

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

COURSE OUTLINE

Course Title: GEOPHYSICS II  
Code No.: GEO 211-4  
Program: GEOLOGICAL ENGINEERING TECHNICIAN  
Semester: THREE  
Date: MAY 14, 1984  
Author: G.I. MacINNIS

New: \_\_\_\_\_ Revision: X

APPROVED: \_\_\_\_\_  
Chairperson Date

CALENDAR DESCRIPTION

Geophysics II  
Course Name

GEO 211-4  
Course Number

PHILOSOPHY/GOALS:

When readily detectable natural geophysical anomalies do not exist, informative anomalies may sometimes be induced. This course therefore introduces students to field procedures of inducing anomalies; selection of optimum field method and equipment, and preliminary interpretation of data obtained. Emphasis is placed on recognition that geophysics is an essential tool to be used in construction of a more complete geologic framework.

METHOD OF ASSESSMENT (GRADING METHOD):

Final marks are based 60% on field work and assignments and 40% on results of a written test.

80 - 100% - A  
70 - 79% - B  
60 - 69% - C

Rewrite option for total course is available at discretion of instructor (for C grade only) to those students that have written tests, completed assignments, and achieved 40% overall.

TEXTBOOK(S):

Practical Geophysics for the Exploration Geologist  
Northwest Mining Association, 1980.

ADDITIONAL REFERENCES:

- (1) Applied Geophysics, Telford, Geldart et al, Cambridge University Press, 1978.
- (2) Mining Geophysics, Parasnis, 2nd Edition, Elsevier Scientific Publishing Company, 1973.

<u>TOPIC</u>	<u>PERIODS</u>	<u>DESCRIPTION</u>
1	12	The Electromagnetic Spectrum Newton's Third Law Induction Effects on a time-varying electromagnetic field by various natural conductors - sulphides faults, graphite, electrocytes, etc.
2	24	E-M using portable input methods  a) Vertical Loop b) Horizontal Loop c) Combination of Vertical Loop and Horizontal Loop d) Variable Frequency
3	12	E-M using fixed input methods  a) VLF b) Turam
4	8	Airborne Methods
5	8	Comparison and Selection Parameters