

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

COURSE OUTLINE

COURSE TITLE: PULP AND PAPER INDUSTRY PROJECT

CODE NO: PPE 361-4 **SEMESTER:** VI

PROGRAM: PULP & PAPER ENGINEERING TECHNOLOGY

AUTHOR: JACK BETHUNE

DATE: MAY 1995 **PREVIOUS OUTLINE DATED:** MAY 1991

APPROVED: DEAN *///.* *IA<* **DATE:** *fM H/tjS*

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TOTAL CREDIT HOURS:

PREREQUISITES: AVAILABLE ONLY IN 6TH SEMESTER

I. PHILOSOPHY/GOALS:

The purpose of this course is to allow the student to explore, in more depth, a technological project related to his or her work experience or course work. This is achieved by undertaking a suitable project, developing and analyzing appropriate data and preparing a comprehensive report on the project's work and its interpretation.

II. STUDENT PERFORMANCE OBJECTIVES:

The overall educational objective of this course is that the student can demonstrate the ability to research and carry out a suitable technical project and to report this in an acceptable written format.

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

1. Demonstrate ability to focus on a specific technical problem and develop an appropriate hypothesis.
2. Demonstrate ability to carry out a review of the literature relative to the chosen problem.
3. Demonstrate ability to design and carry out the research work associated with the project.
4. Demonstrate ability to analyze collected data and draw appropriate conclusions from them.
5. Demonstrate ability to prepare a finished written report using an acceptable format.

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III. TOPICS TO BE COVERED:

REQUIREMENTS;

The following is a list of requirements to be met by each student in carrying out the project work and preparing his or her final report. The times that are referred to relate to the schedule for carrying out certain requirements.

1. In collaboration with Faculty, select a Project subject and prepare a 1-2 page Project Proposal. This is to be completed by Week 3 of Semester 6.
2. The Project Proposal must contain: (a) a tentative title for the Project; (b) a hypothesis developed for the project; (c) a brief outline of the expected experimental work; (d) a list of the equipment and supplies needed and (e) a statement of the expected results.
3. The Project Proposal will be marked and returned by Week 5 of Semester 6 with approval to proceed on the Project. If approval is not given, the Project Proposal must be modified with the assistance of Faculty.
4. Background reading, relevant to the Project, that is required for the development of theoretical and experimental components of the work will be started by Week 4 of Semester 6 and should be completed by Week 5.
5. A literature review, drawn from the background reading material, will be prepared and submitted for approval by Week 6 of Semester 6.
6. The student's Project work will commence as early in Semester 6 as feasible, but no later than Week 6. The objective is for the student to carry out this work on his or her own. Periodic progress meetings will be held with Faculty.
7. Seminars will be presented during Weeks 9 and 10 of Semester 6 in order for the student to report his or her progress to date and to allow the work to be subjected to constructive peer criticism.
8. The completed Project Report, in its final form, will be submitted for evaluation no later than the end of Week 14 in Semester 6.
9. The format of the Project Report will follow that specified in Pulp & Paper Engineering Technology Format for Semester 6 Project Reports which will be available to students early in Semester 6.

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REQUIREMENTS - Continued:

During the early part of the semester, regular meetings (two hours, once per week) will be held. The purpose of these meetings is to guide students in selecting topics, setting hypotheses, carrying out literature searches, designing experiments and preparing the final report.

Late in the semester, these hours will be used for meeting with individual students to discuss their progress.

IV. EVALUATION METHODS:

Grading will be based on the student's performance in one informal seminar based on the project as well as on the preparation of the final report. The seminar will be worth 20% of the final mark for the course with the Report being worth 80%. The report will be evaluated in terms of technical content, presentation, completeness, interpretation of data and on its merits as a written report. This means that writing skills will be fully evaluated.

Letter grades will be assigned as follows:

A+= 90-100%
A = 80-89%
B = 70-79%
C = 59-69%
R = -59%

Students having a final grade of "R" will have to repeat the course in order to obtain credit. There are no supplemental tests for this course.

V. REQUIRED STUDENT RESOURCES:

There is no textbook for this course. Access to word processing facilities (or typing) is a requirement for the final report.

VI. ADDITIONAL RESOURCE MATERIALS AVAILABLE IN THE COLLEGE LIBRARY:

Use of all relevant texts, reference books, journal articles is required. In addition, faculty members may make private materials available to students.

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VII. REPORT FORMAT

In general, specific identifiable areas that a Final Format Report should contain are:

(a) **THE FRONT PART**

Fly leaf, letter of transmittal, title page, synopsis (abstract), table of contents, list of figures (illustrations), list of tables.

(b) **INTRODUCTION**

General introduction to report could contain background knowledge and information, historical information, rationale for project, pertinent important theory (laws, equation, etc...) necessary to do the project.

(c) **BODY**

Actual data and/or information verifying the project and directly relates to topic – contains experimental and/or technical data and information, tables, figures, etc...

For most technical reports, the sections to follow introduction, include Literature Review and Materials and Methods.

(d) **REVIEW OF LITERATURE**

This section includes the work done by other authors. Each work is properly referenced and is laid out in chronological order. The most common method is to induce the number of the reference form the reference section.

(e) **MATERIALS AND METHODS**

A thorough description of the equipment, apparatus and methods used to collect the data is made in this section. Any deviation or modifications to the standard method is highlighted. The method should be adequately described with the use of illustrations even if the data is collected by some other agency.

(f) **DISCUSSION**

Interpretation and discussion of technical and/or experimental data and/or information within the body, recommendation, etc... Results should be properly tabulated and reference should be made to these tables.

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VII. REPORT FORMAT (continued)

(g) **CONCLUSION**

Basically answers or correlates with introduction and topic, brings out specific points discovered or elucidated from the experimental and/or technical data or information. Generalized statements of important and pertinent facts in regards to the topic, introduction and body can be made.

(h) **APPENDIX**

Necessary but unimportant (extraneous) information can be included here that relates to the topic and is needed for further explanation BUT DOES NOT HAVE TO BE INCLUDED IN THE REPORT.

(i) **BIBLIOGRAPHY**

Chronological listings of reference textbooks, periodicals that are used and referred to in the report. They are listed in order of usage and the proper format must be adhered to. •

VIII GENERAL COMMENTS

Writing

The style of a Scientific report is concise. Since the report is normally written after the work is completed, the third person past tense is used most frequently. Any personal pronouns (I, we, you, they, etc.) are avoided. Abbreviations such as temp, and press, are never used, but abbreviations such as C, mL, g, etc., that are frequently used in scientific calculations, are acceptable. If in doubt, do not use an abbreviation.

The material to be presented should be outlined and then arranged in a logical pattern to fit within the framework of the report format. The body of the work can be divided into sections and subsections as required. The material should be presented such that it leads up to the end section of the report. This lends emphasis to this most important section.

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Typing

In most instances the author of a report will use the services of a stenographer for the typing of the report. It is the responsibility of the author to give the typist sufficient help and directions that the report can be typed with the proper spacing and format. The author should thoroughly check the final typed copy for any errors in spelling, punctuation, grammar, format, etc. All such errors are the fault of the author and not the typist.

IX. 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.