

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title:           PHYSICS  
Code No.:               PHY 114-3  
Program:                GEOLOGICAL ENGINEERING TECHNICIAN  
Semester:               I (Fall)  
Date:                    27 MAY, 1983  
Author:                 G.I. MAC INNIS

New

Revision

APPROVED:

Chairperson

Date

- 1 -

PHYSICS

GEOLOGICAL ENGINEERING TECHNICIAN

PHY 114-3

CALENDAR DESCRIPTION

PHYSICS  
Course Name

PHY 114-3  
Course Number

PHILOSOPHY/GOALS:

Units of measure, concepts of mass, force, work and power. Magnetism and electricity, mainly DC circuit calculations\* Wave motion, electromagnetic waves, formation of E-M waves.

METHOD OF ASSESSMENT (GRADING METHOD):

Lectures only

- 3 tests, plus additional quizzes

75 - 100% - A

65 - 74% - B

55 - 64% - C

Re-write option is available at discretion of instructor to those students that have written original test, and who have achieved 40% overall.

TEXTBOOK(S):

Introductory Applied Physics, Harris/Hemmerling,  
4th Ed., McGraw - Hill, 1980

## PHYSICS

PHY 114-3

## GEOLOGICAL ENGINEERING TECHNICIAN

TOPIC	PERIODS	DESCRIPTION
1	4	Accuracy and Precision - correct rounding of numbers - using powers of 10 and the S.I. system.
2	4	Wave Motion - Huygen's Principles - Reflection refraction - Snell's Law - Interference and Phase relationship
3	12	Direct Current Electricity - Static electricity - DC circuits: series, parallel and series - parallel circuits - Measurement of: resistance, voltage, and current flow - Batteries - Kirchoff's Law
4	3	Electromagnetic Induction - Factors influencing strength of induced current
5	12	Alternating Current Electricity - Alternating current circuits - Measurement of AC voltage, strength, and resistance - Generators - Determination of capacitance and inductance - Rectifiers and transformers
6	4	Magnetism - Magnetic field, field strength - PARA, - DIA, - and FERRO - Magnetism - Hysteresis curve
7	4	Electromagnetic Waves - Electromagnetic spectrum - Formation of E.M. waves around a transmitter
8	5	Gas Laws - Boyle's Law - Charles' Law - Ideal Gas Laws