

I. COURSE DESCRIPTION:

This course builds on the students' understanding of the fundamental principles of sampling and survey design in the context of wildlife surveys. Students will gain experience using a variety of methods to survey wildlife populations with an emphasis not only on data collection but also on the analysis, interpretation, and communication of results.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

Upon successful completion of this course, the student will:

1. Conduct an analysis of the scientific literature on population assessment methods in relation to a selected wildlife species or group of similar species (mammal, birds, or herpetofauna).

Potential Elements of the Performance:

- Demonstrate proficiency in:
 - developing a clear, organized key word list
 - accessing scientific literature
 - reviewing abstracts for relevance
 - gleaning appropriate information
 - summarizing findings in tabular or graphical form (e.g., summarized by population assessment method, study objectives, geographical area, key findings, future research directions, etc.)
- 2. Investigate wildlife population assessment methods and techniques used to measure habitat and food use and participate in surveys applying standard protocols and techniques.

Potential Elements of the Performance:

- Describe direct wildlife counting methods (complete counts, incomplete counts, and mark-recapture), indirect wildlife counting methods (indices), and wildlife detection methods (presence/absence)
- Understand the common role indices play in addressing inventory and monitoring questions and the advantages and disadvantages for their use
- Demonstrate knowledge of the biases, challenges and advantages / disadvantages of different techniques used to measure wildlife habitat and food use

- Competently conduct field surveys:
 - determine carnivore diet (stomach content analysis)
 - determine use, availability and relative quality of winter deer, elk or moose browse
 - use radio-telemetry equipment to collect location data on VHF-collared elk
 - survey relative abundance of wildlife (e.g., winter track transects, red shouldered hawk/spring woodpecker survey, nocturnal owl survey)
 - identify wildlife tracks and signs (e.g, mammal tracks, gait patterns, scat, and other unique sign; stick nests and the birds or other wildlife that built them)
- 3. Explain techniques used to capture, handle and mark wildlife, humanely and safely.

Potential Elements of the Performance:

- Understand and discuss legal, ethical, and humane considerations in wildlife research
 - Understand and discuss advantages and disadvantages of common wildlife capture devices (e.g., mist nets and cannon nets for birds; cannon nets, net guns, box and cage traps for mammals)
 - Describe the common techniques and equipment used for marking wildlife (e.g., ear tagging, tattooing, radio-collaring, PIT tags) and explain the advantages and disadvantages of invasive and non-invasive marking techniques
 - Describe techniques and equipment used for safe handling and physical constraint of captured or anesthetized animals and to ensure safety of the handler
4. Demonstrate knowledge and skills to sex and age wildlife.

Potential Elements of the Performance:

- Identify and compare the common techniques used to sex and age wildlife.
- Demonstrate ability to sex and age upland game bird species using biological features (i.e., wings and tails)
- Demonstrate ability to assess age of selected mammals using, e.g., canine pulp cavity and tooth wear

5. Describe reasons (i.e., purpose and goal) for harvesting wildlife populations, how the harvesting can be accomplished, and why the reasons are appropriate. (*Note: this is an extension of a topic that was first introduced in the course NRT 205*)

Potential Elements of the Performance:

- Explain the purpose and goals for harvesting (i.e., hunting and trapping) wildlife; e.g., recreation, culture, and as a management tool
- Describe and compare differences between sustainable harvesting and wildlife control
- Describe and compare differences between additive vs. compensatory mortality
- Understand the underlying concept of wildlife damage management and describe wildlife damage control techniques
 - describe the concept of wildlife damage management
 - describe common wildlife damage control techniques and evaluate their efficacy
 - examine case studies in Ontario (e.g., black bear capture and translocation)
- Explain current opposition to, and advocacy for, harvesting wildlife
- Examine case studies in Ontario such as the impact of hunting and trapping on populations

III. TOPICS:

- capture, handling, and marking
- data analysis
- food habits
- habitat survey
- harvest
- literature search
- population assessment techniques
- sexing and ageing
- technical report writing
- tracks and signs
- wildlife damage control

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

- Laboratory coat, safety glasses
- Safety vest, snowshoes, hard hat, compass for field trips
- All reference material will be placed on LMS

V. EVALUATION PROCESS/GRADING SYSTEM:

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|--|-----|
| <input type="checkbox"/> Final Test | 10% |
| <input type="checkbox"/> Quizzes, Lecture Readings/Assignments | 20% |
| <input type="checkbox"/> Field and Lab Assignments | 70% |

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.

If a faculty member determines that a student is at risk of not being successful in their academic pursuits and has exhausted all strategies available to faculty, student contact information may be confidentially provided to Student Services in an effort to offer even more assistance with options for success. Any student wishing to restrict the sharing of such information should make their wishes known to the coordinator or faculty member.

VI. SPECIAL NOTES: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.

Conduct:

- Any student who in the judgement of the instructor behaves inappropriately in scheduled classes or copies the work of another student without the instructor's permission, will be subject to all the terms and conditions in the student's rights and responsibilities hand book and may after, reviewing the situation with the instructor, be asked to leave the course with an F grade.

Evaluation:

- To be eligible to make up for a missed test or quiz, the instructor must be contacted via phone or email ASAP to discuss make-up options. Students not contacting the instructor prior to a missed class or within a day afterwards will get a zero except under extenuating circumstances; e.g., doctor's note.
- Late assignments will only be accepted within 24 hours past the due date and will be penalized 20% except under extenuating circumstances, e.g., doctor's note
- The instructor cannot guarantee responses to questions in the 24-hour period prior to assignment deadlines and tests via phone message or email.

VII. COURSE OUTLINE ADDENDUM:

1. Course Outline Amendments:
The faculty member reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.
2. 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.
3. 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 Key Dates Calendar 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. Student Services, located in E1101, can provide information regarding the Prior Learning Assessment and Recognition policy or it can be viewed on the student portal.

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

4. 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>.
5. Communication:
The College considers Desire2Learn (D2L) 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 this Learning Management System (LMS) communication tool.

6. Accessibility 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 the Accessibility Services office. Visit Room E1101, call Ext. 2703 or email studentsupport@saultcollege.ca so that support services can be arranged for you.

7. Audio and Video Recording 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. Students with disabilities who require audio or visual recording devices in the classroom as an accommodation will receive approval from their counsellor once the Audio and Video Recording Devices in the Classroom Policy has been reviewed by the student. Recorded classroom instruction will be used only for individual academic use and will not be used for any other purpose. Recordings may only be used for individual study of materials presented during class and may not be published or distributed. Intentional misuse of audio and video recordings or intentional misrepresentation when requesting the use of a device for recording shall constitute a violation of this policy and laws protecting intellectual property.

8. Academic Dishonesty:

Students should refer to the definition of “academic dishonesty” in the Student Code of Conduct. Students who engage in academic dishonesty will be issued a sanction under the Student Code of Conduct which could lead to and include expulsion from the course/program. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, students must use a documentation format for referencing source material.

9. 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 November (fall semester courses), first week of March (winter semester courses) or first week of June (summer semester courses) will be removed from placement and clinical activities due to liability issues. 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.