

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



COURSE OUTLINE

COURSE TITLE: WILDLIFE SURVEY TECHNIQUES
CODE NO. : NRT 255 **SEMESTER:** 4
PROGRAM: FISH & WILDLIFE TECHNICIAN
AUTHOR: T.WINTER
DATE: DEC 2009 **PREVIOUS OUTLINE DATED:** DEC 2008
APPROVED: B. PUNCH

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| | CHAIR | DATE |
| TOTAL CREDITS: | 4 | |
| PREREQUISITE(S): | NIL | |
| HOURS/WEEK: | 4 | |

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For additional information, please contact Brian Punch, Chair,
School of Natural Environment/Outdoor Studies & Technology Programs
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I. COURSE DESCRIPTION:

This course is aimed at the understanding and performance of various techniques essential for wildlife management. Topics include: Field note taking, data recording and retrieval; literature searches; food habit analysis; habitat evaluation techniques; population estimation; criteria for sexing and aging game birds and mammals; methods of capture, handling and marking wild animals; evaluation of wildlife damage.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1. Perform a scientific literature search and solve problems related to wildlife management using approved scientific problem-solving techniques.

Potential Elements of the Performance:

- Select an Ontario wildlife species, identify and retrieve all significant recent written material on that species using journals, scientific publications and books.
- Prepare and present findings of research on Ontario wildlife species.
- Prepare a bibliography and an indexed abstract file on topics related to wildlife surveys for that species
- Select a wildlife management problem and develop several hypotheses to test, related to your scenario.
- Develop solutions to a problem, using a flow chart of suggested activities.

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

2. Perform field identification of wildlife tracks and signs, scatology analysis, and cause of death evaluation. Have the ability to identify and assess wildlife damage.

Potential Elements of the Performance:

- Complete a photo collection of 30 tracks and signs indicating species and key features.
- Examine and differentiate the scat of several wildlife species native to Ontario.
- Investigate scenarios to determine the cause of death of wildlife species or livestock.

- Perform track and signs and cavity surveys to develop a species inventory.
- Determine whether wildlife is responsible for specific livestock or wildlife predation by collecting and analyzing direct and indirect evidence of predation

This outcome will constitute 25% of the course's grade

3. Perform habitat analysis techniques to evaluate food presence and availability.

Potential Elements of the Performance:

- Investigate field techniques used to measure the habitat parameters that are required for select species.
- Perform a variety of wildlife surveys to assess food and cover, and write up a report that assesses total habitat carrying capacity, present utilization and management suggestions for the future.
- Perform the necessary sampling procedures to lay out and analyze data from sample plots that will be statistically meaningful.

This outcome will constitute 25% of the course's grade

4. Design and perform field investigations and subsequent analysis of population estimation techniques.

Potential Elements of the Performance:

- Explain the major types of population census, and their strengths and weaknesses
- Describe inventory methods such as:
 - Total counts
 - Sample census
 - Mark- recapture methods
 - Indices of populations
- Demonstrate the ability to perform the field surveys and the calculations for techniques such as :
 - King strip census
 - Peterson Index
 - Aerial surveys for Moose
 - Pellet group counts for deer

This outcome will constitute 20% of the course's grade

5. Perform techniques used for wildlife sex and age determination. Analyze population structure in wildlife populations based on these techniques.

Potential Elements of the Performance:

- Explain the importance of sex and age ratios with respect to wildlife management.
- Explain how to determine the sex and age of upland game bird species using biological features (wings, tails).
- Explain techniques used for age and sex determination in many Ontario mammal species.
- Demonstrate the ability to correctly determine age and sex for many wildlife species.
 - Age moose using jaw-aging techniques
 - Tooth grinding and cross-sectioning

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

6. Explain techniques used to capture, handle and mark wild animals, humanely and safely.

Potential Elements of the Performance:

- Demonstrate the ability to set up traps as required to capture nuisance birds or mammals
- Describe proper methods for handling any wildlife species to ensure safety of the handler and the wildlife species
- Explain the relative merits and drawbacks of marking by tagging, colouration or mutilation.
- Demonstrate the ability to utilize chemical immobilization equipment properly.

This outcome will constitute 5% of the course's grade

III. TOPICS:

1. **Introduction , problem solving and literature searches**
2. **Wildlife Tracking and signs**
3. **Habitat evaluation techniques**
4. **Population analysis and techniques**
5. **Criteria of sexing and aging**
6. **Methods of capture, handling and marking wild animals**

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

1. Required text: **Bookhout, R.A.** 1996. *Techniques for Research for Wildlife and Habitats*. The Wildlife Society.
2. Recommended Field Guide: **Rezendes, P.** 1999. *Tracking and the Art of Seeing*. Firefly Books.
3. Laboratory coat and glasses
4. Safety vest, snowshoes, hard hat, compass for field trips
5. Dissecting kit
6. Other readings as assigned from the LRC or internet

V. EVALUATION PROCESS/GRADING SYSTEM:

Students will be evaluated on the basis of achievement of learning outcomes. These will be determined by:

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|--------------------------------|-------------------|
| 1. Labs and Assignments | 60% |
| 2. Tests | <u>40%</u> |
| | 100% |

Late assignments will be penalized -10% per school day late. Late assignments will not be accepted once they have been returned in class. Students who miss tests will not have an opportunity to rewrite without valid excuse (i.e. doctor's note).

Attendance is mandatory at all labs and field trips. In the event of an excused absence, students will be required to make up an alternate lab on their own time. Failure to attend two labs and/or field trips will result in an immediate "F" grade.

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% | 3.00 |
| B | 70 - 79% | 2.00 |
| C | 60 - 69% | 1.00 |
| D | 50 – 59% | 0.00 |
| F (Fail) | 49% and below | |
| CR (Credit) | Credit for diploma requirements has been awarded. | |
| S | Satisfactory achievement in field /clinical | |

| | |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------|
| U | placement or non-graded subject area. 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. Announcements, news, the academic calendar of events, class cancellations, your learning management system (LMS), and much more are also accessible through the student portal. 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. *It is the departmental policy that once the classroom door has been enclosed, the learning process has begun. Late arrivers will not be granted admission to the room.*

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 honoured) as of the first week of *March* 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.