

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



COURSE OUTLINE

COURSE TITLE: ANIMAL DIVERSITY

CODE NO.: NRT105-3 **SEMESTER:** 5

PROGRAM: ABORIGINAL RESOURCE TECHNICIAN

AUTHOR: HAROLD COOPER

DATE: JUNE 2003 **PREVIOUS OUTLINE DATED:** Jan 2002

APPROVED: _____
DEAN DATE

TOTAL CREDITS 3
PREREQUISITE(S): None
LENGTH OF COURSE: 3 hrs/week x 16 weeks
TOTAL CREDIT HOURS: 48

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For additional information, please contact
Natural Resources Programs,
(705) 759-2554, Ext. 688

I. COURSE DESCRIPTION:

This course is an introduction to the identification of common fish and wildlife species in Ontario. Classes will concentrate on discussing key anatomical features used to identify selected specimens. Ecological value will be stressed through learning significant points of each species natural history. Topic areas will include: aquatic invertebrates, terrestrial insects, freshwater fish, reptiles and amphibians, birds, mammals, wildlife tracks & signs, and fish & wildlife parasites and diseases.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

Upon successful completion of this course, students will demonstrate the ability to:

1. Identify various invertebrate groups with special ecological and interpretive values found in the aquatic environment

Potential Elements of the Performance:

- Using specimens provided, identify to order over 30 selected aquatic invertebrates, crustaceans and molluscs including exotics
- Identify major external features of aquatic insects
- Recognize the major types of metamorphosis in insects and identify the stage from selected specimens
- Identify a variety of aquatic invertebrates to order
- Explain significant ecological facts of aquatic insects for interpretative purposes

This learning outcome will constitute approximately 15% of the course.

2. Identify terrestrial insects to order and identify selected insects with special ecological and interpretative value to species.

Potential Elements of the Performance:

- Identify over 30 terrestrial insects to order
- Identify to specified group or species, selected butterflies and other insects with high interpretative value
- Relate the importance of each of these special groups ecologically and describe their unique biological features

This learning outcome will constitute approximately 15% of the course.

3. Identify selected sport and commercial freshwater fish and their

ecological and interpretive value.

Potential Elements of the Performance:

- Using pictures identify over 30 major sport and commercial species of freshwater fish including selected exotics
- Relate economic and ecological importance of selected species

This learning outcome will constitute approximately 15% of the course.

4. Identify selected amphibians and reptiles with special ecological and/or interpretive value.

Potential Elements of the Performance:

- Using pictures and recordings identify several Ontario amphibians
- Relate ecological/interpretative importance of amphibians
- Using slides identify several turtles and snakes of Ontario
- Relate ecological/interpretative importance of reptiles

This learning outcome will constitute approximately 15% of the course.

5. Identify common bird species in Ontario with special ecological and interpretive value.

Potential Elements of the Performance:

- Using pictures and recordings, identify 40 important species from each of the major families of birds using sight and song
- Relate the ecological/interpretative importance of selected species of birds
- Identify exotic species and relate their influence on the native fauna

This learning outcome will constitute approximately 15% of the course.

6. Identify important mammals in Ontario with special ecological and interpretive value.

Potential Elements of the Performance:

- Using pictures and available specimens, identify important Ontario mammals and indicate changes in range/introductions
- Relate the ecological/interpretative value of mammals

This learning outcome will constitute approximately 15% of the course.

7. Recognize the danger posed by diseases and parasites associated with wildlife and fish, and describe the specialized organisms responsible.

Potential Elements of the Performance:

- Outline the complex life cycles of organisms responsible for such diseases as rabies, Lyme's disease, and beaver fever
- Recognize the danger of these diseases and outline appropriate preventative methods
- Outline the complex life cycles associated with selected wildlife and fish parasites
- Describe the biology of selected parasite groups
- Relate important and interesting ecological information for interpretative purposes

This learning outcome will constitute approximately 10% of the course.

III. TOPICS:

1. Aquatic Invertebrates
2. Terrestrial Insects
3. Freshwater Fish
4. Amphibians and Reptiles
5. Songbirds, Waterfowl, Raptors and Shorebirds
6. Mammals
7. Wildlife Tracks & Signs
8. Fish & Wildlife Parasites and Diseases

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Peterson, R. T. 1980. *A Field Guide to the Birds [Peterson Field Guides]*.
Houghton Mifflin Company, Boston. 384 pp.

Burt, W.H. and R.P. Grossenheider. 1980. *A Field Guide to the Mammals*.

[*Peterson Field Guides*]. Houghton Mifflin Company, Boston. 289 pp.

Behler, P. and F. W. King. 1980. *National Audubon Society - Field Guide to Insects and Spiders*. Alfred A. Knopf Publishing, Inc. New York.

Rezendes, P. 1992. *Tracking & the Art of Seeing: How to Read Animal Tracks & Sign*. Camden House Publishing, Inc. Charlotte, Vermont. 320 pp.

Sault College. 2002. *Animal Diversity (NRT105) - Study Guide*. Sault College of Applied Arts & Technology. Sault Ste. Marie, Ontario.

ADDITIONAL RESOURCES:

Scott, W.B. and E.J. Crossman. 1973. *Freshwater Fishes of Canada*. Bulletin 184. Fisheries Research Board of Canada. Canadian Government Publishing Centre. Ottawa, Ontario. 966 pp.

Behler, J. L. and F. W. King. 1979. *National Audubon Society - Field Guide to Reptiles and Amphibians*. Alfred A. Knopf Publishing, Inc. New York.

Ayles, H. 1970. *Common Parasites of Ontario Fishes*. Fisheries Inventory Unit, Fish and Wildlife Branch. Ontario Ministry of Natural Resources. 21 pp.

Elliott, L. and T. Mack. 1990. *Wild Sounds of the Northwoods [Audio Tape]*. Lang NatureSound Studio. Ithaca, New York. (For identifying amphibians and birds)

V. EVALUATION PROCESS/GRADING SYSTEM

Aquatic Invertebrate Identification Test	10%
Terrestrial Insect Identification Test	10%
Freshwater Fish Identification Test	10%
Amphibian and Reptile Identification Test	10%
Bird Identification Test	10%

ANIMAL DIVERSITY

Course Name

NRT105-3

Code No.

Mammal Identification Test	10%
Fish and Wildlife Parasite \ Diseases Identification Test	10%
Wildlife Tracks & Signs Collection	20%
Attendance, Participation & Field Exercises	10%
	100%

<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
F (Fail)	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 – limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course (see Policies & Procedures Manual – Deferred Grades and Make-up).	
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.	

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 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.

Plagiarism:

Students should refer to the definition of “academic dishonesty” in *Student Rights and Responsibilities*. 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, as may be decided by the professor. 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.

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. Credit for prior learning will be given upon successful completion of the following:

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.