

**Course Name**

GC1. Drilling Fluids Technology

**Duration**

Five (5) days

**Objectives**

The goal of this course is to provide knowledge and understanding of drilling fluids engineering. Some of the topics covered will include the composition and properties of water-based/non-aqueous drilling fluids, API testing and analysis procedures, clay chemistry, polymer chemistry, drilling fluid selection and design, treatment of drilling fluids and solids control equipment. The course will also focus attention on the drilling fluids-related problems of wellbore stability, differential sticking, lost circulation, hole cleaning, environmental acceptability and formation damage. Classroom exercises and discussions on the practical cases are also included.

**Content**

- Definition and Functions of Drilling Fluids
- Physical and Chemical Properties
- Clay Chemistry
- Polymer Chemistry
- Water Based Drilling Fluids
- Non-Aqueous Drilling Fluids
- Pneumatic Fluid Systems
- Solids Control

**Prerequisites**

Basic knowledge of drilling, drilling fluids and well construction.

**Audience**

Drilling and drilling fluid engineers, superintendents and supervisors, and all professionals involved in well planning and operation.