

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

COURSE OUTLINE

Course Title: PRINTING & CONVERTING
Code No.: PPE 163-3
Program: PULP AND PAPERMAKING OPERATIONS
Semester: SEMESTER II
Date: MARCH 1989
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New: X Revision:

APPROVED: 
Chairperson

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Date

CALENDAR DESCRIPTION

PRINTING & CONVERTING

PPE 163-3

COURSE NAME

COURSE NUMBER

PHILOSOPHY/GOALS;

The purpose of this course is to introduce the student to the variety of end-use processes that paper and paperboard is subjected to before it is used as a consumer product. Printing processes such as letterpress, gravure and lithographic offset will be compared in terms of process conditions, equipment, paper or board requirements, markets and economics.

Converting technologies (the conversion of paper or board to consumer or packaging goods) will be studied by means of several important examples. These will include corrugated board, folding boxes, facial tissue and disposable diapers.

METHOD OF ASSESSMENT;

Students will be graded on the basis of their performance on two tests to be given at appropriate intervals during the semester.

Letter grades will be assigned according to the standard Sault College system. Students having a final overall cumulative percentage between 50 and 59% may be permitted to write a supplemental examination that will cover the material from the entire course.

TEXTBOOK(S);

The general reference book, used in other courses in the program, will be used.

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

OBJECTIVES;

The overall educational objective of this course is that the student will be able to demonstrate adequate knowledge of the important printing and converting processes used in the pulp, paper and packaging industries. More specific objectives to be met in the course are as follows:

1. Demonstrate knowledge of the important printing processes including letterpress, gravure and lithographic offset.
2. Demonstrate knowledge of equipment used for each of the important printing processes.
3. Demonstrate knowledge of paper and paperboard qualities needed for each printing process.
4. Demonstrate knowledge of the economic trends in printing.
5. Demonstrate knowledge of corrugated board and corrugated carton manufacture.

Demonstrate knowledge of folding box manufacture from multi-ply paperboard.

Demonstrate knowledge of facial tissue manufacture.

8. Demonstrate knowledge of the manufacture of disposable diapers.

NATURE OF PRESENTATION:

The course will be given 3 times each week using three single periods. The bulk of the presentation will be based on lecture material supported by appropriate visual aids. Examples of printing and converted products will be used to demonstrate the concepts studied.

TOPICS COVERED:

WEEK

TOPIC

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|----|---|
| 1. | Introduction to course and topics covered
The need for printing and converting
The economics of printing and converting |
| 2. | The scope of the industry in Canada
Printing processes |

WEEK	TOPIC
3.	<ul style="list-style-type: none">- Letterpress printing and equipment used- Advantages and limitations of letterpress- Gravure printing and equipment used
4.	<ul style="list-style-type: none">- Advantages and limitations of gravure printing- Lithographic offset printing and equipment used
5.	<ul style="list-style-type: none">- Advantages and limitations of offset printing- Where printing is going in the future
6.	<ul style="list-style-type: none">- Test 1- Basic packaging technologies
7.	<ul style="list-style-type: none">- Manufacture of corrugated board
8.	<ul style="list-style-type: none">- Equipment used and process conditions- Board types and properties
9.	<ul style="list-style-type: none">- Manufacture of corrugated cartons- Carton performance and tests
10.	<ul style="list-style-type: none">- Manufacture of folding boxes- Uses of folding boxes
11.	<ul style="list-style-type: none">- Application of finishes to boxboard- Foils, laminates, printing, varnishes
12.	<ul style="list-style-type: none">- Manufacture of consumer tissue products- Facial tissues, toilet paper properties
13.	<ul style="list-style-type: none">- Manufacture of absorbent consumer products- Disposable diaper design and theories
14.	<ul style="list-style-type: none">- The future of converting- Competition from other materials- Test 2