

I. COURSE DESCRIPTION:

This course is aimed at the understanding and performance of various techniques essential for wildlife management. Topics include: Field note taking, data recording and retrieval; literature searches; food habit analysis; habitat evaluation techniques; population estimation; criteria for sexing and aging game birds and mammals; methods of capture, handling and marking wild animals; evaluation of wildlife damage.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

Upon successful completion of this course, the CICE student will with the assistance of a Learning Specialist, demonstrate the ability to:

1. Perform a scientific literature search based on a selected wildlife species

Potential Elements of the Performance:

- Select a common wildlife species from Ontario
- Identify and retrieve all significant recent written material on that species using the Internet, scientific publications, related journals or books.
- Prepare a bibliography and an indexed abstract file on topics related to wildlife surveys for that species

(This outcome will constitute 5% of the course's grade)

2. Solve problems related to wildlife management scenarios using approved scientific problem-solving techniques

Potential Elements of the Performance:

- Select a wildlife management problem from a prescribed list of candidate problems.
- Develop several hypotheses to test related to your scenario.
- Attempt to follow through to the solution of that problem, using a flow chart of suggested activities.

(This outcome will constitute 5% of the course's grade)

3. With assistance perform field identification of wildlife tracks and signs, scatology analysis, and cause of death evaluation. Have the understanding of identifying and assessing wildlife damage and explore control programs for nuisance species.

Potential Elements of the Performance:

- Complete a photo collection of 30 tracks and signs indicating species and key features.
- Examine and differentiate the scat of several wildlife species native to Ontario.
- Investigate scenarios to determine the cause of death of wildlife species or livestock.
- Perform track and signs and cavity surveys to develop a species inventory.
- Determine whether wildlife is responsible for specific livestock or wildlife predation by collecting and analyzing direct and indirect evidence of predation
- Identify wildlife predators and nuisance species by vocalizations, tracks, signs and method of kill.

(This outcome will constitute 20% of the course's grade)

4.

Design and perform general habitat analysis techniques to evaluate food presence and availability: Food utilization; Cover availability and utilization

Potential Elements of the Performance:

- Investigate field techniques that might be used to measure the habitat parameters that are required.
- Select a survey or surveys or design a survey that will allow collection of the required data.
- Perform a variety of survey types to assess food and cover, and write up a report that assesses total habitat carrying capacity, present utilization and management suggestions for the future.
- Perform the necessary sampling procedures to lay out and analyze data from sample plots that will be statistically meaningful.

(This outcome will constitute 20% of the course's grade)

5. Design and perform general field investigations and subsequent analysis of population estimation techniques.

Potential Elements of the Performance:

- Explain the major types of population census, and their strengths and weaknesses
- Describe some inventory methods under the following headings:
 - Total counts
 - Sample census
 - Mark- recapture methods
 - Indices of populations
- Demonstrate the ability to perform the field surveys and the

calculations for techniques such as :

King strip census
Peterson Index
Aerial surveys for Moose
Pellet group counts for deer

(This outcome will constitute 20% of the course's grade)

6. Perform techniques used for wildlife sex and age determination. Analyze population structure in wildlife populations based on these techniques.

Potential Elements of the Performance:

- Explain the importance of sex and age ratios with respect to wildlife management.
- Explain how to determine the sex and age of upland game bird species using biological features (wings, tails).
- Explain techniques used for age and sex determination in many Ontario mammal species.
- Demonstrate the ability to correctly determine age and sex for many wildlife species.
 - Age moose using jaw-aging techniques
 - Tooth grinding and cross-sectioning

(This outcome will constitute 20% of the course's grade)

7. Explain techniques to capture, handle and mark any wild animals, humanely and safely.

Potential Elements of the Performance:

- Demonstrate the ability to set up traps as required to capture nuisance birds or mammals
- Describe proper methods for handling any wildlife species to ensure safety of the handler and the wildlife species
- Explain the relative merits and drawbacks of marking by tagging, colouration or mutilation.
- Demonstrate the ability to utilize chemical immobilization equipment properly.

(This outcome will constitute 10% of the course's grade)

III. TOPICS:

1. **Introduction , problem solving and literature searches**
2. **Wildlife Tracking and signs**
3. **Habitat evaluation techniques**
4. **Population analysis and techniques**
5. **Criteria of sexing and aging**
6. **Methods of capture, handling and marking wild animals**
7. **Recent tools in wildlife research**

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

1. Wildlife surveys (NRT 255) lab manual
2. Dissecting kit
3. Laboratory coat and glasses
4. Safety vest, snowshoes, hard hat, compass for field trips
5. Required TEXT : **Bookhout, R.A.** 1996 . *Techniques for Research for Wildlife and Habitats*. The Wildlife Society.
6. Recommended Field Guide: **Rezendes, P.** 1999 . *Tracking and the Art of Seeing*. Firefly Books.
7. Other readings as assigned from the LRC or internet

V . EVALUATION PROCESS/GRADING SYSTEM:

Students will be evaluated on the basis of achievement of learning outcomes. These will be determined by:

1. Assignments -**Total value 30%****2. Practical tests -****Total value 25%****3. Theory -*** Theory quizzes and field activity- **5%*** Mid-term Report **20%*** Final exam **20%**

Late assignments will be penalized -10% per school day late. Late assignments will not be accepted once they have been returned in class. Students who miss tests will not have an opportunity to rewrite without valid excuse (i.e. doctor's note).

Attendance is mandatory at all labs and field trips. In the event of an excused absence, students will be required to make up an alternate lab on their own time. Failure to attend two labs and/or field trips will result in an immediate "F" grade.

The following semester grades will be assigned to students in postsecondary courses:

<u>Grade</u>	<u>Definition</u>	<u>Grade Point Equivalent</u>
A+	90 – 100%	4.00
A	80 – 89%	3.00
B	70 - 79%	2.00
C	60 - 69%	1.00
D	50 – 59%	0.00
F (Fail)	49% and below	
CR (Credit)	Credit for diploma requirements has been awarded.	
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S	Satisfactory achievement in field /clinical placement or non-graded subject area.	
U	Unsatisfactory achievement in field/clinical placement or non-graded subject area.	
X	A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.	
NR	Grade not reported to Registrar's office.	
W	Student has withdrawn from the course without academic penalty.	

VI. SPECIAL NOTES:

Disability Services:

If you are a student with a disability (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your professor and/or the Disability Services office. Visit Room E1101 or call Extension 2703 so that support services can be arranged for you.

Retention of Course Outlines:

It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other postsecondary institutions.

Communication:

The College considers **WebCT/LMS** as the primary channel of communication for each course. Regularly checking this software platform is critical as it will keep you directly connected with faculty and current course information. Success in this course may be directly related to your willingness to take advantage of the **Learning Management System** communication tool.

Plagiarism:

Students should refer to the definition of “academic dishonesty” in *Student Code of Conduct*. Students who engage in academic dishonesty will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course/program, as may be decided by the professor/dean. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material.

Course Outline Amendments:

The professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

Substitute course information is available in the Registrar's office.

Tuition Default

Students who have defaulted on the payment of tuition (tuition has not been paid in full, payments were not deferred or payment plan not honoured) as of the first week of November will be removed from placement and clinical activities. This may result in loss of mandatory hours or incomplete course work. Sault College will not be responsible for incomplete hours or outcomes that are not achieved or any other academic requirement not met as of the result of tuition default. Students are encouraged to communicate with Financial Services with regard to the status of their tuition prior to this deadline to ensure that their financial status does not interfere with academic progress.

VII. PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advance credit transfer (advanced standing) should obtain an Application for Advance Credit Form from the program coordinator (for course-specific courses), or the course coordinator (for general education courses), or the program's academic assistant. Students will be required to provide an unofficial transcript and course outline related to the course in question.

Credit for prior learning will also be given upon successful completion of a challenge exam or portfolio.

CICE Modifications:**Preparation and Participation**

1. A Learning Specialist will attend class with the student(s) to assist with inclusion in the class and to take notes.
2. Students will receive support in and outside of the classroom (i.e. tutoring, assistance with homework and assignments, preparation for exams, tests and quizzes.)
3. Study notes will be geared to test content and style which will match with modified learning outcomes.
4. Although the Learning Specialist may not attend all classes with the student(s), support will always be available. When the Learning Specialist does attend classes he/she will remain as inconspicuous as possible.

A. Tests may be modified in the following ways:

1. Tests, which require essay answers, may be modified to short answers.
2. Short answer questions may be changed to multiple choice or the question may be simplified so the answer will reflect a basic understanding.
3. Tests, which use fill in the blank format, may be modified to include a few choices for each question, or a list of choices for all questions. This will allow the student to match or use visual clues.
4. Tests in the T/F or multiple choice format may be modified by rewording or clarifying statements into layman's or simplified terms. Multiple choice questions may have a reduced number of choices.

B. Tests will be written in CICE office with assistance from a Learning Specialist.***The Learning Specialist may:***

1. Read the test question to the student.
2. Paraphrase the test question without revealing any key words or definitions.
3. Transcribe the student's verbal answer.
4. Test length may be reduced and time allowed to complete test may be increased.

C. Assignments may be modified in the following ways:

1. Assignments may be modified by reducing the amount of information required while maintaining general concepts.
2. Some assignments may be eliminated depending on the number of assignments required in the particular course.

The Learning Specialist may:

1. Use a question/answer format instead of essay/research format
2. Propose a reduction in the number of references required for an assignment
3. Assist with groups to ensure that student comprehends his/her role within the group
4. Require an extension on due dates due to the fact that some students may require additional time to process information
5. Formally summarize articles and assigned readings to isolate main points for the student
6. Use questioning techniques and paraphrasing to assist in student comprehension of an assignment

D. Evaluation:

Is reflective of modified learning outcomes.