



Course Outline

ENVIRONMENTAL
TECHNOLOGY

ENVT 170A
Animal Identification
Fall, 2014

3 CREDITS
4 HOURS PER WEEK

INSTRUCTOR: Dr. Danna Schock

INSTRUCTOR: Dr. Danna Schock
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OFFICE NUMBER: S209c
OFFICE HOURS:

Monday	1:00 – 2:00 pm
Tuesday	1:00 – 2:00 pm
Thursday	1:00 – 3:00 pm
Friday	1:00 – 2:00 pm

Please email me to arrange a mutually convenient meeting time if you need to speak with me but my office hours won't work with your schedule.

HOURS OF INSTRUCTION:

<u>Lecture</u>		
Thursday	9:00 – 10:50 am	Room S114 (ENVT Lab)
<u>Lab</u>		
Thursday	11:00 am – 12:50 pm	Room S114 (ENVT Lab)

COURSE DESCRIPTION:

Students will develop identification skills necessary for identifying vertebrates and aquatic invertebrates of Alberta, with a special emphasis on identifying provincially and/or federally listed species. Course topics include bird ID by sight and ear, mammal tracking, and aquatic invertebrate collection and identification.

PRE-REQUISITE/CO-REQUISITE(S):

Biology 108

COURSE OUTCOMES:

Students that successfully complete this course will be able to:

1. Identify by sight and/or sound 30 bird species found in of Alberta, including species listed by provincial and/or federal agencies. Special emphasis will be placed on species that breed in, or migrate through, the boreal forest of northern Alberta.
2. Identify by sight, tracks, scat and, where applicable, sound, 25 species of large and small mammals found in Alberta. Emphasis will be placed on species that are listed or managed by provincial and/or federal agencies. Species will include boreal caribou and big brown bats.
3. Identify by sight and, where applicable, sound, all 18 amphibian and reptile species found in Alberta with special emphasis on provincially and/or federally listed species.
4. Identify by sight 10 species of fish found in Alberta, with special emphasis on provincially and/or federally listed species, and species of significance to anglers and Aboriginal groups in Alberta.
5. Identify 10 major groups of aquatic invertebrates by sight and through the use of diagnostic keys in the lab. Special emphasis will be placed on taxa that are used as indicators of ecosystem functioning and health, for example in wetland reclamation projects. Students will be responsible for collecting and preparing a collection of properly identified aquatic invertebrates.
6. Link all species referred to in #1 - #5 above to species range maps and habitat types. This will involve a general sense of the ecology each of the species, and as a result, an ability to group species into species assemblages one might expect to encounter at a particular habitat (e.g., a Jack Pine stand versus a wetland)
7. Use field guides to identify wildlife seen in the field but not immediately recognized. This will be accomplished by knowing which distinguishing characteristics to look for in these kinds of situations (e.g. shape of head, size of track, wing plumage, etc.)
8. Be technically skilled in the use of binoculars, dissecting scopes, field guides, and other equipment used for identifying wildlife.

REQUIRED RESOURCES:

Students will be required to purchase a variety of field guides including *current* bird, mammal and fish field guides. Students will receive instruction on the types and sources of field guides on the first day of class.

Dunn & Alderfer (2011) Field Guide to the Birds of North America, 6th Edition

Reid (2006) Peterson's Field Guide Series: Mammals of North America, 4th Edition

Fisher, Joynt and Brooks (2007) Reptiles and Amphibians of Canada

Joynt & Sullivan (2003) Fish of Alberta

See below regarding the book *Aquatic Invertebrates of Alberta*.

Each student will need their own pair of binoculars for use throughout the course, and other courses in the program. Inexpensive “pocket sized” binoculars are **STRONGLY DISCOURAGED** because they are too dark (lens diameter too small) and the optics too poor to allow for decent wildlife identification. Magnification of at least 7x and lens diameter of at least 42 mm is strongly recommended (this would appear as “7x42” on the binocular’s specifications). Additional instruction on purchasing binoculars will be given the first day of class; students will be expected to have their own binoculars by the end of the first week of class.

Several online resources will also be used, including, but not limited to:

Cornell’s fantastic online bird identification website

<http://www.allaboutbirds.org/guide/search>

Government of Alberta’s portal for information on provincially listed wildlife species

<http://www.srd.alberta.ca/FishWildlife/SpeciesAtRisk/Default.aspx>

Government of Canada’s portal of information on federally listed wildlife species

http://www.sararegistry.gc.ca/default_e.cfm

Aquatic Invertebrates of Alberta – this is a digitized version of a book we will have access to in the lab

http://sunsite.ualberta.ca/Projects/Aquatic_Invertebrates/

TOPICS TO BE COVERED:**Please Note:**

This course outline may be modified to facilitate unforeseen time constraints. Time allotted to each topic will vary depending on depth and complexity of the material but in general expect 2-3 weeks/topic. Lab periods will often involve field excursions to sites near Fort McMurray to observe wildlife life in their habitats. Attendance on field excursions is not optional.

Topic 1	<p>Overview: The overview is intended to familiarize students with a number of concepts they will encounter throughout the course. It is intended to enable students to delve into the taxon-specific topics that follow.</p> <p>Overview topics will include: 1) Introduction to common wildlife identification techniques in the field and lab including use of common equipment (e.g., binoculars, nets) and field guides.</p> <p>2) Review of scientific nomenclature and classification schemes, and where to obtain current information on scientific names.</p>
Topic 2	Identification of birds (sight and sound)
Topic 3	Identification of amphibians, reptiles (sight, and where applicable, sound)
Topic 4	Identification of fish (sight)
Topic 5	Identification of mammals (sight, sound, tracks & scat)
Topic 6	Identification of aquatic invertebrates (sight, use of keys, sampling techniques and strategies, preservation techniques)

Lab schedule Fall 2014

DATE	ACTIVITY
	First Day of Classes Wed 3 Sept, last day of classes Fri 5 Dec
Week of 2 Sept	Discussion of field guides, binoculars and other materials needed for the course. All materials must be purchased before lab the week of 8 Sept.
Week of 8 Sept	Lab 1 - Use of binoculars, estimating distance and size, use of dipnets, wind meters and water quality meters.
Week of 15 Sept	Lab 2 – Field trip to Gregoire Lake Prov Park. Use of field guides and equipment to characterize a site. Animal identification will focus on birds and point count sampling strategies.
Week of 22 Sept	Lab 3 – Collection and preservation of aquatic invertebrates. Identification of invertebrates will be ongoing throughout the semester from this point forward. Students may work individually or in pairs for their aquatic invertebrate project. Sampling design must be approved prior to beginning collections.
Week of 29 Sept	Lab 4 – ID of birds – part 1 Preserved specimens, computer programs, and outside (weather dependent).
Week of 6 Oct	Lab 5 – ID of birds – part 2 Field trip to Syncrude to observe bird deterrent systems (weather dependent).
Week of 13 Oct	Lab 6 – ID amphibians and reptiles Preserved specimens, computer programs. Quiz at beginning of class: Bird ID by sound (5 % of final grade)
Week of 20 Oct	Midterm (including practical component) first half of class (25 % of final grade) Second half of class: preparation and guidance for <i>Species Assemblage</i> assignments.
Week of 27 Oct	Lab 7 – <i>Species Assemblage</i> presentations and assignments due this week (15 % of grade).
Week of 3 Nov	Lab 8 – ID of Fish Fresh and preserved specimens including aging species of importance for managing fisheries.
Week of 10 Nov	Lab 9 – ID mammals – part 1 (small mammals) Preserved specimens, owl pellets.
Week of 17 Nov	Lab 10 – ID mammals – part 2 (large mammals) Preserved specimens and tracks in soil and sand, and if possible, in snow.
Week of 24 Nov	Lab 11 – Invertebrate collections – Time to work on identification and receive guidance in class.
Week of 1 Dec	Lab 12 – Invertebrate collection assignment due (15 % of grade)

MOODLE and KEYANO EMAIL:

Moodle is at <http://ilearn.keyano.ca>

This course is supported through Moodle. Assignments, readings, handouts, etc., will be posted on Moodle. It is expected that you will be regularly visiting the course page and that you are able to send and receive messages through Moodle. You must ensure your account is operational and that you are familiar with how to navigate Moodle by the end of the FIRST WEEK OF CLASSES.

Similarly, you must ensure your KEYANO email is operational and you must check it regularly – twice a day is recommended. **I will not use your personal email addresses** (gmail, yahoo, etc) for a plethora of liability, security and confidentiality reasons.

CELL PHONES and other electronic devices:

Except by express permission of the instructor:

- a) cell phones must not be visible during class and must be SILENT. Class disruptions and failure to follow class material due to cell use will not be tolerated.
- b) cell phones and other electronic devices must be turned off and stored in a designated area during all exams.

EVALUATION:

Assignment	Percentage	Due Date
Quiz: Bird ID by sound	5 %	Thurs 16 Oct
Mid-term	25 %	Thurs 23 Oct
<i>Species Assemblages</i> Presentation & Report	15 %	Thurs 30 Oct
Aquatic Invertebrate Collection & Report due	15 %	Thurs 4 Dec
Final Examination	40 %	set by Registrar's Office (Exams run 8 -17 Dec)

GOOD ATTENDANCE AND GOOD GRADES ARE TIGHTLY CORRELATED

Regular attendance is expected and that fact will be reflected in the calibre and nature of assignments and exams. PowerPoint presentations should be thought of as study guides; you must take additional notes in class to do well.

Material presented by guest lecturers and material presented during student presentations will be included on exams.

Attendance will be taken in accord with department policy.

This will be accomplished by **sign-in sheets** distributed at the beginning of class/lab. Each student must enter their own information on the sign-in sheet. Failure to record your information on the sign-in sheets will be recorded as an absence.

ASSIGNMENTS AND EXAMS

It is YOUR responsibility to make sure you know when assignments are due, and when exams take place. Major exam dates are listed in this course outline. Assignments will be announced in class/lab.

You will have at least 1 week to complete assignments.

Assignments are due at the start of class on the day they are due. Assignments are automatically late if not handed in when asked for at the start of class.

Late assignments will be penalized 20% per day late and will not be accepted if more than 5 days late. Do not email any assignments to me. I won't open them; they will be deleted.

The final exam will be cumulative.

Travel plans are NOT valid excuses for missing a final exam. Do not make plans to travel during the final lecture exam period 8 – 17 Dec. Exams missed under these circumstances will not be accommodated and therefore completion of the course is not possible.

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

For information on Deferred Exams, Supplemental Exams and other general College-wide policies pertaining to exams, students should consult:

<http://www.keyano.ca/Academics/Examinations>

GRADING SYSTEM:

Letter Grade	Description	Grade Points
A+		4.0
A	Excellent	4.0
A-		3.7
B+		3.3
B	Good	3.0
B-		2.7
C+		2.3
C	Satisfactory	2.0
C-		1.7
D+		1.3
D	Minimal Pass	1.0
F	Failure	0

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

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

<http://www.keyano.ca/Academics/CreditCalendar>

Important Dates for the Fall 2014 Semester:

Friday 10 Oct	Last day to withdraw with a refund (50%).
Thursday 23 Oct	Mid-Term Exam
Wednesday 26 Nov	Courses dropped after this date will be designated “W”. (A withdrawal (W) is not reflected in your GPA)
Friday 5 Dec	Last day of classes
8 – 17 Dec	Final Exams college-wide; date set by Registrar’s office

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/StudentLife/StudentConduct/AcademicPoliciesProcedures>

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/StudentLife/StudentConduct/AcademicPoliciesProcedures>

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.



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Danna Schock, Instructor

Date

Reviewed and approved by:

Louis Dingley, Chair

Date

Guy Harmer, Dean

Date