

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

COURSE OUTLINE

Course Title: OIL, GAS, COAL GEOLOGY

Code No.: GEO 226-3

Program: GEOLOGY

Semester: 4

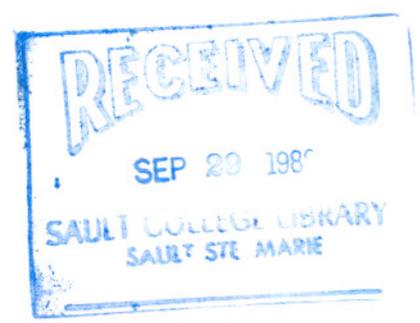
Date: SEPTEMBER, 1988

Author: MANFRED ENGEL

New: _____ Revision: X

APPROVED: 
Chairperson

Date Sept 28/88



CALENDAR DESCRIPTION

OIL, GAS, COAL GEOLOGY

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PHILOSOPHY/GOALS:

This course focuses on the study of the formation, migration and entrapment of oil and gas, exploration methods and drilling and production techniques. The formation of coal, classification, occurrences and mining methods of coal are also studied.

METHOD OF ASSESSMENT:

Four written tests or equal value (25% each)

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

Rewrite option of total course material is available at the discretion of the instructor (for a C grade only) for students that have written tests and achieved between 45% and 59%.

TEXTBOOK(S):

R.C. Selley, "Elements of Petroleum Geology"

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TOPIC	PERIODS	DESCRIPTION
1	2	<u>Introduction</u> - Energy supply and demand - World market conditions - Major occurrences and Distribution System
2	2	<u>Physical and Chemical Properties of Oil & Gas</u> - Types of Hydrocarbons - Properties - Chemistry of Oil
3	2	<u>Exploration Methods</u> - Geophysical Methods - Formation Evaluation
4	4	<u>Generation & Migration of Petroleum</u> - Theories of Formation - Formation of Kerogen - Petroleum Migration
5	10	<u>The Reservoir</u> - Porosity, Permeability - Structural, stratigraphic, hydrodynamic - Reservoir Continuity - Reserve Calculations
6	8	<u>Well Drilling & Production</u> - Drilling methods - Casing, Cementing - Mud technology - Production methods
7	4	<u>Sedimentary Basins</u> - Mechanism of Basin Formation - Classification of Basins

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<u>TOPIC</u>	<u>PERIODS</u>	<u>DESCRIPTION</u>
8	4	<u>Tar Sands and Oil Shales</u> - Occurrence - Tar Sands - Oil Shales - Extraction of oil from Tar and Shale
9	2	<u>Formation of Coal</u> - Origin of Coal - Carboniferous Stratigraphy
10	4	<u>Classification and Properties of Coal</u> - Types of Coal - Petrology of Coal - Properties of Coal
11	3	<u>Coal Mining Methods</u> - Underground methods - Strip mining - Land reclamation