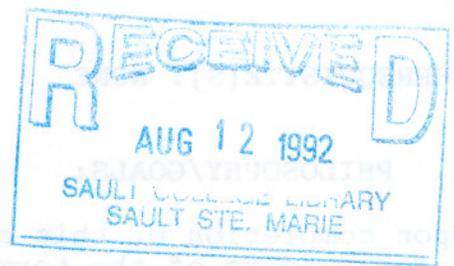


SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY
 SAULT STE. MARIE, ONTARIO



COURSE OUTLINE

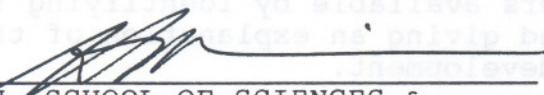
COURSE TITLE: FOREST UTILIZATION (HARVESTING)

CODE NO.: FOR110-4 **SEMESTER:** III

PROGRAM: FORESTRY TECHNICIAN

AUTHOR: T.R. WHITE

DATE: JULY 1992 **PREVIOUS OUTLINE DATED:** FEB. 1985

APPROVED:  **DATE** July 16/92

DEAN, SCHOOL OF SCIENCES & NATURAL RESOURCES

FOREST UTILIZATION (HARVESTING)

FOR 110-4

COURSE NAME

COURSE NUMBER

TOTAL CREDIT HOURS: 64

PREREQUISITE(S): NONE

I. PHILOSOPHY/GOALS:

Upon completion of this course the students will have a comprehensive understanding of the terminology and the forestry equipment involved in the different systems of harvesting timber in Eastern Canada. An understanding of what equipment is available and how it functions will give the students an appreciation of , "Is the right logging system being used to fit the harvesting description?"

II. STUDENT PERFORMANCE OBJECTIVES:

Upon successful completion of this course the student will be able to:

1. Explain how a large tree can be felled manually with a chain saw in a safe manner while avoiding any mechanical damage.
2. List and explain all the methods of skidding and forwarding.
3. Compare the basic parts and functions of any tracked or wheeled machine involved in the minor transportation of all forest products.
4. Describe the feller bunchers available by identifying the different styles of felling heads and giving an explanation of the evolution that took place in their development.
5. Identify the more common harvester type machines being used in Ontario.
6. Realize the importance of delimiting within the harvesting system and recognize the methods and machinery available to perform this function beside the chain saw.
7. Illustrate a number of different styles of slashers and where they fit into the harvesting system.
8. Identify the wide variety of loaders operating in the forest industry.

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II. STUDENT PERFORMANCE OBJECTIVES - CONT'D

9. List and describe the different logging systems used in Ontario.
10. Explain how the different pieces of equipment can link together to complete a logging system.
11. Identify the different styles of trucks, trucks and trailers, and tractors and semi-trailers involved in the major transportation of timber products and explain why such a variety get involved.
12. Identify the different styles of railway cars that get involved in the major transportation of timber products.

III. TOPICS TO BE COVERED:

1. Manual felling techniques used in the felling of large trees with a chain saw.
2. Minor Transportation
 - a) Skidding by
 - i) hand
 - ii) animal
 - iii) tractor
 - iv) tracked machine
 - v) wheeled skidder
 - vi) yarder
 - vii) grapple skidder
 - viii) clam bunk skidder
 - b) Forwarding
 - c) Feller Bunchers
 - i) shear head
 - ii) chainsaw head
 - iii) auger head
 - iv) combined chainsaw/shear head
 - v) circular disc head
 - vi) cone saw head
 - vii) twin disc head

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- d) Harvesters
 - e) Full Tree Feller Forwarders
 - f) Delimbers
 - i) multi stem
 - ii) stroke delimiters
 - g) Slashers and/or Processors
3. Logging systems
- a) Shortwood
 - b) Tree Length
 - c) Full Tree
4. Methods of Loading
- a) Hand
 - b) Jammer and/or A frame
 - c) Power jammer
 - d) Crane
 - e) Pallet
 - f) Hydraulic loader
 - g) Self loader
 - h) Front-end loader
5. Major Transportation
- a) Trucks
 - b) Railway cars

IV. EVALUATION METHODS:

Two major tests:	#1 after "Logging Systems"	± 75%
	#2 end of the semester	± 25%

		100%

Grades:

A+ = ± 90% A = 80+% B = 70+% C+ 60+% R = <60%

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**V. ADDITIONAL RESOURCE MATERIALS AVAILABLE IN THE COLLEGE LIBRARY
BOOK SECTION:**

Periodical Section

Magazines:

Canadian Forest Industries, Forest Industries, Logging and Sawmilling Journal and Forest Chronicle are available for reference reading.

Audiovisual Section

There will be review material in the library "on reserve" two to three weeks prior to the two major tests in the form of slides, slides on VHS video, and VHS video.

VIII. SPECIAL NOTES:

The presentation of this course uses slides and diagrammed handouts very extensively. Therefore, grades are usually in direct proportion to attendance.

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 all the time frames and to adjust to any rapid change within the forest industry.

