HL 129

Drilling & Completions

2 Credits

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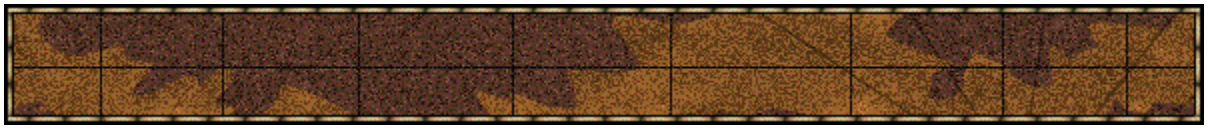

Drilling & Completions

Calendar Description

There are many details that go into operating oil wells effectively and efficiently including preventative maintenance and well remediation. This course describes most aspects of operating different types of oil wells and methods used to maximize efficiency.

Rationale

This is a required course for both the Heavy Oil Power Engineering and the Heavy Oil Operations Technician programs. This course provides the basic knowledge of how oil wells are operated and the services required to keep production flowing.

Prerequisites

None

Co-Requisites

HL 119

Course Learning Outcomes

Upon successful completion of this course, students will be able to

1. describe the operation and equipment for single wells, pad wells, tank wells and flowline wells.
2. identify the services that are used to keep wells operating.
3. describe well testing and identify the different methods of testing.
4. describe the importance of landowner relations.
5. describe production tanks and fluid management
6. describe Single Well monitoring for facilities and wells
7. describe hydraulic fracturing.

Resource Materials

HL119 Heavy Oil Course Material

HL129 Heavy Oil Course Material

Conduct of Course

Course topics are covered in lecture form using PowerPoint presentations. On-site visits to applicable industrial locations give realistic application of the course topics. Students are encouraged to ask questions and discuss all topics in class. Assignments, quizzes and exams evaluate the progress and extend the learning.

Class conduct will be according to the Energy department student manual.

Evaluation Procedures

Learning is assessed in the following activity areas:

Assignment	10%
Lab	10%
Midterm	30%
Final Exam	50%
Total	**100%**

A student may review midterm and/or final examination papers; however, these documents must be kept on file in the Heavy Oil Operations Technician Program office.

The value of each assignment is set by the instructor prior to the evaluation. In setting the value, the instructor considers length, depth, and complexity of the assignment.

A penalty is normally applied to late assignment work. A supplemental final examination may be made available to a student who does not achieve an overall course grade of C+. Mutually agreed upon remediation must proceed the re-examination.

Peer tutoring may be available for students requiring learning assistance.

Grade Equivalents and Course Pass Requirements

A minimum grade of C+ is required to pass this course.

Letter	F	C+	B-	B	B+	A-	A	A+
Percent Range	0-64	65-69	70-74	75-79	80-84	85-89	90-94	95-100
Points	0.00	2.30	2.70	3.00	3.30	3.70	4.00	4.0

Attendance

Attendance is recorded at each session. Students must maintain a 90% hourly attendance record in this course.

Course Units/Topics

1. Oil wells
2. Pad wells
3. Flowline wells
4. Well testing
5. Single Well batteries
6. Single well monitoring
7. Well remediation
8. Service rigs
9. Well optimization
10. Production tanks
11. Fluid Hauling
12. Leases and Landowners
13. Pipeline right-of-ways
14. Fracking

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