

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



Utdrag

## Purpose

Well drilling and rigging, electrical cable operations shall lay the foundation for practicing a vocation in national and international oil industries in servicing electronic instruments in exploration, oil and gas wells. 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.

Learning in the subject shall contribute to developing the apprentice's ability to handle risky operations. Learning in the subject shall lay the foundation for practical skills in controlling, using, troubleshooting and maintaining electrical cables, logging instruments, and radioactive, pyrotechnic and surface equipment. Learning in the subject shall also contribute to developing 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 Electrical Cable Operations.

## Structure

Well drilling and rigging, electrical 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 troubleshooting	Well operations	Maintenance and reporting

## Main subject areas

The main subject area covers control checks and testing on equipment according to procedures and current rules and regulations. Controlling and troubleshooting electrical well cables, surface equipment, logging instruments and radioactive and pyrotechnic equipment are included in the main subject area.

The main subject area covers execution and documentation of well operations. Current legislation concerning environment, health and safety and procedures is also included. Furthermore, the use of logging instruments and pyrotechnic equipment is also included.

The main subject area covers maintenance and repairs of surface equipment, logging instruments and electrical well cables. Procedures and documentation routines are included in the main subject area.

## 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, electrical cable operations, basic skills are understood as follows:

*Being able to express oneself orally* in Well drilling and rigging, electrical 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, electrical 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, electrical 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, electrical cable operations involves calculation electrical values, forces and pressures for well equipment.

*Digital literacy* in Well drilling and rigging, electrical cable operations involves using digital measuring and testing instruments and control systems. It also involves gathering documentation from EDP systems.

## Competence aims

### Preparation and troubleshooting

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

- prepare and troubleshoot according to current rules and procedures
- build cable heads
- write work permits and fill in risk assessment forms
- connect electrical well cables and logging instruments together
- prepare logging instruments for wells with high pressures and high temperatures
- calculate forces and pressures that influence well equipment
- prepare and rig surface equipment on landed and floating drilling rigs
- select and prepare electrically-operated pyrotechnic well equipment based on planned operations
- test and maintain electrical well cables and logging instruments
- maintain, troubleshoot and repair surface equipment and logging instruments
- use measuring and testing instruments for electrical measurements
- connect, test and troubleshoot tow ring boxes for logging cables
- calculate electrical values

### Well operations

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

- carry out and document well operations according to current rules and quality assurance systems
- use safety equipment adapted to working operations
- manoeuvre logging instruments and well tools in wells with help from winches
- give an account of the limitations of electrical well cables
- prepare fishing operations with drill columns
- give an account of the installation and removal of radioactive sources
- mount and dismantle explosives in well tools
- give an account of the limitations of operations in drilling mud and high-angle wells
- identify and prepare combinations of logging instruments
- follow emergency procedures during operations
- discuss and elaborate on professional and safety-related problems in Norwegian and English

- care for your own and other's health in accordance with procedures for risk and injury prevention

## Maintenance and reporting

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

- maintain and repair surface equipment and logging instruments according to procedures
- keep log books during well operations
- troubleshoot, overhaul and maintain well equipment and electrical well cables
- write non-conformance reports in Norwegian and English according to current procedure
- write transport documents and order lists
- write transfer logs for daily changes of shift
- evaluate the quality of own work

## Assessment

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

Provisions for final assessment:

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

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