SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

Sault College

CICE COURSE OUTLINE

COURSE TITLE: Introduction To Fish & Wildlife

CODE NO. : NRT110 **SEMESTER:** Fall
MODIFIED CODE: NRT010

PROGRAM: Fish & Wildlife Technician

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MODIFIED BY: Velma Simon, Learning Specialist CICE Program

DATE: July 2007 **PREVIOUS OUTLINE DATED:** June 2006

APPROVED:

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CHAIR, COMMUNITY SERVICES **DATE**

TOTAL CREDITS: 3

PREREQUISITE(S): NONE

HOURS/WEEK: 3

I. COURSE DESCRIPTION:

This practical course will introduce the student to field procedures to assess wildlife habitat and relative abundance of animal populations. Collection techniques, preparation, display and identification of important aquatic and terrestrial invertebrates will be practiced. Field data will be recorded, analyzed and summarized in report format. In addition employment opportunities will be discussed and several guest speakers will address specific opportunities in the Fish and Wildlife field.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

Upon successful completion of this course, the CICE student, with the assistance of a Learning Specialist will demonstrate the ability to:

1. **Conduct field surveys to assess habitat and relative abundance of wildlife populations**

Potential Elements of the Performance:

- execute field procedures as instructed
- assess local Canada goose population numbers using a droppings survey
- determine stream discharge using floatation method, current meter and computer software
- assess chemical parameters of stream water
- correctly calibrate and operate field equipment (compass, GPS, current meter, HACH kit, surber sampler)
- collect aquatic invertebrates to assess water quality using biotic and diversity indices
- construct an appropriate bird feeder for the College woodlot and monitor local bird feeding activity
- participate in the annual Deer Check Station on St. Joseph's Island during the fall hunt

This learning outcome will constitute approximately 10% of the course's grade

2. **Collect and identify animal specimens for interpretation and display**

Potential Elements of the Performance:

- correctly use nets, traps and various collection techniques for both aquatic invertebrates and terrestrial insects
- properly kill, pin and label 15 terrestrial insect species for invertebrate collection
- recognize common terrestrial insect and aquatic invertebrate orders given key characteristics
- demonstrate effective use of a bifurcated (dichotomous) key for identification
- recognize important sports and commercial fish species of Ontario based on key characteristics
- identify local woodlot bird species by sight and vocalizations
- observe and record bird species of Sault Ste. Marie using the Sault Naturalists Checklist

This learning outcome will constitute approximately 40% of the course's grade

3. **Record, analyze and present field data**

Potential Elements of the Performance:

- complete field forms neatly and accurately
- present data in organized tables, graphs and figures
- use appropriate software to analyze and interpret data
- summarize objectives, methodologies, results and discussion of results in an organized technical report format

This learning outcome will constitute approximately 40% of the course's grade

4. **Evaluate career opportunities in Fish & Wildlife**

Potential Elements of the Performance:

- summarize career opportunities in Fish and Wildlife
- examine entrepreneurial opportunities in Fish and Wildlife

This learning outcome will constitute approximately 10% of the course's grade

III. TOPICS:

1. Terrestrial Insect Collection, Killing, Pinning and ID
2. Stream Discharge Determination
3. Basic Water Analysis and Aquatic Invertebrate Collection
4. Introduction to Aquatic Invertebrates, Key Use & Interpretation
5. Wildlife Population Estimate
6. Local Woodlot Bird Identification (sight & vocalizations)
7. Identification of Important Fish Species of Ontario
8. Employment Opportunities

IV. REQUIRED RESOURCES/ TEXTS/ MATERIALS:

Hubbs, Carl L., Karl F. Lagler and G.R. Smith. 2004. Fishes of the Great Lakes Region. University of Michigan Press. Michigan.

Peterson, Roger Tory. 1980. Eastern Birds. A Field Guide to the Birds. 4th Edition. Houghton Mifflin Co., Boston**.**

Walker, V. 2007. Intro to Fish & Wildlife Lab Manual – ON LINE. Sault College, Sault Ste Marie.

Birds of Sault Ste. Marie Check List

Dissection kit
Waders (Cabela or equivalent)
Insect Display Box, pins and pinning block

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.

V. EVALUATION PROCESS/GRADING SYSTEM:

Technical Reports (4)	**40%**
Insect Collection	**15%**
Fish Biology/Ecology	**10%**
Field Forms	**10%**
Quizzes	**15%**
Participation	**10%**
	100%

QUIZZES: There will be several quizzes based on terrestrial insect ID, aquatic invertebrate ID, fish ID, speaker presentations, valued at 15% total

PARTICIPATION: Student participation in the annual Deer Check Station on St. Joseph's Island or any other F&W volunteer project will be valued at 5% each, up to a maximum of 10% total.

BONUS: Wildlife scats (not including waterfowl) collected and in good condition with pertinent information included (ID, date, location, habitat found), will be awarded 1% per scat up to a MAXIMUM of 5% (for 5 different scats).

NOTE: Lab assignments and report values will be reduced at a rate of **10% per day** for late submissions for a period of 5 days after the due date. After 5 days and lab assignment/report value will be zero. All labs/assignments and reports must be submitted regardless of lateness to pass the course.

Attendance during field exercises is **MANDATORY.** Student missing field work without valid, documented reason will risk repeating the course.

NOTE: Students given the opportunity to submit a lab report associated with a **missed** field trip will receive a maximum grade of 60% for that report

The following semester grades will be assigned to students in postsecondary courses:

Grade	Definition	Grade Point Equivalent
A+	90 - 100%	4.00
A	80 - 89%	4.00
B	70 - 79%	3.00
C	60 - 69%	2.00
F (Fail)	59% 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 instructor and/or the Special Needs office. Visit Room E1101 or call Extension 2703 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.

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.

CICE Modifications:

Preparation and Participation

1. A Learning Specialist will attend class with the student(s) to assist with inclusion in the class and to take notes.
2. Students will receive support in and outside of the classroom (i.e. tutoring, assistance with homework and assignments, preparation for exams, tests and quizzes.)
3. Study notes will be geared to test content and style which will match with modified learning outcomes.
4. Although the Learning Specialist may not attend all classes with the student(s), support will always be available. When the Learning Specialist does attend classes he/she will remain as inconspicuous as possible.

A. Tests may be modified in the following ways:

1. Tests, which require essay answers, may be modified to short answers.
2. Short answer questions may be changed to multiple choice or the question may be simplified so the answer will reflect a basic understanding.
3. Tests, which use fill in the blank format, may be modified to include a few choices for each question, or a list of choices for all questions. This will allow the student to match or use visual clues.
4. Tests in the T/F or multiple choice format may be modified by rewording or clarifying statements into layman's or simplified terms. Multiple choice questions may have a reduced number of choices.

B. Tests will be written in CICE office with assistance from a Learning Specialist.

The Learning Specialist may:

1. Read the test question to the student.
2. Paraphrase the test question without revealing any key words or definitions.
3. Transcribe the student's verbal answer.
4. Test length may be reduced and time allowed to complete test may be increased.

C. Assignments may be modified in the following ways:

1. Assignments may be modified by reducing the amount of information required while maintaining general concepts.
2. Some assignments may be eliminated depending on the number of assignments required in the particular course.

The Learning Specialist may:

1. Use a question/answer format instead of essay/research format
2. Propose a reduction in the number of references required for an assignment
3. Assist with groups to ensure that student comprehends his/her role within the group
4. Require an extension on due dates due to the fact that some students may require additional time to process information
5. Formally summarize articles and assigned readings to isolate main points for the student
6. Use questioning techniques and paraphrasing to assist in student comprehension of an assignment

D. Evaluation:

Is reflective of modified learning outcomes.