



2019

Specialized Managerial Courses for O&G Sector



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Introduction to Petroleum – 5 days

Topics and course objective

The course focuses on the “upstream” portion of the petroleum value chain, where petroleum is found and extracted from the ground. It lays out the life cycle of petroleum resources from exploration, through development and production, to decommissioning. It briefly reviews the essential work processes of the sector, as well as the geological, environmental, technological, social, and economic contexts. The challenges of governing the sector in the national interest as well as commercial interests are outlined. As learning objectives, the course shall enable participants to acquire the following insights:

- Understand the major elements and decision-making points of the petroleum resource life cycle.
- Recognize the significance of geological and environmental conditions, technology, safety imperatives, and market conditions for petroleum operations.
- Recognize the roles of key groups of participants and stakeholders in the petroleum sector, and the challenges of governing the sector consistent with relevant interests.

Who should attend

The course is intended to benefit anyone who will be engaged with the petroleum sector in a commercial, regulatory, or civil capacity. No prior knowledge specific to the petroleum sector is required. The course is also suitable for persons who have worked with the petroleum sector from some time and wish to broaden their understanding of it beyond their own professional focus.

There are two versions of the course:

- Introduction to Petroleum (basic): Using traditional classroom delivery and group work.
- Introduction to Petroleum - with OilSim: Including a computer assisted simulation game provided in co-operation with our partner NExT.

The 8 Week Programmes - 8 weeks

Insights for managing petroleum resources

Our 8-week programmes offer essential insights for managing petroleum resources from a national, as well as commercial, perspective. The participants will gain increased capabilities for contributing to petroleum resource management through three main avenues:

- Understanding the petroleum value chain, i.e. the activities required to find, produce, and sell oil and gas, including the requirements for health, safety, and environmental protection in petroleum operations.
- Understanding the societal context and the governance requirements for petroleum, i.e. how petroleum activities can be managed to create lasting benefits for society.
- Increased professional skills by working in multi-disciplinary and multi-cultural teams to solve complex problems, as well as capabilities for analysis and communication.

During 8 intensive weeks, participants receive and practice expert knowledge. They get to apply their insights in teams through case work resembling a real-world scenario, and on a challenge from their work situation at home. The 8-week programmes feature excursions and insights into Norway's accomplishments in managing its own petroleum sector, as well as events aimed at developing an effective and enjoyable learning environment.

Two parallel programmes

The 8-week programmes are two programmes running in parallel:

- Petroleum development and operations
- Petroleum policy and resource management

They are usually referred to as the "Operations" class and the "Policy" class, respectively. We admit around 26 participants for each class (ca 52 in total). For more information check our website.

Many lectures and events are common to both programmes, whereas some lectures are specific to each course. Participants are also given different tasks for the case work. In Petroleum Development and Operations, the main emphasis is on the process of planning the development and subsequent operations of petroleum fields. In Petroleum Policy and Resource Management, the main emphasis is on the licencing of petroleum rights as a process between national Government and commercial firms, and on the development of national petroleum policy.

Who should attend

The 8-week programmes are suited to professionals from public administration, oil companies and other institutions who are engaged in petroleum sector issues. It is particularly relevant for those who need to understand the implications of petroleum operations for society.

Applicants should have:

- A university-level degree (Bachelor or higher) in a field relevant to the petroleum sector, such as geosciences, engineering, economics, law, environmental sciences, etc.;
- Several years of relevant work experience;
- A current work position involved within the petroleum sector;
- Fluency in English;
- A written statement from the applicant's employer confirming that the applicant will be granted a leave to attend the programme and will return to work after the programme.

When selecting applicants for admission, we will seek to attain a suitable distribution of participants in terms of professions, nationalities, and gender.

A unique learning experience

This 8-week programme is a globally unique learning experience. Lectures are given by professionals who bring a wealth of industry and regulatory experience. While expert lectures fill about half of the available programme time, the remaining time consists of activities which engage participants: discussions, case work, challenges relating to work at home, a computer-assisted simulation game, excursions, and knowledge tests.

The case work is situated mostly in the imaginary country of Eureka and its neighbour Eastland. A large gas-condensate field has been discovered, for which development needs to be planned. Both countries also need to engage in further licencing to prepare for future petroleum developments. Participants are assigned to multi-disciplinary teams acting as companies or authorities in Eureka and Eastland.

Participants are required to devote their time fully to the programme during the 8 weeks. Each will need to contribute actively to the case work and other tasks, and make presentations. In return, they will return home with a better understanding of the petroleum sector and what it takes to manage it. They are also trained at working in multi-disciplinary, multi-cultural teams. Many acquire a set of international contacts and friends with whom they continue to communicate for many years. A diploma is granted as evidence of successful participation at the end of the programme.

The learning environment

The 8-week programmes are delivered once per year, in Stavanger, Norway, usually in September and October.

Participants stay in a hotel and are transported by bus to the programme events at the training centre, which is co-located with the Norwegian Petroleum Directorate and the Petroleum Safety Authority. Meals are provided in the form of a daily living allowance to each participant. They are also lent some rugged outdoor jackets and footwear suited to the Norwegian weather and the activities we will be doing.

An intranet site supports the programmes on which participants can access lecture documentation and other relevant information during, and after, the 8 weeks. Each participant is provided with a laptop computer equipped with Microsoft Office programmes, internet access and other required software during the 8 weeks.

Application and preparations

We are restructuring the operational and financial model for the 8 weeks' programmes.

The Petroleum Value Chain and Expectation Management - 3 days

Expectation Management is the process of gathering, incorporating, and measuring stakeholder expectations during the life of a project. Petroleum development projects have great potential to benefit the community in which they are developed. The local communities must be positively engaged during the development, construction, and operation phases of the project to balance the expectations of the people with the benefits of the project. Community expectations have a direct impact on the effectiveness of community involvement measures.

The objective of the course is to provide stakeholders and local change agents with information on large petroleum projects with respect to the technicalities involved, its time perspective and the resulting local spin offs, if the project is managed properly. Topics covered during the course are:

- The petroleum value chain and its various phases
- Maximizing national participation during project phases
- Defining the expectation management process
- Understand the stakeholders - understanding of what key stakeholders want
- Expectation management deliverables
- Large International projects – examples on expectation management

Who should attend

Participants should be local change agents, community politicians and members, contractors and suppliers to the petroleum industry, NGO's, journalists, and other stakeholders who can leverage a realistic understanding of the petroleum industry and its local and national potential.

National Management of Petroleum Resources - 2 weeks

An advanced course in managing a nation's resource endowment

This course is based on the premise that nations should manage their petroleum resources to create long-term benefits for the nation and its population. Most countries choose to involve commercial enterprises in petroleum operations to benefit from the capabilities that such enterprises can bring. The relationship between national authorities and commercial enterprises is, therefore, central to successful management of petroleum resources.

The course aims to expand participants' understanding of the requirements for managing the petroleum sector of a nation. It provides expert lectures and team practices on the following topics:

- Managing natural resources: general principles and international practice
- Governance, policy, and regulation
- Organisation and regulatory capacity-building
- Managing the petroleum field life cycle
- General issues in resource management

Team practices

Building on our unique methodology in applying educational scenarios resembling real-world challenges, participants will immerse themselves in the imaginary country of Eldorado. Eldorado faces several issues regarding the management of its petroleum resources, often highlighted by disturbing reports in the daily newspaper. It has a ministry of petroleum, some oil companies, and an assertive civil society organisation (all represented by teams of course participants). Participants, therefore, must work in teams and draw on insights from course lectures to resolve Eldorado's various challenges.

Who should attend

The course is designed for senior public administrators, politicians, petroleum company professionals and others who are engaged in petroleum sector issues from a societal perspective. A university degree and several years of relevant professional experience are desirable. Proficiency in the English language is required. Participants shall be expected to participate actively throughout the course including team practices, and must be prepared for two weeks of intense learning work.

We also recommend the course to previous participants of our 8 weeks' programmes, as an opportunity to refresh and expand their insights in the field. Preferably they should have attained at least 4 years of relevant professional experience between the two courses.

Sustainable Energy Development - 4 days

The primary focus for this course will be to explore different cost effective energy alternatives available in addition to the emerging technologies that need to be considered when planning for a stable, environmental friendly and secure energy supply. Both conventional and non-conventional energy sources will be discussed, how they can be combined to meet the requirement for a secure power supply in a sustainable and environmental friendly manner. Framework to achieve stable, cost effective and environmental friendly energy supply will be discussed in addition to challenges related to security of supply.

Topics:

- Energy sources and challenges - examine various renewable and conventional energies
- Energy policies – national and international
- Energy technologies - resources, extraction, conversion, and end-use technologies
- Energy efficiency – optimization and planning
- Energy storage – the challenges with renewable energy
- Energy security and sustainability – securing supply, and dependency
- Environmental challenges and climate change – the challenges and possible remedies
- Renewables and the economy – the price of going green

Who should attend?

Authorities responsible for national, regional, and local level energy systems, enterprises/private sector, civil society organizations and media, who work with or are interested in energy in a broader context. Personnel from the petroleum industry would also benefit from the course as a part of the course also will relate to conventional fossil fuel and the potential role in the energy supply locally and globally.

National Governance of the Petroleum Sector - 5 days

Revenue from resource exploitation should be utilized in a sustainable manner to create and continue to improve economic and social development for the country's citizens. A decision by a nation to embark on the exploitation of non-renewable natural resources should be based on a set of clearly defined objectives. These can best be expressed in an overriding petroleum policy.

Managing petroleum resources is a multi-faceted task, at both the operational and management levels and regardless of whether it is done by a company or a government institution. It typically demands that a multitude of considerations, uncertainties and risks be carefully, and often collaboratively, considered by decision-makers.

Objective

The immediate objective is to improve the participants' understanding of challenges and opportunities within the petroleum sector. The participants shall, upon successful completion of the course, be able to better understand;

- Good governance
- Designing and implementing petroleum policy
- Efficiency in resource management
- Mitigating harmful effects on the environment
- Mitigating harmful effects on the economy
- Revenue management
- The resource base / the market and enterprise capacity
- Uncertainty and risk management
- Role of government / role of the oil company
- Balancing economic interests

Organizing and Developing a Petroleum Sector - 3 days

A workshop on international practices in organizing the petroleum sector. The policy and regulatory functions and the business interest of the state are often dealt with by separate state institutions. In this course examples of different institutional solutions to efficient petroleum sector management will be discussed. The petroleum industry comprises international oil companies as well as national oil companies, some of which have evolved into international companies. The position and importance of commercial enterprises in relation to national goals for resource management will be reviewed.

Learning objectives:

- Understand and discuss how international oil companies may contribute to national goals for petroleum resource management
- Recognize different historical models for the role of international oil companies in resource-rich nations
- Discuss the pros and cons of establishing a national oil company, and how such companies can contribute to national goals for resource management.
- Identify and discuss potential regulatory and economic challenges deriving from national oil companies
- Recognize alternative governance models for national oil companies
- Identify and discuss the requirements for authorities to monitor petroleum activities at different stages of petroleum operations
- Recognize key aspects of modern human resource management practices
- Discuss the relevance of organizational practices which are common in international firms, in a national context
- Understand the need for systematic capacity building
- Ability to contribute to identifying capacity requirements on the national level

Who should attend

This workshop is designed for a broad range of personnel from parliamentarians to civil servants from authorities, institutions and governmental bodies involved in the petroleum industry as regulators.

Unitization in The Oil and Gas Industry - 3 days

Recently, emerging developments abound in the oil and gas industry, one of which is unitization as a means of oil development and production. With increasing needs for production efficiency, cost reduction techniques and alternative funding sources, unitization as a production methodology is increasingly getting attention, consideration, and acceptability.

Topics covered

- Fundamentals of unitization in the oil and gas industry
- Issues and challenges to obtaining agreement on the joint development of petroleum resources
- Terminology, definitions, and concepts
- Unitization agreement
- Unitization; operations and modalities
- Approaches / alternatives to unitization
- Equity determination and re-determination: conditions and procedure
- Unitization accounting and reporting
- Cross border issues and international law applications

Executive Course on Petroleum Resource Management – 3 weeks

- Understanding the petroleum resources value chain, i.e. the activities required to explore, produce, and sell petroleum resources, including the requirements for health, safety, and environmental protection in the operations.
- The three cardinal elements:
 - The resource base
 - Markets
 - Enterprise capacity
- Roles and Responsibilities
- Understanding the societal context and the governance requirements for petroleum resources, i.e. how the activities can be managed to create lasting benefits for society.
- Increased professional skills for working in multi-disciplinary and multi-cultural teams to solve complex problems, as well as capabilities for analysis and communication.
- Industry visits, case studies and simulations.

Energy Optimization in the Oil and Gas Industry – 3 days

- Impacts of global energy waste on profitability and sustainability
- Opportunities for energy efficiency
- Energy management systems
- Audits and certifications
- Cost-effective energy optimization solutions
- Benchmarks
- Energy mitigation strategies

Petroleum Contracts and Negotiations - 3 days

The petroleum legislation and regulatory framework for petroleum operations shall reflect the petroleum policy. Different legal framework instruments and examples of key regulatory provisions are discussed, as well as the balance between the requirement for stable framework conditions and contractual flexibility. There are many contract options used in the petroleum industry. The major differences between a concessionary regime and contractual regime are reviewed. This 3-day course includes formal instruction in the art of successful negotiations, the importance of proper planning, and the implementation of certain behavioural rules that must be applied for a successful resolution. The delegates will participate in interactive role-playing to learn concepts and develop skills in applying them.

Topics and objectives:

- Contract types and model contracts for different purposes
- Worldwide trends in contracting regimes
- Stable and predictable contracts as the basis for investments
- Identifying negotiation issues
- Identify the dynamics and basic requirements for negotiating successfully
- Understand the importance of proper planning and positioning for success in negotiations
- Effectively gather information to produce the best results that satisfy the needs of all parties
- Better resolve divergence in views or deadlocks to the host country's advantage

Gas and LNG Sales Contracts: Structure, Pricing, and Negotiations - 4 days

The course objective is for participants to understand the value chain context, structure, and main issues of contracts for selling natural gas delivered by pipeline and as LNG.

Course topics

Sources, transport, and applications of natural gas.

- Production as associated or non-associated gas; implications for marketing
- Transportation and storage
- Uses of natural gas: Heating, industries, powergen, transport fuel.
- Current developments in global markets

Gas market participants, trade, and regulatory framework

- Sellers, buyers, and traders; strategic orientations
- Forms of trade and the role of commodity exchanges
- Regulatory framework: EU energy market directives; applications

Contracts: Outline content and main issues

- Sales/purchase agreement for pipeline-delivered gas and LNG
- Gas pipeline transportation agreement
- LNG shipping agreement (charter party)

Supply administration: Managing deliveries

Practices and discussions

Prior knowledge

Depending on their prior knowledge, participants attending this course may find it useful to first attend our course on Contracts and Negotiations.

Implementation, Monitoring, and Follow-Up of Petroleum Contracts - 4 days

With most projects being carried out as a contract, it is becoming increasingly important to ensure that the performance of the contract is managed correctly. Failure to do so leads to quality being compromised, clauses falling into disuse (or even misuse), and disputes and claims proliferating. The signing of a contract is the beginning of possibly a fifty year or longer relationship. The challenge of managing petroleum resources for optimal economic value and benefit to the society, requires that the contract partners follow-up and monitor activities and contractual obligations the whole contract period. This also includes the late phases when need for redevelopment for increased recovery may be relevant. In addition, the monitoring of possible impact on environment, health and safety is necessary both to ensure adherence to national regulations and contract terms. Monitoring and follow-up processes is also beneficial to respond efficiently to requests and proposals from relevant stakeholders.

Topics covered

- Contract types
- Deliveries, requirements, and consequences of the various contract types
- Monitoring practices and principles
- Requirements for: Security, Environment, Health, and Safety
- Resource management – high recovery and regularity
- Cost Efficiency and cost control
- Contractual reporting and quality control
- Procurement – international contracts, local content
- Plan for development and operations (PDO)
- Field Development – drilling, facilities, infrastructure
- Master plan to secure optimal Infrastructure
- Tools to improve model documents

Delivery model

The course will be delivered as short lectures with international best practice examples on monitoring and follow-up of petroleum contracts. Active group work and open dialogue and discussions are used to strengthen understanding and involve the participants in the real-life examples and challenges.

Who should attend?

The course is primarily designed for those responsible for implementing, monitoring and follow-up of different petroleum contracts. This could be civil servants at the national and local levels, personnel from a national oil company, the petroleum industry and representatives from other enterprises/private sector. Also, civil society organizations and media, who have an interest in this subject and wants to be a meaningful partner in the dialogue on contracts monitoring and transparency could benefit from this course.

Performance Leadership - 4 days

Companies are transforming into a flatter, team-based structure and supervisors and team leaders will need to learn how to combine a leadership role with fulltime operational responsibilities. This course will be aimed at developing core leadership and supervisory skills in people who are new to this demanding role. Participants will learn how to manage themselves and their time, how to delegate effectively and motivate staff, and how to apply coaching, problem solving, and conflict management skills to improve team performance.

Objectives

- To enable each supervisor to clarify roles and responsibilities in relation to managing individuals and teams.
- To develop the knowledge and skills required to manage people effectively.
- To commit to an action plan designed to improve effectiveness over the next six months.

Topics

- Effective communication
- Behavioural styles
- The role of the supervisor
- Conflict management
- Managing performance
- Documenting discipline
- Coaching for positive results
- Team building
- Situational leadership
- Motivating people

Target audience

Those who have been appointed to a supervisory position recently, or who are about to be appointed to such a position. Those supervisors who have not received any formal training in this field.

Training Methods

- Highly participative
- Group discussion
- Giving presentations
- Syndicate exercises
- Case studies
- Action plans
- Role play exercises

Persuasion, Influence & Negotiation for Business, and Leaders - 3 days

Persuasion, Influence, and Negotiation (PIN) skills differentiate impactful leaders from the rest! The essence of any leader's role -regardless of mandate, seniority, or industry -is the ability to positively influence followers, deliver well, and continuously negotiate with teams, managers, stakeholders, or adversaries to make real progress. As the world becomes ever more connected and integrated in business, cross-cultural communication and influence are a critical skill for any leader or professional.

When you walk into a negotiation meeting and your agenda needs to prevail, you're leading a team or project and need to draw out the best in others, or challenges in collaboration arise in your culturally diverse workforce, you will benefit from sharpening your PIN skills to give you the edge. Our built-in learning from the Harvard Negotiation Institute at Harvard Law school means you get the best training there is on offer right on your doorstep, individually, in teams or groups. A pipeline of training programs on solving actual business cases serves leaders and professionals from basic skills for newcomers to master classes for seasoned executives and board members. Our new boot camp program is the perfect match for those who need to hit the ground running or have limited time and need an intensive up-skilling experience. All training is pragmatic, industry-relevant and based on engaging case simulations and role play with live feedback and coaching.

Learning Objectives:

Train leadership skills you need to:

- Communicate in a way that gets results – among your team, stakeholders, peers
- Work across cultural boundaries and teams
- Negotiate a shared vision for your organization – and get buy in for it
- Lead people over whom you have no real authority – and gain real cooperation and collaboration
- Build strong relationships in business negotiations – that are sustainable and valuable
- Develop your own unique leadership style – improve your strengths and identify your blind spots

Build knowledge:

- Common traps in negotiations ... and how to avoid them
- Negotiating with your head – not your heart
- When NOT to negotiate
- Neutralize threats, insults, and lies
- Deal with someone who is more powerful than you
- Shape important deals
- Identify and control your own tendencies in the face of conflict
- Negotiate in uncertain environments
- Claim and create more value

Competence Development in the Petroleum Sector – 3 days

Human capital is essential to any organization and thus the need to continually maintain and support personnel to give their best always. How do you cope with the constant changes in technology and rapid fluctuations in oil prices and the following cut in training budgets? Those responsible for staff training and evaluation are relied upon by organization to give maximum return to the huge financial cost of training. This course is designed for the benefits of managers responsible for planning and executing staff training and evaluation.

Objectives and topics

- Competence and competence development
- Organisational roles and responsibilities
- Managers as coaches
- Needs analysis
- Competence assessments
- Manage skills gap
- Trends in learning and development
- Learning Management Systems
- Competency based systems in the petroleum Sector
- Methods to evaluate training
- Planning and designing training programmes
- Selecting the best courses
- Training delivery methods
- Training for purpose
- Training evaluation
- Case studies

Advanced Decision Analysis with Portfolio and Project Modelling - 4 days

Forecasts and evaluations depend upon well-designed project and portfolio models that are based upon clear decision policy, sound professional judgments, and a good decision process. In this course participants learn to build good models. We use the familiar Microsoft Excel spreadsheet as the platform for project and risk assessment models. Add-in software provides Monte Carlo and decision tree capabilities. The course emphasises the evaluation of concepts and techniques, rather than particular software programs.

Topics covered

- Multi Objective Decision Modelling
- Decision Tree Analysis
- Monte Carlo Simulation
- Portfolio Modelling and Management
- Sensitivity Analysis
- Implementation

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- Competency based systems in the petroleum Sector
- Methods to evaluate training
- Planning and designing training programmes
- Selecting the best courses
- Training delivery methods
- Training for purpose
- Training evaluation
- Case studies

Leadership and Management of the Energy Sector – 5 days

- Global energy perspectives, markets, and trends
- Strategy, sustainability, leadership
- Negotiation strategies and decision-making in view of uncertainties
- Adapting organizations to future needs in the energy sector, creating a performance culture
- Entrepreneurship and innovation
- The digital world collides with the traditional energy sector
- Individual development activities
- Networking, social and explorational activities
- Keynote speakers

Corporate Responsibility – 3 days

- Separation of roles
- Human rights and Labour standards
- Anti-corruption and integrity standards
- Effective stakeholder communication
- Legal and regulatory Framework
- Strengthening the business case for responsible conduct
- Intergovernmental cooperation
- Investment agreements and instruments
- International trade agreements
- International principles of corporate governance
- Key elements of corporate strategies
- Key components of corporate reputation management
- How organizations develop their corporate identities
- The nature of strategic public relations
- Ethics and communication in challenging times
- Media relations and information communication technologies
- Government relations
- Community and investor relations
- Sponsorship and corporate social responsibility

Portfolio Management – 4 days

Procedures and Execution of Acquisitions and Divestment of Petroleum Assets in the Petroleum Industry

Principles and Methods for Geologic 3D Modelling - 3 days

This course is designed for those who have a geologic/reservoir engineering background and need to know the principles, methods, and goals for building 3D geologic models. The different data types of elements in the 3D modelling process will be briefly described, as well as the process of preparing and integrating the data into the work process. The course is aimed at providing a background and understanding for the geoscientist to be able to follow up with specific application training within 3D modelling or just to understand the process and results from such a product.

Target audience

Geoscientists and reservoir engineers who need to understand the principles for building a geologic 3D model, the data needed for this process and the methods that will be used to build.

Prerequisites

Geoscience background, familiarity with seismic and well log interpretation methods

Topics covered

- Definition of a 3D geologic model and the reason for building one
- Introducing the three main elements of a model; structural framework, facies model and petrophysical model
- Identifying and describing input data elements from conventional mapping, seismic interpretation (surfaces and faults) in time or depth, well tops
- Describe process to import the data needed to build a structural model
- Data types used for facies definition from well log analysis or conceptual depositional model
- Import facies information and build model to allow different facies types within the structural framework
- Describe the data source for petrophysical data such as net to gross, porosity and hydrocarbon saturation and how to import these data and use them to build a petrophysical model
- Conversion from time to depth domains
- Data analysis methods that allow for averaging, distribution and prediction of data outside the well locations
- Volume calculations (in-place and recoverable reserves) based on a petrophysical model with porosity and saturation and PVT data, such as recovery factor, B_o , B_g , GOR
- Sensitivity analysis to understand the impact of variations and uncertainties in the parameters affecting the calculated volumes
- Workflows that will automate the process of building the model in order to allow fast rebuilding after changes in input data, keep consistency and document the steps

Managing Resource Data - 3 days

Managing valuable resource data has, for a period of time, been a vital part of the energy and extractive sector. The typical roles and responsibilities and the strategic importance of the resource data to attract good business partners serious about developing the petroleum resources in a country, have become increasingly important.

This course on managing resource data will primarily use experiences from the petroleum and the mining sectors as an outset for learning. Data management is a large industry, and this course can be seen as a starting point for awareness and the importance of resource data. Those who make decisions must be made aware of this area to see the potential and importance it has to the development of natural resources.

Topics covered

- Overview of data management and the various disciplines;
- Policy, legislation, regulations, stakeholders, the industry;
- Perspectives of extractives data management – national, private, service providers;
- Data gathering methodologies in the mining and petroleum industry;
- Document and records management (DRM);
- Well and production data challenges;
- Geographical Information Systems (GIS);
- Data processing and analysis;
- Management of physical data, storage facilities and data centres;
- Information security;
- Experiences and lessons learned around the world.

Who should attend

The course is designed for personnel of authorities as well as private sector professionals who work with Information Management or are interested in this topic and its context.

Improving Oil and Gas Recoveries - 5 days

The ultimate recovery factor varies between 5-70% globally, leaving 30-95% of the oil originally in place, in the ground at abandonment. The most important decisions impacting field recovery are the selection of:

- Recovery strategy (primary-secondary – tertiary)
- Drainage point distribution in the reservoir, and
- Reservoir management strategy to optimize production performances

The course reviews the most important factors impacting production rates and ultimate recovery.

Course Outline

Basic reservoir engineering concepts

Depositions (Sand/Carbonates)

Recovery Impact of:

- Reservoir characteristics
- Recovery strategies; Primary – Secondary – Tertiary
- Injection fluids

Recovery Strategy Options of:

- Gas; conventional/unconventional
- Condensates
- Light oil
- Heavy oil
- Oil with gas caps

Recovery Strategy Impact on:

- Uncertainties and risk
- Economics
- Environment

Who should attend

Engineers and others involved in, or responsible for sustaining or increasing oil and gas production and enhancing oil recovery from reservoirs under primary depletion, pressure maintenance by water or gas injection, and enhanced oil recovery schemes, as well as, other professionals and managers participating in the above effort on a multi-disciplinary team who need to gain better understanding of the concepts, practices, benefits, and limitations of the various conventional and emerging technologies.

Plan for Development and Operations (PDO) – 3 days

Permission to develop a hydrocarbon field is usually subject to the Government's approval of a plan submitted by the operating or contracting companies. The process of preparing and approving the plan provides opportunities for dialogue between oil firms and Government on how the field will be developed and produced. This course will discuss key policy considerations and activities in this regard, and the importance of early interaction with the companies.

Objectives and topics

- Main activities and processes required for petroleum production
- Requirements for proper planning to achieve a successful development and operations
- Discuss the function and importance of the PDO in the management of petroleum resources
- Main structure, content, and formal implications of the PDO
- Impact Assessment
- Processing and evaluation of PDO
- Unitization and area development
- Important contractual commitments
- Infrastructure, transport of petroleum, gas treatment capacity
- Decision criteria and documentation requirements
- Development solutions, technology, production strategy
- Cost
- Organization and execution
- Operations and management
- Drilling and well activity
- Disposal of facilities
- Financial analysis

Who should attend?

The course is designed for personnel of authorities as well as private sector professionals who work with PDO or are interested in this topic and its context.

Practical Management of Oil and Gas Development Projects – 5 Days

This course put emphasis on the practical aspects of managing an oil and gas development project.

Course objectives

The course focuses on the practical aspects of oil and gas project management with an emphasis on offshore fields. The course's practical approach prepares the participants to take part in actual project organizations.

The learning objectives:

- The participants shall obtain knowledge necessary to direct participation in project organizations
- The participants shall understand the complexity of the project and be able to communicate with project personnel with different backgrounds
- The participants shall recognize the importance of getting project tasks solved with efficiency taking into account the safety for personnel, environment

Course topics

- Challenges and goals of offshore project management
- Pre-development activities
- Environmental baseline analysis
- Feasibility study
- Early phase project planning / project management
- Initial risks and uncertainties, risk management
- Defining criteria for development concept
- Environmental matters in field development, including Environmental Impact Analysis
- Concept development and evaluation
- Selection of major concept and concept alternatives, reasoning, and arguments for use of proven and new technologies
- Looking for technical alternatives
- Mitigation of risks and uncertainties
- Pre-FEED activities
- Learning points, experiences, benchmarking, case presentation
- Project risks and management of uncertainties. Risk mitigation at the Phase – Select.
- Integrated project management (interface between infrastructure, project development strategy, operational philosophy, etc.)
- FEED Activities
- Geology and production assessments within project lifecycle
- Probable risks, ways of mitigating risks and uncertainties
- Field Development – technical development
- Concept optimization. Detailing the technical solution
- Case references
- Interface between subsea, surface and land-based infrastructure. Project management and identification of uncertainties
- Marine operations. Alternatives to marine operations, restrictions, price\value benefits. SIMOPS and management
- Identification of additional risks and uncertainties
- Their impact on detailed engineering and project realization
- Management of detailed engineering of the project
- Commissioning / Production start-up

Who should attend?

The course's practical approach prepares the participants to take part in actual project organizations. The participants may come from different backgrounds, although it is designed for engineering projects. Participants will be engineers, planners, cost engineers and their managers. The geology and geophysical aspects, as well as drilling and production, are not highlighted in the course.

Exploration and Field Development - 4 weeks

This workshop introduces the fundamental aspects, methodology and skills needed to plan the life cycle of gas and oil fields from exploration and discovery, through the assessment phase, the project and development phases, the field operations period, and the abandonment phase. These modules can also be delivered as separate modules.

Week 1 - Exploration

Week 2 - Field Development

Week 3 - Field Economics, and later, Field Development Phases

Week 4 - Risk Management and Partnerships

Learning objective

The participants will understand the full life cycle of the upstream oil and gas industry – including petroleum and exploration economics, concessions and partnerships, petroleum engineering aspects of planning, developing and operating oil and gas fields.

Topics covered

The students will understand the process of planning and developing offshore oil and gas fields and the petroleum engineering aspects governing the operation of offshore fields. They will know the principle of material balance and reservoir management, inflow from the reservoir to the wells, temperature management in production systems, flow in wells and production systems, flow equilibrium, production planning and production control, and the basics of field processing of oil and gas. They should understand the risks, uncertainties, and economic factors involved in field development and operations. They will understand the decision variables, the optimization objectives and the constraints involved in optimization of field production.

The students will develop skills in selection of field development concept and in calculation of exploration and development economics.

The students will fully understand the principles of field development within a wide area of relevant subjects and be in position to participate in asset teams with a good understanding of the role of their own specialization.

Learning methods and activities

Lectures, discussions, interactive exercises, group work with feedback presentations and case studies. The course is taught in English.

Petroleum Project Management: Principles and Practices - 4 days

Project management knowledge and skills are required to successfully manage all types of projects. The practical application of standard project management methodologies will be enhanced with a workshop-style approach. The course will provide the student with the ability to apply project management best practices in initiating, planning, executing, and closing a project. Participants will learn effective techniques for monitoring and controlling a project, as well as how to capture project lessons learned.

Topics covered

- Project management and the project life cycle
- Identifying and establishing a project governance
- Project planning
- Stakeholder analysis and communication planning
- Scope definition
- Developing a Work Breakdown Structure (WBS)
- Defining task dependencies, resources, and estimating the level of effort for the project schedule
- Determining critical path and float
- Project planning and project execution
- Planning for quality
- Procurement planning
- Project risk analysis
- Project change control
- Project monitor/control and project closing
- EVA analysis
- Project quality reviews
- Closing processes and conducting lessons learned
- Organizational change management

Project Estimation and Cost Management - 4 days

This course is designed for those who will be expected to understand and participate in O&G projects. The emphasis of this course is on the practical application of best practices for project management. Emphasis is placed on helping students learn how to develop Project Cost and Schedule Management plans that address the development of realistic cost and schedule estimates, and how monitoring, controlling, re-planning and reporting will be accomplished throughout the project life cycle.

Topics covered:

- Main challenges to O&G Projects and the importance of using project management best practices
- Front End Loading (FEL) and the Project Execution Plan (PEP)
- Project Execution Plan Elements
- Estimation Techniques
- Schedule Execution Management
- Contractor Selection and Management
- Risk Management
- Quality Management
- Project Monitor/Control and Project Closing
- Key Concepts Impacting Cost Control
- Earned Value
- Milestones, Performance Reporting, and Re-planning
- Project Closure

Development and Operation of Offshore Gas Fields – 9 days

This course gives an overview of the offshore industry and an introduction to methods and technologies relating to the development of offshore gas fields. This will be illustrated by examples from relevant areas where gas fields have been developed or where gas fields are in production.

Course objectives

After following the course, the student shall:

- Understand the business drivers in the offshore gas industry, and the importance of a value chain perspective and the importance of multidisciplinary work
- Understand how a combination of technical solutions, economics and operational effectiveness influences the development
- Understand the importance of safe and efficient operations and the importance of operating the field in an environmental friendly manner
- Be aware of the variety of technical solutions that can be used and the limitations and feasibility issues of specific solutions
- Be aware that the international gas market is changing and that long-term sales contracts are necessary for a development to be given the go-ahead

Course Topics

- Early project phases, technology for exploration, project design basis,
- Cost estimation in project phases, economic assessment
- Technology building blocks, subsea technology
- Development scenarios for offshore fields
- Operations: base, logistics, costs of operations
- Environmental aspects
- Vessel stability, wave analysis, hydrodynamics, linear waves
- Offshore marine operations. Design principles, design of pipelines and risers
- Safety and security, Maintenance aspects

Who should attend?

The course is intended for participants from countries where offshore gas field development projects are being planned or for personnel in companies planning offshore gas field developments. The content will be somewhat adjusted to the background of the participants (technical or administrative) and could be particularly useful for personnel representing authorities or bodies that will be involved in the process of approving development plans.

Arctic and Cold Climate Offshore Development Technology

– 5 days

A course for those who want to get an insight into technology for oil and gas development projects in the Arctic, or in cold climates, this course will be a very useful introduction for their future work.

Course Objectives:

The course emphasizes conceptual thinking with the aim of identifying sound solutions rather than on detailed design for the Arctic or cold climates. Those interested in detailed design will be referred to appropriate rules and standards.

The key learning objectives are to:

- Give the participants an introduction to different aspects of the technology for oil and gas developments in the offshore Arctic/ cold climate regions.
- Discuss all aspects of safe design and operations under Arctic/ cold climate conditions.

Course topics

The specific conditions and challenges of the Arctic region/ cold climate areas will be reviewed.

The course will give a basic introduction to, and understanding of, the Arctic/ cold climate regions physical environment with an emphasis on the differences between design conditions and operational conditions. The cause of, and conditions during, Polar low pressures will be discussed.

The specifics of development solutions for relevant offshore oil and gas fields will be reviewed in detail.

Development solutions for offshore oil and gas fields in the Arctic region/ cold climate areas to be discussed in detail; this includes separate lectures on well stream, fixed offshore structures, anchored floaters, transport solutions, offshore pipelines, winterization, emergency escape, marine operations, risk analysis of arctic operations, and specific effects that influence design and operations in the Arctic.

The requirements for safe design practices to safeguard personnel and the arctic/ cold climate region's clean environment will be handled in separate lectures.

The economics, project execution and schedule of an arctic project will be reviewed.

Design aspects will include discussions related to loading from ice, loading from waves and currents (for comparison), behaviour of vessels in waves, qualitative risk analysis and economic evaluations.

Finally, case studies will include different scenarios for the ice cover of the Arctic region/ the relevant cold climate regions and the effects this could have on technology needed.

Further discussions of analytical aspects could be raised in a possible follow-up course: Arctic Technology II.

Who should attend?

The participants should be involved in projects related to cold climate oil and gas developments. This involves personnel from oil and gas companies as well as personnel from engineering and manufacturing companies involved in preparing facilities for cold climate regions.

Offshore Decommissioning - 3 days

Decommissioning is a fast-growing issue facing the global offshore oil and gas industry, with major potential and major risks. Decommissioning is a source of major liability for countries, operators, contractors and the public, which must be understood if it is to be managed cost effectively.

This workshop is developed to provide insight and guidance into how countries, governments, regulators and oil and gas companies have approached and tackle the laws, regulations and guidelines for decommissioning, in terms of technical, environmental, safety and economic considerations. In many cases worldwide the offshore decommissioning laws, regulations and guidelines are general international guidelines from the United Nations which have been difficult to apply and enforce on a case-by case basis to decommissioning projects. Ideally the existing legal framework for offshore decommissioning should be flexible and adaptable to enable the delivery of a defensible and balanced decommissioning solution for each decommissioning project. This workshop will consider these key themes.

Finally, the workshop will provide a broad review of all aspects of decommissioning, including: decommissioning methodologies, technology, public perception, planning, cost, safety, tax, environmental decommissioning and pipeline management systems.

Learning Objectives

- History and review of worldwide offshore decommissioning projects
- Decommissioning law and regulation and other key drivers
- Understand the many aspects of decommissioning liability
- The decommissioning engineering process and marine operations
- Decommissioning technologies from all over the world
- Review various well P&A challenges
- Environmental and safety considerations in decommissioning
- Manage the transition from production to decommissioning
- Background to decommissioning cost estimating
- The challenges with taxation and accounting for decommissioning

Who should attend?

Regulator perspective - This workshop is for national and state regulators and all the disciplines used in regulation of offshore decommissioning and well plugging and abandonment: engineering managers, decommissioning engineers, environmental managers, HSE managers, regulators, tax professionals and accountants, governance managers, insurance brokers, lawyers, professionals involved with economic evaluations, forecasting, and economic decisions in the upstream oil and gas business.

What to expect

This unique 3-day workshop is a review & discussion forum on decommissioning - one of the major issues facing the global oil & gas industry. It introduces the complex cross-discipline nature of offshore decommissioning, its technical, cost, tax, logistical & regulatory challenges through a mixture of presentations, discussion, videos & workshop exercises.

Participants will get a broad review of all aspects of decommissioning, including: decommissioning methodologies, technology, public perception, planning, cost, safety, tax, environmental decommissioning and pipeline management systems.

Engineering Management – 5 days

- Civil Engineering (structures and foundations)
- Lean Management & Lean Engineering
- Engineering Management (activities, deliverables, work sequence, interfaces)
- Identify and mitigate main risks (schedule, vendors, interfaces, quality)
- Manage critical points, implementation, and monitoring of KPI's
- Process flow plans (drawing, updating, review)
- Safety Engineering (safety studies, risk assessments, safety in design, safety principles)

Advanced Project Management – 5 days

- Project Management Fundamentals (definitions, business value, roles and responsibilities, skills)
- Project Management Lifecycle
- Organizational (influences, cultures, styles, communication, structure, processes, environmental, stakeholders, governance, project team, success, phases)
- Project Management processes
- Project Integration Management
- Scope Management
- Time Management
- Cost Management
- Quality Management
- Human Resource Management
- Communications Management
- Risk Management
- Stakeholder Management
- Closing Processes and Conducting Lessons Learned
- Organizational change management

Procurement – 3 days

- Plan Procurement Management (input, tools, techniques, output)
- Contract types and parameters for engineering projects
- Contract terms and control
- Develop and organize bids
- Selection of best bidder
- Management of claims, liability, and other legal issues
- Close procurements

LNG Plant Development

- Content and duration to be announced

Introduction to Petroleum Economics - 4 days

The course objective is for participants to obtain an overview and basic understanding of the economic dimensions, analysis, and decision support in the petroleum sector.

Topics covered

- Impact of petroleum on the national economy: How oil may, or may not, create affluence in a society.
- Companies in the petroleum sector.
- Petroleum company financial statements: Understanding what oil companies tell about their profits and value.
- Economic analysis for investment decisions: Net Present Value and other concepts for analysing investment projects.
- Development and production economics: How to determine if a development project is economically sound.
- Exploration economics: How \$50 million exploration wells can be justified even if likely to be dry.
- Petroleum fiscal instruments: How the value of oil and gas is shared between firms and the Government.
- Decision support under uncertainty.
- Financial controls in petroleum operations: Keeping track of money and value.

Petroleum Fiscal Systems - 4 days

The course introduces the common instruments of law and contract by which the value of petroleum resources is shared between firms and states. The course draws on examples from many countries, and provides insights into the economic and administrative implications of fiscal systems.

Topics covered

- The legal basis for petroleum exploitation.
- The main fiscal instruments: Royalties, production sharing, bonuses, and taxes.
- State participation as a fiscal instrument.
- Business obligations with pseudo-fiscal effects: Supply obligation, training, local content, and others.
- Indirect taxes etc. affecting petroleum operations: Excise taxes, tariffs, VAT and others
- Fiscal valuation, control, and administration
- Cross-border fiscal issues for the petroleum sector
- Fiscal design considerations
- Fiscal issues in natural gas
- Licensing process and fiscal transparency

Fiscal Metering - 5 days

Metering is required primarily for the following purposes:

- Well monitoring for reservoir monitoring
- Allocation metering, for calculation of ownership and tariff purposes
- Sales metering, for the assessment of sales volumes

Reliable and accurate metering is thus of great importance for all stakeholders in the petroleum sector. It reduces the likelihood of disputes between buyer and seller and facilitates control of losses. Accurate measurement demands the use of standard equipment and procedures. This training relates to all forms of liquid or gaseous hydrocarbons.

Learning objectives. Participants will understand:

- Standards and systems for metering
- Legal matters related to fiscal metering
- Effective metering and allocation system throughout their oil and gas production, distribution, and export processes.
- Uncertainty requirements for the different metering purposes will be presented.
- The importance of accurate metering and roles and responsibilities will be discussed.

Topics

- Definition and standards
- Legal framework
- System design considerations
 - Basic design considerations
 - Primary element selection criteria
 - Process variables
 - Fluid acceptable criteria
 - Performance, meter turndown and linearity
 - Pressure loss and cavitation
 - Traceability and uncertainty of calibration
 - Weight and space
 - Secondary instrumentation and equipment
 - Data acquisition, verification, transformation, aggregation, communication, and management
 - Physical system quality management (assurance and control), including repeatability, uncertainty and normal causes of error and error rates
- Meter system design
 - Flow metering principles
 - Calibration and proving
 - Selection of meter size and number
 - Piping configuration
 - Control and calibration
 - Safety
- Equipment for primary measurement of fluids
- Equipment for secondary measurement
- Equipment for qualitative Measurement
- Flow computation and display
- Operation and maintenance

Mid- and Downstream: Processing, Markets and Uses for Oil and Gas - 3 days

This three-day course is about what happens with oil and gas after they have been produced. It reviews processing and transport requirements for oil and gas, the international markets in which they are traded, the ways in which they are used, and opportunities for domestic applications. The course also addresses interfaces between oil, gas, and other energies, notably renewables, in a nation's energy supply.

The course aims to provide an understanding of the downstream oil and gas sectors which is relevant also for those who are mainly concerned with the upstream. Depending on the geographic and economic circumstances of a petroleum producing country, there can be important linkages between the upstream and downstream value chains. Especially for natural gas, the challenge of securing offtake and sales can be a significant constraint on development. Several countries have sought to develop domestic uses of oil and gas which they produce, which can provide development opportunities but also significant economic risk for the country.

This course can be a suitable preparation for those interested in our course on gas and LNG sales contracts.

Topics covered

- Oil refining basics
- The global market for crude oil
- Trading instruments for oil (and other bulk commodities)
- The petroleum fuels retail sector
- Natural gas: origin, definitions, and characteristics
- Processing and transportation of natural gas
- Markets and uses for natural gas
- Natural gas regulations: Monopolistic and competitive frameworks
- Natural gas liquids: origin, applications, and markets
- Small scale distribution of LNG
- Options for avoiding gas flaring
- Petrochemicals and other industries based on oil and gas
- Developing industry based on oil and gas: Drivers and risks
- Oil and gas as part of national energy supply: Interactions with renewables and other energies.

Who should attend

This course is designed for personnel who are involved in the petroleum industry with a broad perspective on understanding and enhancing value creation in the petroleum energy and its interaction with other parts of the wider energy sector. It is applicable to regulators, oil company professionals, personnel from finance and related industries, as well as professionals from NGOs and the media.

Revenue Management – 5 days

- Objectives of revenue management
- Sustainable development and lasting value for the nation
- Relevant policies and legislation
- Sources of revenue
- Collection of government take
- Administration of revenues, roles, responsibilities, and structures
- Revenue and intergovernmental fiscal transfers
- Fiscal monitoring
- Revenue utilization and impact
- Establishment of petroleum fund
- Revenue stabilization
- Non-oil tax revenues
- Transparency and accountability
- Norwegian and other nations' experiences

HSE And Contingency Planning - 3 days

Poorly managed petroleum exploration and production can cause serious injuries, damage, loss of life, and pollution of the environment. It is essential that all operations be carried out in a safe manner to minimize the risk of negative consequences. The responsibility for health, safety, and environmental management rests primarily with the operating companies. Efficient emergency preparedness contingency planning is paramount for all petroleum operations, and both the operator and the authorities have responsibilities.

Topics covered

HSE policies and key elements
Management systems and audits
Authorities' roles / industry interface
Strategic Environmental Assessments / EIAs
Oil spill contingency planning and dimensioning
Accidents and Incidents
Emergency preparedness
Crisis management
Building an HSE culture

Environmental Governance within the Petroleum Sector - 3 days

The appearance of new and existing environmental challenges in developed and developing countries raise questions about the ability of the governments and the industry to guarantee sustainable oil and gas project developments. Environmental governance has to be improved and prioritized, awareness need to be developed and new management concepts need to be established in order to address these problems in a sustainable manner.

Course objective and topics

The objective of the course is to enhance the participants' understanding of the main concepts of environmental governance, of the roles of various actors and of how to deal with the most important issues such as pollution, waste, and climate change aspects.

The topics include:

- Environmental governance concepts
- Strategic Environmental Assessment (SEA)
- Roles of various actors within environmental governance
- Typical environmental and socio-economic impacts related to the petroleum industry
- Laws/regulations and institutional framework
- Environmental management principles
- Climate change in relation to the petroleum sector
- Co-existence between the petroleum industry and other industries/activities
- Stakeholder involvement
- Instruments and tools related to environmental governance
- Industry Environmental Management Systems
- Environmental Impact Assessment (EIA)
- Environmental Risk Analysis
- Environmental licensing
- Contact and cooperation between the petroleum industry and the authorities
- Reporting, audits and enforcement

Delivery model

The course will be delivered as lectures illustrated by relevant examples on environmental governance and specific instruments and tools. Active group work and open dialogue and discussions are used to strengthen understanding and involve the participants in actual examples and challenges. The group work will include role-playing exercises with the aim to actively engage participants in identifying their roles in environmental governance.

Who should attend?

The course is designed for officials at the national, regional, and local levels, personnel from the petroleum industry and representatives from other enterprises/private sector, civil society organizations and media, who work with, or are interested in, environmental governance.

Strategic Environmental Assessment (SEA) – 3 days

Oil and gas exploration and production impact the environment and people within the influence areas in question. Knowledge about potential environmental and socio-economic risks and opportunities before opening up areas for petroleum activities or during early stages of oil and gas development and production, is crucial for the government in order to make informed decisions. Strategic Environmental Assessment represents a systematic approach to deal with these challenges and has become a successful tool for governments around the world.

Course objective and topics

The objective of the course is to build thorough understanding about the purpose of SEA and the systematic steps and documentation requirements of the SEA process including how to manage the stakeholder engagement which is a prerequisite for a successful result. The course also covers how to deliver practical advice to decision makers during the SEA process and how to ensure effective implementation of the concluding recommendations.

The topics include:

- Mandate and objectives of the SEA
- Screening process including Scope of Work, organization of the SEA, stakeholder engagement planning, support/tools and Terms of Reference
- Scoping process including scenario development/analysis, development of issues matrix, decisions on Key Issues register and Scoping Report
- Development of integration and response matrix and analysis of key issues
- Monitoring indicators, testing and monitoring plans
- Implementation plans and SEA reporting
- Advisory notes and concluding recommendations

Delivery model

The course will be delivered as lectures illustrated by recent examples on SEAs from Uganda, onshore/offshore Ghana and Norway. Active group work and open dialogue and discussions are used to strengthen understanding and involve the participants in relevant examples and challenges in the countries in question.

Who should attend?

The course is designed for officials at national, regional and local levels, and people from the private sector and civil society organizations who are involved in SEA processes. Personnel from the petroleum industry would also benefit from the course in their role as vital stakeholders and in order to build understanding about the framework conditions for being involved in the petroleum sector in the country. Media would also benefit from participating due to the open planning process and extensive focus on stakeholder engagement.

Environmental Impact Assessment (EIA) – 5 days

Oil and gas exploration and production impact the environment and people within areas of influence in question. Thorough understanding of the potential environmental and socio-economic impacts is a prerequisite for successful planning, design, construction and operation of oil and gas activities. EIA is the most important instrument ensuring a solid basis for governmental decision-making on oil and gas developments. And not least, a good quality EIA ensures effective and sustainable integration of environmental aspects into petroleum developments on all levels.

Course objective and topics

The objective of the course is to introduce state of the art concepts and methodologies for onshore and offshore EIAs within the petroleum sector, and to train the participants on taking active part in dealing with EIAs in a wide context.

The topics include:

- EIA as a planning tool related to the petroleum sector
- EIA in the context of Strategic Environmental Assessment (SEA)
- Key challenges related to the quality of EIA
- The EIA process
- Typical aspects and impacts related to onshore and offshore petroleum projects
- The Screening process
- The Scoping process
- Availability and quality of baseline data
- Stakeholder engagement
- Risk assessment related to unforeseen events as part of the EIA
- Impact Assessment
- Methodologies for impact prediction. Magnitude and significance.
- Mitigation and residual impacts
- EIA reporting, implementation and monitoring
- Integration between EIA results, and design and operations of the oil and gas facilities

Delivery model

The course will be delivered as lectures illustrated by recent and relevant examples on EIAs for onshore and offshore exploration and development activities and for onshore and offshore oil and gas pipelines in several locations. Active group work and open dialogue and discussions are used to strengthen understanding and involve the participants in relevant examples and challenges in the countries and potential projects in question.

Who should attend?

The course is designed for personnel from the petroleum industry and for officials at national, regional and local levels directly involved in conducting and reviewing EIAs for the petroleum industry.

Environmental Management in Northern/Arctic Regions - 3 days

Planning and development of oil and gas operations in northern/arctic regions require ultimate attention when it comes to environmental management. These areas are environmentally vulnerable and indigenous peoples are exposed to any changes threatening their original lifestyle. Knowledge about the baseline conditions is incomplete and even more important than anywhere else requiring environmental management to be extremely focused and adapted to local conditions.

Course objective and topics

The objective of the course is to build a thorough understanding of the environmental and socio-economic risks and opportunities of oil and gas developments in areas with cold climates. All important elements of sustainable environmental and socio-economic management are covered. The participants will therefore get a good basis for participating in, or assessing, oil and gas developments in such areas.

The topics include:

- Environmental challenges in northern/arctic regions
- Description, availability and constraints of baseline data
- Environmental management in general
- Stakeholder involvement with focus on indigenous peoples
- Environmental Impact Assessment (EIA)
- Environmental Risk Analysis
- Contingency analysis and pollution (oil spill) response planning
- Operational challenges in cold climate

Delivery model

The course will be delivered as lectures illustrated by environmental management examples from Alaska, Norway and Russia. Active group work and open dialogue and discussions are used to strengthen understanding and involve the participants in relevant examples and challenges in their countries and regions.

Who should attend?

The course is designed for personnel from the petroleum industry and for officials at national, regional and local levels. Media and representatives from civil society organizations would also benefit from participating.

HAZID, HAZOP, LOPA: Implementation of Process Safety Reviews - 3 days

During this training course, you will be introduced to the process of performing safety reviews in projects per procedures. Participants will be exposed to planning, organizing, facilitating, and participating in reviews.

Objectives

- Attain knowledge of the most relevant reviews used in petroleum industry projects.
- Why and how these reviews are carried out.
- Hazard identification and analysis
- Risk analysis
- Safety integrity
- Be able to plan and organize reviews per procedures.
- Be able to participate in, and give presentations on, reviews.
- In combination with relevant experience, facilitate reviews.
- Risk assessment and implications to new facilities, or modifications to existing facilities.
- Identification of actions and recommendations to reduce risks at ALARP

Target audience

The primary target audience for this course is engineers working with safety, environment, HSE, process, piping, structure, and instrument. HSE Managers, Task Managers, Project Managers, Engineering Managers, Installation Managers, Plan and Risk Engineers will also benefit from the course.

Offshore Safety Audits - 5 days

Safety management systems, on which follow-up is not properly done, may soon become an idle system. Auditing is one way of following-up on a system. Audit are a powerful management tool if correctly applied. A prerequisite for a successful audit is that all involved parties know the rules.

Audits should be a neutral and objective tool. Audits conducted by different auditors should arrive at similar conclusions when the same operation is audited under the same conditions. To fulfil these requirements, auditors must be thoroughly educated and trained. This training is a natural step in acquiring such skill and proficiency. The training will be a combination of lectures, case studies, discussions, and practical training. Since auditing is very much about collecting appropriate facts, we expect the target audience very soon after this training to conduct an audit to practice the new skills.

Towards the end of this training there will be discussions on lessons learned and important issues to be followed up.

Topics covered

- Legislation
Managing Safety and the Environment in the Upstream Petroleum Activities
- Safety features of equipment and processes
- Acknowledgement of Compliance (AoC)
- Audit practices
- Communication skills - interviewing techniques and auditor skills required
- Testing and maintenance philosophy of key safety critical equipment
- Instruments to measure safety culture
- Managing operations
- Monitoring technical issues - lifting operations, electrical safety, collision risk management
- Qualitative risk assessment
- Risk Management - methods and tools for quantitative risk analysis
- Major hazards on offshore installations
- Contingency philosophy
- Emergency preparedness
- Offshore and onshore emergency organization
- Investigation Procedure and investigation of accidents
- Crisis management / communications
- MTO method in practice
- Emergency response table top exercise

Development of Local Content - 3 days

A common ambition for governments is to maximize national value creation along the petroleum value chain, in the form of employment, value-addition, and the transfer of technology and knowledge. This is often also referred to as local content or national content. This workshop on developing sustained national participation will highlight the common challenges and barriers facing national participation in the petroleum sector.

Topics covered

The following topics will be given specific attention:

- Definition of national content and the basic elements.
- The nature of the supplier industries: Global capabilities and local adaptations.
- International experiences and challenges with national content.
- Oil company policies and practices on national content (examples).
- Legal mechanisms for building national content.
- Petroleum sector competence and conditions for success.
- The roles of the different parties in achieving goals for national participation.

Delivery model

The focus of the workshop will be adapted to the geographical context in which it is given (i.e. country specific), or provided as a delivery where the national content is discussed on a generic level. It will provide opportunities for discussing challenges for national engagement in the participants' context, for which their active contributions to discussions will be useful. It will be designed to give the participants an understanding of the various aspects and opportunities concerning national participation in the petroleum sector. Key stakeholders will be identified and their roles discussed. Demands and interaction with the IOC's and the supply industry will be elaborated. Alternative strategies and policies to increase the national content will be discussed as well as various country experiences, including Norway.

Who should attend

The workshop is designed to address the issue of national content mainly from a national and regulatory perspective, and is therefore intended primarily for Government personnel, industry associations and other parties with an interest in the matter. The quality of the workshop will be enhanced if at least some participants will be in a position to contribute to discussions based on their experience and sector insights.

Gender Equality in the Petroleum and Natural Resource Sectors - 3 days

The course aims to provide basic gender concepts and methodologies applicable to the petroleum and other natural resource sectors.

Topics covered

- Gender concepts
- Gender, energy, and development
- Gender issues in the natural resource sectors
- Gender and the value chain
- Gender mainstreaming methodologies
- Gender Action Plan
- Gender audits
- Gender mainstreaming in daily work
- Gender in local content
- Experience sharing - gender equality in Norway

Active and continued learning

In addition to expert lectures on the course topics, the course features practices and discussions engaging participants to apply the knowledge and reinforce the learning experience. Furthermore, interactive group works conducted after the lectures aim to challenge different views on gender equality and its implications in various countries and cultures.

Who should attend

The course will be beneficial for personnel of national authorities, enterprises, learning institutions, civil society organisations and media who engage with the petroleum sector. Requiring no prior knowledge of the sector, the course provides a general overview and familiarization with gender in the petroleum industry.

Developing Supplier Industry in the Oil and Gas Sector – 4 days

- This will be a new module following our course on Development of Local Content - 3 days.
- Policies, legislation, and regulations
- Project, procurement, and contract strategies
- Products and services needed in the various phases of the petroleum sector – think long-term
- International quality, HSE and management standards
- International prequalification systems
- Skills and technological needs and development
- The procurement processes and winning international and national tenders
- Partnerships, and technology and knowledge transfer
- Clusters, hubs, mentoring programs, and local industry capacity
- Finance needs and mechanisms
- Case studies from other countries



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