

GEOL 4317: Applied Petroleum Geology

Fall 2010

ENVM 6099 B: Petroleum Res. Mgmt.

Sid Richardson 232

W: 6:00 pm – 9:00 pm

Instructor

Dr. Steven J. Rosscoe
Sid Richardson 206
srosscoe@hsutx.edu
(325) 670-1387

Office Hours

Mondays 9:00 am – 11:00 am
1:00 pm – 5:00 pm
Wednesdays 9:00 am – 11:00 am
Fridays 9:00 am – 11:00 am

Textbook (Recommended)

Basic Well Log Analysis
George Asquith
Daniel Krygowski
2nd Edition

Course Description

This course is designed to introduce the student interested in the oil industry to the basic concepts of well log analysis. Each week the theory behind a logging tool will be explained, followed by an activity period where real examples are worked with real logs generously donated by Halliburton Energy Services.

Expected Learning Outcomes

Any student successfully completing this course should be able:

- Understand what each logging tool is designed to do.
- Understand how a tool's operation can lead to important geologic properties of a well system.
- Apply analytical techniques to real log examples.
- Find and evaluate the quality of a reservoir from a well log.
- Fully appreciate that it is in the interpretation of log data that errors are made not in the function of the tool.

Assessment of Expected Learning Outcomes

The success of a student in completing the expected learning outcomes for the course will be evaluated formally by graded activities, exams, and projects (see below), and informally by pre- and post-course surveys and observation of lab and group work.

Determination of Course Grade

The grade earned in this course will be determined by the student's success in completing the following components of course work. The course grade is determined based on points earned versus the points available for the semester resulting in a percentage. The distribution of points among course components is found below:

<u>Component</u>	<u>Number</u>	<u>Points Each</u>	<u>Total Points</u>	<u>Relative Percent</u>
Examinations	3	100	300	100% of Grade

The points needed to earn a specific letter grade in the course can be found below:

A (270 points or more) *B (240-269 points)* *C (210-239 points)* *D (180-209 points)* *F (179 points or less)*

Important: At the end of the semester, the grade a student has earned is based on the number of points the student has earned. Any student asking for a grade bump is out of line. Asking for a grade bump, is asking for special privileges, and is extremely unethical. The instructor will recalculate grades, but will not bump grades. If a student asks for a grade bump the request will be ignored.

- Examinations – Throughout the semester three examinations will be given. These will be practical examinations where the student is expected to demonstrate the technical skills acquired during the course time. These examinations are scheduled. Make-up examinations will be given only in cases of legal, paper-documented absences.

University Policies

The university has specific policies on attendance, the use of electronic equipment in the classroom, students with disabilities, and official university communications, as well as an official calendar for the semester. See attached sheet of University Policies and Important Dates.

Course Schedule

The following is the schedule that will be used for this semester. Adjustments may be made at any time by the instructor and will be supplied virtually in blackboard as updates are made. It is the instructor's goal that modifications to this schedule will be minimal throughout the semester.

<u>Date</u>	<u>Topic</u>
08/25/2010 (W)	Introduction to the Course (Brief Meeting)
09/01/2010 (W)	Gamma Ray and Spontaneous Potential Logs
09/08/2010 (W)	Neutron and Bulk Density Logs
09/15/2010 (W)	Sonic and Photo Electric Logs
09/22/2010 (W)	Resistivity Logs (part 1)
09/29/2010 (W)	EXAMINATION 1 (Gamma, SP, Neutron, Density, Sonic, PE)
10/06/2010 (W)	Resistivity Logs (part 2)
10/13/2010 (W)	Determination of Lithology and Porosity
10/20/2010 (W)	Water Saturation and Bulk Volume Water
10/27/2010 (W)	Other Properties
11/03/2010 (W)	EXAMINATION 2 (Resistivity, Lithology, Porosity, Sw, BVW, Other)
11/10/2010 (W)	Guest Speaker: The Image Log – Jeremy Bader, Halliburton Energy Services
11/17/2010 (W)	Evaluation of Carbonate Reservoirs
11/24/2010 (W)	No Class – Thanksgiving Holiday
12/01/2010 (W)	Evaluation of Sandstone Reservoirs
12/08/2010 (W)	EXAMINATION 3 (Evaluation of a Reservoir)