

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



**SAULT
COLLEGE**

COURSE OUTLINE

COURSE TITLE: WILDLIFE BIOLOGY & MANAGEMENT
CODE NO. : NRT 205 **SEMESTER:** F12
PROGRAM: F&W Conservation
AUTHOR: Winter
DATE: Aug 2012 **PREVIOUS OUTLINE DATED:** Jun 2011
APPROVED: B. Punch Aug 2012
"B. Punch"

CHAIR **DATE**

TOTAL CREDITS: 4
PREREQUISITE(S): N/A
HOURS/WEEK: 16 weeks

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I.

COURSE DESCRIPTION: Wildlife Biology & Management is a practical introductory course to field identification, life histories, and habitat requirements of Ontario wildlife species. Basic wildlife population strategies and conservation management techniques will be explored. 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 student 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 class resources, 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.

(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 35% 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.

(This outcome will constitute approximately 15% of final grade)

4. ***Research and describe 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.
- Participate in guest presentations on current aspects of wildlife management.
- Using resources from Media Services, your instructor, the Internet, and other libraries and agencies, conduct research, develop and present a report outlining the biology, ecology, and management 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
 - Management (past and present techniques), user groups and issues.

(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.
- LMS provided modules including excerpts from - 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 (i.e. doctor's note).

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

Theory tests/assignments	= 50%
Lab tests/assignments	<u>= 50%</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	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:

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.