

CBM003 ADD/CHANGE FORM

Undergraduate Council
 New Course Course Change *2008*
 Core Category: None Effective Fall 2008

or

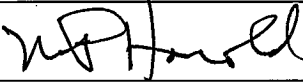
Graduate/Professional Studies Council
 New Course Course Change
 Effective Fall __

RECEIVED MAR 06 2008

- Department: CHE ENG College: ENGR
- Person Submitting Form: Dr. Michael P. Harold Telephone: 34307
- Course Information on New/Revised course:
 - Instructional Area / Course Number / Long Course Title:
PETR / 3315 / Introduction to Well Logging
 - Instructional Area / Course Number / Short Course Title (30 characters max.):
PETR / 3315 / INTRO TO WELL LOGGING
 - SCH: 3.00 Level: JR CIP Code: 14.2501.00 Lect Hrs: 3 Lab Hrs: 0
- Justification for adding/changing course: To provide for new discipline areas
- Was the proposed/revised course previously offered as a special topics course? Yes No
 If Yes, please complete:
 - Instructional Area / Course Number / Long Course Title:
____ / ____ / ____
 - Content ID: _____ Start Date (yyyy3): _____
- Authorized Degree Program(s): B.S. Petroleum Engineering
 - Does this course affect major/minor requirements in the College/Department? Yes No
 - Does this course affect major/minor requirements in other Colleges/Departments? Yes No
 - Are special fees attached to this course? Yes No
 - Can the course be repeated for credit? Yes No
- Grade Option: Letter (A, B, C ...) Instruction Type: lecture ONLY (Note: Lect/Lab info. must match item 3, above.)
- If this form involves a change to an existing course, please obtain the following information from the course inventory: Instructional Area / Course Number / Long Course Title
 ____ / ____ / ____
 - Start Date (yyyy3): _____ Content I.D.: _____
- Proposed Catalog Description: (If there are no prerequisites, type in "none".)
 Cr: 3. (3-0). Prerequisites: PHYS1322, MATH2433, and PETR2311. Co-requisites: PETR3211, PETR3313, & PETR3321. Description (30 words max.): Introduction to modern well logging methods, engineering, and core-log integration.
- Dean's Signature: Joseph Tedesco Date: 3/6/08
 Print/Type Name: Joseph Tedesco, Deani

Cullen College of Engineering **UC 9765 08F**
CBM003 Supplement - B Fe Page 3 of 5
(New Course)

Note: Special Fees: If special fees requested, Course Related Fee Request Form will be required.

	<u>2/2/08</u>	<input checked="" type="checkbox"/> Approved
Chair of Initiating Dept. Signature	Date	

PETR 3315: Introduction to Well Logging
Credit: 3

Description: Introduction to modern well logging methods, engineering, and core-log integration.

Prerequisites(s): PHYS 1322, MATH 2433, and PETR 2311. **Co-requisites:** PETR3211, PETR3313, & PETR3321.

Textbook Required: Halliburton Log Analysis and Formation Evaluation and Halliburton Log Interpretation Charts (CD)

Course Objectives: At the end of this course, students will be able to:

1. identify the basic physical principles of the common open hole logging measurements in order to evaluate formation properties.
2. interpret common open hole logging measurements for lithology, porosity, and water saturation estimates and their associated limitation and uncertainties.
3. perform basic wireline log evaluations on a representative, commercial software package.
4. integrate wireline logging data with basic core data in order to assess formation lithology, porosity and permeability.

Topics and Hours

Topic	Class Hrs
Overview, Introduction to Formation Evaluation	3
1. Saturation	3
2. Passive devices	5
3. Acoustic	3
4. Density/ Neutron	3
5. Porosity, lithology	7
6. Resistivity	3
7. Shaly sands	5
8. Core-log integration	5
9. Net pay, resources	2
10. Review	1
11. Final Examination	2
Total Hours	42

Method of Evaluation:

Class Participation	20%
Tests	15%
Quizzes	20%
Report	20%
Final Examination	<u>25%</u>
Total	100%

Contributions to Professional Component:

1. Engineering Science and Design: All topics to relate to the application of scientific principles to the solution of formation evaluation problems.

Relationship of Course to Program Outcomes:

Objective	Program Outcome
Identify the basic physical principles of the common open hole logging measurements in order to evaluate formation properties.	<p>An ability to apply knowledge of mathematics, science and engineering.</p> <p>An ability to use the techniques, skills and modern engineering tools necessary for engineering practice.</p>
Interpret common open hole logging measurements for lithology, porosity and water saturation estimates and their associated limitations and uncertainties.	<p>An ability to design and conduct experiments, as well as to analyze and interpret data.</p> <p>An ability to identify, formulate and solve engineering problems.</p> <p>Competency in characterization and evaluation of subsurface geological formations.</p> <p>An ability to deal with the high level of uncertainty in petroleum reservoir problems in problem definition and solution.</p>
Integrate wireline logging data with basic core data in order to assess formation lithology, porosity and permeability.	<p>An ability to apply knowledge of mathematics, science and engineering.</p> <p>An ability to design and conduct experiments, as well as to analyze and interpret data.</p> <p>Competency in characterization and evaluation of subsurface geological formations and their resources using geoscientific and engineering methods.</p> <p>An ability to deal with the high level of uncertainty in petroleum reservoir problems in problem definition and solution.</p>