DOC.# 345

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

COURSE TITLE: FOREST MENSURATION II

CODE NO.: FOR239-4 SEMESTER: THREE

PROGRAM: FORESTRY TECHNICIAN

AUTHOR: JERRY ZUCHLINSKI

DATE: JUNE 1996 PREVIOUS OUTLINE DATED: JULY 1992

APPROVED: _____ June 14, 1996
DEAN, SCHOOL OF SCIENCES & NATURAL RESOURCES DATE

FOREST MENSURATION II — **FOR239-4**

COURSE NAME — **COURSE NUMBER**

TOTAL CREDIT HOURS: 64

PREREQUISITE(S): FOR119-4 Forest Mensuration I

I. PHILOSOPHY/GOALS:

This course includes log and wood identification, an introduction to tree grading. It reviews tree measurement instruments and techniques and then concentrates on forest resource sampling, which also has numerous non-timber applications. It covers timber cruising field work and compilations; as well as introducing hand held microcomputer and global positioning systems technologies. The course also examines scaling procedures and volume calculation.

II. STUDENT PERFORMANCE OBJECTIVES:

Upon successful completion of this course the student will, to a cumulative minimum 60% accuracy:

1. Be able to identify 22 species of logs.
2. Be able to identify basic tree defects and separate standing trees into 3 grades.
3. Be able to use stand and stock tables.
4. Be able to calculate data from a wedge prism cruise utilizing Normal Yield Tables.
5. Be able to calculate log and tree volumes using geometric formulae.
6. Be able to conduct a strip cruise to determine various forest values.
7. Be able to carry out scaling procedures under the log rule and stacked wood system.
8. Use hand held computer.
9. Use global positioning instrument.

FOREST MENSURATION II — COURSE NAME

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III. TOPICS TO BE COVERED:

	NO. OF WEEKS
Introduction Tree Height and Diameter Review	1
Unit 1 - Log Identification - features used for identification - wood planes - tree growth - hardwood log identification - softwood log identification - miscellaneous species log identification	2
Unit 2 - Scaling - use of tables - use of scaling stick - stack wood system - log rule	2
Unit 3 - Forest Resource Sampling - types of sampling units - plot shape - plot size - field layout - volume tables - types of volume - timber cruise compilations - sample intensity - normal yield tables	3.5
Unit 4 - Hand Held Microcomputers - introduction - microcomputer accessories - general notes - applications - programme inventory list	1
Unit 5 - Global Positioning Systems - what is GPS? - how GPS works	1

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Unit 6 - Tree Grading and Defects 1

- problems in quantifying tree quality
- guidelines for choosing trees for wildlife
- how the grading system works
- sample spreadsheet and instructions
- sample tally and compilation

Unit 7 - The Measurement of Tree Volume 1

- introduction
- mathematical formulas

IV. EVALUATION METHODS:

Practical tests and Assignments	- 80%
Written Tests	- 20%
	100%

V. SPECIAL NOTES:

Students with special needs (e.g. physical limitations, visual impairments, hearing impairments, learning disabilities) are encouraged to discuss required accommodations confidentially with the instructor.

Your instructor reserves the right to modify the course as he/she deems necessary to meet the needs of students.