# SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

## **SAULT STE. MARIE, ONTARIO**



## **COURSE OUTLINE**

COURSE TITLE: Ecosystem Classification

CODE NO.: NRT 256 SEMESTER: 16F

**PROGRAM:** Adventure Recreation and Parks Technician, Fish &

Wildlife Conservation Technician, Forest Conservation Technician, Natural Environment Technician/Technologist

AUTHOR: Robert Routledge

**DATE:** May 2016 **PREVIOUS OUTLINE DATED:** June 2015

APPROVED:

Colin Kirkwood May 2016

DEAN/CHAIR DATE

TOTAL CREDITS: 3

PREREQUISITE(S): none

HOURS/WEEK: 3

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(705) 759-2554, Ext. 2401

#### I. COURSE DESCRIPTION:

This course is a survey of natural wetland and forest ecosystems and associated plant communities found in central Ontario. A range of vascular and non-vascular wetland and terrestrial plants and lichens will be identified with a focus on indicator species. Identification of these organisms combined with hands-on experience in describing soils in the field will be used to classify a range of local ecosystems using current Ontario Ecological Land Classification tools at the Ecosite and Vegetation-Type level.

#### II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1. Identify vascular and non-vascular plants and lichens.

#### Potential Elements of the Performance:

- identify selected flowering, vascular wetland plants (floating-leaved, submergent, emergent and other associated plants)
- identify selected ferns, horsetails, club-mosses, liverworts, mosses, and lichens and describe morphology and associated terminology specific to each taxonomic group
- identify, describe and compare the fruiting structures and vegetative features of selected grasses, sedges and rushes using appropriate terminology and demonstrate effective use of dichotomous keys
- identify, describe and compare the reproductive structures and processes characteristic of ferns, club-mosses, mosses, and lichens
- 2. Identify and digitally photograph taxonomically important features of selected vascular and non-vascular plants and lichens.

#### Potential Elements of the Performance:

- identify a minimum number of selected vascular and non-vascular plants and lichens in the field using available resources
- acquire digital images of a minimum number of taxonomically important identification features for each specimen identified
- present images in a digital herbarium format using PowerPoint or comparable software

# Classify a range of local ecosystems using current Ontario Ecological Land Classification tools at the Ecosite and Vegetation-Type level.

## Potential Elements of the Performance:

- competently apply field skills and techniques specific to the Ecological Land Classification system
- Ecosite
- competently dig a soil pit and use a dutch auger
- describe a mineral soil profile from a soil pit and augered samples by competently delineating soil horizons and reliably collecting soil parameters (e.g., depth, textural class, coarse fragment classification) to enable classification to an ecosite using decision keys in *Ecosites of Ontario*
- describe an organic soil profile (e.g., von Post scale of decomposition) from extracted soil auger samples and identify wetland indicator plants to enable classification to an ecosite using decision keys in *Ecosites of Ontario*
- describe the composition and structure of ecosystem conditions through the use of ecosite fact sheets
- Vegetation-Type
- reliably collect vegetation data to allow classification of Vegetation-Type (V-type) using the central Ontario site classification system
- using the V-type, find the ecosite 'best match' to determine the approximate value of the site(s) to featured Ontario wildlife species

#### III. TOPICS:

- 1. identification of flowering, vascular wetland plants
- 2. identification of ferns, fern allies, mosses, and lichens
- 3. graminoid (sedge, grass, rush) morphology
- 4. ecosystem classification (ecosite, vegetation type)
- 5. soil sampling (soil pit, dutch auger)
- 6. photo-documentation of taxonomically important features of selected plants and lichens

## IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

- Hardhat, visi vest, rubber boots, safety boots, rain gear, clipboard, pencils
- Wetland Plants of Ontario (Newmaster et al.) recommended
- Forest Plants of Central Ontario (Chambers et al.) recommended
- Fern Finder (Hallowell and Hallowell) provided by college on loan
- Ecosites of Ontario (Ontario Ministry of Natural Resources and Forestry) draft copy provided by college on loan

#### V. EVALUATION PROCESS/GRADING SYSTEM:

Identification tests and assignments	52
Field labs and associated assignments	32
Photo collection assignments	16
Overall	100

The following semester grades will be assigned to students:

		Grade Point
Grade	<u>Definition</u>	Equivalent
A+	90 – 100%	4.00
Α	80 – 89%	7.00
В	70 - 79%	3.00
С	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 place subject area.	cement or non-graded
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**:

- To be eligible to write a <u>missed test</u>, the instructor must be contacted via phone
  or email ASAP to discuss options. Students not contacting the instructor prior to
  a missed class or <u>within a day</u> afterwards will get a zero except under
  extenuating circumstances as in the case of a medical excuse.
- <u>Late assignments</u> will only be accepted within 24 hours past the due date and will be penalized 20% except under extenuating circumstances as in the case of a medical excuse.
- 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.
- Field labs are held rain or shine please be prepared! Students will not be allowed to participate in a field lab if the proper safety gear and/or clothing are not worn.

#### 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 <a href="https://my.saultcollege.ca">https://my.saultcollege.ca</a>.

#### 5. <u>Communication:</u>

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 <a href="mailto:studentsupport@saultcollege.ca">studentsupport@saultcollege.ca</a> 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. <u>Academic Dishonesty</u>:

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.