Course Description:

Who is the course for?

This course is aimed at individuals working in the oil and gas industry in any role who require an understanding of how oil can be recovered from a reservoir.

Is previous experience required?

You do not need prior knowledge or experience to complete this course and it is assumed that you are competent in your designated role.

How will the course benefit me?

Oil and gas operators use a variety of techniques to extract oil and gas from reservoirs. This course will provide a detailed overview of the different extraction methods, their advantages and disadvantages, and when they may be used.

The knowledge gained in this course will help you understand this early stage of the oil and gas processing lifecycle. You will also learn about the various environmental issues that arise during oil and gas exploration, both on- and offshore.

How will the course benefit my company?

By ensuring that you are familiar with this stage of oil and gas processing, you will have a greater understanding of the industry and where your role fits in.
What standards are referenced in the course?

This course does not refer to specific legislation or laws but is written to current HSE guidelines, industry best practice and standard operating procedures.

Is there an assessment?

Once you have completed the course, you will be asked a series of questions to check your knowledge and understanding. These are based on the learning objectives for the course and have a pass mark of 80%.

Learning Objectives:

• Describe the formation of oil and gas

• Identify the principal types of geological features that contain oil and gas

• Explain how oil and gas migrates through rock

• Explain how oil and gas becomes trapped

• Identify the different types of traps

• Explain the different types of traps

• Explain the purpose of oil and gas exploration

• Identify the principal methods of exploration

• Describe the principal methods of exploration

• Identify the advantages and disadvantages of the different methods of exploration

• Describe the main environmental issues that arise during oil and gas exploration

• Identify the different types of drilling rigs

• Describe the different types of drilling rigs

• Identify the main components of a drilling rig

• Describe the main components of a drilling rig

• Identify the principal types of drilling

• Describe the principal types of drilling

• Explain the benefits, constraints and limitations of the different drilling techniques

• Identify the people who are most active in the drilling operation process

• Identify some recent drilling techniques

• Identify the steps that must be taken to complete a well

• Identify the different types of well casing

• Identify the different types of completions
• Explain how perforations are created in wells
• Identify the different well completion activities that must be considered
• Describe the components of a typical well completion
• Explain the purpose of a subsurface safety valve
• Identify the factors that affect well completion design
• Explain the purpose of a wellhead
• Identify the main components of a wellhead
• Describe the main components of a wellhead
• Explain the functions of a Christmas tree
• Explain the operation of a choke valve
• Explain the operation of a Christmas tree
• Describe a subsea wellhead
• Explain the operation of a subsea Christmas tree
• Identify the three main types of artificial lift
• Describe a gas lift system
• Identify the advantages and disadvantages of gas lift
• Describe electric submersible pumps
• Identify the advantages and disadvantages of electric submersible pumps
• Describe the beam pumping system
• Identify the advantages and disadvantages of beam pumps
• Define well stimulation
• Identify the different well stimulation methods
• Describe the different well stimulation methods
• Define enhanced oil recovery