

Course Code

PE04

Course Title

Drilling Engineering

Instructor

Dr. Gür at Altun



Professional Career

Company: Dept. of Petroleum and Natural Gas Engineering

Istanbul Technical University

Position: Asst. Prof. Dr.

Education: PhD in Petroleum engineering (1999) Louisiana State University

MS in Petroleum engineering (1993) Istanbul Technical University

BS in Petroleum engineering (1988) Istanbul Technical University

- Interests: Drilling engineering, well completion, well logging
- Experience: Following short courses were offered
- Drillstring and casing design (advanced level), Adiyaman, May 2009 (3.5 days)
- Drillstring and casing design (advanced level), Lüleburgaz, Dec. 2008 (4 days)
- Drillstring and casing design (advanced level), Ankara, April 2008 (3 days)
- Well logging (introductory level), Ankara, June 2007 (0.5 day)

Course Objective and Description

Designed for cross-training of other technical disciplines such as production and reservoir engineers, geoscientists, support and supervisory personnel who interacts with drilling engineering and well construction.

Who Should Attend

Petroleum Engineers, well site geologist, managers

Prerequisite

None

Learning Level

Basic

Duration

3 days

Course Material

A file of Power Point Presentation and handouts

Course Outline

Day One

- Drilling rigsSystems of drilling rigs
 - o Power
 - o Hoisting
 - o Circulating
 - o Rotary
 - o Well monitoring
- Special marine equipment
- Drilling cost analysis
- Drilling fluids
 - o Diagnostic tests
 - o Pilot tests
 - o Water base muds
 - o Inhibitive muds
 - o Additives)

- Cements
 - o Composition
 - o Testing
 - o Standardization
 - o Additives
 - o Placement techniques

Day Two

- Drilling hydraulics
- Hydrostatic pressure in liquid and gas columns
- Hydrostatic pressure in complex fluid columns
- Annular pressure during well control operations
- Buoyancy
- Rheological models
- Non-static well conditions
- Laminar and turbulent flow in pipes and annuli

Day Three

- Rotary drilling bits
 - o Type selection and evaluation
 - o Terminating a bit run
 - o Factors affecting penetration rate
- Formation pore pressure
- Formation fracture resistance
- Casing design
 - o Manufacturing
 - o Standardization
 - o Performance properties
 - o Design criteria
- Introduction to directional drilling
- Hole problems

Ankara, Turkey

10-12 May

15-17 Sep

US\$ 1,420
