

**SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY**

**SAULT STE. MARIE, ONTARIO**



Sault College

**CICE COURSE OUTLINE**

**COURSE TITLE:** Wildlife Biology and Management

**CODE NO. :** NRT205 **SEMESTER:** Fall  
**MODIFIED CODE:** NRT0205

**PROGRAM:** Fish and Wildlife Technician

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**MODIFIED BY:** Velma Simon, Learning Specialist CICE Program

**DATE:** Sept. 2009 **PREVIOUS OUTLINE DATED:** Sept. 2008

**APPROVED:** "Angelique Lemay"

	<hr/>	<b>CHAIR, COMMUNITY SERVICES</b>	<hr/>	<b>DATE</b>
<b>TOTAL CREDITS:</b>	4			
<b>PREREQUISITE(S):</b>	N/A			
<b>HOURS/WEEK:</b>	16 weeks			

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*For additional information, please contact the Chair, Community Services*  
*School of Health and Community Services*  
*(705) 759-2554, Ext. 2603*

## I. COURSE DESCRIPTION:

Wildlife Biology & Management is a practical introductory course to field identification, life histories, habitat requirements and basic 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 game and non-game birds and mammals. A laboratory component emphasizing anatomy and physiology, parasites and diseases of wildlife, species at risk, management practices and identification of key species is also essential.

## 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 and inventory the principle game and non-game wildlife species of uplands and wetlands.***

### Potential Elements of the Performance:

- Identify significant 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.
- Design and perform a small mammal inventory using live traps.
- Research methods of inventory of larger mammals and birds.
- Participate in a check station for big game species or waterfowl.
- Analyze parameters of 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, timber 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, categories, 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 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.
- Identify common parasites and diseases by diagnosis of symptoms or direct evidence.

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

4. ***Research wildlife management planning and formulate a wildlife management plan 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
- OR using the same resources, develop a POSITION PAPER on a current controversial issue in wildlife management that will include history of the issue, state of understanding on the issue, and your position.

**(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* 5<sup>th</sup> ed.
- Cooper/Winter, 2009. *Wildlife Biology and Management Study Guide and Lab Manual* NRT 205. Sault College.
- Field Guide to mammals.
- 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 and penalties will apply for late submissions.

After the specified due date and time, the penalty imposed will be a 10% reduction in value per college scheduled class day or portion thereof. After 10 late days the assignment is technically worth zero.

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:

<b>Grade</b>	<b>Definition</b>	<b>Grade Point Equivalent</b>
A+	90 – 100%	
A	80 – 89%	4.00
B	70 - 79%	3.00
C	60 - 69%	2.00
D	50 – 59%	1.00
F (Fail)	49% and below	0.00
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:

### 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.

### 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.

### Prior Learning Assessment:

Students who wish to apply for advance credit transfer (advanced standing) should obtain an Application for Advance Credit from the program coordinator (or the course coordinator regarding a general education transfer request) or academic assistant. Students will be required to provide an unofficial transcript and course outline related to the course in question. Please refer to the Student Academic Calendar of Events for the deadline date by which application must be made for advance standing.

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

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

### 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.

### 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*. A professor/instructor may assign a sanction as defined below, or make recommendations to the Academic Chair for disposition of the matter. The professor/instructor may (i) issue a verbal reprimand, (ii) make an assignment of a lower grade with explanation, (iii) require additional academic assignments and issue a lower grade upon completion to the maximum grade “C”, (iv) make an automatic assignment of a failing grade, (v) recommend to the Chair dismissal from the course with the assignment of a failing grade. 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.

Student Portal:

The Sault College portal allows you to view all your student information in one place. **mysaultcollege** gives you personalized access to online resources seven days a week from your home or school computer. Single log-in access allows you to see your personal and financial information, timetable, grades, records of achievement, unofficial transcript, and outstanding obligations, in addition to announcements, news, academic calendar of events, class cancellations, your learning management system (LMS), and much more. Go to <https://my.saultcollege.ca>.

Electronic Devices in the Classroom:

Students who wish to use electronic devices in the classroom will seek permission of the faculty member before proceeding to record instruction. With the exception of issues related to accommodations of disability, the decision to approve or refuse the request is the responsibility of the faculty member. Recorded classroom instruction will be used only for personal use and will not be used for any other purpose. Recorded classroom instruction will be destroyed at the end of the course. To ensure this, the student is required to return all copies of recorded material to the faculty member by the last day of class in the semester. Where the use of an electronic device has been approved, the student agrees that materials recorded are for his/her use only, are not for distribution, and are the sole property of the College.

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 enclosed, the learning process has begun. Late arrivers will not be granted admission to the room.*

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.



**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.