

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



COURSE OUTLINE

COURSE TITLE:	Terrestrial Ecosystem Surveys		
CODE NO. :	NET 205	SEMESTER:	17W
PROGRAM:	Natural Environment Technician/Technologist		
AUTHOR:	Rob Routledge		
DATE:	Jan. 2017	PREVIOUS OUTLINE DATED:	June 2015
APPROVED:	Sherri Smith		Dec 2016
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	CHAIR	DATE	
TOTAL CREDITS:	4		
PREREQUISITE(S):	none		
HOURS/WEEK:	4		

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For additional information, please contact

Sherri Smith, Chair,

Natural Environment, Business and Design

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I. COURSE DESCRIPTION:

This course will provide students with an understanding of the fundamental principles of sampling and survey design. The research process will be reinforced as students design and execute a field research project. Students will gain experience using a variety of data collection methods in the survey of plant and wildlife communities. Overall, students will demonstrate proficiency in the collection, management, analysis, and interpretation of field data and communication of results.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1. Describe the major components of an experimental (survey) design and demonstrate knowledge of the basic principles of sampling.

Potential Elements of the Performance:

- Demonstrate an understanding of the research process
 - Demonstrate knowledge of various data collection methods available for sampling forest stands and wildlife populations (e.g., fixed vs. variable-radius quadrats, direct vs. indirect wildlife counting methods), when their use is most appropriate, and advantages and disadvantages of each
 - Demonstrate knowledge of sampling design options (how sampling units are placed within a population), advantages and disadvantages of each, and understand the importance of representative sampling
 - Understand and discuss factors that influence quadrat (sampling unit) size, shape, number (sample size), and arrangement for a given scenario
2. Demonstrate appropriate sampling methodology and use of equipment to collect field data and analyse, interpret, and communicate results in a technical report.

Potential Elements of the Performance:

- Demonstrate proficiency in basic navigation skills (e.g., compassing, pacing, chaining, navigating to and from locations)
- Demonstrate appropriate knowledge of, and ability to, conduct terrestrial field surveys applying standard protocols and techniques
- Demonstrate proficiency in data handling and management
- Demonstrate ability to use data analysis tools available in Microsoft Excel for computing basic descriptive statistics and completing

various statistical analyses to analyze field data

- Demonstrate ability to prepare graphs and tables to summarize descriptive data and statistical analyses
3. Review a primary research article from a scholarly journal directed towards the effects of forest harvesting activities and/or natural disturbances (e.g., forest fires, insect infestations or blowdowns) on an eastern North American wildlife species or group of similar species.

Potential Elements of the Performance:

- Demonstrate the ability to interpret a primary research article by:
 - defining the problem that the research proposes to answer
 - describing the process of data collection and explain how the methods employed are used to answer the “problem” under study
 - summarizing conclusions and future research directions suggested by the study
4. Prepare a research project proposal related to wildlife or plant ecology and conduct a pilot study to evaluate the feasibility of the proposed research project.

Potential Elements of the Performance:

- Demonstrate ability to develop a draft research project proposal that includes:
 - background information and key literature
 - justification, hypotheses, and predictions (proposed research question should be possible to answer within constraints of available time and equipment)
 - description of the proposed study area
 - study design and methods (detailed description of proposed field and analytical methods)
 - literature cited
 - data sheet
 - time line of activities
- Demonstrate ability to conduct a pilot study using the same methods proposed for the actual study and prepare a pilot study report which assesses the research proposal study design and methods based on results of the pilot study

III. TOPICS:

- basic statistics
- data handling and management
- navigation and orientation
- experimental design
- basic principles of sampling
- data analysis
- technical report writing
- literature review
- research process
- sampling forest stands
- sampling wildlife populations

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

- all reference material will be placed on LMS
- hard hat, reflective vest, snowshoes, compass

V. EVALUATION PROCESS/GRADING SYSTEM:

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| <input type="checkbox"/> Final Test | 10% |
| <input type="checkbox"/> Quizzes and Field/Lab Assignments | 90% |

The following semester grades will be assigned to students:

Grade	<u>Definition</u>	<i>Grade Point Equivalent</i>
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 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 academically successful, the faculty member may confidentially provide that student's name to Student Services in an effort to help with the student's success. Students 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.

Evaluation:

- Absences during field labs, tests, quizzes, and other assessments will not be excused without documented health or personal reasons.
- Late assignments will only be accepted within 24 hours past the due date and will be penalized 20% except under extenuating circumstances with appropriate documentation.
- Changes to the Course Evaluation scheme may be considered during the semester if approved by the majority of the class (majority = approval by 75% of students present at time of vote).
- 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 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 announcements, news, academic calendar of events, class cancellations, your learning management system (LMS), and much more is available. 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. 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) 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.