

## Environmental Technology

Fall, 2019

### **ENVT 252 Regional Plant Identification**

*3 Credits, 2 hours lecture and 2 hours lab per week*

An examination of plant diversity in western Canada with a focus on the boreal forest of northern Alberta. Identification skills gained in this course will rely on the integration of information from the field, lecture and laboratory in plant taxonomy, plant anatomy, plant physiology and plant ecology. Students are required to submit a plant collection of approximately 100 specimens. An oral presentation on an applied topic related to botany in western Canada is required.

*Must have completed BIOL 108 – An Introduction to Biodiversity*

### **Instructor**

Dr. David Smith  
S209B  
780-791-4997  
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### **Office Hours**

Monday to Friday 12:00 PM – 12:50 PM

### **Hours of Instruction**

Lecture: Tuesday 10:00 – 11:50 PM S210

Laboratory: Thursday 3:00 PM – 4:50 PM S114

### **Required Resources**

Bidlack, J. and S. Jansky. 2014. Stern's Introductory Plant Biology with Lab Manual. McGraw-Hill Higher Education, 13th Edition, ISBN-10: 0077976266

Johnson, D., L. Kershaw and A. MacKinnon. 2009. Plants of the western forest. Lone Pine Publishing Edmonton, Alberta ISBN-10:1-55105-844-8

Royer, F. 2007. Plants of Alberta. 2007. Lone Pine Publishing, Edmonton, Alberta; ISBN-10: 1551052830

MacKinnon, A., J. Pojar and R. Coupe. 2019. Plants of Northern British Columbia Paperback. Lone Pine Publishing, Edmonton, Alberta, ISBN-10: 1772130036.

### **Full outdoor apparel for fall and winter weather including suitable footwear**

### **Course Outcomes**

The student will be able to:

- Collect, identify and mount plant specimens from diverse taxa emphasizing local flora
- Practice keying plants using a variety of information sources,

- Demonstrate familiarity with local plants especially with regard to identification, morphology, plant life cycles, and evolutionary history using oral presentations and written work,
- Work effectively in groups by managing group projects such as plant collections and oral presentations.

### Evaluation

Plant collection – 25% due week of November 18, no exceptions

Assignments - 10% due one week after each lab

Oral presentation - 10% due three weeks before final exams

Midterm Exam - 15% week of October 14

Final Exam - 40%

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	
	<b>Progression</b>	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.
	<b>Minimum Pass</b>	D	50 – 54.9	
Failure	F	0.0	< 50	Responses fail to demonstrate appropriate understanding or are fundamentally incomplete.

**Proposed Schedule of Topics****LECTURES AND LABORATORIES, ENVT 252, FALL 2019**

Week of Sep 2	Introduction to Botany	NO LAB
Week of Sep 9	Field trips, Clearwater River floodplain, upland aspen forests	LAB 1 Bryophytes and liverworts
Week of Sep 16	Bryophytes Field trip, Aspen/white spruce forest	LAB 2 Fungi and lichens
Week of Sep 23	Fungi Field trip, Black spruce bog	LAB 3 Horsetails, Clubmosses, Ferns
Week of Sep 30	Lichens Field trip, Mature white spruce forest and sedge fen	LAB 4 Gymnosperms
Week of Oct 7	Seedless Vascular Plants	LAB 5 Angiosperms
Week of Oct 14	Evolution of Gymnosperms and Angiosperms	LAB 6 Roots, stems and leaves
Week of Oct 14	Angiosperms	LAB 7 Plant Collection (introduction)
Week of Oct. 21	Plant morphology	LAB 8 Plant Collection (forbs)
Week of Oct 28	Leaves	LAB 9 Plant Collection (trees/shrubs)
Week of Nov 4	Holiday	NO LAB, Holiday
Week of Nov. 11	Plant reproduction	LAB 10 Plant Collection (graminoids)
Week of Nov 18	Fruits	LAB 11 Plant Collection (submission deadline)
Week of Nov. 25	Plant Development and Biomes	Oral presentations
Week of Dec 2	Traditional Ecological Knowledge	No Lab

**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.

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 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](http://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, Wellness Services and Student Life Department 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 8:30 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.

**Student Life Department (CC210)** is a place for students to go when they don't know who else can answer their questions. The staff will help students navigate barriers to success and if they don't know the answer, they will find it out. Student success is directly affected by how connected a student feels to their college. The student life department is there to help students get connected.

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