

**SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY
SAULT STE. MARIE, ONTARIO**



COURSE OUTLINE

COURSE TITLE: Applied Photo Interpretation

CODE NO. : NRT217

SEMESTER: 4

PROGRAM: Forest Conservation Technician

AUTHOR: Gerard Lavoie

DATE: January, 2017

PREVIOUS OUTLINE DATED: Jan., 2016

APPROVED: Sherri Smith

Jan., 2017

Chair

Date

TOTAL CREDITS: 3

PREREQUISITE(S): N/A

HOURS/WEEK: 3

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I. COURSE DESCRIPTION:

The objective of this course is to provide the student with skills relating to aerial photo interpretation. This will consist of tree species identification, landforms identification and ecosite land classification. The delineation and identification of forested and non-forested polygons, as it relates to Ecological Land Classification applicable to current enhanced Forest Resource Inventory (eFRI) specifications, will be emphasized. The student will further enhance his/her knowledge and skills in identifying tree species, keying out forested stands, identifying site types through glacial landform recognition and the application of aerial photos for data collection.

II. LEARNING OUTCOMES AND ELEMENTS OF PERFORMANCE:

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

1. Understand the process of aerial photo interpretation.Potential Elements of the Performance:

- Complete a stereo vision test and depth perception test.
- Show how photo interpretation is important to the management of forest resources.
- Perform hardcopy aerial photo setup and preparation
- Familiarize students with eFRI photo interpretation specifications.

2. Delineate and Identify Forested and Non Forested polygons.Potential Elements of the Performance:

- Identify, delineate and record attributes for wetland and non forested polygons.
- Identify and delineate forested polygons, differentiated by eFRI specifications (height, age, soil depth, soil type, vertical/horizontal structure, disturbance, site prep, site class...).
- Identify various non forested wetland features.
- Identify and differentiate between non-forested anthropogenic features.

3. Recognize and identify Boreal and Great Lakes St. Lawrence Forest tree species on aerial photos/digital imagery.Potential Elements of the Performance:

- Conifer Identification: **Sb, Pj, Cw, Pw, Pr, Sw, La, Bf, and He.**
- Boreal hardwoods identification: **Pt, Pb, Bw, and Ab**
- GLSL hardwoods identification: **Mh, Mr, Or, By, Aw, Bd, and Ew.**
- Identify species, crown vigor, and crown spacing & shrub cover using large scale aerial photographs.

4. Identify multiple landform types on aerial photos and digital imagery.

Potential Elements of the Performance:

- Identify basic landforms and relate their properties and attributes to Ecosite Land Classification.
- Utilize supplemental information supplied by the Northern Ontario Engineering Geological Terrain Survey (NOEGTS).
- Identify a variety of ecosites on an aerial photograph using the OMNR Ecosite Land Classification photo interpretation decision node keys.

5. Determine tree heights and crown closure on an aerial photograph.

Potential Elements of the Performance:

- Determine canopy closure, vertical and horizontal structure using digital imagery.
- Determine and estimate tree heights based on field calibration plot information comparison.

6. Identify delineation boundaries of forested stands using OMNR eFRI and ELC specifications.

Potential Elements of the Performance:

- Differentiate conifer, hardwood and mixed wood stand types.
- Recognize single and multi tiered stands.
- Identify plantations and natural regeneration
- Identify wetland species (conifer and deciduous).
- Identify upland species (conifer and deciduous).

III. TOPICS:

1. Identify forested and non-forested polygons.
2. Identification of conifers and hardwoods in the Boreal forest region and the Great Lakes St. Lawrence forest region.
3. Determination of ecosites from an aerial photograph. OMNR FRI specifications and the Ecological Land Classification System.
4. Recognize and identify common physical landscape features on aerial photos (geomorphology).
5. Delineate forested and non forested ecosites and identify the FRI working group.

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

1. Passive polarized 3D glasses (provided).
2. Active 3D shutter glasses (provided).
3. Pocket stereoscope
4. Staedtler grease pencils 108-9 black, 108-2 red, 108- 3 blue
5. Photo interpretation of ecosites in North western Ontario (available at campus shop)

V. EVALUATION PROCESS/GRADING SYSTEM:

There are 10 assignments & labs making up 50% of the final grade; 2 written tests, worth 25% each, make up 50% of the final grade. Regular attendance is absolutely necessary in order to succeed in this course as there is an abundant amount of learning material to cover.

One of the following semester grades will be assigned to each student:

Grade	Definition	Grade Point Equivalent
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	<50%	0.00 (Fail)

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.

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. *<Optional: It is the departmental policy that once the classroom door has been closed, the learning process has begun. Late arrivers will not be granted admission to the room.*

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.

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 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.

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>.

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.

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.

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 counselor 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.

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.

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.

VII. COURSE OUTLINE ADDENDUM:

The provisions contained in the addendum are located on the portal form part of this course outline.