

I. COURSE DESCRIPTION:

Wildlife Biology & Management is a practical introductory course to field identification, life histories, habitat requirements, and basic conservation management techniques for wildlife species of Ontario. Students will be required to take part in field trips to assist in identification and habitat assessment for birds and mammals. A laboratory component is included emphasizing anatomy and physiology, parasites and diseases of wildlife, species at risk, management practices and identification of key species.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1. ***Identify principle wildlife species in Ontario, describing life histories, and habitat requirements.***

Potential Elements of the Performance:

- Identify principle mammal species using video, slides, and field guides
- Have the knowledge necessary to key out less common species using a taxonomic key.
- Identify the skulls and hairs of many Ontario mammal species using a key.
- Perform a small mammal inventory using live traps.
- Participate in a check station for big game species or waterfowl.
- Analyze parameters of white-tailed deer herd health such as average weights, antler growth etc. from deer check station results.
- Record observations in field conditions correctly in an organized, systematic format.
- Prepare and present a report on selected wildlife '*families*' and '*Orders*' describing characteristics of the classifications and life histories of the Ontario residing species within each group.

(This outcome will constitute approximately 30% of final grade)

2. ***Predict the growth potential for any wildlife population.***

Potential Elements of the Performance:

- Differentiate between the theoretical patterns of growth in wildlife populations (exponential, J-shaped, Sigmoid) and explain when each is likely to occur.
- Describe factors that affect natality, mortality, survivorship and stability of wildlife populations.

- Investigate the ecological relationships between individual wildlife species and the forest habitat, emphasizing: forest soils, nutrient cycling, successional stages, impact of fire, management practices, and other forest disturbances.
- Examine case studies in Ontario such as:
 - impact of hunting, and trapping on populations
 - impact of other factors such as predation, inter-specific and intra-specific competition
 - invasive species
 - Species at Risk – impacts, status, policy and related legislation.
 - wildlife extirpations and extinction
- Complete a report on a Species at Risk in Ontario noting factors affecting growth potential for the species populations, critical habitat components, and present designations.

(This outcome will constitute approximately 25% of final grade)

3. ***Demonstrate a basic knowledge of wildlife anatomy and evaluate the health status of wildlife populations.***

Potential Elements of the Performance:

- Dissect and identify anatomical features of mammals.
- Perform a necropsy on a deceased bird or mammal species by examination of external and internal anatomy to determine normalcy and potential causes of death.
- Identify the components of the alimentary tract and its associated organs.
- Write up a necropsy report that completely describes the specimen, its condition, age etc. and necropsy results.
- Perform a comprehensive food habit investigation and write a report based on your results.
- Identify and state the stages in the life cycles of major parasites/diseases of wildlife.

(This outcome will constitute approximately 25% of final grade)

4. ***Research and provide a basic description of wildlife management planning for a selected wildlife species.***

Potential Elements of the Performance:

- Summarize the wildlife planning process and solve a simple scenario based on this process.
- Review the values of wildlife that must be considered in a management plan, and discuss the possible approaches to wildlife management.

- Discuss current management principles and problems that may develop from each.
- Using resources from Media Services, your instructor, the Internet, and other libraries and agencies, conduct research and develop a management plan outline for an assigned species (or group of similar species) that will include:
 - Biological life history and reproductive potential
 - Ecological relationships
 - Limiting and compensating factors on growth
 - Behavioural traits
 - Present and future management

(This outcome will constitute approximately 20% of final grade)

III. TOPICS:

1. **Wildlife Population growth**
2. **Wildlife values and management**
3. **Parasite and disease identification and diagnosis**
4. **Mammal Identification and status**
5. **Mammal anatomy, physiology and state of health**
6. **Wildlife Ecology and habitat requirements**

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

- Bolen, E. G., and W. L. Robinson, 2003. *Wildlife Ecology and Management* 5th ed.
- Cooper/Winter, 2009. *Wildlife Biology and Management Study Guide and Lab Manual* NRT 205. Sault College.
- Kurta, A. 1994. *Mammals of the Great Lakes Region*. Michigan Press
- Dissection Kit (with new blades)
- Lab coat and safety glasses.

V. EVALUATION PROCESS/GRADING SYSTEM:

Assignment due dates will be clearly indicated when assignments are given out. After the specified due date and time the assignment will not be accepted without a valid, supported excuse.

A final grade will be derived from the results of theory test and quizzes, practical tests, and assignments.

Theory tests/assignments	= 60%
Lab tests/assignments	<u>= 40%</u>
TOTAL	100%

The following semester grades will be assigned to students:

<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.	
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:Attendance:

Sault College is committed to student success. There is a direct correlation between academic performance and class attendance; therefore, for the benefit of all its constituents, all students are encouraged to attend all of their scheduled learning and evaluation sessions. This implies arriving on time and remaining for the duration of the scheduled session. *It is the departmental policy that once the classroom door has been enclosed, the learning process has begun. Late arrivers will not be granted admission to the room.*

VI. COURSE OUTLINE ADDENDUM:

The provisions contained in the addendum located on the portal form part of this course outline.

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.