

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 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.

Recommended: 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 14
Final Exam	40%, week of April 18
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. 3	Course introduction
Jan. 10	Forest inventory methods
Jan. 17	Forest biomes
Jan. 24	Boreal forests and fire
Jan. 31	Nutrient and water cycles
Feb. 7	Midterm, Area and volume calculations
Feb. 14	Tree structure and dendrochronology
Feb. 28	Forest management and harvest practices
Mar. 7	Silviculture and wood quality
Mar. 14	Forest pests and diseases
Mar. 21	Forest ecosite classification preparation for mandatory field trips
Mar. 28	Wood products
Apr. 4	Term projects, oral and written report due
Apr. 11	Review

Proposed Schedule of Laboratory Topics (week of:)

Jan. 3	No lab
Jan. 10	Ecosites of northern Alberta
Jan. 17	Measuring tree heights, floodplain and upland forest
Jan. 24	Measuring shrub age, floodplain and upland forest
Jan. 31	Term project assignment
Feb. 7	Compass and declination
Feb. 14	Calculating tree age using tree cores and cross-sections
Feb. 28	Calculating board footage in floodplain and upland forests
Mar. 7	Determining seed viability in the laboratory
Mar. 14	Basal area prism and distance methods in floodplain forests
Mar. 21	Field trip – Northern Forest Products sawmill
Mar. 28	Review

Please Note:

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

Performance Requirements and Student Services**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](#). The Keyano College credit calendar also has information about Student Rights and Code of Conduct. It is the responsibility of each student to be aware of the guidelines outlined in the Student Rights and Code of Conduct Policies.

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 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; and
- 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 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 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 may not be graded until you show this signed certificate.

Specialized Supports

The Student Services department is committed to Keyano students and their academic success. There are a variety of student supports available at Keyano College. Due to the continuing situation with the Covid-19 pandemic, the offered support services will be implemented differently this semester by being provided mostly virtually. In-person service can be requested as needed. All Alberta Health Services guidelines will be followed for in-person appointments—wear a mask, maintain two meters of physical distance, use hand sanitizer, and stay home if you are unwell.

All student services are available during Keyano business hours: Monday to Friday, 8h30-16h30.

Accessibility Services: provides accommodations for students with disabilities. Students with documented disabilities, or who suspect a disability, can meet with a Learning Strategist to discuss their current learning barriers and possible accommodations. Students who have accessed accommodations in the past are encouraged to contact us to request them for the semester. Please note that requesting accommodations is a process and requires time to arrange. Contact us as soon as you know you may require accommodations. For accessibility services supports and to book a virtual appointment, please contact accessibility.services@keyano.ca.

Accessibility Services also provides individual and group learning strategy instruction for all students, as well as technology training and supports to enhance learning. Meet with a Learning Strategist to learn studying and test-taking strategies for online classes. Schedule an appointment with the Assistive Technology Specialist to explore technology tools for learning. Book an appointment today by emailing accessibility.services@keyano.ca

Wellness Services: 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. All individual appointments will continue virtually.

Wellness Services welcomes students to participate in any of the virtual group sessions offered throughout the academic year addressing topics including mindfulness and test anxiety.

Individual virtual appointments can be made by emailing wellness.services@keyano.ca.

Library Services: provides students with research and information supports as they engage in their studies. Library staff are available to support you both virtually and in person throughout the semester. For a detailed list of library supports and services, go to www.keyano.ca/library. For any inquiries, please email askthelibrary@keyano.ca.

Begin your research with the [Library's FIND page](#). Search for sources using OneSearch, the Library's Catalogue, or by searching in a specific database selected from the [A-Z Database List](#).

Individual support with the Information Librarian is available virtually. Appointments can be requested by using the [Book A Librarian online form](#).

Research and Subject Guides are helpful resources when beginning your research or addressing other information needs. To view a subject or course specific guide, go to the Subject Guide webpage [here](#).

To access additional research resources, including Citation Guides (APA, MLA, Chicago, or IEEE), go to the [Research Help Library page](#).

The Loanable Technology collection is available to support students in their online learning pursuits. Items available for borrowing include mobile projectors, webcams, noise cancelling headphones, Chromebooks, and laptops. For an up-to-date list of technology available for borrowing, go to the Library's [Loanable Technology webpage](#).

Skill Centre: Provides academic support services to students registered in credit programs at Keyano College in the form of tutoring, assignment/lab support, writing support groups, facilitated study groups, workshops, and study space. This service is free and is available for all Math, Sciences, Humanities and Trades courses offered at Keyano.

While most courses are being offered online, the Skill Centre will be offering mostly virtual services and in-person sessions as requested. Please email Skill@keyano.ca to get in contact with our Academic Content Specialists. The Skill Centre is located in CC-119 at the Clearwater Campus.

For the most up to date information on how to book a session, please view the [Keyano Skill Centre homepage](#).

Academic Success Coaching: offers you support and access to resources for your academic success to help you to find the Keys to your Success. The Academic Success Coach will work with you to develop an academic success plan, develop your study and time management skills, and connect you with the right resources here at Keyano. Academic.success@keyano.ca is the best way to access resources during virtual service delivery. The Academic Success Coach is located in the Skill Centre in CC-119 at the Clearwater Campus.

E-Learning

Technology and internet will impact your online learning experience. It's important that you are able to watch an online video and other course materials, take online quizzes, and participant in a live class with your instructor and other students.

Keyano College operates in a Windows based environment and having the correct tools for online learning is important. Here's a list of recommended system requirements.

Internet Speed

Minimum Internet speeds of 5 Mbps.
 Recommended Internet speeds of 25 Mbps (especially if you are sharing your internet at home).
 Check your internet speed with [Fast.com](https://www.fast.com/).

System requirements:

Microsoft Windows	Apple
<p>Minimum Requirements:</p> <p>A Windows 10 computer/laptop</p> <ul style="list-style-type: none"> · Minimum 4GB of RAM. · 10GB+ available hard drive storage. · Enough available hard drive space to install the Microsoft Office suite (approximately 3GB). <u>Microsoft Office</u> software is free to all Keyano students and employees. · Microphone, webcam and speakers. A headset with a microphone is recommended. · System updates must be regularly installed. · Anti-Virus / Anti-Malware software 	<p>Minimum Requirements:</p> <p>A Macintosh (V10.14 and above) computer/laptop</p> <ul style="list-style-type: none"> · Minimum 4GB of RAM. · 10GB+ available hard drive storage. · Enough available hard drive space to install the Microsoft Office suite (approximately 3GB). <u>Microsoft Office</u> software is free to all Keyano students and employees. · Microphone, webcam and speakers. A headset with a microphone is recommended. · System updates must be regularly installed. · Anti-Virus / Anti-Malware software.
<p>Recommended Requirements</p> <ul style="list-style-type: none"> · 8GB of RAM · A method of backing up/synchronizing to local or cloud-based storage such as OneDrive is highly recommended. This is included if you complete the setup of KeyanoMail and download MS Office using your Keyano email for free. 	<p>Recommended Requirements</p> <ul style="list-style-type: none"> · 8GB of RAM · A method of backing up/synchronizing to local or cloud-based storage such as OneDrive is highly recommended. This is included if you complete the setup of KeyanoMail and download MS Office using your Keyano email for free.
<p>Chromebooks are not recommended as they are not compatible with testing lockdown browsers.</p> <p>A Microsoft Surface or iPad or iPad Pro may be possible alternatives in some program areas.</p>	

Specific Department Requirements:

Business and OA programs require Windows 10.
 Other programs may utilize Windows based tools as well.

Computer Software

Students will be able to get access to Microsoft Office 365 for free using Keyano credentials by [clicking here](#).

Recording of Lectures and Intellectual Property

Students may only record a lecture if explicit permission is provided by the instructor or by Accessibility Services. Even if students have permission to record a lecture or lecture materials, students may not share, distribute, or publish any of the lectures or lecture materials, this includes any recordings, slides, instructor notes, etc. on any platform. Thus no student is allowed to share, distribute, publish or sell course related content (instructor, or students) without permission. It is important to recognize that the Canadian Copyright Act contains provisions for intellectual property. The Academic Integrity Policy provides additional information on Keyano College's expectations from students as members of the intellectual community.

ITS Helpdesk

If you are having issues with your student account, you can contact the ITS Helpdesk by emailing its.helpdesk@keyano.ca or calling 780-791-4965.