

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



Sault College

COURSE OUTLINE

COURSE TITLE: WILDLIFE BIOLOGY AND MANAGEMENT

CODE NO. : NRT205 SEMESTER: 3

PROGRAM: Fish and Wildlife Technician

AUTHOR: T. Winter

DATE: June 2007 PREVIOUS OUTLINE DATED: June 2006

APPROVED:

DEAN

DATE

TOTAL CREDITS: 4

PREREQUISITE(S): N/A

LENGTH OF COURSE: 16 weeks

TOTAL CREDIT HOURS: 64

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For additional information, please contact C. Kirkwood, Dean
School of Technology, Skilled Trades & Natural Resources
(705) 759-2554, Ext.2688

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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 student 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 20% 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.

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- 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 25% of final grade)

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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, H., 2007. *Wildlife Biology and Management Study Guide and Lab Manual* NRT 205. Sault College.
- Field Guide to mammals.
- Dissection Kit
- 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. Assignments will be due at noon on the date specified, regardless of class schedule.

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, assignments and a major project.

Theory Tests	= 35%
Theory Quizzes	= 5%
Practical Tests	= 20%
Field Activity Completion (deer check)	= 5%
Assignments & Projects	<u>= 35%</u>

TOTAL 100%

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The following semester grades will be assigned to students:

Grade	Definition	<i>Grade Point Equivalent</i>
A+	90 – 100%	4.00
A	80 – 89%	
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:

Special Needs:

If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your professor and/or the Special Needs office. Visit Room E1101 or call Extension 703 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.

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Code No.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.

VII. PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced credit in the course should consult the professor. Credit for prior learning will be given upon successful completion of a challenge exam or portfolio.

VIII. DIRECT CREDIT TRANSFERS:

Students who wish to apply for direct credit transfer (advanced standing) should obtain a direct credit transfer form from the Dean's secretary. Students will be required to provide a transcript and course outline related to the course in question.