

CALENDAR DESCRIPTION

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

GEOPHYSICS II

SAULT STE. MARIE, ONTARIO

Course Name

PHYSIOGRAPHY\GOALS:

When readily detectable natural geophysical anomalies do not exist, informative anomalies may sometimes be induced. The methods studied include induced polarization, self-potential, and preliminary interpretation of data obtained. The case history approach is used in class and for assignments. Self-potential, VLF and horizontal and vertical

COURSE OUTLINE

GEOPHYSICS II

Course Title:

GEO 211-4

Code No:

GEOLOGICAL ENGINEERING TECHNICIAN

Program:

THREE

Semester:

SEPTEMBER 1988

Date:

M. ENGEL

Author:

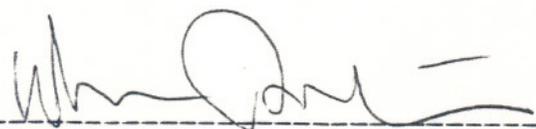
TEXTBOOK(S):

Practical Geophysics for the Exploration Geologist Northwest Mining Association 1980.

New: _____ Revision: X

(1) Applied Geophysics, Telford, Colclough, Cambridge University Press, 1978
(2) Mining Geophysics, Parasnis, 2nd edition, Elsevier Scientific Publishing Company, 1973

APPROVED:


Chairperson

September 22, 1988

Date

CALENDAR DESCRIPTION

GEOPHYSICS II

GEO 211-4

Course Name

Course Number

PHILOSOPHY/GOALS:

When readily detectable natural geophysical anomalies do not exist, informative anomalies may sometimes be induced. The methods studied include induced polarization; selection of optimum field methods and equipment, and preliminary interpretation of data obtained. The case history approach is used in class and for assignments - Self Potential, VLF and Horizontal and Vertical EM.

METHOD OF ASSESMENT (GRADING METHOD):

Final marks are based 25% on assignments and 75% on results of 3 written tests of equal value.

- A+ = 90% or better
- A = 80-89%
- B = 70-69%
- C = 60-69%

Rewrite option for total course is available at discretion of instructor (for C grade only) to those students that have written test, completed assignments, and achieved 45% overall.

TEXTBOOK(S):

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

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

September 13, 1988

Date



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APPROVED:

TOPIC	PERIODS	DESCRIPTION
1	3	The Electromagnetic Spectrum Newton's 3rd Law Induction Effects on a time - varying electromagnetic field by various natural conductors - sulphides faults, graphite, electrolytes etc.
2	12	E - M using portable input methods (a) Vertical Loop (b) Horizontal Loop (c) Combination of (a) and (b) (d) Variable Frequency
3	12	E - M using fixed input methods (a) VLF (b) Turam
4		Airborne Methods
5	8	Self-Potential Method - theory Equipment - procedures Interpretation - application
6	8	Resistivity Methods - theory Types of electrode arrays a) Sounding b) Mapping c) Pseudo depth plots Interpretation
7	8	Induced Polarization - theory Pseudo depth plot combination Application of technique Interpretation of data
8	6	Gravimetric Surveying Newtons First Law, and its application to gravimetrics Discussion of corrections to be applied to gravity readings Applications and limitations
9	3	Tests