



University of Nicosia, Cyprus

Course Code OGEE-340	Course Title Formation Evaluation	ECTS Credits 6
Department Engineering	Semester Fall, Spring	Prerequisites OGEE-320, OGEE-330
Type of Course Required	Field Oil & Gas Engineering	Language of Instruction English
Level of Course 1 st Cycle	Year of Study 3 rd	Lecturer(s) Dr Paul Featherstone
Mode of Delivery Face-to-face	Work Placement N/A	Co-requisites None

Objectives of the Course:

The main objectives of the course are to:

- Introduce the students to the fundamental concepts of well log interpretation
- Provide solid knowledge to interpret well logs to in order to make decisions relative to well completion, etc.
- Provide solid knowledge to read well logs, apply the necessary environmental corrections, and perform well log interpretations to hydrocarbon bearing formations and communicate the results effectively
- Provide solid technical knowledge to conduct library and/or internet search and communicate the results through an oral presentation.
- Provide solid technical knowledge to recognize safety issues including handling radioactive sources.

Learning Outcomes:

After completion of the course students are expected to:

- Have an understanding of the fundamental concepts of well log interpretation.
- Demonstrate the ability to interpret well logs to in order to make decisions relative to well completion, etc.
- Demonstrate the ability to read well logs, apply the necessary environmental corrections, and perform well log interpretations to hydrocarbon bearing formations and communicate the results effectively.
- Demonstrate the ability to conduct library and/or internet search and communicate the results through an oral presentation.
- Recognize safety issues including handling radioactive sources.

Course Contents:

- Log interpretation, fundamental concepts
- SP log and applications
- Conventional resistivity logs and applications
- Acoustic (sonic) log and applications

- Gamma ray and caliper logs
- Formation density compensation
- Compensated neutron and side wall neutron porosity logs
- Litho-density log and applications
- Collective applications and interpretation of the above geophysical well logs

Learning Activities and Teaching Methods:

Lectures, projects, discussion

Assessment Methods:

Homework, project assignments, tests, final exam.

Required Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
Donald Helander	Fundamentals of Formation Evaluation	SPE	1983	9780930972028
Schlumberger	Log Interpretation Charts	Schlumberger	2009	

Recommended Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
Sylvain J. Pirson	Handbook of Well Log Analysis: For Oil & Gas Formation Evaluation	Prentice Hall		9780133828047
Schlumberger	Foundamentals of formation testing	Schlumberger	2006	