

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

COURSE OUTLINE

Course Title APPLIED PHYSICS II
Code No, : PHY 118-3
Program: PULP & PAPER/WATER RESOURCES ENGINEERING TECHNOLOGY
Semester: TWO
Date: FEBRUARY, 1984
Author: G. I. MACINNIS

New

Revision

APPROVED:



Chairperson

Date ^/:P

CALENDAR DESCRIPTION

APPLIED PHYSICS II

PHY 118-3

COURSE NAME

COURSE NUMBER

PHILOSOPHY/GOALS:

Characteristics and use of some members of the electromagnetic spectrum; the kinetic molecular theory as applied to problems with heat and temperature; proceed from a knowledge of static electricity and magnetism to an awareness of their inter-relation in connection with current flow; introductory study of simple harmonic motion and sound.

METHOD OF ASSESSMENT (GRADING METHOD):

LECTURES ONLY: Minimum of three (3) tests of equal value, attendance will be taken at lectures.

85-100? A - Rewrite option for total course is available
70- 79? B - at discretion of instructor to those students
60- 69? C who have written tests and who have achieved
i\0% overall

TEXTBOOK(S):

Introductory Applied Physics, Harris/Hemmerling; 4th Edition,
McGraw-Hill, iWOT

PHY 118-3

<u>TOPIC</u>	<u>PERIODS</u>	<u>DESCRIPTION</u>
1	12	<u>HEAT AND THERMODYNAMICS</u> <ul style="list-style-type: none">- temperature scales- the effects of heat as explained by the kinetic molecular theory- heat and change of state- heat transfer
2	20	<u>ELECTRICITY AND MAGNETISM</u> <ul style="list-style-type: none">- electrostatics - units, problems and applications- Coulomb's Law- capacitance and dielectrics- D.C. electricity, sources and effects, plus series, parallel, and series-parallel circuits- batteries- Kirchoff's Law- capacitance and dielectrics- magnetism and electromagnetism, including magnetic field, field strength, PARA-DIA and FERRO magnetism- hysteresis curve- electromagnetic induction- A.C. electricity - circuits and measurement, generators, capacitance, impedance and inductance, rectifiers and transformer
3	8	<u>WAVE MOTION (AND SOUND)</u> <ul style="list-style-type: none">- Huygen*s Principles; types and speeds of waves- reflection refraction- Snell*s Law- interference and phase relationships- ultra-violet and fluorescence- introduction to quantum physics