

# Forestry 131 - Forest Botany

## Course Outline

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**Term:** Fall

**Lectures & Labs:** TBA

**Instructor:**

TBA

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### DESCRIPTION

An introduction to the biology and classification of British Columbia's native flora. Topics include the structure and function of trees and plants, identification of native tree species and key native plant species, water and nutrient relations and how trees and plants are adapted to specific environmental conditions.

### SCOPE AND CREDIT

This 3 credit course is accepted towards the Forestry Resources Technology Diploma and the UBC Forestry Transfer program.

### COURSE FORMAT (3:0:2)

Learning will be accomplished through a variety of activities, including  
Attending lectures,  
students will be able to:

- Participating in class and online discussions,
- Tree and plant ID (projects, labs and exams),
- Field trips,
- Reading assignments.



### LEARNING OUTCOMES

Upon successful completion of this course, students will be able to:

1. Assess the potential hazards of working in the forest; demonstrate safe work procedures for carrying out tasks, and use appropriate personal protective equipment requirements and describe emergency procedures.
2. Define and use the technical terms applicable to forest botany in conversation with peers and technical reports.
3. Identify and describe selected B.C native tree and shrub species; using cones, fruit, foliage, twigs or bark.
4. Identify a variety of common native plant species, including mosses, ferns, grasses, sedges, herbs and shrubs.
5. Apply selected conventions of plant taxonomy and binomial nomenclature.
6. Construct and use dichotomous keys to identify various tree species.
7. Describe the habitat in which specific indicator plants and trees grow.
8. Prepare a digital plant portfolio and describe the plant habitat.
9. Describe the basic cellular structure and function of woody stems

- (hardwoods and softwoods), roots, leaves, and reproductive structures.
10. Describe primary and secondary growth, with an emphasis on how forest managers can apply this knowledge to influence wood properties and yield.
  11. Describe vegetative and sexual reproductive characteristics of selected tree species.
  12. Describe the life history of selected tree species.
  13. Describe basic plant growth, including the role of nutrients, light, water, external influences and plant hormones.

In addition to the subject-specific learning outcomes listed above, specific program learning outcomes will be covered. Upon successful completion of this course students will have furthered their ability to:

1. Read, comprehend and summarize material appropriate to the field of forestry - specifically forest botany (e.g., to review and summarize the role of plant cells and to describe and explain the ecological niches that plants and trees occupy.)
2. Analyse information and think critically (e.g. consider the basic environmental requirements of indicator plants/trees and apply this knowledge in classifying and describing forest ecosystems, to utilize dichotomous to identify unknown tree specimens).
3. Utilize digital resources to effectively search for information (e.g. identify unknown plants and research where they grow.)

#### REQUIRED TEXTS

1. Pojar, J. and A. MacKinnon. 2005. Plants of Coastal British Columbia, Revised, Lone Pine Press. (*class set*)
2. Parish, R. and S. Thompson. Tree Book - Learning to Recognize Trees of BC, CFS. (Available as a pdf)

<http://www.for.gov.bc.ca/hfd/library/documents/treebook/>

3. Green, R.N. and K. Klinka. 1994. A Field Guide to Site Identification and Interpretation for the Vancouver Forest Region, BC Land Management Handbook No. 28, BC Ministry of Forests, 285 p. (Available as a pdf)  
<http://www.for.gov.bc.ca/hfd/pubs/docs/lmh/Lmh28.pdf>

#### RECOMMENDED TEXTS (sample)

Available from former students or Amazon.ca:

1. Farrar, J.L. 1995. Trees in Canada, Canadian Forest Service / Fitzhenry and Whiteside.
2. Starr, C et al. 2013. Plant structure and function. Biology: The Unity and Diversity of Life, 13<sup>th</sup> Ed., Cengage Learning.

#### COMMUNICATIONS

All information regarding the course will be distributed through the course "D2L" website through VIU Learn at: <http://learn.viu.ca>

You will be automatically enrolled in the FRST131 website with your course registration. You are responsible for checking the website at least weekly for notices and assignments. If your email has changed since registration, make sure that you provide an up-to-date version.

#### FIELD EQUIPMENT & SAFETY

Some labs will be outdoors. Students will be required to wear hard hats, caulked boots and hi-vis vests as directed by the instructor. (Students who are not enrolled in the Forestry program or who forget their gear should consult with the instructor about use of a limited outdoor gear supply donated to the Department.)

## STUDENT EVALUATION (sample)

The following evaluation will be used in calculating the Final grade (subject to change):

Mid-term I Exam	10%
Mid-term II Exam	20%
Mid-term III Exam	6%
Quizzes (2@2%)	4%
Tree/Plant Lab Exams	20%
Plant Collection	25%
Lab Reports	5%
Professionalism	10%
<b>TOTAL</b>	<b>100%</b>

The tree/plant lab exams may consist of both written questions and hands-on identification of specimens. Midterms may cover lectures, field trips, labs, reading assignments and identification of specimens. Any missed exams will receive a grade of zero.

## ACADEMIC POLICIES

For further information on the grading scale, exam policies, missing tests, assignment format standards, late assignments, instructor assessment of professionalism, and academic misconduct (e.g., plagiarism), please refer to the D2L [Forestry Portal](#).

