

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



Sault College

COURSE OUTLINE

COURSE TITLE: WILDLIFE BIOLOGY AND MANAGEMENT

CODE NO. : NRT2050 **SEMESTER:** 3

PROGRAM: Fish and Wildlife Technician

AUTHOR: H.A. Cooper

DATE: June 2002 **PREVIOUS OUTLINE DATED:** June 2001

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 the Dean,
School of Natural Resources
(705) 759-2554, Ext. 688

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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 birds and mammals. A laboratory component emphasizing anatomy and physiology, parasites and diseases of wildlife, 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. *Inventory the principle game and non-game wildlife species of uplands and wetlands.*

Potential Elements of the Performance:

- Compile a "Check-list of Birds of the Sault Ste. Marie Area" for a period of one semester
- 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 of any Ontario mammal using a key
- Identify the fauna of a community by their tracks or sign (e.g. scats, scrapes)
- 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.
- Identify and state the stages in the life cycles of 24 major parasites/diseases of wildlife

(This outcome will constitute approximately 50% 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:
 - wildlife extirpations and extinction
 - impact of hunting, and trapping on populations
 - impact of other factors such as predation, inter-specific and intra-specific competition
 - success stories in introductions of exotics and re-establishing endangered and extirpated species

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

3. *Evaluate the health status of wildlife populations.*

Potential Elements of the Performance:

- Dissect and identify anatomical features of mammals and birds to assess "normal" and "abnormal" condition
- Identify common parasites and diseases by diagnosis of symptoms or direct evidence
- 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

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

4. *Formulate a wildlife management plan for a 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 15% of final grade)

III. TOPICS:

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

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

A comprehensive reference list will be distributed to students in first class of semester.

Your Sault College Library will also contain a number of texts and periodicals, which could prove useful.

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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; however, it is required that it still be submitted. A final grade will be derived from the results of theory and practical tests and at least one assignment (number to be finalized in class).

Theory Tests (all equal value)	Total = 50%
Assignments (all equal value)	Total = 15%
Practical Tests (all equal value)	Total = <u>35%</u>
Volunteer activity (bonus – 5%)	100%

The following semester grades will be assigned to students in post-secondary courses:

<u>Grade</u>	<u>Definition</u>	<u>Grade Point Equivalent</u>
A+	90 - 100%	4.00
A	80 - 89%	3.75
B	70 - 79%	3.00
C	60 - 69%	2.00
R (Repeat)	59% or below	0.00
CR (Credit)	Credit for diploma requirements has been awarded.	
S	Satisfactory achievement in field placement or non-graded subject areas.	
U	Unsatisfactory achievement in field placement or non-graded subject areas.	
X	A temporary grade. This is used in limited situations with extenuating circumstances giving a student additional time to complete the requirements for a course (see <i>Policies & Procedures Manual - Deferred Grades and Make-up</i>).	
NR	Grade not reported to Registrar's office. This is used to facilitate transcript preparation when, for extenuating circumstances, it has been impossible for the faculty member to report grades.	

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Code No.**VI. SPECIAL NOTES:**

The grading system before weighting will be as follows:

Tests and Assignments:

A+ = 90-100%
A = 80-89%
B = 70-79%
C = 60-69%
R = less than 60%

Identification Tests

All identification tests have an 80% pass requirement

Rewrites: Rewrites will only be allowed on identification tests. Only one rewrite will be allowed per test. There will be no rewrites on test or assignment material without extenuating circumstances.

Attendance: Student attendance is mandatory for all laboratories and field trips. Students who miss two or more labs or field trips without documented valid reason will receive an "R" grade in this course.

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 instructor and/or the Special Needs office. Visit Room E1204 or call Extension 493, 717, or 491 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 post-secondary institutions.

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 instructor.

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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.