

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

COURSE OUTLINE

Course Title: FORMATION OF MINERAL DEPOSITS

Code No.: GEO 279-4

Program: GEOLOGY

Semester: 4

Date: SEPTEMBER, 1988

Author: MANFRED ENGEL

New: _____ Revision: X

APPROVED: 
Chairperson

Sept 28/88
Date

CALENDAR DESCRIPTION

FORMATION OF MINERAL DEPOSITS

GEO 279-4

COURSE NAME

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PHILOSOPHY/GOALS:

This course emphasizes the occurrence and classification of metallic and non-metallic economic mineral deposits with detailed study of some representative occurrences emphasizing petrologic, mineralogic and structural associations of possible genetic significance.

METHOD OF ASSESSMENT:

Final marks are based on results of 3 written tests of equal value (25% each) and on an oral and written presentation of the genesis of a selected ore deposit.

A+ - 90% or better
A - 80% - 89%
B - 70% - 79%
C - 60% - 69%

Rewrite option of total course material available at the discretion of instructor (for C grade only) to those students that have written all tests, completed assignments and achieved an average of 45% to 59%.

TEXTBOOK(S):

Richard Edwards and Keith Atkinson, "Ore Deposit Geology".

TOPIC	PERIODS	DESCRIPTION
1	10	<u>Introduction</u> - Mineral economics and exploration - Definitions - Crustal abundance of minerals - Geologic Thermometers
2	10	<u>Magmatic Deposits</u> - Magmas and Mineral Deposits - Magmatic Concentration - Cr, Ni, Fe Deposits - Kimberlites
3	10	<u>Magmatic Hydrothermal Deposits</u> - Porphyry Coppers Deposits - Porphyry Mo, Sn, Au Deposits
4	10	<u>Hydrothermal Vein Deposits</u> - Classification - Rock openings - Types of Deposits - Au Deposits
5	3	<u>Sedimentary Deposits</u> - Placers - Sediment hosted Fe, Cu, Pb, U Deposits
6	6	<u>Weathering Processes</u> - Residual Concentration - Supergene enrichment
7	3	<u>Metamorphic Processes</u> - Skarn Deposits - Case histories
8	3	<u>Tests</u>