



**COURSE DESCRIPTION:**

- I. Effective forest management for environmental assessment as well as forest harvest planning is based on accurate field inventories of the composition of the forest. This course examines methods of obtaining such information, through hands-on training. Tree and forest heights, diameters and ages will be covered. Inventory methodologies including fixed area plot measurement and point sampling will be carried out in the field. Compilation of forest inventory data will round out the course.

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

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

1. Carry out accurate field measurements and inventories of forest trees (65%)

Potential Elements of the Performance:

- Explain the concepts of timber cruising, forest inventories and growth and yield.
- Carry out prism, fixed area and strip cruises complete with the associated compilations
- Understand how to design a timber inventory
- Demonstrate the ability to use electronic field instruments and data recorders

2. Properly compile, summarize and report inventory results (15%)

Potential Elements of the Performance:

- Compile complete, legible cruise tallies
- Summarize results using appropriate calculations
- Demonstrate the use of computerized tally sheets

3. Demonstrate knowledge of the Forest Resource Inventory System in Ontario. (5%)

Potential Elements of the Performance:

- Record data using the FRI Format.
- Explain the FRI system.

4. Calculate the number of trees per hectare, basal area per hectare and timber volume per hectare (15%)

Potential Elements of the Performance:

- Understand the concepts of stems per hectare, basal area per hectare and tree volume per hectare.
- Apply mathematical formulae to calculate trees per hectare, basal area per hectare and volume per hectare.

**III. TOPICS:**

1. Tree height and diameter measurement of tree growth and age
2. Types of timber sampling techniques (strip cruising, fixed area plots, point sampling)
3. Timber cruise compilations
4. Laying out a forest inventory
5. Electronic inventory equipment and data recorders
6. Forest resource inventory ground plots

**IV. REQUIRED RESOURCES/TEXTS/MATERIALS:**

- Compass with mirror and declination set used in Outdoor Navigation
- Calculator
- Hard hat, steel toed boots, vest, pencils and a clipboard.

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

- |                                    |     |
|------------------------------------|-----|
| • Mid term tests                   | 15% |
| • Field exercises and compilations | 65% |
| • Final Exam                       | 20% |

NOTE: Up to 20% may be deducted (5% per instance) for documented mishandling or failure to return equipment

NOTE: All assignments must be submitted at the start of class on the due date. There will be a 10% per day penalty for late assignments. Late assignments will not be accepted after that assignment has been marked and returned to the class.

NOTE: Attendance and active participation in each lab is mandatory in order to receive a grade for that lab. Many of the labs are field related and the majority of the learning is done in the field.

The following semester grades will be assigned to students in postsecondary courses:

<b>Grade</b>	<b><u>Definition</u></b>	<b>Grade Point Equivalent</b>
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.	

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

**VII. COURSE OUTLINE ADDENDUM:**

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