

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

COURSE TITLE: FOREST BIOLOGY

CODE NO.: BIO 111-3

SEMESTER: ONE

PROGRAM: PULP & PAPER

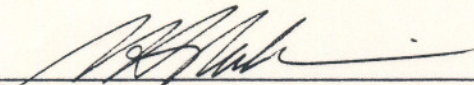
AUTHORS: A. SUGDEN, SUSAN BARBER

DATE: SEPTEMBER 1990

PREVIOUS OUTLINE DATED: SEPT. 1986

APPROVED:

DEAN



DATE

Aug 21/90

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TOTAL CREDIT HOURS: 48

PREREQUISITES: NONE

**I. PHILOSOPHY/GOALS:**

Forest Biology introduces the student to underlying biological and ecological concepts that have relevance to the Pulp & Paper Engineering Technology program. The position of the forest in the overall ecological system and its connection with the pulp and paper industry are examined. Plant cells, tissues and organs are studied and the nature of tree growth is examined. A variety of skills are learned including: basic use of the microscope, preparation of wet mounts, observation and sketching of specimens, basic wood identification and preparation of laboratory reports.

**II. STUDENT PERFORMANCE OBJECTIVES:**

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

1. Demonstrate the laboratory skills: microscope operation, specimen preparation, and documentation.
2. Utilize observational skills and apply the scientific method.
3. Evaluate the relationship between the forest and the ecological system.
4. Identify and describe the macro and micro components of wood.

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DATE

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III. TOPICS TO BE COVERED:

<u>WEEK</u>	<u>TOPIC</u>
1	Introductions and Expectations an introduction to Science, Biology & Ecology Scientific Nomenclature
2	Lab #1: The Forest
3	Photosynthesis Forest Production
4	Nutrient Cycling Populations
5	Test #1
6	Lab #2: The Microscope and Plant Cells
7	Woody Plant Structure Lab #3: Woody Plant External Features
8	Growth & Development of Woody Plants: Lecture
9	Test #2 Lab #4: Comparison of Hardwoods and Softwoods
10	Lab #4 - continued
11	Wood Identification Lab #5: Wood Identification
12	Wood and Pulp
13	Pulp & Paper & Sustainable Development
14	Review/Overlap Week
15	Test #3 Lab Test
16	Take up Final - Assign Grades

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**IV. EVALUATION METHODS:**

The grading system is as follows:

A+ = 90-100%    A = 80-90%    B = 70-80%    C = 60-70%  
R = less than 60%, course must be repeated

LABORATORY ASSIGNMENTS:    LAB #1 ----- /20  
                                  LAB #2 ----- /20  
                                  LAB #3 ----- /20  
                                  LAB #4 ----- /20  
                                  LAB #5 ----- /20  
                                  LAB TEST ----- /20  
  
                                  TOTAL OUT OF \_\_\_\_\_ /120

IN CLASS TESTS:               TEST #1 ----- /40  
                                  MIDTERM TEST #2 ----- /40  
                                  FINAL TEST #3 ----- /40  
  
                                  TOTAL OUT OF \_\_\_\_\_ /120

FINAL GRADE:                 LAB \_\_\_\_\_ /120 = 50%  
                                  TESTS \_\_\_\_\_ /120 = 50%

**V. REQUIRED STUDENT RESOURCES:**

BIO111 Mini-Text (in Bookstore)

The following are recommended; not required.

Core, H.A., Cote, W.A., & Day, A.C., Wood Structure and Identification, 2nd Edition, University Press, Syracuse, N.Y., 1979.

Arms, K. & Camp, P.S., Biology, 2nd Edition, Saunders, Toronto, 1982.

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

Titles will be provided during the semester.

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**VII. SPECIAL NOTES**

Students will be required to complete case problems and readings as assigned.

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.



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