

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



Sault College

COURSE OUTLINE

COURSE TITLE: Fall Camp – Forestry

CODE NO. : NRT306 **SEMESTER:** Five

PROGRAM: Integrated Resource Management Technology

AUTHOR: Erwin Goertz/Mark Harvey

DATE: June **PREVIOUS OUTLINE DATED:** NEW
2000

APPROVED:

| | | |
|--|-------------|-------------|
| | _____ | _____ |
| | DEAN | DATE |

TOTAL CREDITS: 2

PREREQUISITE(S): None

LENGTH OF COURSE: 1 week **TOTAL CREDIT HOURS:** 32

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For additional information, please contact Joe Fruchter, Dean
School of Business, Hospitality and Natural Resources
(705) 759-2554, Ext.688

Course Name

Code No.**I. COURSE DESCRIPTION:**

Students will carry out practical exercises and perfect outdoor skills as they relate to a forest technician. Exercises are drawn from the Applied Resource Calculations, Trees & Shrubs, Field Orientation, Forest Mensuration, Photogrammetry and Timber Cruising courses. Students will utilize aerial photographs, NTS and OBM maps as well as reach sites through the use of various modes of transportation (walking, ATV, canoe). Timber cruising, aerial photo interpretation, using a Vertical Sketchmaster, compassing and chaining, using a GPS (Global Positioning System), using a DAP electronic data recorder, evaluating a thinning trial and viewing research plots all form part of the field camp activities.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1. Demonstrate leadership in field environment.

Potential Elements of the Performance:

- Assist field camp staff in logistics and planning of each day's activities
- Assist staff in maintenance and repair of equipment
- Discuss daily activities with students and assist in clarifying instructions or over-coming problems
- Evaluate the contribution of each team member as they participate in field activities
- Evaluate the effectiveness of each exercise and suggest improvements for subsequent classes

2. Navigate accurately and quickly through a forested landscape using mechanical and electronic navigation aids.

Potential Elements of the Performance:

- Properly use a magnetic hand compass with declination set
- Properly use a GPS unit to locate field positions, mark locations and enter field coordinates
- Obtain directions from maps and aerial photographs using a navigational protractor and/or a compass.

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3. Compare the effects of thinning a plantation at various spacing factors.

Potential Elements of the Performance:

- Measure tree numbers, heights and diameters.
- Establish plots of a certain size and calculate # of trees/ha

4. Operate an ATV.

Potential Elements of the Performance:

- Run through a safety check, including checking of fluid levels.
- Successfully complete an obstacle run.

5. Carry out an FRI timber cruise

Potential Elements of the Performance:

- Delineate aerial photographs by forest stands.
- Identify tree species on aerial photographs.
- Conduct field work using a prism.
- Compile field data and summarize the forest stand description.
- Use a digital planimeter..
- Accurately use a Vertical Sketchmaster to transfer forest stand boundaries from aerial photographs to a basemap.

6. Carry out an operational timber cruise.

Potential Elements of the Performance:

- Establish field plots on aerial photographs with directions and distances to each plot.
- Accurately compass and chain to each plot
- Demonstrate ability to be organized and efficient when collecting forest inventory data.
- Accurately determine tree heights, diameters and product quality class for all trees within the fixed area plots.
- Demonstrate ability to collect data and record on data sheets neatly and accurately.
- Compile the field data using Microsoft Excel software and produce stand and stock tables.
- Demonstrate the ability to conduct and process a forest inventory using a DAP portable data recorder.

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7. Carry out operational silvicultural activities.

Potential Elements of the Performance:

- Plant forest tree seedlings according to specified standards.
- Assess tree planting according to a specified format.
- Collect and process data from a tree plant operation calculating quality and payment.
- Assess a white pine shelterwood seed cut for spacing.
- Accurately mark white pine trees for removal and understand the underlying principles when selecting trees to be harvested.

8. Be able to follow instructions and work as part of a cooperative, productive team in the forest.

Potential Elements of the Performance:

- Demonstrate ability to organize and complete work in an efficient and timely manner.
- Demonstrate the ability to work as part of a team.
- Conduct all work in a manner that respects the safety of other crew members.
- Wear all safety equipment (hardhat, safety boots) as required.
- Recognize potential hazards while working in the forest and the steps that can be taken to minimize risks to crew members

III. TOPICS:

1. Tour of Canadian Forest Service Jack Pine productivity study.
2. Visit a White Pine shelterwood area.
3. Using a GPS unit.
4. Maintenance and operation of an ATV.
5. Conducting an FRI timber cruise.
6. Conducting an operational timber cruise.
7. Using computer software to compile data collected in the field.
8. Using a DAP portable data recorder to collect field data and produce final results.
9. White Pine tree marking.
10. Tree planting.
11. Tree planting quality assessments.

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IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

- Fall Camp 2nd Yr Forestry NRT 252 course manual
- Navigational protractor
- Compass
- Clipboard
- Pencils/pen/paper
- China marker or grease pencil
- Pocket stereoscopes
- Metric scale
- Dot grid
- Calculator
- Hardhat
- Safety boots (2 pair recommended – rubber and leather)
- Rain gear, small day pack, pillow case
- Sleeping bag
- Extra clothing and personal items
- Pocket knife, flashlight, canteen (water bottle)
- Wrist watch
- Cup or coffee mug
- Prescription medicine if required

V. EVALUATION PROCESS/GRADING SYSTEM:

The following semester grades will be assigned to students in this course:

| <u>Grade</u> | <u>Definition</u> |
|--------------|---|
| S | Satisfactory |
| U | Unsatisfactory |
| R (Repeat) | 59% or below |
| CR (Credit) | Credit for diploma requirements has been awarded. |
| X | A temporary grade. This is used in limited situations with extenuating circumstances giving a student additional time to complete the requirements for a course (see <i>Policies & Procedures Manual – Deferred Grades and Make-up</i>). |
| NR | Grade not reported to Registrar's office. This is used to facilitate transcript preparation when, for extenuating circumstances, it has been impossible for the faculty member to report grades. |

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Students must satisfactorily complete **ALL** of the following activities; GPS exercise, red pine thinning trial, ATV proficiency, FRI timber cruise, operational timber cruise, White Pine tree marking, DAP exercise, and tree planting in order to obtain a satisfactory (S) grade in this course.

VI. SPECIAL NOTES:

Special Needs:

If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your instructor and/or the Special Needs office. Visit Room E1204 or call Extension 493, 717, or 491 so that support services can be arranged for you.

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.

The Professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

Substitute course information is available in the Registrar's office.

VII. PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced credit in the course should consult the instructor.

VIII. DIRECT CREDIT TRANSFERS:

Students who wish to apply for direct credit transfer (advanced standing) should obtain a direct credit transfer form from the Dean's secretary. Students will be required to provide a transcript and course outline related to the course in question.