

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



COURSE OUTLINE

COURSE TITLE: SECOND YEAR NET FIELD CAMP
CODE NO. : NET 201 **SEMESTER:** F10
PROGRAM: Natural Environment Technician / Technology
AUTHOR: V. Walker / T. Winter
DATE: AUG 2010 **PREVIOUS OUTLINE DATED:** NEW
APPROVED: "B.Punch"

CHAIR

DATE

TOTAL CREDITS: 2
PREREQUISITE(S): None
HOURS/WEEK: N/A

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I. COURSE DESCRIPTION:

This field camp provides a hands-on, practical experience specific to environmental studies. Emphasis will be placed on field techniques and surveys to evaluate fish and wildlife populations and assess their habitats (e.g. Ontario Wetland Evaluation, Ontario Aquatic Habitat (Lake) Inventory Survey, Ontario Stream Assessment Protocol). Students will demonstrate the proper use of field instruments, traps and nets. The correct procedures for humane capture, handling and marking of wildlife will be practiced. In addition, students will perform soils analysis through the establishment of a soil pit. A forest post harvest audit will be completed to quantify compliance level with provincial standards. All terrain vehicle operation, safety and basic maintenance will be reinforced.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1. Conduct a lake survey using standard equipment and methodologyPotential Elements of the Performance:

- effectively use passive and active fish capture techniques such as gill nets, trap nets, minnow traps and seine nets
- practice efficient and humane procedures to capture, handle fish
- process fish by determining and recording species identification; total length; fork length; weight; sex; stomach contents; state of health; presence of parasites, tags or marks and by removing scales, fin rays cleithrum and/or otoliths for age determination
- select and use appropriate field equipment to collect, document and preserve small littoral fish and aquatic invertebrates
- correctly operate and where necessary, calibrate the following instruments and equipment: oxygen meter, conductivity meter, pH meter, HYDROLAB, secchi disc, Juday plankton net, Eckman dredge
- accurately map riparian vegetation, substrate types and other shoreline features for physical features map
- correctly operate a Bathymetric Automated Survey System (B.A.S.S.) unit to map lake basin profile
- safely operate an outboard motor under field conditions

2. Assess physical processes and channel structure of a streamPotential Elements of the Performance:

- properly demonstrate the Ontario Stream Assessment Protocol field procedures for assessing physical processes and channel structure
- accurately define site boundaries of the stream site
- set up transects and observation points
- correctly measure hydraulic head (velocity), active channel width, instream cover, maximum particle size, bank stability, bank vegetation and cover type, stream bearing
- classify stream substrate types

3. Capture aquatic invertebrates for collection requirementsPotential Elements of the Performance:

- correctly use dip nets and surber samplers in the collection of aquatic invertebrates
- proper preserve and document invertebrates collected
- accurately record habitat variables of collection location

4. Complete field related components to complete a wetland evaluationPotential Elements of the Performance:

- follow the Ontario Wetland Evaluation System protocol
- Identify and describe features of various wetland types including associated flora and fauna
- accurately identify common wetland plants
- delineate and map vegetative forms within a wetland boundary
- document biological, social, hydrological and special feature components of a wetland for the purpose of evaluation
- Show proper safety and handling of a canoe

5. Complete in-field wildlife surveysPotential Elements of the Performance:

- follow the Marsh Monitoring Program Protocol to survey marsh birds and amphibians
- accurately perform sandhill crane behavioral survey

- accurately perform small animal surveys, using proper measurements and techniques.
- estimate population using calculations from small animal survey field data

6. Complete a description of a soil pit.

Potential Elements of the Performance:

- establish a soil pit to the proper depth and dimension
- complete an analysis of soil horizons, both organic and mineral
- perform measurements and a texture test on all mineral horizons
- take a bulk density sample of the mineral soil
- establish the presence of free carbonates in the soil profile
- complete tally sheets satisfactorily and collect a soil sample from each of the soil horizons
- identify the color of each mineral soil horizon using the Munsell color charts

7. Investigate a red pine final harvest retaining trees by performing a harvest field audit.

Potential Elements of the Performance:

- Be able to describe the red pine plantation crop plan from planting to final harvest and explain the reason for thinning
- Properly use mensuration equipment to measure tree heights, diameters, stump heights, residual tree damage, damage to advanced desired regeneration, rutting and commercial waste remaining
- Layout field plots using compass and 30m tape
- Tally the specific infractions and residual trees indentified on a per plot basis, per hectare basis and total stand
- Calculate residual stems per hectare, wasted wood volume using the cubic metre rule
- Calculate the road access percentage of landbase
- Determine the areas of compliance and non-compliance

8. Organize field data into neat, accurate and complete standardized field forms and field maps

Potential Elements of the Performance:

- construct an accurate lake physical features map
- neatly and accurately complete a Lake Summary form, Gill Net Catch Record Forms, Field Collection Records, Scale Sample Envelops

- associated with a lake survey
- neatly and accurately complete field forms associated with the Ontario Stream Assessment Protocol
- perform basic calculations to summarized survey data
- construct a wetland vegetation and features map to be used to complete a wetland evaluation
- neatly and accurately complete habitat description forms associated with the Marsh Monitoring Program Protocol
- neatly and accurately complete field forms for wildlife survey data
- neatly and accurately complete field forms for soils analysis
- perform calculations and make conclusions as to the harvest compliance level.

III. TOPICS:

1. Wetland Habitat Evaluation
2. Lake/Stream Survey
3. Aquatic Invertebrate Collection
4. Wildlife Surveying Techniques
6. Wetland Habitat Evaluation
7. Soils Analysis
8. Forest Harvest Audit

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

1. Manual of Instructions - Aquatic Habitat Inventory Surveys. Fisheries Branch, OMNR (ONLINE)
2. Kurta, Allen. 1995. Mammals of the Great Lakes Region. Fitzhenry and Whiteside. Toronto. 376 p.
3. Newmaster, S.G., A.G. Harris and L.J. Kershaw. 1997. Wetland Plants of Ontario. Lone Pine Publishing. Edmonton, Alberta. 240 p.
4. OMNR. 1993. Ontario Wetland Evaluation System (Northern Manual). NEST Technical Manual TM-001. 171 p (Manual to be provided)
5. Second Year NET Field Camp Manual. 2010 Sault College, Sault Ste. Marie.
6. Hubbs, C. L and K. L. Lager. 2002. Fishes of the Great Lakes Region. University of Michigan. Ann Arbor, Michigan. 267 p.
7. McCulloch, R. D. 2002. The ROM Guide to Amphibians and Reptiles of Ontario. Royal Ontario Museum. McClelland & Stewart. Toronto, Ontario. 168 p.
8. Rezendes, P. 1999. Tracking and the Art of Seeing: How to Read Animal Tracks and Sign. Harper Collins. New York, New York. 325 p.
9. Peterson, R. T., 2002. A Field Guide to the Birds of Eastern and Central North America. Houghton Mifflin Publishing, Boston. 427 p.
10. Soils Analysis (NRT257) course manual & lab manual
Field Manual for describing soils in Ontario

V. EVALUATION PROCESS/GRADING SYSTEM:

The following semester grades will be assigned to students in post-secondary courses:

<u>Grade</u>	<u>Definition</u>
S	Satisfactory
U	Unsatisfactory
W	Student has withdrawn from the course without academic penalty.

The grade received will be based on attendance and participation.

MANDATORY attendance and participation is required for all field activities for a satisfactory (S) grade.

NO ALCOHOL, ILLEGAL DRUGS or FIREARMS ALLOWED IN CAMP
Those students not complying with the Student Code of Conduct will be withdrawn from camp and receive an F grade.

NOTE: This course provides an opportunity for field data collection fundamental to mapping exercises and analysis in both Aquatic Ecosystem Surveys (NET 200) Wetland Management (NET 210), Soils Analysis (NRT 257) and Forest Practices & the Environment (NET 252). Failure to receive a satisfactory (S) grade in NET 2nd Year Camp may seriously hamper success in those courses listed.

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.

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 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.