

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ON



COURSE OUTLINE

COURSE TITLE: INTEGRATED RESOURCE MANAGEMENT

CODE NO.: FOR220 **SEMESTER:** 4

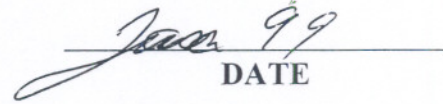
PROGRAMS: FISH AND WILDLIFE, FORESTRY, PARKS
AND OUTDOOR RECREATION TECHNICIAN

AUTHOR: BOB CURRELL

DATE: JANUARY 1999 **PREVIOUS OUTLINE DATED:** JANUARY 1997

APPROVED:


DEAN


DATE

TOTAL CREDITS: 4

PREREQUISITE(S): None

LENGTH OF COURSE: 3 HOURS/WEEK

TOTAL CREDIT HOURS: 48

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Natural Resources, (705) 759-2554, Ext. 688.*

INTEGRATED RESOURCE MANAGEMENT

FOR220

COURSE NAME-----
CODE NO.**I. COURSE DESCRIPTION:**

This course will explain the principles and practices involved in carrying out Sustainable Forestry.

The full range of values provided by forests will be described and methods of protecting or enhancing those values while carrying out forest management will be provided.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1. Explain the meaning of sustainable forestry and describe the principles, which must be followed if it is to be carried out.

Potential Elements of the Performance:

- distinguish between a forest use and a forest value
- list and discuss at least 10 uses and values provided by forests
- describe the 4 types of diversity found in forested landscapes
- explain the reasons why biodiversity is important
- discuss ways that biodiversity can be maintained while carrying out forest management
- outline 5 principles of sustainable forestry as it is applied to Ontario forests

This learning outcome will constitute 10% of the course's grade.

2. Discuss the major environmental problems, which are threatening the world and suggest ways to minimize these problems.

Potential Elements of the Performance:

- describe the concept of Sustainable Development
- list six major global environmental problems and describe the ways these problems affecting the health of the world ecosystem
- propose ways that many of the earth's environmental problems can be corrected or their effects minimized
- explain how human development is affecting the world's climate
- indicate how climate change may affect Canadian resource management

This learning outcome will constitute 10% of the course's grade.

3. Complete an FEC site classification for any forested site in North-western Ontario

Potential Elements of the Performance

- describe why FEC site classification systems were developed
- use vegetation and soil keys in order to correctly determine Vegetation types and Soil types
- list and describe the types of information which is provided for each V type and S type in North-western Ontario
- explain how an Ecosite is identified using this system and describe ecosite interpretations being developed

This learning outcome will constitute 10% of the course's grade.

4. Discuss the value of Old-Growth forests and describe their role in protecting biodiversity

- describe an old growth forest in terms of age and disturbance
- list and explain at least 4 values provided by old growth forest ecosystems
- indicate the usefulness of snags and downed dead woody debris found in the forest

This learning outcome will constitute 10% of the course's grade.

5. Explain the status of Co-management in Ontario

- distinguish between state management, self-management, and co-management
- list the criteria upon which successful co-management agreements are based
- explain why aboriginal people in Ontario have special hunting and fishing rights

This learning outcome will constitute 5% of the course's grade.

6. Explain how timber management practices can be modified to enhance wildlife management objectives

- explain the habitat requirements of generalist and specialist species of wildlife
- describe and compare the effects that timber harvesting and natural disturbances such as wildfire can have on wildlife
- explain the concepts of Featured Species management and Endangered Species management

- describe at least 5 ways that timber management operations can be modified to encourage diversity of habitats
- describe the habitat areas that moose require throughout the year
- explain how timber management operations should be modified to protect moose habitat
- map a proposed timber management compartment showing how cut blocks will be laid out in order to provide moose habitat protection

This learning outcome will constitute 25% of the course's grade.

7. Describe the concerns of non-consumptive forest users regarding forest management and discuss ways that those concerns can be addressed

Potential Elements of the Performance

- discuss concerns that different stakeholder groups have about forest development
- describe how to modify timber management operations to protect tourism values
- list the types of provincial and national parks and describe the purpose of each type
- discuss the importance of wilderness
- summarize the Lands For Life initiative and debate the process and outcome of this planning exercise

This learning outcome will constitute 10% of the course's grade.

8. Explain how forest values are identified and protected when forest management planning and forest operations take place

Potential Elements of the Performance

- summarize the forest management process
- explain what Areas of Concern and Forest Reserves denote and describe the detailed planning that is involved in their establishment
- describe the Ministry of Natural Resources Work Permit system and distinguish between compliance monitoring and effectiveness monitoring

This learning outcome will constitute 10% of the course's grade.

9. Discuss current issues in natural resources management

Potential Elements of the Performance

- compare the different points of view of the various stakeholder groups in the Temegami area
- discuss the issues associated with management of the Algoma highlands

This learning outcome will constitute 10% of the course's grade.

III. TOPICS:

- 1) Sustainable Forestry – Uses and values provided by forests and principles to follow when practicing sustainable forestry are described. Diversity and its importance in forest ecosystems is explained
- 2) Sustainable Development – Human caused environmental problems of global significance are introduced and ways to minimize these problems are suggested. The effects of climate change on Canadian resource management will be discussed
- 3) Forest Ecosystem Classification – The Northwestern Ontario FEC system will be presented and instruction will be provided on using soil and vegetation keys to provide site descriptions. The concept of Ecosites will be introduced.

TEST 1

- 4) Old Growth Forests – Criteria by which to identify old growth forests will be presented and the values of these ecosystems will be explained
- 5) Co-management of Natural Resources – Co-operative management, self-management and state management will be introduced. Native issues in resource management will be introduced
- 6) Integration of Timber and Wildlife Management – The habitat needs of selected game and non-game species will be described and the effects that timber management can have on these habitats will be detailed. The concepts of Features Species and Endangered Species management will be introduced.
- 7) Integrating Moose and Timber Management – Moose habitat needs will be explained and the effects that timber management can have on these habitats will be presented. Guidelines intended to ensure the provision of moose habitat while timber management operations are carried out will be explained.

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COURSE NAME-----
CODE NO.**TEST 2**

- 8) Non Consumptive Forest Uses – Forest stakeholder groups and the ways to their concerns about forest development will be presented. Purposes and classes of provincial and national parks will be described. The Lands For Life planning exercise will be introduced and various points of view regarding the outcome of the process will be presented
- 9) Protecting Forest Values – The Forest Management planning process in Ontario will be described with emphasis placed on identifying and protecting non-timber values while carrying out forestry operations. The work permit system of regulating forest development will be explained.
- 10) Land Use Case Studies – The issue of land-use in various locations including Temagami and the Algoma Highlands will be discussed.

TEST 3**IV. REQUIRED RESOURCES/TEXTS/MATERIALS:**

Integrated Resource Management Study Guide 1998 edition

V. EVALUATION PROCESS/GRADING SYSTEM

40% - Assignments

60% - Tests, tests of equal value will occur after topics 3, 7 and 10

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

<u>Grade</u>	<u>Definition</u>	<u>Grade Point Equivalent</u>
A+	90 – 100%	4.00
A	80 – 89%	3.75
B	70 – 79%	3.00
C	60 – 69%	2.00
R (Repeat)	59% or below	0.00
CR (Credit)	Credit for diploma requirements has been awarded.	
S	Satisfactory achievement in field placement or non-graded subject areas.	
X	A temporary grade – limited to situations	

with extenuating circumstances giving a student additional time to complete the requirements for a course (see Policies & Procedures Manual - Deferred Grades and Make-up).

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.

VI. SPECIAL NOTES:

A day long tour of maple syrup making operations on St. Josephs Island is planned for late March. A short quiz will follow this trip.

- Students intending to miss tests must contact the instructor before the test time with an acceptable reason for test rescheduling. Assignments will be given out during class and students not in attendance at that time will not receive the assignment.

Special Needs

- If you are a student with special needs (eg. physical limitations, visual impairments, hearing impairments, learning disabilities), you are encouraged to discuss required accommodations with the instructor and/or contact the Special Needs Office, Room E1204, Ext. 493, 717, 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 post-secondary institutions.
- Course Modification
The instructor reserves the right to modify the course as deemed necessary to meet the needs of students.
- Disclaimer for Meeting the Needs of the Learners
- Substitute Course Information is available at the Registrar's Office.
- Any Other Special Notes appropriate to your course.

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COURSE NAME-----
CODE NO.**VII. PRIOR LEARNING ASSESSMENT**

Students who wish to apply for advanced credit in the course should consult the instructor. Credit for prior learning will be given upon successful completion of the following: