



Course Outline

ENVIRONMENTAL
TECHNOLOGY

ENVT 265A
Forest Technology
Winter, 2014

3 CREDITS
3 HOURS lecture PER WEEK
3 HOURS laboratory PER WEEK

INSTRUCTOR: David Smith

INSTRUCTOR: David Smith
PHONE NUMBER: (780) 791-4997
E-MAIL: david.smith@keyano.ca
OFFICE NUMBER: S209B

OFFICE HOURS:

Monday – Friday 1:00 – 1:50 PM

HOURS OF INSTRUCTION:

Monday	11:00 AM – 12:50 PM	Room S216
Friday	2:00 PM – 3:50 PM	Room S114

COURSE DESCRIPTION:

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.

PRE-REQUISITE(S):

Prerequisite: BIOL 208

COURSE OUTCOMES:

The student will be able to demonstrate practical and theoretical 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 disciplines in forestry: forestry, conservation, wildlife, ecology, recreation, forest operations and wood products.

ECO CANADA ENVIRONMENTAL COMPETENCY OUTCOMES:

The student will gain the:

- Ability to conduct environmental impact assessments. (#1)
- Ability to conduct environmental site assessments. (#2)
- Ability to develop/implement water supply and water efficiency plans and programs (#10)
- Ability to develop environmental sampling, testing, and monitoring programs. (#11)

- Ability to conduct studies related to ecosystem and habitat preservation and/or management of natural resources. (#24)
- Ability to monitor/evaluate effectiveness of programs and practices related to ecosystem and habitat preservation and/or management of natural resources. (#26)
- Ability to design/develop environmental research and development proposals, programs and projects (#30)

ECO CANADA TRANSFERABLE COMPETENCY OUTCOMES:

The student will develop and apply skills in the following transferable competencies:

- Professional ethics & work style (#1)
- Learning & creativity (#2)
- Communicating effectively (#3)
- Collaboration (#4)
- Critical thinking & judgment (#5)
- Planning and organizing work and projects (#6)

REQUIRED RESOURCES:

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

TOPICS TO BE COVERED:

Please Note:

This course outline may be modified to facilitate unforeseen time constraints. Date and time allotted to each topic is subject to change. Lecture topics and labs for each week are noted.

Proposed Lecture Calendar

Week of	Topic
Jan. 7	Course introduction What is forestry?
Jan. 14	Intro to forest biomes and boreal species Forestry ecology: review of nutrient cycling
Jan. 21	Nutrient and water uptake
Jan. 28	Photosynthesis
Feb. 4	Stand growth
Feb. 11	Midterm
Mar. 4	Measuring and monitoring forest resources
Mar. 11	Succession and selection

Mar. 18	Reforestation and silviculture
Mar. 25	Forest fire ecology Sustainable forest management practices
April 8	Wildlife management Animal species requirements
Apr. 15	Disease, Timber harvesting
Apr. 22	Exam week

Proposed Laboratory Schedule

Jan. 7	No lab
Jan. 14	Ecosites of northern Alberta
Jan. 21	Measuring tree heights
Jan. 28	Calculating tree age using twigs
Feb. 4	Term project assignment
Feb. 11	Use of compass
Feb. 18	Calculating tree age using tree cores and cross-sections
Mar. 4	Calculating board footage
Mar. 11	Seed viability
Mar. 18	Forest mensuration
Mar. 25	Effect of trees on their environment
April 1	Oral presentations
April 8	Science Fair
Apr. 15	Term projects, written report due

MOODLE

Go to <http://ilearn.keyano.ca>

This course is supported through Moodle. Assignments, readings and handouts will be posted on Moodle. Login information will be provided by your instructor. For further instructions please see the Moodle handout.

EVALUATION:

Assignment	Percentage	Due Date
Assignments	20% total 10@2%	One week after each lab
Project, oral and written	25%	Week of April 8
Midterm	25%	Week of Feb. 13
Final Exam	30%	Week of April 16

GRADING SYSTEM:

Letter Grade	Description	Grade Points
A+		4
A	Excellent	4
A-		3.7
B+		3.3
B	Good	3
B-		2.7
C+		2.3
C	Satisfactory	2
C-		1.7
D+		1.3
D	Minimal Pass	1
F	Failure	0

A minimum grade of ‘C-‘ is required for progression.

Students who do not complete all the required work should not expect to pass the course.

Students should consult:

http://www.keyano.ca/current_students/examinations/index.htm

IMPORTANT DATES:

January 18, 2013	Courses dropped after this date will be designated “W”. (A withdrawal (W) is not reflected in your GPA)
February 11, 2013	Midterm Exam
March 8, 2013	Courses dropped after this date will be designated “WF”. (A withdrawal failure (WF) counts as a 0 in your GPA)
April 19, 2013	Last day of classes
April 22-30, 2013	Final Exam

COLLEGE POLICIES

Equality, Equity and Respect

The Keyano College is committed to providing an environment of equality, equity and respect for all people within the College community. All members of this community are considered partners in developing teaching and learning contexts that are welcoming to all. Faculty, staff, and students are encouraged to use inclusive language to create a classroom atmosphere in which students' experiences and views are treated with equal respect and valued in relation to their gender, ethnic and cultural background, and sexual orientation.

Students should consult:

http://www.keyano.ca/Committees/IRA/Individual_Rights_Policy.asp

Plagiarism and Cheating

Every student expects to be treated and evaluated fairly in a course. Plagiarism and cheating robs everyone of this right.

No student may submit words, ideas or data of another student or person as his or her own in any writing, project, assignment, quiz, electronic presentation, exam etc. Any work used that is not the student's own must be clearly cited as belonging to someone else. There are penalties for using other's work and not citing it. The Student's Rights & Responsibilities document clearly outlines these penalties and the appeal process.

- No learner can obtain information from another student during an exam.
- No learner can bring unauthorized information (paper or electronic) into an exam or quiz.
- No student can submit work done in another course for grading in this course without the written prior approval of the course instructor.
- No student can submit copyright protected or commercially produced materials as part or all of an assignment without proper citation & permission.

Student Rights & Responsibilities

Students should consult the Keyano College Credit Calendar or online at:

<http://www.keyano.ca/Media/Collections/Calendars/Keyano.Calendar1112-10-full.pdf>

Specialized Supports and Duty to Accommodate

Disability Support Services: Learner Assistance Program

If you have a documented disability or you think that you would benefit from some assistance from a Disabilities Counsellor, please call or visit the Disability Supports Office 780-792-5608 to book an appointment (across from the library). Services and accommodations are intended to assist you in your program of study, while maintaining the academic standards of Keyano College. We can be of assistance to you in disclosing your disability to your instructor, providing accommodations, and supporting your overall success at Keyano College.

Specialized Supports and Duty to Accommodate

Specialized Support and Duty to Accommodate are aligned with the office of Disability Support Services: Learner Assistance Program (LAP) guided by federal and provincial human rights legislation, and defined by a number of Keyano College policies. Keyano College is obligated by legislation to provide disability-related accommodations to students with identified disabilities to the point of undue hardship.



Course Outline

**ENVIRONMENTAL
TECHNOLOGY**

**ENVT 265A
Forest Technology
Winter, 2014**

**3 CREDITS
3 HOURS LECTURE and 3 HOURS LAB PER WEEK**

Dr. David Smith, Instructor

Date

Reviewed and approved by:

Louis Dingley, Chair

Date

Guy Harmer, Dean

Date