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SEMARAK TRAINING

UPSTREAM OIL & GAS
E-LEARNING COURSES 2021

GET TRAINED AND CERTIFIED AT
ANYWHERE, ANYTIME.

INTRODUCTION

Semarak Training is specialised in empowering the performance of professionals and organisations in Energy industry in Malaysia through world-class training solutions. Our company, Semarak Solutions Sdn. Bhd. is registered with Human Resource Development Fund (HRDF) as a training provider & a licensed company by PETRONAS.

Our trainings are categorised in Oil & Gas, Solar Energy, Business, Health, Safety & Environment (HSE) and Digitalisation. Our group of consultants comprise of proven Malaysian and international Subject Matter Experts (SME) who are not only capable of transferring years of global experience and expertise to our clients, but also passionate to transform them to be the world-class professionals and organisations.

Our headquarter and training center are at the heart of Kuala Lumpur City Centre, Malaysia. We promise 5-Star hospitality by organising trainings at our affiliate prestigious hotels or at any preferred venues by our clients. We also enable our clients to train at anytime and anywhere through our online trainings.

Our team comprises of experienced professionals with industry background who are able to understand better the technical and business challenges to help our clients to close the competency gap and achieve their training goals in time.

Be assure that we aim to meet the training objectives of our clients through most effective training solutions that lead to positive performance.

Registered Training Provider

Licensed Company

Member

Associate Member

100% Malaysian Company

COURSE CATEGORY

1	Introduction
2	Subsurface
3	Well Planning
4	Well Engineering
5	Drilling & Completions
6	Specialised Applications
7	Advanced Well Control

In partnership with NORWELL EDGE

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COURSES IN CATEGORY INTRODUCTION

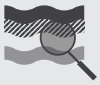
1. Introduction

Code	Title	Duration (hour)	Description	Learning Focus	Price/User (MYR)
E0101	**Introduction to Geology** 	3	This module provides learners with a substantial introduction to Geology in the oil & gas industry. The module explores the key concepts of both Geology and Petroleum Geology.	• Rock types and origin • The rock cycle • The main fault types and their relationship with plate tectonics • Why time is important in geology • The five elements of petroleum geology	FOC
E0102	**Introduction to Drilling** 	3	This Introduction to Drilling module providers learners with an overview of the theory, tools and techniques used to drill for oil & gas around the world.	• Introduction to well construction methods • Concepts behind rotary drilling • Applications and features of drilling rigs • Overview of rig systems • The main features of a rig circulating system • Introduction to the drillstring	FOC
E0103	**Introduction to Production** 	3	This module introduces the key concepts of hydrocarbon production, from what is being produced, where it comes from and how it is handled.	• Oil and gas process facilities • Plant commissioning and handover • Production operations and maintenance • Field optimization • Decommissioning	FOC

*Any course listed as FOC (Free of Charge) are only available as part of a wider purchase including non-FOC modules.

COURSES IN CATEGORY SUBSURFACE

2. Subsurface

Code	Title	Duration (hour)	Description	Learning Focus	Price/User (MYR)
E0104	**Geophysics (coming soon)** 	3	In this module we explore the methods used to study the earth, with emphasis on the most widely used in the oil and gas industry such as seismic surveying. Learners will be given the fundamental knowledge needed to understand and engage with Geophysical concepts.	• Rock types and origin • The rock cycle • The main fault types and their relationship with plate tectonics • Why time is important in geology • The five elements of petroleum geology	180.00
E0105	**Petrophysics (coming soon)** 	3	Whereas Geophysics looks at the larger geological structures, Petrophysics concerns the physical properties of the reservoir rockand fluid. This module explores petrophysical properties, logging and interpretation.	• Petrophysics and our understanding of the subsurface • The main petrophysical reservoir properties • Wireline logging tools • Petrophysical interpretation of logs • Shaly sands	180.00
E0106	**Reservoir Engineering (coming soon)** 	3	The objective of Reservoir Engineering is to optimise future production at the field designstage. In this module learners will explore how Reservoir Engineering is applied in the oil & gas sector, from modelling to recovery.	• Oil and gas process facilities • Plant commissioning and handover • Production operations and maintenance • Field optimization • Decommissioning	180.00
E0107	**Geomechanics (coming soon)** 	3	Geomechanics is the study of how rock behaves during the course of a well's life. This module provides an understanding of the fundamentals of Geomechanics from earth stress to pore pressure.	• How log data is used in strength modelling • The value of core • Building a stress model • Stress orientation • Pore pressure estimation	180.00

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COURSES IN CATEGORY WELL PLANNING

3. Well Planning

Code	Title	Duration (hour)	Description	Learning Focus	Price/User (MYR)
E0108	**Conceptual Design** 	1	This module provides learners with knowledge of the Offset Well Review and Conceptual Well Design steps that are critical to all exploration, appraisal and field development operations.	• Importance of Data Gathering and Offset Review • Overview of Conceptual Well Design The use of pore pressure, fracture gradient and kick tolerance	90.00
E0109	**Time and Cost Estimation** 	1	This module will give learners a grasp of the main features of well time and cost estimation, including their importance in well planning.	• Key factors affecting well timings • Tangible and intangible costs associated with well operations • Understand systems for managing well costs	180.00
E0110	**Material Procurement** 	1	In this module Material Procurement is explored, giving learners an understanding of the tendering process and how materials and services are selected.	• Understands the tendering process • The key information needed to procure well materials and services • What the key materials and services are	180.00
E0111	**Detailed Drilling Programmes** 	1	This module provides learners with an understanding of the Detailed Drilling Programme, why this is important and what goes into its preparation	• The purpose and role of the Detailed Drilling Programme • Understand the content and composition – what is included, and why	180.00

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COURSES IN CATEGORY WELL ENGINEERING

4. Well Engineering

Code	Title	Duration (hour)	Description	Learning Focus	Price/User (MYR)
E0112	**Shallow Gas** 	1	Shallow gas can pose a high risk to oil & gas operations. In this module learners will understand the key features, risks and mitigations of shallow gas..	• Understand what shallow gas is and the risks it poses • Understand how a well can be designed to mitigate the risks • What procedures are used when drilling into a potential shallow gas zone	180.00
E0113	**Pore Pressure** 	1	In this module the fundamental aspects of Pore Pressure are discussed, giving learners an understanding of the various pressure states and how these are predicted.	• Understand the concepts of normal, abnormal and subnormal pressures • The processes which cause abnormal pore pressures • Overview of how pore pressures are predicted before and during drilling	90.00
E0114	**Fracture Gradient** 	1	Fracture gradient is a key concept in well design and operations, throughout the life of a well. This module provides learners with this essential core knowledge.	• Understand the definition and concepts of fracture pressure • Learn how fracture gradient affects the well design • Understand how fracture gradient can be measured	90.00
E0115	**Hydrostatics** 	1	This module aims to give learners a grounding in Hydrostatics and the importance of this concept in all oil & gas operations.	• Learn how hydrostatic pressures are calculated • Understand how and where pressure losses occur in the circulating system • Understand drilling hydraulics and why they are important • Discover the effects of equivalent circulating density and how is it calculated.	90.00
E0116	**Formation Fluids** 	1	In this module learners will explore how Formation Fluids are formed, how they accumulate and how they affect well design and operations.	• The main types of formation fluid and how they form • Discover the fundamentals of Phase behaviour • Understand how formation fluids impact drilling operations	90.00

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E0117	**Formation Temperature Analysis** 	1	Formation temperatures change the way wells are designed, how equipment and fluids interact and the efficiency of operations. This module provides the fundamental core knowledge needed by upstream teams.	• What is Geothermal Gradient and how is it used • Understand static and dynamic temperature profiles • Learn about the impact of temperature on well design and material selection	90.00
E0118	**Drilling Fluids** 	3	Drilling fluid is needed to successfully drill, test, complete and produce a well. In this module learners will be given the knowledge needed to understand the core principals of drilling fluids in modern oil & gas.	• The main types of Drilling Fluid and their properties • Drilling Fluid field tests • Solids Control and the Circulating System • Pressure losses and ECD	180.00
E0119	**Drillstring Design** 	2.5	The drillstring is the central component of the drilling process. In this module the concept of the drillstring is explored, discussing the equipment, design and limitations of modern well design.	• Understand the main components of the drillstring • Explore the physical capabilities and limits of drill pipe and other components Overview of drill bits, how they work and key features	180.00
E0120	**Casing Seat Selection** 	1	In this module learners will explore how casing setting depths are accurately planned, engineered and selected. The factors that affect casing seat selection and the role that kick tolerance plays.	• Determine casing setting depths using a formation pressure prognosis • Understand the concept of kick tolerance and how it can influence casing setting depth	180.00
E0121	**Casing and Tubing Design** 	2.5	Casing design is fundamental to all oil & gas wells. In this module learners will explore the key concepts of the design process from load cases to wear and fatigue.	• Discover the different types of casing and tubing and their purpose • Overview of the properties and features of casing and tubing • Understand the fundamental casing design load cases • Learn about corrosion, wear and fatigue	180.00
E0122	**Wellhead and Xmas Tree Selection** 	1	In this module the features, limitations and design of modern wellheads and xmas trees are introduced including the differences between surface and subsea, and how they are selected.	• Surface and subsea wellheads • The function of xmas trees and the key components • Wellhead and xmas tree selection	90.00

Code	Title	Duration (hour)	Description	Learning Focus	Price/User (MYR)
E0123	**Conductor and Riser Analysis** 	1	In harsh conditions and deepwater environments, conductor and riser analysis is a critical process. In this module learners will discover the fundamentals of conductor and riser analysis, i ncluding the types of system and key components.	• The principals of conductor setting and analysis • Types of riser and riser analysis	90.00
E0124	**Cement Design** 	1.5	Cement is an important tool in well construction. Our cement design module provides learners with a grounding in the main concepts of cement properties, additives, equipment, design and evaluation.	• Understand the main properties of cement and cement additives; • Learn about the various items of cement equipment commonly used; • Learn how cement is placed – understand the terms primary and secondary cementation, as well as cement evaluation.	180.00
E0125	**Material Selection** 	2.5	Material selection in oil & gas is a critical process. Downhole environments can be hostile and the equipment and materials used over the course of a well must be carefully designed. In this module learners will be given an understanding of this process and how it affects casing and drillstring design.	• Casing and Tubing material selection • Materials selection for Wellhead, Xmas Tree, Drilling equipment • How Corrosion affects the selection process	90.00
E0126	**Directional Drilling** 	1	Directional drilling has allowed new wells to be drilled, andnew reservoirs explored. In this module we explore the evolution of directional drilling and what tools and techniques are used today.	• History and Applications of Directional Drilling • The importance of Wellbore Positioning • Modern Directional Drilling techniques	180.00
E0127	**Geomechanics and Wellbore Stability** 	3	This module explores the applications of geomechanics to a wide range of critical areas such as pore pressure, wellbore stability, sand failure analysis and compaction.	• Why geomechanics is important to field development • How pore pressure is estimated and calibrated • What controls the risk of sand failure • Compaction, subsidence, cap rock integrity and fault reactivation • Introduction to sand control	180.00
E0128	**Well Test Planning** 	2	Well Testing is an essential process in the evaluation of a potential reservoir. In this module we explore the fundamental concepts of well testing, how they are designed, planned and performed.	• The types of well test and why they are performed • Well test planning and equipment selection • How well tests are performed, how the reservoir is accessed and how data is collected	180.00

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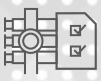
E0129	**Completion Design** 	3	Completions are essential in the production of oil & gas. In this module learners will gain an understanding of what is required during the design and operational phases of a well completion.	• How well types influence Completions • Completion design requirements • Tubing string design and stress analysis • Completion equipment selection	180.00
E0130	**Abandonment and Barriers** 	1	Well abandonment and well barriers are key to ensuring well integrity. In this module we discuss the purpose and goals of the suspension and abandonment process and the various requirements of competent well barriers.	• Understand the purpose and goals of suspension and abandonment • Competent Well Barriers and core requirements, verification and practices.	180.00

COURSES IN CATEGORY DRILLING & COMPLETIONS

5. Drilling & Completions

Code	Title	Duration (hour)	Description	Learning Focus	Price/User (MYR)
E0131	**Drilling Procedures** 	2	Drilling is a complex process that requires significant planning, design and expert execution. In this module learners will explore common drilling procedures and how they are applied to specific operations.	• Common drilling procedures for each phase of a well • Understand best practice during tripping operations • Prevention and response tactics to common drilling problems • Fishing and milling operations	180.00
E0132	**Drilling Operations** 	3	Successful drilling operations are the focus of Operators and Service Companies alike. In this module learners will explore the key aspects of drilling operations, common problems and how to address them.	• Understand the roles and responsibilities of wellsite personnel • Gain an understanding of the critical elements of each operation • Learn how common hole problems can be handled	180.00
E0133	**Formation Evaluation (Coming soon)** 	3	Well logging is an essential part of the data gathering process. In this module we explore the planning and management of open-hole logging, logging tools and logging operations.	• Methods of log data acquisition • Planning and management of logging operations • Measurement and control	180.00
E0134	**Well Testing and Completions** 	2.5	In this module we discuss the fundamental aspects of well t esting and completion operations including methods, equipment and operations.	• Well testing operations and objectives • Completion installation operations • Well workovers	180.00

Code	Title	Duration (hour)	Description	Learning Focus	Price/User (MYR)
E0135	**Drilling and Rig Equipment** 	2	A wide range of equipment is used during drilling. In this module learners will gain an understanding in the critical pieces of rig and third party equipment used during drilling operations.	• Understand the main items of equipment on the drilling rig • Explore common third party equipment	180.00
E0136	**Well Control Equipment** 	2	Well control equipment is essential to the mitigation of risk and safe handling of well control incidents. This module provides learners with an understanding of well control equipment and how they are operated.	• Understand the main components and operations of a BOP • The diverter system and how it operates • The surface equipment used for kick detection and mud gas separation • Awareness of drillstring well control equipment	180.00
E0137	**Well Control Procedures** 	1	Competent procedures are essential in tackling well control incidents. In this module we explore what leads to a loss of well control, how this is detected and ultimately controlled.	• Causes of kicks and kick avoidance • Kick detection and response • Shut in procedures and principal well control techniques	90.00
E0138	**Land Rigs** 	1.5	Land rigs are portable onshore drilling rigs used to explore for, appraise and develop hydrocarbon assets. This module explores the types of land rig and the best practice for common operations.	• The main types of land rig • Common best practice operations	180.00
E0139	**Jack-up Rigs** 	1.5	Jack-ups are versatile and commonly used offshore rigs. In this module learners will gain an understanding in jack- up construction, key systems, design and operations.	• Understand the design principles and considerations behind a Jack-up rig • Equipment and components unique to Jack-ups • The design, operations and operational risks common to Jack-ups	180.00
E0140	**Moored Rigs** 	1	Mooring is a critical operation for many rigs and vessels. In this module we explore how mooring works, the main equipment, planning and operational requirements.	• Understand how a moored rig holds its position • Learn about the components of the mooring system and how anchors are placed • Understand the significance of site surveys and seabed analysis	90.00
E0141	**Dynamically Positioned Rigs** 	1	Many modern rigs utilise dynamic positioning systems. In this module we explore the differences between DP and Moored vessels, how a DP system works and the key operations.	• Understand the advantages and disadvantages of DP rigs • Learn about the technology and various components behind a DP system • Understand the concepts behind watch circles and drift/drive offs	90.00

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E0142	**Project Logistics** 	2	Logistics is a fundamental part of every oil & gas project. It involves the complex process of planning for, shipping and ensuring delivery of equipment, machinery, chemicals, bulk products, material and personnel. In this module learners will understand the roles, responsibilities and operations involved in upstream project logistics.	• Understands the roles and responsibilities involved in project logistics and the operational supply chain • Knowledge of the common operations of the upstream logistics supply chain	180.00
E0143	**Waste Management** 	1	Upstream operations generate waste. This module explores the various elements that might be considered waste, how they are dealt with both onshore and offshore, and the importance of appropriate planning.	• The main categories of waste generated onshore and offshore • The process of drilling fluids solids removal and the equipment involved • Overview of cuttings disposal and waste management planning	90.00
E0144	**Emergency Planning, Safety and the Environment** 	1.5	There are a range of high risk activities undertaken during upstream operations. This module deals with the emergency response planning and procedures that should be in place for upstream operations.	• Major hazards and mitigation • Oil spill planning and response • A 'post Macondo' industry	180.00
E0145	**Risk Management** 	1	Drilling operations involve risk. However, a well managed operation mitigates against these risks such that they do not negatively impact the ongoing work. This module explores the process of identifying, assessing and managing those risks	• Understand hazards and the three main types of risk in oil and gas operations • Learn how risks are identified, classified and assessed using the formal Risk Assessment process • Learn about the tools used to mitigate against risks	90.00
E0146	**Management of Change** 	1	Managing change is critical to successful operations. In this module learners will be introduced to the common types of risk and the process of change management in oil and gas.	• Understand how risk and change is assessed • Learn how to understand, define and document a change	90.00
E0147	**Well Examination and Verification** 	1	Well examination and verification are critical tools used to ensure safe and competent well design and operations. This modules provides an introdcution to the examination and verification process.	• Understand the well examination and verification process	90.00

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Code	Title	Duration (hour)	Description	Learning Focus	Price/User (MYR)
E0148	**Project Close-out** 	1	This module will explore the activities commonly undertaken once a drilling operation has been completed in order to close- out the project.	• Understand common project close-out protocol • Understand the details of physical, administrative and contractual project close- out processes	90.00
E0149	**Well Integrity Management** 	3	This module will provide students with an understanding of the key elements of well integrity, why well integrity is important and the techniques used to ensure wells remain safe throughout their life cycle.	• Understand what well integrity is • Become familiar with well integrity concepts • Understand the importance of well i ntegrity throughout the lifecycle of a well	180.00

COURSES IN CATEGORY SPECIALISED APPLICATION

6. Specialised Application

Code	Title	Duration (hour)	Description	Learning Focus	Price/User (MYR)
E0150	**Managed Pressure Drilling - CBHP**	--	Coming soon.	Coming soon.	180.00
E0151	**Managed Pressure Drilling - PMCD**	--	Coming soon.	Coming soon.	180.00
E0152	**Deepwater** 	3	Deepwater operations are some of the most challenging in our industry. This module provides an understanding of the key concepts, technology, challenges and operations of deepwater projects worldwide.	• Why deepwater is needed • Deepwater technology and equipment • Deepwater well design and operations	180.00
E0153	**HPHT** 	2	HPHT wells are some of the most challenging ever drilled. In this module learners will explore the unique nature of HPHT wells, what makes a well HPHT and that affects well design and operations.	• How HPHT wells differ from conventional wells • HPHT well design and equipment selection • HPHT drilling procedures	180.00

COURSES IN CATEGORY SPECIALISED APPLICATION

7. Advanced Well Control

Code	Title	Duration (hour)	Description	Learning Focus	Price/User (MYR)
E0154	**Cause and Prevention of Kicks** 		Understanding the causes of kicks, and the main preventative methods of conducting drilling and tripping operations, is essential to good well control practice. From this advanced module learners will be able to demonstrate a detailed knowledge of the primary mechanisms that result in loss of primary well control, and the methods used to prevent kicks occurring during drilling and tripping operations.	• Causes of kicks • Prevention of kicks while tripping • Prevention of kicks while drilling	225.00
E0155	**Kick Detection** 		Knowing what to look for, and how to interpret well behaviour, is key in ensuring a rapid response to well control incidents. In completing this module learners will be able to explain the primary kick detection methods, including how they are employed and how results are interpreted.	• Kick warning signs • Drilling breaks • Torque and drag • Cuttings analysis • Shale density • Oil based mud • Flow checks	225.00
E0156	**Shut-in Methods** 		How to shut the well in, and how shut-in methods can vary between scenarios, is a key element of advanced well control understanding. From this module learners will gain a detailed knowledge of well shut-in principles, and be able to explain the differences in shut-in procedures used in common scenarios.	• Shut-in philosophy • Land rigs • Jack-up rigs • Floating rigs • Kicks while running casing • Kicks while out of the hole	180.00
E0157	**Well Control Methods** 		Understanding the advantages, disadvantages and implications of the range of well control methods is essential in ensuring a robust response to well control incidents. In this advanced module learners will gain an understanding of the different well kill methods, when they should be selected and what sets them apart.	• Kill method selection • Circulation kill methods • Volumetric method • Combined stripping and volumetric method • Bullheading	225.00
E0158	**Well Control Equipment** 		The selection, operation, testing and inspection of well control equipment is an essential part of assuring well integrity. In completing this module learners will gain a wide understanding of the various components of industry well control systems, including the recommendation of BOP configurations and equipment test requirements.	• Ram BOPs • Annular BOPs • Diverters • Wellheads • Manifolds • Subsea • Testing and Inspection	180.00

Code	Title	Duration (hour)	Description	Learning Focus	Price/User (MYR)
E0159	**Kick Tolerance** 		How to calculate and monitor kick tolerance is a key element of well control assurance. In completing this module learners will gain an in-depth understanding of how to calculate kick tolerance and make recommendations based on those results.	• Kick tolerance calculation • Kick tolerance while drilling • Kick tolerance limits	225.00
E0160	**Shallow Gas** 		Understanding how shallow gas impacts well design, drilling operations and equipment selection is a essential skill in advanced well control. From this module learners will understand the risks of shallow gas in relation to various rig types, and how the precautions and response is varied accordingly.	• Probability and risk • Jack-ups • Floating rigs	225.00
E0161	**Deepwater** 		Deepwater operations present unique risks in relation to well control. As an increasing number of Operators turn to deepwater prospects, the ability to understand, mitigate and respond to deepwater well control incidents grows. From this advanced module learners will be able to demonstrate an understanding of the main features unique to deepwater well control.	• Fracture gradient • Choke line pressure loss • Choke line fluid displacement • Subsea BOP Systems • BOP Control Systems • Subsea accumulator volume • Deepwater Well Control Procedures	225.00
E0162	**Common Challenges** 		The ability to react to changing situations is just as important as the ability to plan, design and prevent well control incidents taking place. By completing this module learners will gain an understanding of the common problems encountered during well control incidents, including how to avoid, diagnose and overcome them.	• Stripping • Zero pressure drillpipe • Subsea wells • Equipment limitations • Power failure • Plugged choke • **S**topping the circulation • Underground blowouts • Highly deviated wells • Horizontal wells • Oil base mud • Gas hydrates • Stack gas clearing procedure • Loss of secondary well control	225.00
E0163	**Tertiary Well Control** 		A thorough understanding of tertiary control is essential in assuring well control competency. Often overlooked, the last line of defence is critical in the protection of life, assets and the environment during well control incidents. In this module learners will explore the various tertiary well control methods and how these are employed.	• Capping stacks • Relief well drilling • Barite plugs • Cement plugs	225.00

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ask@semaraksolutions.com

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Semarak Solutions Sdn. Bhd. (1378526-T)
Level 6, Lobby A, Wisma UOA II
No. 21, Jalan Pinang
50450 Kuala Lumpur, Malaysia
Phone: **+60 3 2780 6787**
Email: **ask@semaraksolutions.com**
Website: **www.semaraktraining.com**