

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
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Office Hours

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

Hours and Location of Instruction

Monday, Wednesday, Friday 1:00 – 1:50 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. & Archibald, 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

Lab Assignments	10@ 1% = total of 10%, due each week
Oral Presentation	10%, due the week before final exams
Term Paper	15%, due the week before final exams
Midterm Exam	25%, week of February 10
Final Exam	40%, week of April 13
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. 6	Course introduction
Jan. 13	Forest inventory methods
Jan. 20	Forest biomes
Jan. 27	Boreal forests and fire
Feb. 3	Nutrient and water cycles
Feb. 10	Midterm, Area and volume calculations
Feb. 24	Tree structure and dendrochronology
Mar. 2	Forest management and harvest practices
Mar. 9	Silviculture and wood quality
Mar. 16	Forest pests and diseases
Mar. 23	Forest ecosite classification preparation for mandatory field trips
Mar. 30	Wood products
Apr. 6	Term projects, oral and written report due

Proposed Schedule of Laboratory Topics (week of:)

Jan. 6	No lab
Jan. 13	Ecosites of northern Alberta
Jan. 20	Measuring tree heights, floodplain and upland forest
Jan. 27	Measuring shrub age, floodplain and upland forest
Feb. 3	Term project assignment, library research
Feb. 10	Compass and declination
Feb. 24	Calculating tree age using tree cores and cross-sections
Mar. 2	Calculating board footage in floodplain and upland forests
Mar. 9	Determining seed viability in the laboratory
Mar. 16	Basal area prism method upland and floodplain forests
Mar. 23	Forest ecosite classification mandatory field trips
Mar. 30	Field trip – Northern Forest Products sawmill

Please Note:

Date and time allotted to each topic is subject to change.

Performance Requirements**Student Responsibilities**

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.

More specific details are found in the Student Rights and Student Code of Conduct section of the Keyano College 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.

Laboratory Safety

In the science laboratories, safety is important and therefore 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.

Before entering the lab, students are responsible reviewing the lab manual and relevant Safety Data Sheets for the purpose of evaluating risks associated to health. Some hazards used in the laboratory may have additional risks to those with pre-existing medical conditions.

Student Attendance

Class attendance is useful for two reasons. First, class attendance maximizes a students' 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.

Use of phones and laptops are not permitted unless instructor grants permission for a class-related activity. Attendance of lectures and laboratories is mandatory and will be monitored and reported to the Chair. Missing two or more labs will result in failure.

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 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

The Student Academic Support Services (SASS) department: Accessibility Services, Skill Centre and Wellness Services, work together to support student success at Keyano College.

Accessibility Services (CC167) supports student success through group and individualized instruction of learning, study and test taking strategies, and adaptive technologies. Students with documented disabilities, or who suspect a disability, can meet with the Learning Strategists to discuss accommodation of the learning barriers that they may be experiencing. Students who have accessed accommodations in the past are encouraged to visit our office at their earliest opportunity to discuss the availability of accommodations in their current courses. Individual appointments can be made by calling 780-791-8934

Skill Centre (CC119) provides a learning space where students can gather to share ideas, collaborate on projects and get new perspectives on learning from our tutorial staff. Students visiting the centre have access to one-to-one or group tutoring, facilitated study groups, and assistance in academic writing. The Skill Centre's Peer Tutor program provides paid employment opportunities for students who have demonstrated academic success and want to share what they have learned. Tutoring is available free to any students registered at Keyano College on a drop in basis, from 9:00 am to 5:00 pm Monday through Friday. Additional evening hours are subject to tutor availability and are posted in the Skill Centre.

Wellness Services (CC260) offers a caring, inclusive, and respectful environment where students can access free group and individual support to meet academic and life challenges. Mental Health Coordinators offer a safe and confidential environment to seek help with personal concerns. The Mindfulness Room in CC260 is available as a quiet space for students to relax during regular office hours. Wellness Service welcomes students to participate in any of the group sessions offered throughout the academic year addressing such topics as Mindfulness and Test Anxiety. Individual appointments can be made by calling 780-791-8934.

Please watch your Keyano email for workshop announcements from our Student Academic Support Services team.