

ENVT 170 – ANIMAL IDENTIFICATION

3 credits, 16 weeks, 2 hours lecture, 2 hours 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.

Prerequisite/Co-requisite BIOL 108 or equivalent.

Instructor

Dr. Danna Schock

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Office Hours

Tuesday 10:00 – 11:50 am

Thursday 9:00 – 11:50 am

Hours of InstructionLecture

Monday 9:00 – 10:50 am Room S114 (ENVT lab)

Lab

Monday 11:00 am – 12:50 pm Room S114 (ENVT lab)

Required Resources

1. Field Guide to the Birds of North America, 6th Edition, Dunn & Alderfer, National Geographic ISBN 9781426208287
2. Mammals of North America, 2nd Edition, Kays & Wilson, Princeton University Press ISBN 9780691140926
3. Reptiles and Amphibians of Canada, Fisher, Joynt & Brooks, Lone Pine, ISBN 9781551052793
4. Fish of Alberta, Joynt & Sullivan, Lone Pine, ISBN 9781551051918
5. Lab coat (full lab coats that go to the knees). Please note that separate lab coats are required for ENVT courses that meet in the ENVT lab (S114) such as ENVT 170, and courses such as CHEM 101 and BIOL 108 that meet in the upstairs labs.
6. Moodle (<http://ilearn.keyano.ca>). The course outline, lecture notes and other resources will be made available on Moodle.

Course Outcomes

Upon successful completion of this course, students 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, 20 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.

Evaluation

<i>Assignment</i>	Percentage	Due Date
Quiz: Bird ID by sound	5 %	Mon 19 Oct
Mid-term	25 %	Mon 26 Oct
<i>Species Assemblages</i> Presentation & Report	15 %	Mon 2 Nov
Aquatic Invertebrate Collection & Report due	15 %	Fri 4 Dec
Final Examination	40 %	set by Registrar's Office (Exams run Dec 7 -11)

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 Progression	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	
	C-	1.7	60 – 63.9	
Poor Minimum Pass	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.
	D	1.0	50 – 54.9	
Failure	F	0.0	< 50	Responses fail to demonstrate appropriate understanding or are fundamentally incomplete.

Please Note:

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.

Proposed Schedule of Topics

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 mandatory.

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:</p> <ol style="list-style-type: none">1) Introduction to common wildlife identification techniques in the field and lab including use of common equipment (e.g., binoculars, nets) and field guides.2) Review of scientific nomenclature and classification schemes, and where to obtain current information on scientific names.
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)

DATE	ACTIVITY
	First Day of Classes Wed 2 Sept, last day of classes Fri 4 Dec
Week of 31 Aug	Course does not meet this week because first day of classes is Wed 2 Sept
Week of 7 Sept	No classes on Monday 7 Sept due to Labour Day To keep course on schedule, class will meet for mutually convenient 90 min block of time for a general orientation to the course, and to discuss field guides, binoculars and other materials needed for the course. All materials must be purchased, and Keyano's WHMIS training must be completed, before class the week of 14 Sept.
Week of 14 Sept	Lab 1 – Safety orientation to ENVT lab, use of binoculars, estimating distance and size, use of dipnets, wind meters and water quality meters. Begin experimental design of aquatic invertebrate collections. Students may work individually or in pairs for their aquatic invertebrate project. Sampling design must be approved prior to beginning collections. Identification of invertebrates will be ongoing throughout rest of the semester.
Week of 21 Sept	Lab 2 – Field trip to Gregoire Lake Provincial Park. Use of field guides and equipment to characterize a site. Animal identification will focus on birds and point count sampling strategies.
Week of 28 Sept	Lab 3 – ID of birds – part 1 Preserved specimens, computer programs, and outside (weather dependent).
Week of 5 Oct	Lab 4 – ID of birds – part 2 No official class meeting. Independent work on bird identification.
Week of 12 Oct	No class/lab this week – Thanksgiving on Monday 12 Oct
Week of 19 Oct	Lab 5 – ID amphibians and reptiles Preserved specimens, computer programs. Quiz at beginning of class: Bird ID by sound (5 % of final grade)
Week of 26 Oct	Midterm First half of class, includes practical component (25 % of final grade) Second half of class for preparation and guidance for <i>Species Assemblage</i> assignments.
Week of 2 Nov	Lab 6 – <i>Species Assemblage</i> presentations and assignments due this week (15 % of grade).
Week of 9 Nov	Lab 7 – ID of Fish Fresh and preserved specimens including aging species of importance for managing fisheries.
Week of 16 Nov	Lab 8 – ID mammals (small & large mammals) Preserved specimens, owl pellets, tracks in soil and sand, and if possible, in snow.
Week of 23 Nov	Lab 9 – Invertebrate collection – processing and identification
Week of 30 Nov	Lab 10 – Invertebrate collection assignment due (15 % of grade)

Performance Requirements

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 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 / or notes that may be due.

Students are required to attend and complete all labs. *Unexcused absence from any lab period or failure to submit a lab report may result in a failing grade in the course.*

There are no make-up lab sessions in ENVT 170.

Missing two or more labs, for any reason whatsoever, will result in automatically failing ENVT 170.

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 Moodle. Once you have successfully completed the course, 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**Counselling and Disability Services**

Counselling Services provides a wide range of specialized counselling services to prospective and registered students, including personal, career and academic counselling.

SKILL Centre

The SKILL Centre is a learning space in the Clearwater Campus at Keyano College where students can gather to share ideas, collaborate on projects and get new perspectives on learning from our tutorial staff.

The SKILL Centre, through a variety of delivery methods, provides assistance in skill development to Keyano students. Assistance is provided by instructors, staff and student tutors. Individuals wishing to improve their mathematics, writing, grammar, study, or other skills, can take advantage of this unique service.

Authorization

This course outline has been reviewed and approved by the Program Chair.

Danna Schock, Instructor

Louis Dingley, Chair

Date Authorized

Guy Harmer, Dean

Date Authorized

Signed copies to be delivered to:

Instructor
Registrar's Office