Sciences, Economics, English, Math, Soil Science, Introduction to Forestry, Biometrics, & Computer Applications			
Year 2	Forest Plant Biology & Ecology Forest Measurements, Hydrology, and Operations Conservation Theory		Co-op 1 (Junior)	Fall Interior Field School*
Year 3	Silviculture, Entomology, Pathology, Fire, Wildlife/Fish Mechanics of Wood	Co-op 2 (Intermediate)	Co-op 3 (intermediate)	
Year 4	Co-op 4 (Intermediate)	Forest Economics Operations Planning & Management Forest Measurement Soil Mechanics, Forest Engineering	Spring Coastal Field School*	Co-op 5 (Senior)
Year 5	Forest Policy Forest Machinery & Engineering Business of Forest Operation Wood Properties & Manufacturing Mathematical Modeling	Sustainable Integrated Forest Management Business Management Graduating Essay		

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 Forest Operations Co-op Coordinator: **Nazlyn Pirani, Dean's Office - FSC 2615, 604-827-5196, nazlyn.pirani@ubc.ca**

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. Alternatively, you can speak to your program director.

Courses toward Registration as a BC Professional Engineer

Some graduates of the Harvest Planning and Engineering Option choose to take additional courses in mathematics and applied science to obtain eligibility for registration as a professional engineer (P.Eng.) If you are interested, please see your program director or the Professional Engineers and Geoscientists of BC (APEG) website at www.apeg.bc.ca

Contacts:

Dr. Dominik Roeser
Program Director
604-822-3559
Dominik.roeser@ubc.ca
FSC 2036

Forestry Student Services
Advising Office
604-822-1834
forestry.undergrad@.ubc.ca
FSC 2609

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

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>.