

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



**SAULT
COLLEGE**

COURSE OUTLINE

COURSE TITLE: INTRODUCTION TO FISH & WILDLIFE
CODE NO. : NRT 110 **SEMESTER:** 1
PROGRAM: FISH & WILDLIFE CONSERVATION TECHNICIAN
AUTHOR: VALERIE WALKER
DATE: AUG 2010 **PREVIOUS OUTLINE DATED:** MAY 2009
APPROVED:
"B.Punch"

CHAIR DATE
TOTAL CREDITS: 3
PREREQUISITE(S): NONE
HOURS/WEEK: 3

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For additional information, please contact Brian Punch, Chair
School of the Natural Environment/Outdoor Studies & Technology Programs
(705) 759-2554, Ext.2681

I. COURSE DESCRIPTION:

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

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

Upon successful completion of this course, the student 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 25% of the course's grade

2. **Collect and identify invertebrate 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 25 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
- discuss the ecology of invertebrates and their importance as reflectors of environmental health
- determine biotic and diversity indices to assess water quality using aquatic invertebrates

This learning outcome will constitute approximately 15% of the course's grade

3. **Identify selected fish, amphibian and reptile species and discuss their interpretive value.**

Potential Elements of the Performance:

- recognize selected freshwater fish of Ontario & discuss their biology and ecological values
- identify local woodlot bird species by field marks and vocalizations
- observe and record bird species of Sault Ste. Marie using the Sault Naturalists Checklist
- identify amphibians common to Ontario using images and vocalizations
- discuss the ecological/interpretative importance of amphibians
- identify common turtles and snakes of Ontario using images
- discuss ecological/interpretative importance of reptiles

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

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 employment opportunities in Fish & Wildlife**

Potential Elements of the Performance:

- summarize career / summer opportunities in Fish and Wildlife based on presentations given by representatives from local agencies
- participate as a volunteer in F&W projects

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. Identification of Common Herptiles
9. Employment Opportunities in F&W

IV. REQUIRED RESOURCES/ TEXTS/ MATERIALS:

1. Hubbs, Carl L., Karl F. Lagler and G.R. Smith. (2004). *Fishes of the Great Lakes Region*. University of Michigan Press. Michigan.
2. Peterson, Roger Tory and V.M. Peterson. (2002). *A Field Guide to the Birds of Eastern America*. Houghton Mifflin Co., Boston.
3. Voshell, J. Reese. (2002). *Guide to Common Freshwater Invertebrates of North America*. McDonald and Woodward Publishing Company. Blacksburg, Virginia
4. Walker, V. (2010). *Intro to Fish & Wildlife Lab Manual – ON LINE*. Sault College, Sault Ste Marie.
5. Birds of Sault Ste. Marie [Check List](#)
6. Hardhat, safety boots, reflective vest
7. Dissection kit
8. Chest waders (Cabela's or equivalent)
9. Insect Display Box, pins and pinning block

ADDITIONAL RESOURCES:

Scott, W.B. and E.J. Crossman. 1998. *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	10%
Fish Biology Table & ID Sheets	10%
Field Forms	10%
Quizzes	20%
Participation	<u>10%</u>
	100%

QUIZZES: There will be several quizzes based on terrestrial insect ID, aquatic invertebrate ID, fish ID, herptile ID, speaker presentations which are valued at 20% 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 scat, native to Ontario (not including bird droppings - with the exception of ruffed grouse), collected and in good condition with pertinent information included (ID, date, location, habitat found – see scat form), 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:

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

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.

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.

Prior Learning Assessment:

Students who wish to apply for advance credit transfer (advanced standing) should obtain an Application for Advance Credit from the program coordinator (or the course coordinator regarding a general education transfer request) or academic assistant. Students will be required to provide an unofficial transcript and course outline related to the course in question. Please refer to the Student Academic Calendar of Events for the deadline date by which application must be made for advance standing.

Credit for prior learning will also be given upon successful completion of a challenge exam or portfolio.

Substitute course information is available in the Registrar's office.

Disability Services:

If you are a student with a disability (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your professor and/or the Disability Services office. Visit Room E1101 or call Extension 2703 so that support services can be arranged for you.

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*. A professor/instructor may assign a sanction as defined below, or make recommendations to the Academic Chair for disposition of the matter. The professor/instructor may (i) issue a verbal reprimand, (ii) make an assignment of a lower grade with explanation, (iii) require additional academic assignments and issue a lower grade upon completion to the maximum grade “C”, (iv) make an automatic assignment of a failing grade, (v) recommend to the Chair dismissal from the course with the assignment of a failing grade. 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.

Student Portal:

The Sault College portal allows you to view all your student information in one place. **mysaultcollege** gives you personalized access to online resources seven days a week from your home or school computer. Single log-in access allows you to see your personal and financial information, timetable, grades, records of achievement, unofficial transcript, and outstanding obligations, in addition to announcements, news, academic calendar of events, class cancellations, your learning management system (LMS), and much more. Go to <https://my.saultcollege.ca>.

Electronic Devices in the Classroom:

Students who wish to use electronic devices in the classroom will seek permission of the faculty member before proceeding to record instruction. With the exception of issues related to accommodations of disability, the decision to approve or refuse the request is the responsibility of the faculty member. Recorded classroom instruction will be used only for personal use and will not be used for any other purpose. Recorded classroom instruction will be destroyed at the end of the course. To ensure this, the student is required to return all copies of recorded material to the faculty member by the last day of class in the semester. Where the use of an electronic device has been approved, the student agrees that materials recorded are for his/her use only, are not for distribution, and are the sole property of the College.

Attendance:

Sault College is committed to student success. There is a direct correlation between academic performance and class attendance; therefore, for the benefit of all its constituents, all students are encouraged to attend all of their scheduled learning and evaluation sessions. This implies arriving on time and remaining for the duration of the scheduled session.

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Tuition Default:

Students who have defaulted on the payment of tuition (tuition has not been paid in full, payments were not deferred or payment plan not honored) as of the first week of November will be removed from placement and clinical activities. This may result in loss of mandatory hours or incomplete course work. Sault College will not be responsible for incomplete hours or outcomes that are not achieved or any other academic requirement not met as of the result of tuition default.

Students are encouraged to communicate with Financial Services with regard to the status of their tuition prior to this deadline to ensure that their financial status does not interfere with academic progress.