DRILLING AND FORMATION EVALUATION

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Course ID</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRILLING AND FORMATION EVALUATION</td>
<td>EPS 343</td>
<td>EPS 342</td>
</tr>
</tbody>
</table>

Course Description

Rotary drilling and drilling bits. Drilling fluids and hydrostatic pressure in liquid and gas columns. Cements and cement testing. Casing design criteria and design considerations. Well completion design and tubing strings. Perforating oil and gas wells. Directional drilling and deviated wells.


Course Objectives

1. Time is money. Drilling time is big money. Technical and managerial decision makers must grasp the language and technology of drilling operations in order to minimize expenditures throughout the producing life of a well. Successful drilling requires blending many technologies.
2. The drilling of an oil well is seen as the culmination of the exploration process.
3. This course highlights the multi-disciplinary nature of the subject, examines the tools and methods used in exploration drilling and formation evaluation, and provides an understanding of the technical terminology used.
General References for the Course:  (Books/Journals…etc.)

Students in this course can read from:

14. *The Drawworks and the Compound: Unit 1, Lesson 6 (Rotary Drilling, Unit 1, Lesson 6)*, by Kate Van Dyke, Publisher: Petroleum Extension Service; 1st Edition (August 1, 1995), ISBN: 0886981719.

List of URLs for this Course
Course Outcome

Students are expected to study multi-disciplinary nature of the subject, examine the tools and methods used in exploration drilling and formation evaluation, and provide an understanding of the technical terminology used. Students will also learn the following:

1. Student can be able to learn the language of drilling equipment and procedures that must be conquered for maximum benefit.
2. Student can know the skills needed to interpret the information gathered at the drilling rig in order to improve operations and to decrease downtime.
3. Student can importantly taught the skills necessary for identifying opportunities in the Oil and Gas industry, such that upon completion of the course, they are ready to perform in the industry as multi-disciplinarians.
4. Student can further, trained to give a competent technical presentation in English to a broad audience, as well as writing a technical report in a concise and effective manner.
5. Student can get the talent to encourage working in a team; stimulate creative thinking and problem solving ability; and foster initiative and self-discipline.