

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

COURSE OUTLINE

COURSE TITLE: PULP AND PAPER INDUSTRY OVERVIEW
CODE NO.: PPE 150-2 **SEMESTER:**
PROGRAM: PULP AND PAPERMAKING OPERATIONS/PULP AND PAPER ENG.
AUTHOR: ANNE TUNNEY
DATE: AUGUST 1990 **PREVIOUS OUTLINE DATED:** AUG. 1989

APPROVED:  **DEAN** **DATE /**

P & P INDUSTRY OVERVIEW

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TOTAL CREDIT HOURS: 32

PREREQUISITE(S): None

I. PHILOSOPHY/GOALS:

This is a survey course designed to give the beginning student a broad understanding of the scope of the Ontario, Canadian and global pulp and paper industry. The size, socio-economic value and product range of the industry will be covered.

The basic technologies used in product manufacture will be covered. The economics of the industry, including the integration with the sawmilling industry will be dealt with. Problems facing the industry, some possible solutions and the likely shape of the future industry will be discussed.

II. STUDENT PERFORMANCE OBJECTIVES:

Upon successful completion of this course the student will:

1. Demonstrate a knowledge of the size, importance and range of products made in the Ontario pulp and paper industry.
2. Demonstrate a working knowledge of the size, importance and location of pulp and paper production facilities in the rest of Canada.
3. To be able to identify the important areas of the world that compete with Canadian markets for pulp and paper.
4. To be able to differentiate between the basic technologies used in the manufacture of pulp and paper.
5. To demonstrate a knowledge of the different factors that relate to the economics of the manufacture and sale of pulp and paper.
6. To explain the environmental impact of the pulp and paper industry.
7. To be able to offer possible viable solutions to selected problems facing the pulp and paper industry.
8. To reasonably predict what the pulp and paper industry may look like in the future based on its present status.

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III. TOPICS TO BE COVERED:

1. Introduction to Course.
2. Overview of Ontario, Canadian and World Pulp & Paper Industry.
3. Raw Material Used.
4. Basic technologies used for Pulp & Paper Manufacture.
5. Economics of Pulp & Paper Industries.
6. Environmental Impact of Pulp & Paper Industries.
7. Potential Problems facing the pulp & paper industry.
8. The future of the pulp & paper industry.

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IV. LEARNING ACTIVITIES

REQUIRED RESOURCES

- | | |
|--|---|
| 1.0 <u>Introduction To Course</u> | Text "Course Manual for PPE150",
Chapter 1 |
| 1.1 Overview of history of
pulp & paper industry. | Activities: Read Chapter 1 and
complete review questions at end of
chapter. |
| 2.0 <u>Overview of Ontario, Canadian
and Global Industry</u> | Text "Course Manual for PPE150"
Activities: |
| 2.1 Size, location and
products of the Ontario
Pulp & Paper Industry. | Read Chapter 2 and complete review
questions. |
| 2.2 Size, location and
products of the Canadian
Pulp & Paper Industry. | Read Chapter 3 and complete review
questions. |
| 2.3 Global Competition in
Pulp & Paper. | Read Chapter 4 and complete review
questions. |
| 3.0 Raw Material Used | Text "Handbook for Pulp & Paper
Technologist.
Activity: Read Chapter 2. |
| 3.1 Overview of Raw Material | Text "Course Manual for PPE150"
Chapter 5.46-48. Activities: |
| 3.2 Raw materials for
pulping. | Read pgs. 48-51. |
| 3.3 Raw materials for
Papermaking. | Read pgs. 52-54. Complete review
questions at end of chapter 5. |

TEST I - Sections 1 - 3

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IV. LEARNING ACTIVITIES (cont'd)

REQUIRED RESOURCES

4.0 Basic Technologies

Text "Course Manual for PPE150"
Chapter 6 - Activities:

4.1 Basic Technologies for
manufacture of pulp.

Read Chapter 6 and complete review
questions.
Text "Handbook for Pulp & Paper
Technologists" - Activity: Read
Chapter 4

4.2 Basic Technologies for
manufacture of paper.

Text "Course Manual for PPE150" -
Read Chapter 7. Complete problem
1. Complete review questions.
Text "Handbook for Pulp & Paper
Technologists". Read Chapters 16
and 17.

5.0 Economics of Pulp and Paper
Industry

Text "Handbook for Pulp & Paper
Technologists" Chapter 12 + 21.

5.1 Review of Economic
Concerns.

Activities: Read Chapters 12 + 21.

6.0 Environmental Impact of Pulp
and Paper Industry

Text "Handbook for pulp & paper
Technologists". Read Chapters 26 +
27.

6.1 Effects on the
environment.

Text "Course Manual for PPE150" -
Chapter 8. Activities:

Read pgs. 126 - 130.

6.2 Source and nature of
pulp and paper waste.

Read pgs. 130 - 134.

6.3 Waste treatment method.

Read pgs. 134 - 140.

•6.4 Regulations and Safety.

Read pg. 141. Complete Review
Questions.

7.0 The future

7.1 Overview of the future
trends for pulp & paper
industry.

TEST II. Sections 4 - 7 .

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V. EVALUATION METHODS' / ^

A final grade in this course will be based on the results of two tests weighted equally. The grading system will be as follows:

A+ = 90-100 A = 80-89 " S= 70-79 C = 60-69 R = less than 60

Students with a final grade between 55-59 will be allowed to write a supplemental exam.

VI. REQUIRED STUDENT RESOURCES:

Smook, G.; Handbook for Pulp & Paper Technologists, Joint Textbook Committee of the Paper Industry, CPPA, Montreal 1982.

Sugden, A., Course Manual for PPE150, Sault College of Applied Arts & Technology, Sault Ste. Marie, 1989.

VII. ADDITIONAL RESOURCE MATERIALS AVAILABLE IN THE COLLEGE LIBRARY:

Periodical Section -

Tappi Journal, Pulp & Paper Journal.

VIII. 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.