

Dette er en oversettelse av den fastsatte læreplanteksten. Læreplanen er fastsatt på Bokmål

Laid down as a regulation by the Norwegian Directorate for Education and Training on 14 December 2007 as delegated in a letter of 26 September 2005 from the Ministry of Education and Research pursuant to the Act of 17 July 1998 no. 61 relating to primary and secondary education (Education Act) Section 3-4 first paragraph.

Valid from 01.08.2008

Valid to 31.07.2023



Utdanningsdirektoratet

## Purpose

Well drilling and rigging, mechanical cable operations shall lay the foundation for practicing a vocation in national and international oil industries for manoeuvring and installing mechanical equipment down in the well so that optimal production conditions are achieved. Work is done in demanding climates, weather and working conditions, with high demands on quality for environment, health and safety factors and for the worker's health and functional physical abilities. The subject shall contribute to reducing the risk of emissions.

Learning in the subject shall contribute to developing the apprentice's ability to handle risky operations. Furthermore, learning in the subject shall lay the foundation for practical skills in controlling, using and maintaining surface equipment, pressure control equipment and mechanical well tools, and contribute to the development of responsible, precise and independent operators.

Learning in the subject shall arrange for varied training in the selection of working methods and techniques and the use of equipment. Learning in the subject shall emphasise safety and working according to procedures, and stimulate cooperation across many professional groups.

Training completed and passed in the subject will lead to a Trade Certificate. The professional title is Drill Operator for Mechanical Cable Operations.

## Structure

Well drilling and rigging, mechanical cable operations consists of three main subject areas. The main subject areas complement each other, and should be viewed in relation to one another.

### Overview of the main subject areas:

Year level	Main subject areas		
Vg3 / In-service training at a training establishment	Preparation and rigging	Well operations and tools	Maintenance and reporting

## Main subject areas

The main subject area covers control checks and testing of equipment according to procedures and current rules and regulations. Environment, health and safety, along with quality assurance, are central themes of this subject. The use of pressure control equipment, mechanical cables, mechanical well tools and surface equipment are included in the main subject area.

The main subject area covers planning, execution and documentation of well operations. Use and maintenance of well tools and equipment is included in the main subject area.

The main subject area covers maintenance, preparing and troubleshooting of surface, well and pressure control equipment. Procedures and reporting routines are included in the main subject area. The main subject area also covers chemicals and well liquids.

## Basic skills

Basic skills are integrated into the competence aims for this course in areas where they contribute to the development of and are a part of the basic subject competence. In Well drilling and rigging, mechanical cable operations, basic skills are understood as follows:

*Being able to express oneself orally* in Well drilling and rigging, mechanical cable operations involves discussing professional problems and risk assessments with colleagues and other collaborators in Norwegian and English.

*Being able to express oneself in writing* in Well drilling and rigging, mechanical cable operations involves preparing documentation, reports, work permits and safe job analysis forms in Norwegian and English.

*Being able to read* in Well drilling and rigging, mechanical cable operations involves understanding and using procedures, risk analyses, rules and standards in Norwegian and English. It also involves understanding and interpreting drawing, tables and well simulations.

*Numeracy* in Well drilling and rigging, mechanical cable operations involves measuring and calculating pressure and volumes for wells. Furthermore, it involves calculating forces that effect well equipment.

*Digital literacy* in Well drilling and rigging, mechanical cable operations involves using digital control systems and gathering procedures and documentation from data systems.

## Competence aims

### Preparation and rigging

*The aims of the training are to enable the apprentice to*

- assess the risks involved in work operations
- connect mechanical cables and well tools together
- prepare pressure control equipment
- use pressure control equipment for high pressures and high temperatures
- prepare and rig surface equipment on landed and floating drilling rigs
- use hydraulic surface equipment
- test and maintain mechanical cables
- perform function and leakage tests on pressure control equipment
- check systems used for weight and depth measurements
- document finished work in line with procedures
- discuss and elaborate on professional problems and risk assessments with colleagues and other collaborators in Norwegian and English
- select and prepare mechanical pulling and running tools

### Well operations and tools

*The aims of the training are to enable the apprentice to*

- identify and prepare the basic parts of tool strings
- use safety equipment adapted to working operations
- carry out and document well operations according to procedures and current rules and regulations
- give an account of the limitations of mechanical cables types
- interpret and use well simulations during operations

- perform fishing work with the help of mechanical tools, and give an account of working methods
- give an account of the limitations of mechanical cable operations in drilling mud and high-angle wells
- select and use mechanical plugs, locks and valves
- perform leakage tests on well valves and plugs, and give an account of the different methods used
- comply with emergency procedures and service equipment for shut-ins of wells in an emergency

## Maintenance and reporting

*The aims of the training are to enable the apprentice to*

- maintain and repair pressure control equipment, surface equipment and well tools according to procedures
- troubleshoot and maintain hydraulic surface equipment
- give an account of the properties, composition and dangers of chemicals and well liquids
- troubleshoot, overhaul and prepare mechanical well tools and mechanical cables
- write non-conformance reports according to current procedure
- report undesirable incidents in line with requirements for environment, health, safety and quality
- give an account of official requirements for health for workers on the Norwegian continental shelf

## Assessment

### Vg3 Well drilling and rigging, mechanical cable operations

Provisions for final assessment:

Main subject areas	Provision
Preparation and rigging	All apprentices shall sit for a Trade Examination, which is normally carried out over a period of three working days.
Well operations and tools	
Maintenance and reporting	

The provisions for assessment are stipulated in the regulations of the Norwegian Education Act.