

I. COURSE DESCRIPTION:

Ecosystem classification is a survey of natural aquatic and terrestrial ecosystems and associated plant communities found in central Ontario. With assistance from a Learning Specialist, the CICE student(s) will identify a wide variety of plants. Emphasis will be placed on using plants for the classification of forest and wetland ecosystems using ecological classification systems designed for use in the local area.

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 most selected flowering, vascular wetland plants (floating-leaved, submergent, emergent and other associated plants)
- identify most 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 basic knowledge 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
- Create power points of images in a digital herbarium format using (create power points and hand in to professor)

3. **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 most components of 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 most aspects of 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
<hr/> Overall	<hr/> 100

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:

- To be eligible to write a missed test, the instructor must be contacted via phone or email ASAP to discuss options. Students not contacting the instructor prior to a missed class or within a day afterwards will get a zero except under extenuating circumstances as in the case of a medical excuse.
- Late assignments 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.

Addendum:

Further modifications may be required as needed as the semester progresses based on individual student(s) abilities and must be discussed with and agreed upon by the instructor.

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.

CICE Modifications:**Preparation and Participation**

1. A Learning Specialist will attend class with the student(s) to assist with inclusion in the class and to take notes.
2. Students will receive support in and outside of the classroom (i.e. tutoring, assistance with homework and assignments, preparation for exams, tests and quizzes.)
3. Study notes will be geared to test content and style which will match with modified learning outcomes.
4. Although the Learning Specialist may not attend all classes with the student(s), support will always be available. When the Learning Specialist does attend classes he/she will remain as inconspicuous as possible.

A. Tests may be modified in the following ways:

1. Tests, which require essay answers, may be modified to short answers.
2. Short answer questions may be changed to multiple choice or the question may be simplified so the answer will reflect a basic understanding.
3. Tests, which use fill in the blank format, may be modified to include a few choices for each question, or a list of choices for all questions. This will allow the student to match or use visual clues.
4. Tests in the T/F or multiple choice format may be modified by rewording or clarifying statements into layman's or simplified terms. Multiple choice questions may have a reduced number of choices.

B. Tests will be written in CICE office with assistance from a Learning Specialist.***The Learning Specialist may:***

1. Read the test question to the student.
2. Paraphrase the test question without revealing any key words or definitions.
3. Transcribe the student's verbal answer.
4. Test length may be reduced and time allowed to complete test may be increased.

C. Assignments may be modified in the following ways:

1. Assignments may be modified by reducing the amount of information required while maintaining general concepts.
2. Some assignments may be eliminated depending on the number of assignments required in the particular course.

The Learning Specialist may:

1. Use a question/answer format instead of essay/research format
2. Propose a reduction in the number of references required for an assignment
3. Assist with groups to ensure that student comprehends his/her role within the group
4. Require an extension on due dates due to the fact that some students may require additional time to process information
5. Formally summarize articles and assigned readings to isolate main points for the student
6. Use questioning techniques and paraphrasing to assist in student comprehension of an assignment

D. Evaluation:

Is reflective of modified learning outcomes.