SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ON

COURSE OUTLINE

COURSE TITLE: ANIMAL DIVERSITY

CODE NO.   NRT105   **SEMESTER:**

PROGRAM: FISH & WILDLIFE TECHNICIAN
PARKS & OUTDOOR RECREATION TECHNICIAN

AUTHOR: JASON VANSLACK

DATE: JAN 1999   **PREVIOUS OUTLINE DATED:**   N/A

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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I.   COURSE DESCRIPTION:

This course is an introduction to the identification of common fish and wildlife species found in Ontario. Lectures will concentrate on discussing key anatomical features used to identify selected specimens. Interpretive value will be stressed through learning significant points of each species natural history. In the following labs, students will be exposed to shdes and specimens where information from the previous lecture will be applied. Topic areas will include invertebrates, terrestrial insects, freshwater fish, reptiles and amphibians, various species of birds, mammals, and fish and wildhfe diseases.

n.   LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

L   Identify various invertebrate groups found in the aquatic environment utilizing keys based on important anatomical features.

Potential Elements of the Performance:

- Using specimens provided, identify to order selected aquatic crustaceans and muUuscs including troublesome exotics
- Identify the major external feature, and their fianctions, of crustaceans using the crayfish as a study specimen
- Recognize the major types of metamorphosis in insects and identify the stage from selected specimens
- Draw the external features used in identification keys from aquatic specimens of each stage of the insect cycle
- Identify a variety of aquatic insects to orders/families using keys and on sight
- Relate ecological curiosities amongst aquatic insects for interpretive purposes

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

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2.   **Identify terrestrial insects to orders and identify to specific type, selected insects with special ecological/interpretive value.**

   Potential Elements of the Performance:

   • Identify using keys and on sight, a variety of terrestrial insects to order
   • Identify to specified group/species, selected butterflies and other insects with high interpretive 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.**

   Potential Elements of the Performance:

   • Using slides and preserved specimens identify using keys and on sight, major sport and commercial species of freshwater fish including selected exotics
   • Relate economic and ecological importance and interest of selected species

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

4.   **Identify selected amphibians and reptiles.**

   Potential Elements of the Performance:

   • Using slides and recordings identify Ontario amphibians
   • Relate ecological/interpretive importance of amphibians
   • Using slides identify turtles and snakes of Ontario
   • Relate ecological/interpretive importance of reptiles

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

5,   **Identify important songbirds, waterfowl, raptors and shorebirds, and relate their importance and interpretive value.**

Potential Elements of the Performance:

- Using slides and recordings, identify important species from each of the major bird groups from sight and song
- Relate the ecological/interpretive 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.

Identify important mammals in Ontario and relate their importance and interpretive value.

Potential Elements of the Performance:

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

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

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7.   **Recognize the danger posed by diseases 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, beaver fever and botuHsm
- Recognize the danger of these diseases and outline appropriate preventative methods
- Outline the complex life cycles associated with selected wildlife/fish parasites
- Describe the biology of selected parasite groups
- Draw from prepared sHdes the structure of selected parasite groups such as flukes, tapeworms and roundworms
- Relate important and interesting ecological information for interpretive purposes

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

m.   **TOPICS:**

1.   Invertebrates
2.   Terrestrial Insects
3.   Freshwater Fish
4.   Amphibians and Reptiles
5.   Songbirds, Waterfowl, Raptors and Shorebirds
6.   Mammals
7.   Fish and Wildhfe Diseases

IV.   REQUIRED RESOURCES/TEXTS/MATERIALS:

Peterson, R. T. 1980. *A Field Guide to the Birds.* Houghton Mifflin Company, Boston. 384 pp.   ISBN # 0-395-36164-8

Kurta, A. 1995. *Mammals of the Great Lakes Region.* Fitzhenry & Whiteside. , Toronto, Ontario. 376 pp.   ISBN # 1-55041-078-4

V.   EVALUATION PROCESS/GRADING SYSTEM

Invertebrate Identification Test	15%
Terrestrial Insect Identification Test	15%
Freshwater Fish Identification Test	15%
Amphibian and Reptile Identification Test	15%
Bird Identification Test	15%
Mammal Identification Test	10%
Fish and Wildlife Diseases Identification Test	<u>15%</u>
	100%

Grade	Definition	Grade Point Equivalent
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. Satisfactory 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.,	

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VI.   **SPECIAL NOTES:**

Special Needs
If you are a student with special needs (eg. physical limitations, visual
impairments, hearing impairments, learning disabilities), you are encouraged to
discuss required accommodations with the instructor and/or contact the Special
Needs Office, Room E1204, Ext. 493, 717, 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.

Course Modification
The instructor reserves the right to modify the course as deemed necessary to
meet the needs of students.

Disclaimer for Meeting the Needs of the Learners

Substitute Course Information is available at the Registrar's Office.

Any Other Special Notes appropriate to your course.

Vn.   **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 successfiil completion of the
following: