



TRAINING 

CAPABILITY DEVELOPMENT
FOR THE ENERGY SECTOR

DRILLING, WELL AND FACILITIES ENGINEERING

SKILLS DEVELOPMENT FOR INDIVIDUALS
AND TEAMS



DRILLING AND WELL ENGINEERING

Foundation Level

[N694: Basic Drilling Technology](#)
[N695: Introduction to Drilling, Completion, and Workover Operations](#)
[N672: Applied Drilling Engineering](#)
[N600: Well Planning and Execution](#)
[N608: Fundamentals of Well Completions and Workovers](#)
[N739: Horizontal Drilling & Extended Reach Drilling](#)
[N740: Introduction To HPHT Well Design](#)
[N741: Principles and Practices of Mud Motor](#)
[N742: Directional Drilling](#)
[N743: Drillstring Design Practices](#)
[N744: Well Engineering: Torque and Drag and Hydraulics](#)

Skilled Level

[N687: Advanced Directional Drilling and Advance Surveying Techniques](#)
[N688: Drillstring Design](#)
[N689: Drilling Fluids](#)
[N690: Stuck Pipe, Design and Operational Practices for Avoidance](#)
[N691: Well Integrity Management & Barrier Verification](#)
[N692: Well Cost Control & Forecasting](#)
[N693: Casing Design & Well Integrity Engineering](#)
[N696: Drilling Rig Selection & Inspection for Performance Optimization](#)
[N697: Extended Reach Drilling \(ERD\) Program](#)
[N698: HPHT Well Engineering](#)
[N943: Well Test Interpretation in Practice](#)
[N998: Well Completion Design](#)
[N738: Applied Drilling Engineering Optimization](#)

DRILLING AND WELL ENGINEERING

FOUNDATION
LEVEL

Course	Instructors	Duration
<u>N694: Basic Drilling Technology</u>	Kevin Gray	5 Days
<p>This course provides a comprehensive introduction to drilling technology and well construction, covering the practices, equipment, and safety measures used throughout the drilling process. Participants will be taken through the step by step process of drilling a well, learning what happens at each stage and who is involved. The course is designed to progress logically, introducing basic concepts in simple terms and gradually building towards a full understanding of drilling operations. The course also emphasizes how wells are designed, constructed, and maintained safely, including well control techniques, casing and cementing operations, and environmental protection measures. By the end of the course, participants will have a solid foundation in drilling technology, allowing them to communicate effectively with drilling professionals, understand the basic engineering and technical aspects of drilling, and recognize how drilling fits into the wider oil and gas industry. This course is designed for individuals new to the industry or those seeking a fundamental understanding of drilling operations and technology. No prior knowledge required as the course builds understanding step by step, covering the processes, people, and technology involved in drilling a well from start to finish.</p>		
<u>N695: Introduction to Drilling, Completion and Workover Operations</u>	Kevin Gray	5 Days
<p>This course provides a comprehensive introduction to drilling, well completion, and workover operations, covering the people, equipment, and processes involved in each discipline. No prior industry knowledge is required—concepts are introduced in simple terms and then expanded upon to build a solid foundation of understanding. The course emphasizes well integrity and how it is maintained across all three disciplines. Participants will gain insight into how drilling, completion, and workover operations fit within the full lifecycle of an oilfield, from exploration and appraisal to development, production, and eventual well abandonment. By the end of the course, participants will be able to communicate effectively with industry professionals, understand the key processes and technologies, and see how different disciplines interact to ensure safe and efficient operations. This course is designed for individuals new to the industry or those seeking a foundational understanding of drilling, completion, and workover operations.</p>		
<u>N672: Applied Drilling Engineering</u>	Evren M. Ozbayoglu	5 Days
<p>The course covers all aspects of drilling technology, emphasizing both theory and practical application. The course provides all required fundamentals and background to design, plan and drill a well whether it is shallow, vertical, directional, horizontal, high pressure - high temperature. Application of the information acquired from this course during design and execution process lead to significant drilling cost reduction as well as decrease the total time for drilling process yet end up with a safe and high-quality drilling job. Planning and general well design, casing, cementing, drill string selection, hydraulics are some of the essence to be covered in this course.</p>		



DRILLING AND WELL ENGINEERING

Course	Instructors	Duration
<p><u>N600: Well Planning and Execution</u></p> <p>The course details the planning and execution of a well from an operational geoscience viewpoint giving a broad understanding of what geological operations entails including practical exercises and role play. For most methods of energy generation, environmental work and waste disposal the drilling of, or repurposing of existing wellbores, is usually required. Few professionals in the industry gain real practical experience and even if they don't work in operations, it's critical that they have an understanding of the practical role of operations geoscientists.</p>	Christine Telford	5 Days
<p><u>N608: Fundamentals of Well Completions and Workovers</u></p> <p>This course provides an introduction and overview of key considerations in well completion and workover design, and a fundamental explanation of well/service equipment and operations. Technical explanations of common practices are given, along with troubleshooting hints. Completions in a variety of settings, including HPHT, deepwater, and resource plays, are considered.</p>	Michael Gallup	3 Days
<p><u>N739: Horizontal Drilling & Extended Reach Drilling</u></p> <p>This course examines well construction technologies and reservoir characteristics required for designing horizontal and multibranch wells; description of specialized drilling strategies including horizontal, extended reach, underbalanced drilling, coiled tubing drilling, geosteering and special downhole tools, stimulation and sand control in horizontal and extended reach wells wells.</p>	Robello Samuel	2 Days
<p><u>N740: Introduction To HPHT Well Design</u></p> <p>This course will cover basic well design specific to HPHT reservoirs and will expose participants to areas of focus for HPHT well design. The impact of temperature and pressure on well barriers will be discussed. Participants will be exposed to various challenges imposed on well barrier elements by HPHT reservoirs and operational practices to help design and execute HPHT wells.</p>	Robello Samuel	2 Days
<p><u>N741: Principles and Practices of Mud Motor</u></p> <p>This is a unique and focused training on positive displacement motor commonly called mud motor. Positive displacement motor commonly called Mud motor, a simple but elegant machine that has become an integral part of the BHA specially when drilling shale wells. Even though tremendous advancements have been made but the challenges remain. The one-day training on mud motors covers the concepts, performance, advancements, future designs and how to use and when to use at difficult times. The workshop covers additional talks from industry technology leaders and is targeted for engineers, mud motor experts and manufacturers.</p>	Robello Samuel	2 Days



DRILLING AND WELL ENGINEERING

Course	Instructors	Duration
<p><u>N742: Directional Drilling</u></p> <p>The course provides a comprehensive treatment of design, model, and practices with theoretical underpinnings for directional, horizontal, and multilateral wells. Various methods discussed will provide more comprehensive view of the trajectory designs for well construction. It also covers well engineering, enabling participants to understand the importance of various well designs. The class also covers the BHA design concepts, drillahead and drillstring dynamics. Examination of the most recent well construction technologies required for designing horizontal and multibranch wells; description of specialized drilling strategies including horizontal, extended reach, geosteering and special downhole tools for complex and advanced wells. Upon completion of this course, participants will not only have deeper knowledge of the basic engineering principles used in the design of high angle wells but also have confidence to use them efficiently for designing as well as solving complex problems effectively.</p>	Robello Samuel	2 Days
<p><u>N743: Drillstring Design Practices</u></p> <p>The course provides a comprehensive treatment of drill string design, practices with theoretical underpinnings. Various operational loads and limits discussed will provide more comprehensive view of the drillstring mechanics. It also covers advanced drilling engineering, enabling participants to understand the drillstring integrity under various operating load conditions. The class also covers the BHA design concepts, drillahead and drillstring dynamics. Participants will be provided on the realtime time monitoring and optimization and predictive conditions when the well is drilled. Upon completion of this course, participants will not only have deeper knowledge of the basic engineering principles used in the drillstring design but also have confidence to use them efficiently for consulting as well as solving complex problems effectively.</p>	Robello Samuel	2 Days
<p><u>N744: Well Engineering: Torque and Drag and Hydraulics</u></p> <p>The course provides a comprehensive treatment of torque and drag forces and wellbore hydraulics, practices with theoretical underpinnings. The course covers the basics of friction factors and the estimation of torque and drag forces, hookload calculations, and tubular buckling concepts for 2D and 3D buckling etc. Also the course will focus on drill bit hydraulics, drilling mud composition, properties and functions, different rheology models. Different hydraulic pump and nozzle optimization methods will be presented with different objective functions. Additional topics include hole cleaning, selected empirical correlations and models for deviated wells with emphasis on practical drilling problems, and surge and swab effects.</p>	Robello Samuel	2 Days



DRILLING AND WELL ENGINEERING

Course	Instructors	Duration
<p><u>N687: Advanced Directional Drilling and Advance Surveying Techniques</u></p> <p>This course will deliver an advanced understanding of modern directional drilling techniques and the industry standards used in well placement and wellbore surveying. The evolution of directional drilling tools and techniques that are used to achieve high accuracy well positioning are detailed with reference to the fundamental engineering that underlies the equipment we work with, and the procedures and practices we work to. This is very much an operationally focused course which looks to deliver a detailed understanding of not just the narrow field of the Directional Driller's work, but all the associated areas of risk that can result from the practices, tools and techniques that they may use. The knowledge from this course can be directly applied to ongoing drilling operations or future well planning and will have a dramatic impact on drilling performance. All the topics are placed in their operational context and an understanding of how each topic is interrelated with the other subject areas in the course is developed throughout the week. Throughout the course areas in which directional drilling and surveying can adversely impact the well cost or increase the well risk are detailed and the mitigations for these risks are discussed.</p>	Kevin Gray	5 Days
<p><u>N688: Drillstring Design</u></p> <p>This course provides an in depth understanding of drillstring design, operation, and inspection, essential for well construction professionals. It starts with foundational concepts, including drillstring metallurgy and component selection, then progresses to the mechanical forces acting on the drillstring during operations. Key design considerations for low angle wells will be covered before expanding into Torque & Drag (T&D) mechanics and the modifications needed in the Bottom Hole Assembly (BHA) as well inclination increases. The course also tackles environmental factors such as shock, vibration, erosion, and corrosion, integrating them into the design and operational decision making process. Additional topics will focus on advanced drillstring mechanics, hydraulics, wear and fatigue management, safety best practices, realtime monitoring, and emergency troubleshooting to provide a comprehensive understanding of drillstring performance and reliability.</p>	Kevin Gray	5 Days
<p><u>N689: Drilling Fluids</u></p> <p>This course will deliver an advanced understanding of modern drilling fluids and their selection for maximum operational efficiency. The course looks at both the fundamental aspect of both water based and oil based fluid systems and details the key aspects that are used to make the most appropriate choices of both base fluids and system additives. This is very much an operationally focused course which looks to deliver a detailed understanding of not just the narrow field of the mud engineers work, but all the associated areas of risk that can result from the formulations, chemical additives as well as the testing techniques and procedures that they may use. The knowledge from this course can be directly applied to ongoing drilling operations or future well planning and will have a dramatic impact on drilling performance. All the topics are placed in their operational context and an understanding of how each topic is interrelated with the other subject areas in the course is developed throughout the week. Throughout the course areas in which the drilling fluids system can adversely impact the well cost or increase the well risk are detailed and the mitigations for these risks are discussed.</p>	Kevin Gray	5 Days



DRILLING AND WELL ENGINEERING

SKILLED
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Course	Instructors	Duration
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<u>N690: Stuck Pipe, Design and Operational Practices for Avoidance</u>	Kevin Gray	5 Days
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This course addresses the root causes of the poor planning and poor operational procedures that lead to stuck pipe situations at the rigsite. The approach to stuck pipe prevention advocated in this course is a 'Holistic' one where the subject is addressed across disciplines at the planning, execution and evaluation stages of each project. The importance of maintaining focus on the key drivers of stuck pipe during each phase of well construction is highlighted as it the use of techniques and equipment previously only used by the geo-science teams. Whilst the course covers all the areas of potential stuck pipe in well construction operations the delivery of the course is focused on ensuring that the greatest impact can be delivered both in the planning stages and at the rigsite. The time weighting of each subject area and each stuck pipe mechanism is based on the industry stuck pipe statistics to ensure that the maximum value is delivered.

<u>N691: Well Integrity Management & Barrier Verification</u>	Kevin Gray	5 Days
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Ensuring well integrity is a critical component of safe and efficient well operations. A failure in well integrity can result in environmental hazards, operational downtime, and catastrophic blowouts, making a structured approach to well integrity management essential. This course provides a comprehensive understanding of well barriers, their verification, and well integrity management systems. Participants will gain knowledge on barrier principles, industry regulations, verification techniques, and operational challenges throughout the well lifecycle—from drilling to abandonment. The course begins with the fundamentals of well barriers and integrity, including definitions, industry standards, and how barriers are designed, implemented, and verified. Participants will learn how different well barrier elements—such as casing, cement, wellheads, and fluid columns—interact to maintain well integrity. real-world case studies will help reinforce these concepts. A significant focus will be placed on well barrier verification, testing methodologies, and how to assess well integrity in different operating conditions. Load cases and risk scenarios will be analysed to demonstrate how barriers withstand operational stresses. The course will also cover well intervention and abandonment, examining barrier element selection, quality assurance, and regulatory requirements. Participants will learn how to mitigate common integrity risks such as annular pressure buildup, casing failures, and cement integrity issues. The final section of the course will introduce Well Integrity Management Systems (WIMS) and Safety and Environmental Management Systems (SEMS). These systems are used by operators, regulators, and industry stakeholders to monitor and verify well integrity throughout its lifecycle. Participants will learn how to implement hazard analysis, emergency response planning, management of change, and contractor selection to maintain well integrity. By the end of the course, participants will be equipped with the technical knowledge and practical tools needed to ensure well integrity, perform verification testing, and comply with regulatory standards—improving well safety, reliability, and environmental protection.



DRILLING AND WELL ENGINEERING

SKILLED
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Course	Instructors	Duration
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<u>N692: Well Cost Control & Forecasting</u>	Kevin Gray	5 Days
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Cost control and forecasting are fundamental to efficient well planning and execution. The ability to accurately estimate, track, and reconcile well costs is critical for drilling engineers, finance teams, and cost engineers to ensure projects remain within budget while maximizing operational efficiency. This course provides a comprehensive exploration of well cost control, covering everything from the initial cost estimation and AFE creation to real-time cost tracking, financial reporting, and post-drilling reconciliations. By integrating both technical and financial perspectives, participants will develop a well-rounded understanding of how to effectively manage well costs, mitigate financial risks, and optimize the value of well expenditures. The course begins with a review of fundamental cost principles, including the well cost improvement cycle and how various technical and operational factors influence well expenses. Participants will learn how to break down costs into Time-Related Costs (TRC), Depth-Related Costs (DRC), and One-Off Costs (OOC) to develop a structured, standardized approach to cost estimation. Another major aspect of the course is risk management in well cost control. Participants will learn how to recognize and mitigate potential cost overruns caused by operational challenges such as stuck pipe, lost circulation, non-productive time (NPT), and well control issues. Strategies for controlling actual well costs, managing financial commitments, and identifying cost overruns before they escalate will be discussed in detail. By the end of the course, participants will have a clear understanding of the entire well cost control and forecasting process, from the initial budgeting phase to final reconciliation. They will be equipped with the skills needed to implement cost-effective drilling strategies, improve financial reporting accuracy, and add value to their organization by enhancing cost control practices.

<u>N693: Casing Design & Well Integrity Engineering</u>	Kevin Gray	5 Days
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Casing design plays a fundamental role in ensuring well integrity throughout the well lifecycle—from drilling and completion to production and eventual abandonment. A well-structured casing design is critical for maintaining well stability, pressure containment, and operational safety. This course provides a comprehensive understanding of casing design principles, focusing on engineering compliance with international well integrity standards such as API, ISO, and NORSOK. Participants will learn how to design casing programs based on geomechanics, wellbore pressure profiles, material selection, and stress analysis.



DRILLING AND WELL ENGINEERING

SKILLED
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Course	Instructors	Duration
<u>N696: Drilling Rig Selection & Inspection for Performance Optimization</u>	Kevin Gray	5 Days
<p>The selection and inspection of drilling rigs are critical to ensuring safe, efficient, and cost-effective well construction operations. This course provides a comprehensive approach to rig selection, inspection techniques, and performance optimization, enabling participants to make informed decisions that reduce nonproductive time (NPT), minimize operational risks, and improve overall drilling performance. The course will cover rig selection criteria, explaining how to choose the right rig based on technical, operational, and commercial considerations. Inspection practices will be covered to enable a good understanding of regulatory, technical, and cybersecurity risks associated with rig operations. The techniques and practices for rig performance optimization to improve rig efficiency, safety, and quality management. By the end of the course, participants will have the knowledge and tools to effectively select and inspect drilling rigs, ensuring performance optimization throughout the rig's operational lifecycle.</p>		
<u>N697: Extended Reach Drilling (ERD) Program</u>	Kevin Gray	5 Days
<p>Extended Reach Drilling (ERD) presents unique engineering and operational challenges that require specialized planning and execution. This course delivers an advanced understanding of high angle well construction, hole cleaning, well monitoring, and directional drilling techniques, ensuring safe and efficient drilling of extended reach and complex wells. This is an operationally focused course that goes beyond the basics of ERD well planning. Participants will gain a deep understanding of risk factors, operational hazards, and best practices to ensure successful well delivery while minimizing wellbore instability, nonproductive time (NPT), and well cost escalation. The curriculum follows the latest research and addresses the highest risk areas associated with high angle and complex well drilling operations. The course also critically evaluates how proposed tools and techniques may impact project risk, ensuring informed decision making for complex wells. Participants will gain practical knowledge that can be directly applied to ongoing drilling operations or future well planning. This training has been proven to deliver dramatic improvements in drilling performance, reduce costs, and increase operational efficiency. All topics are placed in their operational context, ensuring that each subject is interrelated with the overall ERD drilling process.</p>		
<u>N698: HPHT Well Engineering</u>	Kevin Gray	5 Days
<p>High Pressure, High Temperature (HPHT) wells present significant engineering and operational challenges. This course delivers a detailed understanding of the latest drilling techniques, well design considerations, and operational strategies for HPHT wells, focusing on drilling efficiency, well integrity, and risk mitigation. Participants will gain a comprehensive insight into HPHT well planning and execution, learning from historical case studies that highlight what can go wrong when proper planning and operational discipline are not followed. This is a highly operationally focused course, providing knowledge that can be immediately applied not just in HPHT wells but also to improve overall drilling performance and reduce costs across all well types. All topics are discussed within their operational context, ensuring participants understand how each discipline is interconnected and how HPHT techniques can impact overall well costs, safety, and risk exposure.</p>		



DRILLING AND WELL ENGINEERING

SKILLED
LEVEL

Course	Instructors	Duration
<u>N738: Applied Drilling Engineering Optimization</u>	Robello Samuel	2 Days
<p>The course focuses on techniques of optimization, basic concepts, different optimization methods, hydraulic optimization, different nozzle selection criteria, diamond and roller cone bit weight on bit, rotary speed drilling optimization, hydraulic optimization with special downhole tools, well cost estimation, minimum cost casing design. This course envisages studying algorithms and optimization techniques used in the various stages of drilling and well completion operations. The course will also focus on presenting different optimization methods and expose the participants to variety of problems and solve them successfully.</p>		
<u>N529: Well Integrity Cement Evaluation</u>	Gary Frisch	3 Days
<p>The evaluation of cement bonding and zonal isolation is a challenge that the oil and gas industry face as wells are drilled deeper and within more hostile environments. This seminar will cover the use of both sonic and ultrasonic tools to determine the presence or lack of a cement sheath. The quality of the cement sheath is not only important for completion efforts but may also be needed to satisfy regulatory requirements. The cement Basic tool theory, quality control, interpretation of field logs, and methods of evaluating both complex cements and difficult environments will be covered. Both new and well abandonments cement examples will be examined and evaluated. The understanding of cement bond logs and their use will allow operators to maximize the economic life of the well from the initial completion to abandonment. The correct evaluation of the cement sheath will provide confidence in the environmental and safety of the wellbore for the desired completions.</p>		
<u>N943: Well Test Interpretation in Practice</u>	Alain Gringarten	4 Days
<p>This course provides participants with the advanced skills and understanding required to analyse complex pressure transient tests. The methodology followed has become the industry standard, systematic way of interpreting well tests in homogeneous and heterogeneous reservoirs, including fissured and multilayered systems. Recommendations for designing tests in such formations are also addressed for oil, gas and multi-phase flow wells.</p>		
<u>N998: Well Completion Design</u>	Jonathan Bellarby	5 Days
<p>The course expands on a basic awareness of wells and completions to cover how completions can affect production and how completion design is used to optimise production. Some of the key subject areas that are covered include completions types, inflow performance, perforating, stimulation, tubing performance and artificial lift, production chemistry, materials, stress analysis and corrosion and completion equipment / installation.</p>		



INSTRUCTORS

Kevin Gray

Kevin can offer the experience of over 5000 days of operational experience and operations support positions from an oilfield career of over 31 years as well as working as lead trainer for a multi award winning ERD engineering team based in Perth Scotland.

Kevin has designed and overseen the delivery of multi week training programs for offshore drilling, well intervention and fluid supervisors for a number of clients. This has included competency assessment and skills gap analysis throughout the programs. Kevin is also able to draw on his well documented teaching skills to deliver courses or programs in directional drilling and surveying, stuck pipe, extended reach drilling and various other drilling related subject areas. He wrote the first Operation support centre SOP for directional drilling which was later adopted globally. In addition, he has designed and delivered various 'Real Time Centre' training courses including human dynamics training. In his former role as directional drilling coordinator, based in Aberdeen he still holds a number of world records for drilling achievements with motor and RSS tools.



Evren M. Ozbayoglu Christine Telford

Evren M. Ozbayoglu is currently a "Chapman Endowed Wellspring Professor" of The University of Tulsa (TU), Petroleum Engineering Department, and the Director of The University of Tulsa, Drilling Research Projects (TUDRP). He has earned his BSc in 1996 and MSc in 1998 from METU. He earned his PhD degree from The University of Tulsa in 2002. He started working at METU as a full-time faculty and continued working at METU until 2009 August. Since then, he has been working for TU.

Dr. Ozbayoglu has numerous publications and participated in several industrial projects on major drilling engineering topics as well as wellbore hydraulics, hole cleaning, tubular mechanics, and data analytics. He was awarded for "Outstanding Technical Editor Award" for SPE Journal, SPE Reservoir Application & Engineering, and SPE Drilling & Completion for years 2012, 2013, 2015, 2018 and 2019, "SPE Regional Distinguished Faculty Award – Mid-Continent Region – 2013" within 2012-2013 academic year, and SPE Regional Drilling Engineer Award in 2019. He is an SPE member since 1994, and ASME member since 2015.



Starting her industry experience as a mudlogger on the UKCS (UK Continental Shelf), Norway and onshore Europe Christine quickly progressed to wellsite geologist. After 5 years she set up her own company as a consultant working both at wellsite and in the office as an operations geologist planning and executing wells. Christine has worked worldwide for a variety of operators specialising in complex, challenging projects including ultra-extended reach drilling, remote operations, HPHT and deep-water exploration. Throughout her career she has been a mentor and coach preparing operator company personnel for the practical, operational geoscience world.

More recently Christine has transitioned into lecturing and teaching, both in academia and industry. In 2009 she created an operations geology module for Aberdeen University IPG (Integrated Petroleum Geoscience) MSc and this is repeated yearly. Additionally, Christine has taught in-house and external training courses for operators and service companies including the BP Accelerated Development Programme for company staff moving into operations geology roles.



INSTRUCTORS

Michael Gallup

Mike is the Principal Engineering Advisor at Tetra Tech RPS Energy in Canada with over 15 years of experience in completion design and optimization of oil and gas wells, locally and internationally, which includes well test design and analysis, gas well dewatering, and well performance modeling.

He specializes in the construction and application of Integrated Production Models (IPM). These models link material balance, well performance and surface networks to form an overall production system model which is used to optimize field performance, enable production forecasting and monitor reservoir and well performance. Michael also works on economic assessments and field development plans for both offshore and onshore fields located across the globe. Michael is a member of the Society of Petroleum Engineers (SPE), Engineers Nova Scotia, and a registered Professional Engineer with APEGA.



Robello Samuel

With 41 years of experience, Robello is currently working as a Senior Technology Fellow in Halliburton's Drilling Division, where he leads research and engineering in well engineering, cyber-physical systems, artificial intelligence, and sustainability.

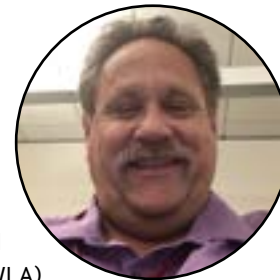
Over the years, he has held various engineering and leadership positions, contributing significantly to both domestic and international oil and gas drilling and completion operations. He has held various leadership roles throughout his career and is recognized for his groundbreaking contributions to drilling technologies and engineering practices. He has received multiple prestigious awards, including the Gulf Coast SPE Drilling Engineering Award, the SPE International Drilling Engineering Award, the SPE Distinguished Membership Award, and the SPE Honorary Award. An educator for over two decades, he is also concurrently an adjunct professor at the University of Houston and at the University of Southern California.



Gary Frisch

Gary has over 34 years of experience in creating, developing, interpretation of petrophysical data concentrating in the cased hole environment. He began as an open hole field engineer with Halliburton Logging Services in Farmington New Mexico. He was transferred to Houston to work in Interpretation and Development in November 1990. He worked on thin bed interpretation but soon migrated to the cased hole environment where he designed and wrote the production logging software including multiprobe array tools. He then developed leading edge computer programs for cement evaluation for multiple type of measurements including sonic, ultrasonic and attenuation that provides interpretation of any cement evaluation tool currently in use throughout the industry.

Authored more than 25 technical papers on both cased and open hole log interpretation, holds 15 U.S. patents along with several international patents. Member of Society of Petrophysicists and Well Log Analysts (SPWLA) and the Society of Petroleum Engineers (SPE).



INSTRUCTORS

Alain Gringarten

Professor Alain C. Gringarten holds the Chair of Petroleum Engineering in the Department of Earth Science and Engineering at Imperial College in London, where he is also director of the Centre for Petroleum Studies. Prior to joining Imperial College in 1997, he spent fourteen years with Scientific Software-Intercomp; five years with Schlumberger; and five years with the Bureau de Recherches Géologiques et Minières in Orléans, France, in various senior technical and management positions.

Prof. Gringarten has taught numerous well test interpretation industry courses around the world and has been involved in many consulting projects through his company Well Analysis Limited. A member of the Society of Petroleum Engineers (SPE) since 1969, he was elected a Distinguished Member in 2002 and an Honorary Member in 2009.

He has chaired or helped organize many SPE Advanced Technology Workshops, Forums and Conferences. He is currently a member of the SPE International committees on R&D.



Jonathan Bellarby

A first-class degree in geophysics and a masters degree in Petroleum Engineering were a prelude to 6 years with BP as a petroleum engineer. Jonathan left BP and, following a short spell in Camco, jointly founded ICE Energy. After 6 years of completions and petroleum engineering consultancy and training, ICE Energy merged with TRACS International, which has now been acquired by AGR, where Jonathan continues with petroleum and completion engineering studies, leading integrated teams, and developing / delivering training courses in diverse world-wide locations.

He is the author of the respected "Well Completion Design" book, published in 2009 by Elsevier.



FACILITIES ENGINEERING



Facilities Engineering

[N733: Subsea Pipeline Engineering](#)

[N734: Onshore Pipeline Engineering](#)

[N736: Process Piping Code, P&IDS and Engineering Drawings Interpretation](#)

[N737: Oil and Gas Transport](#)

[N735: Fundamentals of Risk Based Process Safety Management](#)

[N686: Oil and Gas Storage Tanks: Design, Operation, and Maintenance](#)

[N611: Introduction to Crude Oil Gathering and Processing](#)

[N613: Natural Gas Processing - Dehydration, Refrigeration, and Fractionation](#)

[N983: Pipeline and Process Engineering](#)

FACILITIES ENGINEERING

Course	Instructors	Duration
<p><u>N733: Subsea Pipeline Engineering</u></p> <p>Subsea pipelines have made a tremendous impact in industry as a safe and reliable ‘transport’ system for the delivery of liquids, gases and product. Statistically, pipelines have proven to be safer in terms of incidents than surface transport. This course will provide delegates with a detailed and comprehensive insight into Subsea Pipelines Mechanical Engineering Design, together with the supporting requirements to ensure Pipeline Safety, Integrity And Reliability over their lifetime. Importantly, the course will also present how risks, which pipelines are exposed to, are managed in order to maintain pipeline integrity and safety while complying with legislative and regulatory requirements.</p>	David Newman	3 Days
<p><u>N734: Onshore Pipeline Engineering</u></p> <p>A vast and global network of onshore pipelines are in evidence with new pipelines being designed and built on a month-by-month basis globally – to safely and reliably deliver oil and gas, fuels and other commodities to end users. This course will provide delegates with a detailed and comprehensive insight into Onshore Pipelines Mechanical Engineering Design, together with the supporting requirements to ensure Pipeline Safety, Integrity And Reliability over their lifetime. Importantly, the course will also present how risks, which pipelines are exposed to, are managed in order to maintain pipeline integrity and safety while complying with legislative and regulatory requirements.</p>	David Newman	3 Days
<p><u>N736: Process Piping Code, P&IDS and Engineering Drawings Interpretation</u></p> <p>The use of piping and piping systems plays a critical role within a range of industries – oil and gas, process, petrochemicals, nuclear, etc. As with other operational assets all piping systems may be susceptible to damage from mechanical forces, vibration, corrosion, fatigue, etc. One of the most significant damage mechanisms on piping is known as Corrosion Under Insulation (CUI). This course will present delegates with a detailed insight into piping and piping systems covering design, materials, fabrication, piping protection, piping codes and standards, piping and instrumentation diagrams (P&IDs) and their interpretation. It is noted for clarification that there is often a lot of confusion between What Is Piping and What Is A Pipeline – sometimes these terms are used interchangeably which is incorrect as piping is governed under international standard ASME B31.3 whereas pipelines are governed under ASME B31.4 (liquid pipelines) and ASME B31.8 (gas pipelines).</p>	David Newman	3 Days



FACILITIES ENGINEERING

Course	Instructors	Duration
<p><u>N737: Oil and Gas Transport</u></p> <p>This course provides a detailed and comprehensive understanding of the types and methods by which hydrocarbons are transported around the world. Specifically it looks at hydrocarbon transport by Pipelines, Road Tanker, Rail and Marine Vessels. Of particular importance is that each of the methods presented, discussion will be made on the specific risks that each transport method will be exposed to – those risks extend from the design, construction, operations phases as well as those incurred during an inspection and maintenance programme. In addition, this course will also provide delegates an insight into logistics and supply chain exploring the complex interfaces between all parties involved which carry their own risks in terms of shipping oil and gas cargoes globally – the impact of shipment delays, cross border custom delays, non-compliant documentation, contracts, resource shortages - all contribute to a detrimental ‘cause and effect’ for both shipping operators/owners with respect to their end user.</p>	David Newman	3 Days
<p><u>N735: Fundamentals of Risk Based Process Safety Management</u></p> <p>The Process industry captures a wide range of industries – oil and gas, chemicals, petrochemicals, pharmaceuticals, power generation, nuclear and so on. Over many decades adverse and in some cases, catastrophic incidents have occurred resulting in the impact on human life, the environment, and importantly the impact on business reputation. Further, the price of ‘clean up’ and lawsuits compounds into substantive penalties to the Owners/ Operators of process plants. This course will provide delegates with a detailed and comprehensive insight into the Process Industry at large as well as introducing the concepts of Process Safety, Process Safety Performance and importantly the risk based approach to Process Safety Management in accordance with the provisions of professional institutes.</p>	David Newman	3 Days
<p><u>N686: Oil and Gas Storage Tanks: Design, Operation, and Maintenance</u></p> <p>The course provides a complete overview of various kinds of tanks used, their purposes and attributes. It covers the fundamentals for the design, construction, operation, maintenance, and inspection of petroleum terminal and tank facilities. This includes the safe designs, operations, and considerations in the form of safety moments, incident reviews, and risk management. It considers the different kinds of designs, best practices and the general considerations associated with storage tanks including the hazards of petroleum storage.</p>	David Newman	5 Days



FACILITIES ENGINEERING

Course	Instructors	Duration
<p><u>N611: Introduction to Crude Oil Gathering and Processing</u></p> <p>This course is designed to familiarize participants with the basic aspects of crude oil production and the common processes and equipment used in gathering and processing. It is ideally suited to technical, operations and maintenance personnel involved in oil gathering and processing who have had limited exposure in this area, or for professionals involved in other areas of the petroleum industry who require a comprehensive overview of oil gathering and processing.</p>	Dale Kraus	2 Days
<p><u>N613: Natural Gas Processing - Dehydration, Refrigeration, and Fractionation</u></p> <p>This course is designed to familiarize technical professionals with the design and operation of several common gas plant processing blocks. Day one will be spent on dehydration systems used in typical field gathering and plant facilities, including a review of options available. Day two will focus on mechanical propane refrigeration systems typically used in Hydrocarbon Dew Point and NGL Recovery systems, including a review of design and performance enhancements. Day three will focus on tower operations and troubleshooting used in absorption and fractionation services, with optimization and key performance indicators discussed for each tower in each application.</p>	Dale Kraus	3 Days
<p><u>N983: Pipeline and Process Engineering</u></p> <p>Application of the learnings of this course will provide participants with a working knowledge of the design and operation of crude oil and gas transportation, processing, and distribution systems. It will cover the theory of single and multiphase flow in pipelines and the respective design processes associated with single and multiphase flow; the separation of crude oil, de-watering and the handling and break-up of emulsions; the recovery of liquids from gases; and the storage and distribution of hydrocarbon gases and liquids.</p>	Ivor Ellul	4 Days



INSTRUCTORS

David Newman

Accomplished and results-driven engineering professional with extensive National and International experience (UK, Europe, Middle and Far East, Scandinavia, CIS (Kazakhstan), India, Mexico) in the design, construction, installation, operations, inspection, maintenance, and repair of onshore, offshore and subsea oil and gas and renewable assets. Skilled in managing complex projects across both onshore, offshore and subsea environments, ensuring technical excellence, safety, and on-time deliverables. Co-ordination, supervision and management of multi-cultural and multidisciplinary teams and stakeholders. An extremely passionate individual promoting and delivering Oil and Gas and 'Energy At Large' oil and gas and renewables education and training for national and international delegates at national and international locations from graduates to senior levels.



Dale Kraus

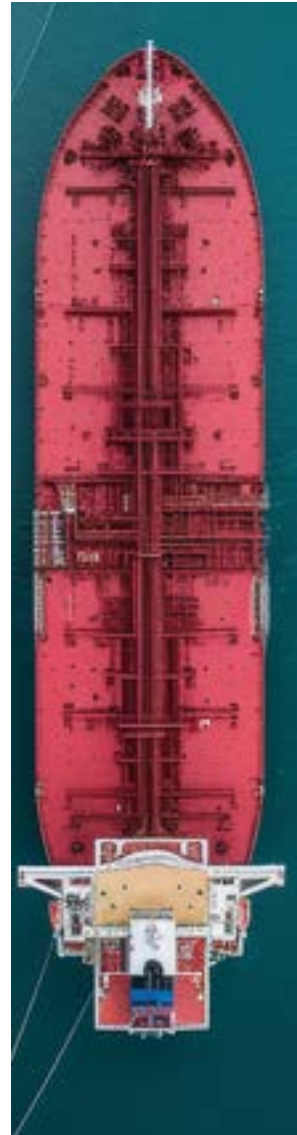
Dale Kraus earned a Degree in Chemical Engineering from the University of Saskatchewan in 1981. He has held Facility Engineering and Operations Management experience with several major multinational oil companies for 20 years, and, most recently, has been providing consulting and training services to the Oil & Gas Industry. He has a broad background in Upstream Facilities and Process Engineering, coupled with extensive Operational experience gained in the Field.



Ivor Ellul

Dr. Ellul began his career in the oil and gas industry in 1980, in West Germany, as a design engineer on pipeline, storage tank, and refinery systems. After specializing in the modeling of multiphase flow in pipelines, he worked for a number of years in the area of numerical modeling of single and multiphase pipelines under steady-state and transient conditions. He has been involved in various pipeline simulation studies for clients worldwide. Recent experience includes various executive positions in the upstream area of the oil and gas industry.

Dr. Ellul is industry lecturer to the Petroleum Engineering Department of Imperial College, University of London where he lectures the M.S. course on pipeline and process engineering. He has held advisory posts on the board of the Faculty of Petroleum Engineering of the University of Houston and participated on a number of SPE committees at both regional and international level. He was a member of the Advisory Board of Energy Ventures, a Norwegian venture capital firm.



COURSE ACCESS

Scheduled courses

We deliver field, classroom and online courses focusing on core skills development and current challenges facing the E&P industry. Courses are delivered by instructors recognised as world class subject matter experts in their field, including industry leaders, professors and distinguished lecturers.

Our scheduled courses can be accessed through your corporate Nautilus Training Alliance (NTA) Membership or courses can be booked on-demand as required online by credit card or invoice.

Self-paced e-learning

Offered independently or as part of a blended learning program, our bespoke e-learning solutions immerse learners in a rich variety of content and interactive media to provide a personalised learning experience. By providing access to our e-learning catalogue or producing custom content, we can help organisations leverage technology to engage their learners in a dynamic and exciting digital learning environment.

With each new course, you will find an overview of what the course covers and what's associated with the specific course elements in the introductory module page. Specific competencies are addressed through videos, presentation materials, interactive quizzes, 3D models, text and voice-overs. Each module is designed for flexible learning and allows for variable periods of interaction with content to suit individual needs.

Courses can be accessed wither via a corporate license or can be booked on-demand as required online by credit card or invoice.

Inhouse courses

The same best in class virtual, field and classroom courses focusing on core skills development and current challenges but delivered inhouse for groups typically of 10 to 20 participants. Courses delivered by instructors recognised as world class subject matter experts.

Designed to meet technical requirements – Learning events are tailored to address learning outcomes most relevant to the team in the workplace. Can include variations across all subject areas and specifics to address cross-disciplinary challenges. Established courses can be delivered off-the-shelf or customised to meet specific technical focus and level.

Flexible locations – Either in your office, or virtually to provide training for participants in multiple locations.

Flexible schedules – Delivered in continuous sessions, or distributed over a longer period of time to suit operational requirements.

Efficient - Team focused training is a cost effective means of learning and development for technical staff with shared technical challenges.

Book a course or make an inhouse course enquiry:
energytraining.tetrattech.com/contact-us/



Team Focused Development

The same best in class virtual, field and classroom courses focusing on core skills development and current challenges but delivered in-house by our world class independent expert instructors for groups typically of 10 to 20 participants.

Team focused development - learning events are designed to address learning outcomes most relevant to the team in the workplace and address cross-disciplinary challenges.

Flexible content - tailored to meet client requirements. In-house courses can be:

- off the shelf versions of established courses
- customised versions of existing courses
- designed exclusively for the specific requirements of the client

Blended solutions - combinations of selected self-paced e-learning modules and instructor-led events provide efficient and effective learning packages.

Flexible locations - classroom in your office, in the field, or virtually to provide training for participants in multiple locations.

Flexible schedules - virtual courses may be delivered in continuous sessions or distributed over a longer period of time to suit operational requirements.

BLENDED LEARNING

A learning approach of building knowledge through interactive on-line modules with skills development in instructor-led virtual, classroom or field based workshops, exercises and scenario-based activities.

1 WHY

- Self-paced learning of foundation knowledge and skills followed by instructor-led sessions which focus on practical applications provides an efficient and effective blended pathway.

2 WHAT

- Based on the requirements of the organisation and the needs of the individual.
- Designed for cohorts of staff and scheduled as required.
- Self-paced learning modules are available as required.
- Instructor-led sessions may be in-person or virtual.
- Workshops concentrate on integrating knowledge and developing applications of skills through scenario-based exercises.

3 WHO

- Our approach is suitable for cohorts of staff in a wide range of roles in different sizes of organisation.
- Applicable to organisations or discipline sectors of all sizes and is particularly suitable for a distributed workforce.

4 HOW

MODULAR

Allows creation of unique training pathways through on-line learning whilst retaining an integrated approach to skills development through classroom and field workshops.

FLEXIBLE

Customised content is accompanied by flexibility of scheduling, fitting in with work patterns to be operationally friendly.

ADAPTABLE

Methods of delivery are adaptable, with content provided as self-paced learning modules (where available) and/or instructor-led sessions in person or virtually.

COST EFFECTIVE

More cost efficient than conventional classroom courses and more effective than on-line training in isolation.

5 SUBJECT AREAS



Oil and Gas



Carbon Management and Gas Transition



Sustainable Heat - Geothermal



Environmental, Social and Governance (ESG)



Certificates for Professional Development

Certificates for Professional Development Hours (PDH) and/or Continuing Education Units (CEU) are issued for application toward your professional development.

We are accredited by the International Association for Continuing Education and Training (IACET) and is authorized to issue the IACET CEU. We comply with the ANSI/IACET Standard, which is recognised internationally as a standard of excellence in instructional practices.

[Visit the IACET website](#)

All Geoscience and Professional Skills Development courses on the Nautilus Training Alliance have been accredited by the Geological Society, London and approved for Continuing Professional Development for geoscientists who are working towards or have received Chartered Geologist status.

[Visit the Geological Society of London's website](#)



Our goal is to collaborate with our customers to develop the competencies and capability of their workforce through integrated learning that supports their roles and promotes individual development driving organisational excellence. Our expertise brings flexible and scalable solutions from a diverse energy portfolio in the design, development of technical content and knowledge-based programmes delivered by expert instructors. Our technical and learning expertise help organisations develop the competencies, skills and knowledge they need to fulfil their collective potential.

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