

ENVT 265 Forest Technology

3 Credits, 3 hours lecture, 3 hours lab per week

The course provides the student with an overview of the forestry industry in the boreal forest of western Canada. Topics covered include the utilization of tree species by sawmill operations and pulp and paper mills, the ecology of the tree species used, recent developments in sustainable forest management, stand assessment, forest mensuration, silviculture, dendrology, environmental impacts of the forestry industry and forest pest control. The field component allows students to gain practical experience in data collection, interpretation of results, presentation of scientific work and in report writing.

Prerequisites BIOL 208

Instructor

Dr. David Smith
S209B
780-791-4997
david.smith@keyano.ca

Office Hours

Monday to Friday 12:00 – 12:50
All office hours are in S209B

Hours and Location of Instruction

Monday, Wednesday, Friday 2:00 – 2:50 Room S214
Thursday 2:00 – 4:50 Room S114

Required Resources

Textbook title, Hunter, M.L. and F. Schmiegelow. 2010. *Wildlife, Forests and Forestry: Principles of Managing Forests for Biological Diversity* (2nd Edition). Prentice Hall. ISBN-10: 0135014328

Beckingham, J.D. & Archibals, J.H. (1996). *Field Guide to Ecosites of Northern Alberta*. Vancouver, British Columbia: UBC Press.

Royer, F. and R. Dickinson. 2007. *Plants of Alberta*. Lone Pine Publishing. Edmonton, Alberta. ISBN-10: 1-55105-283-0

Course Outcomes

The student will be able to demonstrate practical skills related to:

- forest site classification
- species identification and forest mensuration.
- collection, compilation, evaluation, interpretation and presentation of data from local forests and application to current issues in a range of subdisciplines in forestry: conservation, wildlife, ecology, recreation, forest operations and wood products.

Evaluation

Assignments	10@ 2% = total of 20%, due each week
Oral Presentation	10%, due the week before final exams
Term Paper	15%, due the week before final exams
Midterm Exam	20%, week of February 26
Final Exam	35%, week of April 16
Total	100%

A grade of C- is required for progression or transfer.

Grading System

Descriptor	Alpha Grade	4.0 Scale	Percent	Rubric for Letter Grades
Excellent	A+	4.0	> 92.9	Work shows in-depth and critical analysis, well developed ideas, creativity, excellent writing, clarity and proper format.
	A	4.0	85 – 92.9	
	A-	3.7	80 – 84.9	
Good	B+	3.3	77 – 79.9	Work is generally of high quality, well developed, well written, has clarity, and uses proper format.
	B	3.0	74 – 76.9	
	B-	2.7	70 – 73.9	
Satisfactory	C+	2.3	67 – 69.9	Work has some developed ideas but needs more attention to clarity, style and formatting.
	C	2.0	64 – 66.9	
	Progression	C-	60 – 63.9	
Poor	D+	1.3	55 – 59.9	Work is completed in a general way with minimal support, or is poorly written or did not use proper format.
	Minimum Pass	D	50 – 54.9	
Failure	F	0.0	< 50	Responses fail to demonstrate appropriate understanding or are fundamentally incomplete.

Proposed Schedule of Lecture Topics (week of:)

Jan. 8	Course introduction
Jan. 15	Introduction to forest biomes and boreal species, forest ecology
Jan. 22	Nutrient and water uptake
Jan. 29	Photosynthesis
Feb. 5	Stand growth
Feb. 12	Measuring and monitoring forest resources
Feb. 26	Midterm
Feb. 26	Forest succession
Mar. 5	Silviculture
Mar. 12	Sustainable forest management practices
Mar. 19	Forest wildlife management
Mar. 26	Disease
April 2	Timber harvesting
Apr. 9	Term projects, written report due

Proposed Schedule of Laboratory Topics (week of:)

Jan. 8	No lab
Jan. 15	Ecosites of northern Alberta
Jan. 22	Measuring tree heights
Jan. 29	Calculating tree age using twigs
Feb. 5	Term project assignment
Feb. 12	Use of compass
Feb. 26	Term projects
Mar. 5	Calculating tree age using tree cores and cross-sections
Mar. 12	Calculating board footage
Mar. 19	Seed viability
Mar. 26	Forest mensuration
Apr. 2	Early spring field trip – pulp and paper mill
Apr. 9	Oral presentations, term projects, written report due

Please Note:

Date and time allotted to each topic is subject to change. It is your responsibility as a student to contact the Office of the Registrar to complete the forms for Withdrawal or Change of Registration, and any other forms. Please refer to the list of important dates as noted in the Academic Schedule in the Keyano College Credit Calendar.

Performance Requirements**Laboratory Safety**

In the science laboratories, safety is important.

Students must complete the *WHMIS for Students* online training course on Moodle before entering the science laboratories.

Students must comply with the mandatory laboratory safety rules for this course as provided in the laboratory manual. Failure to do so will result in progressive discipline such as a verbal warning, refused entry into the laboratory, or suspension from the College.

Student Attendance

Class attendance is useful for two reasons. First, class attendance maximizes a student's learning experience. Second, attending class is a good way to keep informed of matters relating to the administration of the course (e.g., the timing of assignments and exams). Ultimately, you are responsible for your own learning and performance in this course.

It is the responsibility of each student to be prepared for all classes. Students who miss classes are responsible for the material covered in those classes and for ensuring that they are prepared for the next class, including the completion of any assignments and / or notes that may be due.

Academic Misconduct

Students are considered to be responsible adults and should adhere to principles of intellectual integrity. Intellectual dishonesty may take many forms, such as:

- Plagiarism or the submission of another person's work as one's own
- The use of unauthorized aids in assignments or examinations (cheating)
- Collusion or the unauthorized collaboration with others in preparing work
- The deliberate misrepresentation of qualifications
- The willful distortion of results or data
- Substitution in an examination by another person
- Handing in the same unchanged work as submitted for another assignment
- Breach of confidentiality.

The consequences for academic misconduct range from a verbal reprimand to expulsion from the College. More specific descriptions and details are found in the Student Rights and Student Code of Conduct section of the Keyano College 2016-2017 credit calendar. It is the responsibility of each student to be aware of the guidelines outlined in the Student Rights and Student Code of Conduct Policies.

In order to ensure your understanding of the concept of plagiarism, you must successfully complete the online tutorial found on ilearn.keyano.ca. Then print the certificate, sign it, and show it to each of your instructors. Your course work will not be graded until you show this signed certificate.

Specialized Supports**Counselling and Accessibility Services**

Counselling Services provides a wide range of specialized counselling services to prospective and registered students, including personal, career and academic counselling.

SKILL Centre

The SKILL Centre is a learning space in the Clearwater Campus at Keyano College where students can gather to share ideas, collaborate on projects and get new perspectives on learning from our tutorial staff.

The SKILL Centre, through a variety of delivery methods, provides assistance in skill development to Keyano students. Assistance is provided by instructors, staff and student tutors. Individuals wishing to improve their mathematics, writing, grammar, study, or other skills, can take advantage of this unique service.